

# The Impact of Investment Policy in a Changing Global Economy

A Review of the Literature

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## Abstract

Evidence shows that foreign direct investment can provide many benefits to host countries, including productivity improvements, better jobs, and knowledge transfer. Further, it can serve as a vehicle for transformation of domestic production and better integration with global value chains. Nonetheless, these benefits are not automatic. Investment policies are required to maximize the potential gains of foreign direct investment. One challenge is that there are different kinds of foreign direct investment, and each may have different economic, social, and environmental impacts. However, the literature analyzing foreign direct investment often tends to swing from an extremely case-specific focus—analyzing experiences in one particular country in a single sector during a given period—to lumping together

the analysis as if it was a homogenous phenomenon. Investment policy formulation requires a framework sophisticated enough to differentiate between the various kinds of foreign direct investment, as well as potential challenges and benefits for development. It must also be simple enough to enable governments to organize and prioritize the multiple and complex variables affecting the maximization of investment benefits. This paper presents an overview of the literature on the impact of foreign direct investment. The paper argues that a logical framework is needed to organize existing evidence from research to fill gaps in the literature and make existing evidence more useful in targeting policy making.

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# The Impact of Investment Policy in a Changing Global Economy: A Review of the Literature

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## I. Introduction

International investment patterns have changed dramatically over the past three decades. Major shifts have occurred in the patterns of foreign direct investment (FDI), the parties involved, and the modalities used. In addition, shifts have also occurred in the relationship between trade and investment and regulations governing FDI.

FDI in developing countries once tended to concentrate almost entirely on natural resources. However, many of these countries have now become hosts of FDI involving more sophisticated production of goods and services. Developing countries are also becoming the source of FDI into other developing as well as industrial countries. Indeed, in 2014 emerging and transition economies accounted for 39 percent of global FDI outflows—up from 12 percent in the early 2000s (UNCTAD 2014).

Today more goods and services reach consumers through production by foreign affiliates of multinational enterprises than through trade alone. Because of the growth in global value chains, 70 percent of global trade transactions involve intermediate goods and services (OECD, WTO and World Bank Group 2014). Indeed, global value chains are increasingly shaping growth prospects in developing economies. Between 1990 and 2012, the share of developing countries in global value-added trade rose from 20 percent to more than 40 percent. Economies with the fastest-growing participation in global value chains have gross domestic product (GDP) per capita growth rates about 2 percentage points above the average. There is also a positive correlation between FDI stocks and global value chain participation, especially in the poorest countries— thus indicating that FDI may be an important way for developing countries to access and increase their participation in global value chains (UNCTAD 2013).

Global value chains are coordinated through increasingly complex networks of supplier relationships and various governance modes, from direct ownership of foreign affiliates to contractual relationships (non-equity modes of investment, or NEMs) to arm’s-length dealings. These carry implications for risks and costs of investing. Therefore, they impact the investment decisions of multinational companies (that is,

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whether to deploy FDI, NEMs or other forms of arm's length contracts to source production inputs) as well as the distribution of economic gains from trade (UNCTAD 2013).

NEMs, which are direct contractual relationships between foreign and domestic investors in the form of franchising, licensing, contract manufacturing, services outsourcing and other similar forms, present a new opportunity for developing countries to foster know-how and technology transfers to domestic companies.

Accordingly, investment policy debates are increasingly focused on how to enable countries to capture the opportunities offered by global value chains in order to increase exports— and, more important, to diversify the composition of those exports towards higher value-added goods and services. There is consensus among experts in the field that open trade and investment regimes foster participation in global value chains (Bamber and others 2014; Farole and Winkler 2014; Moran 2014). There is also agreement on the key role played by infrastructure, education and training, and labor market policies in this process. Still, a better understanding is needed of policies that can maximize the potential benefits of FDI for host countries.

The need for countries to have clear investment policies stems from the fact that FDI needs to be managed. History shows that despite the key role of FDI in development, if not properly managed, under certain circumstances, FDI may not be automatically conducive to better standards of living for a host country's population. Further, not all FDI is the same nor has it the same potential impact for development. For instance, FDI in extractive industries may generate very different environmental, social and political impact than FDI in high-tech manufacturing, business services or labor-intensive apparel assembly.

As a first stage in tackling these challenges, this paper reviews econometric and case study evidence about how investment policy can help countries to maximize potential FDI benefits, including transforming their domestic productive sector by increasing their participation in global value chains. In this regard, this paper does not aim to summarize every single FDI-related publication. In the current era of constantly evolving research, one has to recognize that any literature review is necessarily incomplete. Rather, this note attempts to present an overview of the literature that uses empirical and econometric evidence to ascertain the impact of certain FDI policies, and to explore the extent to which those findings can be useful for purposes of investment policy making. In this regard, two fundamental observations can be drawn from the existing literature.

First, evidence shows that FDI can provide significant economic and social benefits to host countries. For example, it can help create higher skilled and better paid jobs, promote the transfer knowledge, raise productivity, and diversify and upgrade the value-added component of exports—all of which affect a country's ability to integrate with global value chains. However, such potential benefits are not automatic. Indeed, specific policy interventions responding to the respective country and investment contexts may be required.

Second, most of the literature analyzing FDI often tends to swing from an extremely case-specific focus — analyzing FDI experiences in one particular country into a single sector during a given period — to the other side of the spectrum, tending to lump together FDI analysis as if it was a homogenous phenomenon. This duality makes it difficult for governments to distill lessons from existing literature, which is often derived from different contexts, for purposes of policy making in developing countries. Governments need frameworks simple enough to enable them to draw logical inferences. Such frameworks should also help clearly organize and prioritize the multiple, complex variables affecting the maximization of investment benefits. However, policy makers also need frameworks sophisticated enough to differentiate between the various kinds of FDI and attendant potential challenges and benefits for development. In this context, then, there appears to be a gap in the investment policy literature bridging these two requirements.

This note has three additional sections. Section II summarizes the literature regarding how FDI affects host countries. Section III examines how investment policy affects FDI, based on the idea that maximization of FDI benefits often follows a continuum that starts with FDI attraction, followed by FDI establishment and retention in the host country, and culminating in the development of linkages between FDI and the domestic economy. Section IV presents conclusions and offers suggestions for future research.

## II. Why do countries seek foreign direct investment?

Within the broader objective of promoting jobs and economic growth, countries tend to compete for FDI to attract the transfer of technology, strengthen managerial and organizational skills, increase access to foreign markets, and diversify exports. Many studies have also shown how FDI can enhance productivity (particularly in services), increase investment in research and development, and create better paid and more stable jobs in host countries. Table 1 summarizes these findings.

Table 1. Effects of foreign direct investment on host country economies

Country	Study	Foreign Direct Investment (FDI) Activity	Effect
<b>Foreign acquisitions</b>			
<b>Czech Republic</b>	Arnold, Javorcik, and Mattoo (2011)	Foreign acquisition of service providers	It boosted labor productivity by 43.6 percent and sales by 33 percent of acquired firms three years after acquisition. There was a positive and statistically significant correlation between the presence of foreign providers and downstream manufacturing firm productivity. For example, simulating a one-standard-deviation increase in foreign presence would lead to a 7.7 percent increase in productivity.
<b>Indonesia</b>	Arnold and Javorcik (2009)	Foreign acquisition of manufacturing firms	It increased productivity by 13.5 percent, employment by 24 percent and wages by 41 percent. There was also a 13.9 percentage point increase in the export share of acquired firms three years after acquisition.
<b>United Kingdom</b>	Canyon and others (2002)	Foreign acquisition of manufacturing firms	Wages were 3.4 percent higher than in domestic firms; labor productivity of acquired firms increased by 13 percent three years after acquisition.
<b>United Kingdom</b>	Girma and Görg (2007)	Foreign acquisition in the electronics and food industries	The technical efficiency of acquired firms rose by 1.0-2.5 percent two years after acquisition.

<b>United Kingdom</b>	Harris and Robinson (2003)	Foreign ownership in the manufacturing sector	Foreign owned-plants were demonstrably more productive than other domestic plants, but varied by country of origin and sector.
<b><i>Spillovers to domestic firms</i></b>			
<b>Bangladesh</b>	Kee (2015)	Sharing of suppliers by garment producers with foreign firms	It accounted for one-third of productivity growth in domestic garment firms, and one-fourth in product scope expansion.
<b>Cross-country</b>	Farole and Winkler (2014)	Forward linkages from FDI (measured as sector average percentage of FDI sales to domestic market); backward linkages from FDI (measured as sector average percentage of domestic input purchases); absorptive capacity of domestic firms (measured by their productivity relative to foreign firms, proximity to other firms, proxies for size, technology and export intensity). Manufacturing firms only.	There was a significant positive impact on domestic firm productivity, and on the productivity of low- and medium productivity firms.
<b>Cross-country</b>	Alfaro and Chen (2015)	Entry of a multinational firm	There was an increase in aggregate-weighted domestic productivity by 1.6 percent within a 6-year period. Between firm selection and reallocation alone, it accounted for 1.4 percent.
<b>Chile</b>	Fernandes and Paunov (2012)	Forward linkages from services FDI to manufacturing firms	There was a 7 percent increase in total factor productivity of manufacturers using the services.
<b>China</b>	Du, Harrison, and Jefferson (2012)	Foreign equity shares in the manufacturing sector (weighted by firm size)	There were significant positive productivity spillovers via backward and forward linkages, but insignificant horizontal spillovers. Results apply to Organisation for Economic Co-operation and Development (OECD) investors. There were no spillovers from Hong Kong SAR, China; Macao; or Taiwan, China-sourced investment.
<b>Czech Republic</b>	Javorcik and Spatareanu (2009)	Suppliers to multinational firms	Multinational suppliers were 12–15 percent more productive, even after controlling for selection bias, compared to non-suppliers.
<b>Ghana</b>	Görg and Strobl (2005)	Previous experience of firm owner at multinational firm	Increased manufacturing firm productivity is evident when multinational experience is in the same industry.
<b>Lithuania</b>	Javorcik (2004)	A 4 percent increase in foreign presence in downstream (buyer) industries	There was a 15 percent increase in domestic firm output in upstream (supplying) industries.
<b>Romania</b>	Javorcik and Li (2013)	A 10 percent increase in the number of foreign retail chain outlets	There was an increased total factor productivity of supplying industries by 2.4- 2.6 percent.
<b>United Kingdom</b>	Haskel, Pereira, and Slaughter (2007)	A 10-percentage point increase in foreign presence in a manufacturing industry	It raised total factor productivity of that industry's domestic plants by about 0.5 percent.
<b>United States</b>	Keller and Yeaple (2009)	FDI presence in the US manufacturing sector	It explains 8-19 percent of productivity growth of U.S. firms between 1987 and 1996. FDI spillovers are particularly strong in high-tech sectors, but largely absent in low-tech sectors.
<b>Venezuela</b>	Aitken and Harrison (1999)	Increase in foreign equity participation and foreign ownership	It increased productivity for recipient plants with fewer than 50 employees, and decreased productivity for other domestic firms. There was a small net impact.
<b><i>Exports</i></b>			
<b>China</b>	Swenson (2008)	Level of multinational export activity across sectors (number of export transactions and total value of exports)	These were positively correlated with “new” export activity by domestic firms.
<b>China</b>	Chen and Swenson (2014)	A 1 standard deviation increase in multinational presence (measured by the value of own-industry multinational exports); and a 10	It was associated with a 6.3 percent increase in transaction unit values, and helped private firms expand new product exports by 1.3 percent.

		percent increase in own-industry export value	
<b>Cross-country</b>	Freund and Pierola (2012)	Top 1 percent of exporters in a country	These account for more than half of a country's total exports, export growth and diversification. They are often linked to foreign capital especially in countries with lower GDP per capita (i.e. 81 percent foreign ownership was found in Tanzania, 67 percent in Jordan, 48 percent in Peru).
<b>Wages and jobs</b>			
<b>Brazil</b>	Poole (2013)	A 10 percentage point increase in the share of former multinational workers	There was a 0.6 percent increase in incumbent workers' wages in domestic firms.
<b>Indonesia</b>	Lipsey, Sjöholm and Sun (2010)	Foreign ownership and acquisition of domestic plants	It resulted in a 5 percent faster growth in employment in foreign-owned plants compared to domestic ones throughout 1975-2005. There was also a 10 percent faster growth in plants that were acquired by foreigners.
<b>Cross-country</b>	Hijzen and others (2013)	Foreign acquisition	Average wages increased by 11 percent in Brazil, 19 percent in Indonesia, 8 percent in Portugal, and 5 percent in the United Kingdom relative to wage increases in domestic firms.
<b>Indonesia</b>	Lipsey and Sjöholm (2004)	Foreign ownership	The result was 12 percent higher wages for blue-collar workers and 20 percent for white-collar workers when a firm is foreign owned.
<b>Portugal</b>	Almeida (2007)	Foreign acquisition	It increases wages on average by 2.2 percent for low educated workers (<=9 years of schooling) and 4.3 percent for the highly educated (> 9 years). The effect applies to manufacturing firms.
<b>Sweden</b>	Heyman, Sjöholm, and Tingvall (2007)	Foreign ownership	Wages of workers in foreign firms were approximately 2.5 percent higher after controlling for worker and firm characteristics.

The benefits from FDI are not automatic. Indeed, the extent to which countries regulate investment and devise other policies affecting spillovers can have a direct impact on the economic, environmental and social effects of FDI. Thus, the importance of governments is to obtain the “right mix” of policies to properly manage different types of FDI. Historically, inadequate design and/or lack of implementation of appropriate policies may, on many occasions, have prevented developing countries not only from attracting, retaining and linking FDI within the domestic economy, but also from maximizing FDI benefits. Within this context, policy makers may often blame FDI when particular expected spillovers do not materialize —as if FDI was intrinsically good or bad or different from domestic investment—rather than focusing on the policies governing investment in general and FDI in particular.

Despite the occasional mixed outcomes of FDI, the key point is that for policy makers in many developing countries, the real question is not whether to choose between FDI and domestic investment, but rather how to connect them. Even in those sectors in which there is no domestic investment, the question remains whether to obtain FDI or no investment at all. According to economic theory, the main reason to attract FDI lies primarily in its potential to deliver greater dynamic benefits to host economies. However, the low levels of domestic capital accumulation and technology in many developing countries practically mean that if FDI does not flow, the prospects for generating additional sources of economic growth remain limited. Moreover, in an increasingly interdependent international economy where prosperity depends on the technical knowledge embedded in goods and services and participation in global value chains, for practical purposes the relevant question is not whether FDI is good or not, but rather, what key policies are needed to maximize its positive effects for development.



The following section presents examples of studies in key areas of econometric research on spillovers. While a substantial body of research exists, a certain level of uncertainty still remains as to how accurate and applicable these findings are in different contexts. For example, Görg and Greenaway (2004) suggest that the findings mainly depend on the methodology applied by econometric studies. In addition, studies vary in the extent to which they assess the various mediating factors for FDI spillovers which can, in turn, distort some of the results.

### *A. Productivity spillovers*

#### *a. Foreign acquisitions*

Whereas there are abundant studies regarding the productivity or technology gap between foreign and domestic firms, few studies have analyzed causal effects of foreign ownership directly on their acquisition targets and how they demonstrate positive productivity effects. Looking at the manufacturing sector, Harris and Robinson (2003) find that foreign-owned plants in the United Kingdom (UK) have generally higher total factor productivity. Additionally, Conyon and others (2002) and Girma and Görg (2007) observe that labor productivity increases in domestic firms acquired by foreign ones.

Evidence for developing countries is also limited. Arnold and Javorcik (2009) suggest that a change from domestic to foreign ownership improved performance in Indonesia's manufacturing sector. Explanations for the higher productivity of foreign firms include their proprietary technology, ability to attract better-motivated employees, as well as superior know-how, management techniques, and marketing strategies. Plants receiving foreign investment also become more integrated with the global economy by exporting a larger share of their outputs and importing a larger share of their inputs.

Regarding services, Arnold, Javorcik, and Mattoo (2011) find that foreign acquisitions of Czech services providers resulted in large increases in the labor productivity and sales of the acquired firms. These findings are consistent with foreign services providers bringing new technologies and know-how to the Czech Republic. Their services are more appealing to Czech consumers, and provide increased quality, variety and availability.

#### *b. Spillovers to other domestic firms*

FDI spillovers can be transmitted from foreign to domestic firms within the same industry, involving intra-industry or horizontal spillovers, or between other industries, involving inter-industry or vertical spillovers. Vertical spillovers can affect locally-operating suppliers of inputs and services in upstream sectors and customers in downstream sectors. Such interactions are often called backward and forward linkages.

The literature distinguishes between two types of effects, as well as the underlying transmission channels in spillovers and linkages. The first are *knowledge effects*, that is, when knowledge created by a multinational enterprise is used by a locally-operating firm without full compensation—for example, through observation of a foreign affiliate, movement of labor, or knowledge transfer to suppliers or

customers. The second type are *pecuniary externalities*, which occur, for example, through price and competition effects — that is, if increased demand for inputs creates incentives for upgrading, or entry of foreign affiliates changes a market structure.

Inter-industry spillover effects have been relatively well established, reflecting foreign firm incentives to interact with local suppliers, while preventing knowledge leaks to local competitors. Javorcik (2004) and Du, Harrison, and Jefferson (2012) find these vertical spillovers in China and Lithuania. Javorcik and Spatareanu (2009) find evidence in the Czech Republic for spillovers to suppliers of foreign firms through both selection and learning channels. Farole and Winkler (2014) use a cross-section of more than 25,000 domestic manufacturing firms in 78 developing countries covered by the World Bank’s Enterprise Surveys. When coupled with sectoral country case studies, they find that supply chains—notably, backward linkages through local sourcing—appear to offer the most direct channel for gains from FDI spillovers, in particular for less productive firms.

With respect to vertical spillovers through forward linkages, several studies highlight productivity spillovers to the manufacturing sector through liberalization of services, including Arnold, Javorcik, and Mattoo (2011) for the Czech Republic, Fernandes and Paunov (2012) for Chile, and Javorcik and Li (2013) for Romania. These results are consistent with service sector liberalization—particularly FDI in the sector—being associated with improved availability, range, and reliability of services. These in turn contribute to better performance among manufacturing firms using services as inputs.

There is some evidence for intra-industry spillovers from FDI, though earlier studies (such as Aitken and Harrison 1999; Haskel, Pereira, and Slaughter 2007) show contrasting results. Javorcik (2014) points out that effects may depend on the technological sophistication and competition levels in developed and developing host countries. For example, a meta-study by Meyer and Sinnai (2009) suggests a U-shaped relationship wherein FDI spillovers are larger for countries below the minimum threshold level (poor country contexts with basically no competition) and above the maximum threshold level (rich country contexts with dynamic competition) of development. Between these threshold levels, FDI spillovers are smaller because of a “crowding-out” effect on local firms. However, any “crowding out” effects of FDI would only apply when investment operations are geared towards the domestic market of the host countries, leading the foreign firm to compete with local ones. This may not be the case of efficiency-seeking investment, where export-oriented foreign enterprises locate in a given country not to supply that market, but rather international ones.

Studies also have to distinguish between the knowledge and competition effects of foreign direct investment, as these can go in opposite directions. World Bank surveys of Czech and Latvian entrepreneurs conducted in 2003 provide evidence suggestive of all the type of externalities noted (Javorcik and Spatareanu 2005). They confirm the existence of knowledge transfer both through the demonstration effect and the movement of labor. They observe the competition effect, which in the short run may have an adverse effect on some firms. Moreover, the relative prevalence of the two effects differs

across countries, which could explain the lack of uniformity in the results obtained for different economies.

On a related note, Alfaro and Chen (2015), exploring a cross-country firm-level data set, show that a 10 percentage point increase in the probability of a new multinational entry raises the aggregate weighted domestic productivity by 1.6 percent across countries. They find that both market reallocation and knowledge spillover are significant sources of productivity gain. However, a substantial share of productivity gains are channeled through competition effects.

Other examples of intra-industry spillovers are also encouraging. Kee (2015) finds evidence for enhanced productivity among local firms that share a supplier with foreign firms. Görg and Strobl (2005) find productivity improving through labor movement spillovers, suggesting that firms which are run by owners who worked for multinationals in the same industry immediately prior to opening up their own firm have higher productivity levels than other firms. Keller and Yeaple (2009) show that technology spillovers arising from FDI could account for 14 percent of productivity growth in American manufacturing firms between 1987 and 1996.

### *B. FDI and exports*

FDI can provide the impetus for export sophistication, which is difficult for many developing countries seeking to leverage exports for growth. Swenson (2008) shows that the positive association between the presence of foreign affiliates and new export connections among private Chinese exporters may be driven by information spillovers. Using detailed Chinese trade statistics from 1997 to 2009, Chen and Swenson (2014) find that the presence of foreign affiliates in the same sector is associated with more and higher unit value trade transactions by Chinese firms.

More importantly, there is a vast literature documenting how many developing countries which used to depend on exports of commodities have managed to substantially increase the number of products exported, as well as the number of export destinations. Such countries have radically modified the composition of their exports by attracting, enabling, and retaining efficiency-seeking FDI. Further, case studies have shown that countries that have managed to upgrade and diversify their export base achieve higher growth rates and greater welfare gains than those that simply keep trying to expand the goods and services that have traditionally dominated their exports. The experiences of different countries such as China, the Czech Republic, Costa Rica, Malaysia, Mexico, the Philippines and Vietnam, among others, illustrate how efficiency-seeking FDI has been a key vehicle in achieving such objectives (Moran 2014). At the firm level, Freund and Pierola (2012) use data from 32 countries and demonstrate that individual firms matter for countries' trade volumes and sectoral trade patterns. These so-called "export superstars" have often entered the export market through foreign investment.

### *C. FDI and knowledge creation*

Data suggest that multinational enterprises play a major role in creating new knowledge through research and development (R&D) activities. In 2002, 700 firms—686 of which were multinational corporations<sup>2</sup>—accounted for 46 percent of global spending on R&D, and 69 percent of business R&D. Moreover, business R&D was not undertaken solely in the headquarters of multinational corporations. A survey of the world's top R&D investors found that the average respondent spent 28 percent of its 2003 R&D budget abroad, including in-house spending by foreign affiliates and extramural spending on R&D contracted to other countries (UNCTAD 2005).

### *D. FDI, wages and jobs*

Evidence points to a positive link between FDI and higher wages paid by multinational companies. Although the magnitude of observed differences varies, a large number of empirical studies find that foreign affiliates pay higher wages relative to domestic firms (Heyman, Sjöholm, and Tingvall 2007, and Hijzen and others 2013). A number of explanations have been suggested for this pattern; only a few are highlighted here. Higher wages may be a result of foreign firms “cherry picking” employees (Almeida 2007). Alternatively, they may result from a lack of local knowledge that prevents foreign firms from attracting good workers without paying a wage premium (Lipsey and Sjöholm 2004).

Wage effects can also accrue through bias in FDI toward higher skill levels. There is evidence, for instance, that manufacturing-related FDI in developing countries favors advanced industrial sectors, and that this bias has been growing. The ratio of FDI flows between higher and lower skill-intensive activities was roughly 5:1 in 1990-92, and about 14:1 in 2005-07 (Moran 2014). These disparities can have short- and long-term effects on average skill levels and wages, particularly in developing economies that manage to tap into middle and higher skill-intensive supply chains (Javorcik 2014).

Evidence regarding wage spillovers to domestic firms is mixed. Poole (2013) finds positive multinational wage spillovers through worker mobility. When workers leave multinationals and are rehired at domestic establishments, these workers' wages continue to increase. On the other hand, higher wages from foreign firms may reduce knowledge spillovers arising from labor turnover (Fosfuri, Motta, and Ronde 2001).

Although some evidence suggests that FDI can bring better jobs to host countries, an important question for policy makers is whether FDI creates additional jobs. Research in this area is very limited. However, Lipsey, Sjöholm and Sun (2010) offer views in the context of foreign takeovers. Using a large panel of plants between 1975 and 2005, they find that foreign-owned Indonesian manufacturing plants grew more rapidly in terms of employment than plants that remained under Indonesian ownership during the same period. Additionally, a foreign takeover of a domestically-owned plant brings, on average, a large immediate expansion of employment. By contrast, there are no significant effects on employment in shifts from foreign to domestic ownership. Most of the employment effects of foreign takeovers took place in

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<sup>2</sup> This number is out of an approximate total of 70,000 multinational corporations. Therefore, these data might significantly underestimate total R&D spending by multinational corporations.

the year of the takeover, and there was relatively little growth in the following years. Given that foreign firms were usually larger in size, the absolute additions to employment in the years after takeover were larger than they would have been under continued local ownership.

### III. How does investment policy affect the attraction of foreign direct investment?

#### A. Investment attraction

In recent decades, in an effort to lure and maximize the benefits of FDI, governments around the world have undertaken significant investment promotion efforts, making extensive use of tax and financial incentives. These have involved mainly corporate tax reductions, tax holidays, investment tax credits, export incentives, customs duty exemptions, grants and other subsidies seeking to attract foreign investors, namely *locational incentives*. In other cases, governments have sought to achieve certain goals through *behavioral incentives*, such as fostering job growth, technology transfers, exports, linkages, and skills development.

The literature supports the case for targeted investment promotion. More nuanced research is needed about locational and behavioral incentives for FDI because of the scarcity of econometric assessments in this area. In addition, limited analysis has been conducted distinguishing how incentives may affect investors' locational and behavioral decisions about different types of investments, such as natural resource-seeking FDI, market-seeking FDI, efficiency-seeking FDI and strategic asset-seeking FDI. Moreover, most studies address tax incentives but not financial ones, which are also significant. Table 2 summarizes the findings from the literature.

Table 2. Effects of investment promotion and incentives on foreign direct investment and other variables

Country	Study	Investment Attraction Measure Studied	Effect
<b>Investment promotion</b>			
Cross-country	Harding and Javorcik (2011a)	Targeted investment promotion	Targeted sectors receive twice as much American FDI as non-targeted sectors. This effect is larger in countries with less effective governments and higher corruption.
Cross-country	Harding and Javorcik (2011b)	Targeted investment promotion	Targeted sectors have 11 percent higher unit values of exported products than other sectors.
Cross-country	Harding and Javorcik (2013)	A one unit increase in the World Bank's Global Investment Promotion Benchmarking (GIPB) score, which measures the quality of investment facilitation services by investment promotion agencies	It results in a 1.5 percent increase in FDI inflows.
<b>Locational incentives</b>			

<b>Cross-country</b>	De Mooij and Ederveen (2008)	A 1 percentage point increase in the host country's corporate tax rate	On average, it decreases FDI by 3.3 percent. A 4.4 standard deviation suggests large variation across studies.
<b>Cross-country</b>	Klemm and Van Parys (2012)	A 10 percentage point increase in the host country's corporate income tax rate	It lowers FDI by 0.31-0.32 percentage points of gross domestic product (GDP).
<b>Cross-country</b>	Desai, Foley, and Hines (2002)	A 10 percent increase in the host country's income tax	It results in a 5 percent lower FDI from U.S. multinational companies, and a 0.9 percent lower return on assets.
<b>Cross-country</b>	James (2013)	A reduction in marginal effective tax rates from 40 to 20 percent	It raises FDI by 1 percent of GDP for countries ranked in the bottom half of <i>Doing Business</i> indicators, and has an 8 times greater effect on countries in the top half.
<b>United Kingdom</b>	Criscuolo and others (2012)	A 10 percent increase in investment subsidies offered to manufacturing firms under the Regional Selective Assistance program	It results in a 7 percent increase in employment through both intensive (3.6 percent) and extensive (net entry) margins.
<b>United Kingdom</b>	Devereux, Griffith, and Simpson (2007)	A £100,000 increase in the expected grant offered to manufacturing firms under the Regional Selective Assistance program	It results in a 1 percent increase in the probability of a greenfield investment, for example, from 1 percent to 1.01 percent. An increase of 10 foreign plants in an area increases the probability of another location investment by 1.032 percent.
<b>United Kingdom</b>	Wren and Jones (2011)	Every £25 million in grants offered under the Regional Selective Assistance program	It results in a one percentage-point increase in the regional share of FDI or, equivalently, six additional inward FDI projects assessed to generate an average of 150 jobs or £4.12 million.
<b>United States</b>	Azémur and Desbordes (2010)	A 10 percentage point drop in the host country's average effective tax rate	It results in 7.7 percent higher sales of U.S. multinational affiliates in the United States, and a 1.2 percent increase in sales of local affiliates.
<b>Behavioral incentives</b>			
<b>German municipalities</b>	Becker, Egger, Merlo (2012)	A 1 percent reduction of the municipal business tax rate levied on profits (equivalent to a decline of about 0.14 percentage points)	It results in a 0.45 percent increase in the number of legally independent foreign-owned firms. The average municipality would have to reduce its business tax rate by about 2.2 percentage points (or 15 percent) from its average level to attract one foreign multinational enterprise.
<b>Texas</b>	Freedman (2013)	Provision of location-based incentives in Empowerment Zones (defined as census block groups with 18-22 percent poverty rates)	It results in a 1–2 percent yearly increase in resident employment. The effects are concentrated in jobs paying less than \$40,000 per year in the construction, manufacturing, retail trade, and wholesale trade industries.
<b>United Kingdom</b>	Durantón, Gobillon and Overman (2011)	Increase in local property taxation	It results in a decrease in manufacturing employment at an elasticity coefficient estimated at about -1. There is no effect on entry of new establishments.
<b>United States</b>	Hanson and Rohlin (2011)	Provision of location-based tax incentives (wage credit) in Empowerment Zones (defined as urban areas with at least 20 percent of the population living in poverty, and a 6.3 percent	It results in a 0.16 -0.30 percentage point increase in the share of retail and service sector establishments in the designated area, and a 0.16-0.19 percentage point decrease in the share of establishments in the

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*a. Targeted investment promotion*

A well-organized, strategically pro-active investment promotion agency can provide an important boost to FDI. Using data from 124 countries, Harding and Javorcik (2011a) find that the presence of an investment promotion agency is correlated with higher FDI inflows, particularly in sectors targeted by the agency. Investment promotion agencies tend to have a positive impact in developing countries—but not industrial countries. In this context, they perform better in places with higher information asymmetries and more red tape, suggesting that the provision of professional information and services (compensating for deficiencies of bureaucracies) by investment promotion agencies can lead to greater FDI.

A rough cost-benefit analysis finds that targeted sectors in developing countries receive more than twice as much FDI as non-targeted sectors, and that the average investment promotion agency spends \$90,000 per sector targeted. Together these estimates suggest that, in certain circumstances, every dollar spent on investment promotion may increase FDI by \$189. Every additional job created by a foreign affiliate requires \$78 in investment promotion spending. These estimates should be interpreted with caution as they are not only very rough figures, but contingent on a series of variables that may not always be easily replicable. They do, however, suggest that investment promotion can be cost-effective. Another important additional caveat of the study is that it does not fully address the possibility of selection bias, namely that the sectors targeted by investment promotion agencies were initially chosen based on their higher potential for attracting FDI. However, the authors do conduct a number of important checks to minimize these risks.

Harding and Javorcik (2011b) use data about 156 countries from the World Bank's Global Investment Promotion Benchmarking (GIPB) series for the years 2006-12 to assess how the quality of investment promotion agencies affects FDI. Their analysis finds that countries with investment promotion agencies able to handle investor inquiries in a more professional way and with higher-quality websites tend to attract more FDI. A country with a GIPB quality score<sup>3</sup> of 60 percent received, on average, 25 percent more FDI than a country with a score of 45 percent. All else being equal, countries with agencies with the average GIPB score of the Latin America and the Caribbean region received 40 percent more FDI than did countries for which the GIPB score was the equivalent average for Sub-Saharan Africa.

Using a sample of 105 countries, Harding and Javorcik (2013) find that FDI targeting by investment promotion agencies can be used to attract efficiency-seeking FDI. It can also raise the quality of exports from the host economy. They observe increases in the unit values of exports from sectors considered priorities in efforts to attract FDI. These results suggest that host countries can use foreign investment to raise the quality of exports both in absolute terms, as well as in terms of bridging the distance to the frontier of higher quality.

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<sup>3</sup> The score is measured using the GIPB results obtained for GIPB 2006, GIPB 2009 and GIPB 2012.

Finally, Gómez-Mera and others (2015) analyze surveys of 713 investors, potential investors and non-investors from emerging economies (Brazil, India, South Africa, and the Republic of Korea). They suggest that investment promotion agencies appear to be a widely used and a helpful resource for investors once they have made the decision to enter a specific market. Almost 70 percent of firms with investment in developing countries reported having relied on the services provided by agencies upon deciding to invest. Key services they valued were the provision of information about procedures and regulations of doing business, as well as corporate taxation and incentives. Furthermore, investment promotion agency services tend to be more valuable for smaller and less productive firms, for which access to information is more costly. One concern revealed by the survey is that investment promotion agencies play only a marginal role in raising awareness of investment opportunities in developing countries. Less than 2 percent learned about such opportunities directly from agencies.

*b. Lures and caveats of investment incentives*

*Locational incentives.* In 2013, investment incentives accounted for 55 percent of the liberalization, promotion, and facilitation measures adopted by countries to attract FDI. Tax incentives constituted more than half of these measures (UNCTAD 2014). The type of incentives used vary between Organisation for Economic Co-operation and Development (OECD) and developing countries. Tax holidays are most prevalent in East Asia and the Pacific, Europe and Central Asia, Latin America and the Caribbean, and South Asia, and least prevalent in OECD countries (James 2013).

Research on locational tax incentives in developing countries has centered on an assessment of fiscal costs and their effectiveness as a determinant in attracting FDI. Studies have found that costs of locational tax incentives can be high. However, more importantly, their effectiveness tends to be offset by a bad investment climate in host countries. For example, Rwanda and Sierra Leone devote more than one-third of their tax revenues to investment incentives (James 2013). Yet FDI linking these countries with global value chains has been extremely limited due to many variables that negatively impact the investment environment.

Tax incentives are less effective under unattractive investment climate conditions, such as poor infrastructure, macroeconomic instability, and weak governance and markets. Investment climate advisory research (James 2013) shows that lowering the marginal effective tax rate from 40 to 20 percent raises FDI by 1 percent of GDP for countries ranked in the bottom half of the World Bank's *Doing Business* indicators. However, it has an eight times greater effect for countries in the top half. Investment climate conditions are one possible reason that some countries do much better when using fiscal incentives policy to attract investment.

Many studies of tax incentives have also focused on OECD countries. For example, a meta study by De Mooij and Ederveen (2008) found that, on average, a 1 percentage point increase in the tax rate reduced FDI by 3.3 percent. There is also a wide range of elasticity of tax effects on FDI. In this context, most studies find that higher tax rates (including effective average tax rates, effective marginal tax rates, and statutory tax rates) have a significant negative impact on FDI. Desai, Foley and Hines (2002) conclude that 10 percent higher corporate income tax rates are associated with 5 percent lower FDI by American-owned foreign



affiliates, and they have a 0.9 percent lower return on assets. Tax effects are particularly strong in Europe, where 10 percent higher tax rates are associated with 7.7 percent lower FDI and a 1.7 percent lower returns on assets. In developing countries, Klemm and Van Parys (2012) find that a 10 percentage point increase in corporate income tax rates lowers FDI by 0.31-0.32 percentage points of GDP. These numbers are small relative to those for OECD countries.

Further, the effects of tax incentives also seem to vary across types of FDI. Efficiency-seeking FDI—where foreign multinationals locate segments of their production chains in different countries in search of greater competitive production strategies—tends to be more responsive to tax incentives than other types of FDI. Azémar and Desbordes (2010) proxy FDI flows with sales by affiliates of multinational enterprises. They find that a 10 percentage point drop in a host country's average effective tax rate is associated with 7.7 percent higher sales by American multinational affiliates in the United States, in contrast to 1.2 percent higher sales by local affiliates. These findings suggest that tax incentives have a bigger effect on vertical, export-oriented FDI rather than on horizontal, market-seeking FDI.

Evidence regarding the role of financial incentives in attracting FDI is relatively limited. It focuses on sets of regional development grants—rather than individual instruments—in developed countries. Such programs have been in place in the European Union, the United States, and many other developed countries for decades, with considerable spending. Despite the ubiquity of these programs, microeconomic evidence on their effects is limited. The United Kingdom is an exception, and shows the complexity of evaluation—mainly due to data access and difficulty with a clear identification strategy—as well as the potential tradeoffs of such programs.

Devereux, Griffith, and Simpson (2007) analyze how grant offers under a major UK business support program, the Regional Selective Assistance scheme, affect location decisions for greenfield investments by foreign and domestic multi-plant groups in different counties. The authors match data on manufacturing plants and grants in the late 1980s and the 1990s. They find that grants are poor predictors of firm location choices relative to agglomeration effects, and that a £100,000 increase in the expected grant raises the probability of a greenfield locating in an assisted area by 1 percent. Further, firms are more attracted to industrially diversified locations, but seek proximity to other foreign-owned plants in the same industry. For example, an increase of 10 foreign plants increases the probability of location by 1.032 percent. These results imply that larger grant offers are needed to attract greenfield entrants to locations where industry agglomeration or natural resource benefits are weaker.

Wren and Jones (2011) address the problems of matching grant and plant data in the previous study. They analyze policy effects at the regional level over a longer period (1985-2005). They find that every £25 million in grants given by a UK region could increase the regional share of FDI by 1 percentage point or, equivalently, six additional inward FDI projects assessed to generate, on average, 150 jobs (equal to £4.12 million). This effect is highly significant but small relative to the UK's inward investment. The authors recommend further research using more disaggregated spatial data to confirm the results.

Criscuolo and others (2012) evaluate the same program with a focus on employment effects. However, they use more precise data on grant per firm. They find that a 10 percent increase in an investment subsidy causes about a 7 percent increase in employment, with about half of this arising from growth in existing plants and half from higher net entry. The scheme boosted employment by about 100,000 a year at a cost of around \$6,300 per job, which is relatively cheap. A possible downside was that the positive effects were confined to smaller firms, which tend to be less productive. The authors conclude that the program potentially lowers aggregate productivity.

Few other studies examine how investment incentives affect the behavior of multinational enterprises. Instead, they focus on the behavior of micro, small, and medium-size firms and the impact of matching grants or the effectiveness and substitutability of tax and financial incentives (such as R&D subsidies and tax exemptions) for large versus small firms. One exception concerns behavioral incentives for jobs. In this context, a literature review by Rahman (2014) summarizes recent econometric evidence:

- Becker and others (2012) analyze how business tax rates affect the number of multinational enterprises, employment, and fixed assets in 11,000 German municipalities. They find that most municipalities do not attract any foreign multinational enterprises. The average municipality would have to lower its business tax rate by about 15 percent— or 2.2 percentage points— to lure a foreign multinational enterprise. This translates into an increase in employment in foreign-owned firms of about 157 jobs and about €6.28 million in fixed assets. The authors estimate that the associated gains in taxes collected from the foreign multinational enterprises would be lower than the losses the average municipality encountered from foregone business tax revenues collected from national enterprises. The study concludes that only municipalities with generally favorable environments for firm location should use their tax rates to attract foreign multinational enterprises.
- Duranton, Gobillon and Overman (2011) analyze local property taxation effects using British manufacturing data. Correcting for unobserved establishment heterogeneity, unobserved, time-varying, site-specific effects and for the endogeneity of local taxation, they find that local taxation has a significant negative effect —with an elasticity of -1.024— on employment growth and no effect on business entry. The negative effect on employment occurs because of some combination of slowing firm growth and the selection effects of higher taxes.
- Hanson and Rohlin (2011) estimate the effects of the Empowerment Zone Program on employment across U.S. industries. The program's main component is a wage tax credit set at 20 percent of the first \$15,000 in wages paid, for a maximum credit of \$3,000 per employee living and working in the designated program area. Applications are accepted from areas where at least 20 percent of the population lives in poverty, and 6.3 percent are unemployed. The authors find that location-based tax incentives have heterogeneous effects across industries based on capital-labor substitutability in the production technology of different industries. In this regard, the short-term gains from the program seem to be offset by losses in other sectors.
- Freedman (2013) examines the effects of the Texas Empowerment Zone Program on local labor markets. Participating businesses within the Empowerment Zone or outside of it receive a combination of state and local benefits for up to five years, and can take several forms. Businesses

can apply for state sales and use tax refunds (tied to the amount of capital investment and number of jobs created) of up to \$1.25 million over five years for qualified spending on machinery and equipment, building materials, electricity and natural gas, and construction labor. Local communities must also offer incentives to designated projects, which can include tax abatements, utility rate reductions, public service expansion, tax increment financing, and expedited permitting, among others. Only census block groups that meet a minimum poverty criterion are eligible. The study finds that Empowerment Zone designation increases resident employment in block groups with poverty rates near 20 percent by 1–2 percent a year. The employment effects seem to be concentrated in jobs paying less than \$40,000 a year and are largely in the construction, manufacturing, retail, and wholesale trade industries.

As evident, most of the literature only examines developed country contexts. In addition, the specificity of findings to distinct objectives, industries, income groups, and geographic areas adds to the complexity of impact evaluation and the replicability of findings. Behavioral incentives are likely to be the top priority for future research.

Finally, one of the earlier works by Blomström and Kokko (2003) suggests that the use of investment incentives focusing exclusively on foreign firms is generally not an efficient way to raise national welfare because the positive externalities from FDI are not automatic. If the subsidies are larger than positive externalities from FDI, the host country will not only lose public revenue, but the incentives will also discriminate against local firms that may lose jobs and market shares. Further, the benefits are realized only if local firms have the ability and motivation to invest in absorbing foreign technologies and skills. As a result, incentives should be provided at equal terms to both foreign and domestic investment. They should focus on activities with the strongest spillover potential. These include linkages, education and R&D.

The scope for future research regarding incentives is large including, notably, a deepening understanding about the effectiveness of locational incentives in specific sectors as well as behavioral incentives and their role in global value chain participation and upgrading. However, to date, few studies evaluate incentives aimed at fostering the various benefits of FDI. Future studies could, for example, examine incentives for foreign-domestic partnerships — whether in the form of joint ventures or NEMs, or for linkages between FDI and suppliers.

### ***B. Moving beyond attraction: Entry reforms are essential, especially in services***

Despite the pace of economic globalization, liberalization of entry regimes for FDI can face strong protectionist resistance. In many countries, arguments for “national interests” and “strategically sensitive industries” are often used to justify FDI entry barriers for fear of competition and other protectionist motivations (WEF 2013).

Between 2000 and 2013, the share of FDI restrictions and excessive regulation in policy measures introduced to govern FDI jumped from 6 to 27 percent. Though almost half of these measures applied across the board, most industry-specific measures applied to services (UNCTAD 2014). In addition,

countries are taking a more creative approach to FDI regulation. Hufbauer and others (2013) analyze more than 100 local content requirements introduced in 2008-13. They find that several depart from the classic mandated purchases from domestic suppliers, and instead mix price and quantity signals to influence market outcomes.

Most of the literature confirms that entry barriers—including performance requirements affecting the establishment of investment—can significantly inhibit FDI and trade in services. Econometric evidence examines common ownership and procedural barriers to FDI, and the most recent research targets liberalization of services. Evidence on the effects of performance requirements is based on case studies. Table 3 summarizes study findings.

Table 3. Effects of investment entry on foreign direct investment and other variables

Country	Study	Investor Entry Measure Studied	Effect
Cross-country	Antras, Desai and Foley (2009)	Removal of foreign ownership restrictions	A 30-34 percent increase in U.S. multinational activity in countries with previously below-median investor protection.
Cross-country	Borchert, Gootiiz and Mattoo (2012)	Improved Services Trade Restrictiveness Index from restricted to open regime level	A \$2.2 billion higher value of services mergers and acquisitions FDI in a country and services sector over seven years.
Cross-country	Barattieri, Borchert and Mattoo (2014)	Improved Services Trade Restrictiveness Index in two countries with different industrial structures	A 5 times larger positive impact on services mergers and acquisitions FDI in a country with a 3.8 percent share of manufacturing in GDP than in one with a 20 percent share.
Cross-country	De la Medina Soto and Ghossein (2013)	Greater openness to foreign equity investment across 12 sector groups; fewer number of days to establish a foreign firm. Both as measured by the World Bank's FDI Regulations Database	Positive correlation with FDI flows per capita (2007-11 average). The Pearson correlation coefficient is 0.193; positive correlation with the percentage of firms identifying business licensing and permits as major constraints (as measured by the World Bank Enterprise Surveys). The Pearson correlation coefficient is 0.348.
Cross-country	Wagle (2011)	Increasing by 10 percent the standardized score for "FDI Arbitration"; increasing by 10 percent the standardized score for "Number of Procedures"	Increases FDI stock by at least 4 and 5 percent respectively.
India	Arnold and others (2012)	One standard deviation increase in the aggregate index of services liberalization	Increased productivity of domestic firms by 11.7 percent and of foreign enterprises by 13.2 percent.

*a. Ownership and procedural barriers across sectors*

De la Medina Soto and Ghossein (2013) analyze the 2012 World Bank Foreign Direct Investment Regulations' indicators for 103 economies. Although the study does not address causality, it finds a positive correlation between average openness to foreign equity investment across sectors and per capita FDI inflows. Further, they find a positive association between the number of days needed to establish a foreign firm and the percentage of firms identifying business licensing and permits as a major constraint.

Antras, Desai, and Foley (2009) find that U.S. multinational firms increased affiliate sales and investments in countries that liberalized ownership restrictions in the 1990s (such as Argentina in 1990, Colombia in 1992, and Mexico in 1990). The effect of entry liberalization, in particular the elimination of joint venture

requirements, is particularly important for countries with perceptions of relatively lower levels of investor protection and low private credit, as greater ownership would allow foreign firms to better control and protect their assets and technologies.

Wagle (2011) analyzes the 2010 World Bank Foreign Direct Investment Regulations' indicators for 87 economies. The study finds that fewer pre- and post-incorporation procedural steps required to establish wholly foreign-owned, domestically-incorporated companies and fewer restrictions to the FDI arbitration process coupled with improved judicial assistance, are associated with higher FDI stocks. Interestingly, in this study, restrictions on equity ownership across sectors are not a significant determinant of FDI, and the author suggests that de facto implementation of laws matters more to investors.

Arnold and others (2012) find that the liberalization of India's services sectors in the 1990s significantly contributed to the productivity increase of foreign and domestic manufacturing firms. The authors construct a Services Policy Reform Index to assess the extent of allowed private (including foreign) ownership as well as operational freedom of service providers in the banking, telecommunications, insurance and transport sectors. Using panel data for about 4,000 Indian firms from 1993 to 2005, they find that a one standard deviation increase in the aggregate index of services liberalization resulted in a productivity increase of 11.7 percent for domestic firms and 13.2 percent for foreign enterprises.

#### *b. Services Trade Restrictiveness Database*

The World Bank's Services Trade Restrictions Database covers 103 countries and five major services sectors (financial, telecommunications, retail, transportation, and professional). It offers several stylized facts about global trade policy patterns in services, including:

- Numerous second-generation restrictions are in place on entry, ownership, and operations, even though public monopolies are now rare and few services markets are completely closed.
- A high degree of *de jure* openness does not always imply *de facto* openness, and market access is often unpredictable. Regulatory discretion is accentuated by a lack of accountability in providing reasons for rejecting a license application, or by the fact that foreign providers do not have the right to appeal regulatory decisions.
- Though certain regions are more restrictive than others, the relative openness across sectors tends to be similar across regions. In particular, professional services and (to a certain extent) transportation remain bastions of protectionism in high-income and developing countries alike, whereas retail, telecommunications, and even finance tend to be relatively open.

Using this database, Borchert, Gootiiz, and Mattoo (2012) match FDI flow data with information on services policy restrictions for 93 destination countries and multiple sectors. They find that restrictions on foreign acquisitions, discrimination in licensing, restrictions on the repatriation of earnings, and inadequate legal resources to appeal decisions significantly deter investment. They also observe that the average value of merger and acquisition inflows is about \$2.2 billion less in countries with high Services Trade Restrictiveness scores than in countries with open policy regimes.

Further, Barattieri, Bochart, and Mattoo (2014) find that policies that seem to matter the most to mergers and acquisitions are restrictions on setting up branches, rules on the nationality of employees, and lack of transparency in license denials. Their study provides intriguing evidence that policy effectiveness is state-dependent. Specifically, large shares of manufacturing and services in GDP seem to allow host countries to maintain more restrictive regimes without deterring mergers and acquisitions in services.

This effect might be sizeable. The authors estimate that in Botswana the same liberalization policy lowering the Services Trade Restrictiveness Index would have an impact about five times as large as in Vietnam—which has a larger share of manufacturing in GDP—in terms of both the probability and number of merger and acquisition deals. Alternatively, the same policy restriction would have much larger negative effects in Botswana than in Vietnam. These results might help explain why policy restrictions have inhibited services investment less in the industrializing economies of Southeast Asia than in other regions.

Such research has multiple implications. First, there seems to be a strong case for easing restrictions on FDI, including for liberalization of services which, among other benefits, generates significant positive spillovers to the manufacturing sector (discussed in section II). Second, eliminating restrictions on services can have different effects on FDI, and evidence suggests that countries' industrial structure matters quite a lot. Third, there might be spillover effects between FDI policies toward services and manufacturing—given that FDI in services seems to follow FDI in manufacturing. However, the extent to which these are interdependent is subject to further research.

Other remaining questions include whether policy effectiveness might also depend on other factors, such as the orientation of FDI. For example, market-seeking investors looking to supply established local manufacturers might have stronger incentives to enter a country—even in the presence of restrictive policies—than export-oriented service providers seeking cost efficiency or specialized local skills, as they can choose from a wider set of investment locations. Other considerations might apply to investors acquiring service providers as strategic assets with the goal of diversifying their international portfolios. Investigating these aspects would be useful because countries might prefer to target different types of services.

### *C. Investment retention: The importance of investor confidence*

Investor concerns about government conduct are at the top of corporate agendas. The 2014 Political Risk Survey by the World Bank Group's Multilateral Investment Guarantee Agency (MIGA) finds that investors from industrial and developing countries continue to rank political risk as one of the main constraints to foreign investment (MIGA 2014). Of 459 senior executives interviewed, 41 reported the cancellation of investment plans or withdrawal of existing investment due to adverse regulatory changes, 27 due to breach of contract, and 26 due to restrictions on currency transfer in the year preceding July 2013. Moreover, concerns about political risk are increasing. Though 47 percent of investors planned to increase FDI, 37 percent intended to neither increase nor decrease investments in the year following July 2013—compared with 70 percent and 15 percent, respectively, in the years before. Investment retention is

particularly important for developing countries, where about half of FDI earnings remain as reinvestments (UNCTAD 2013).

Political risk also affects investments from emerging markets. In a survey of 713 investors, potential investors and non-investors from Brazil, India, South Africa, and Korea, Gómez-Mera and others (2015) find that while only 4.8 percent of investors identified political risk as a top investment consideration, potential investors and non-investors are clearly not indifferent to it as these numbers increased to 8.6 and 16.4 percent respectively. Almost half of non-investors ranked political risk as one of the two main location factors considered in investment decisions. Political stability and transparency are far more important than concerns about elections, corruption control and other business environment factors—emphasizing investors’ strong preference for predictability and certainty in regulations. Interestingly, the survey also shows that more export-oriented companies, and those from India and Korea, are more risk-averse. This is to be expected considering that these firms are often part of international production networks and are subject to greater costs of unexpected regulatory changes disrupting just-in-time business processes.

Governments alleviate political risk in different ways. International Investment Agreements (IIAs) have been studied the most and are the focus of this paper. To the extent that international investment agreements protect investors against some key political risks— such as expropriation— and typically provide for *de jure* enforcement of these provisions, they are considered mitigation instruments for political risk. IIAs, a category that comprises both bilateral investment agreements and preferential trade agreements with investment provisions,<sup>4</sup> are also becoming more common, reaching about 3,240 in 2013 (UNCTAD 2014).<sup>5</sup>

#### *a. International Investment Agreements*

Abundant evidence has accumulated regarding the effects of IIAs in recent years. Sauvant and Sachs (2009) compiled a list of studies investigating the effectiveness of bilateral investment agreements in attracting investment and found very different conclusions. For example, Yackee (2009) considers such agreements signed between the top 18 FDI outflow countries and the rest of the world, and finds that the agreements do not affect receipts of FDI. The author finds that many factors could explain the mixed evidence, including endogeneity issues. For example, do IIAs increase FDI, or are they signed because of existing inflows? Other possible factors include differences in the type and strength of investment provisions, problems in disentangling effects relative to other liberalization reforms, and data quality and availability for larger samples.

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<sup>4</sup> Key investor protection guarantees include: protection against expropriation, fair and equitable treatment, most-favored-nation treatment and national treatment, dispute resolution, and guarantees on free conversion and transfer of currency and capital.

<sup>5</sup> While this is a positive sign of continued interest in FDI attraction agendas, scholars also point out that the multiple disciplines covered by international investment agreements bring coordination, transparency, and governance challenges to investors and policymakers. See WEF (2013) for a discussion of this topic.

Most new evidence tries to address one or more of these concerns, and suggests that IIAs can be important mechanisms in attracting investors. Table 4 summarizes these studies. In this regard, the modalities that maximize their effects—including effects on the prevention of FDI outflows from host countries—remain unclear.

Table 4. Effects of bilateral investment agreements, and preferential trade agreements on foreign direct investment and other variables

Country	Study	Investor Protection Measure Studied	Effect
Cross-country	Berger and others (2013)	Ratification of bilateral investment agreements and preferential trade agreements with all source countries (83 developing host countries and 28 source countries)	In the short term, a host country could increase its share of FDI flows from all source countries by 17 percent through bilateral agreements and by 23 percent through preferential trade agreements. The long-term effect increases to 37 percent for bilateral agreements and to 50 percent for preferential trade agreements. The long-term impact of switching from preferential trade agreements without national treatment provisions to agreements with them (with all source countries) is about 29 percent.
Cross-country	Busse, Koniger, and Nunnenkamp (2010)	Ratification of bilateral investment agreements (83 developing host countries and 28 source countries)	A nearly 25 percent increase in host country share of FDI flows from all source countries. The long-term effect is about 31 percent.
Cross-country	Buthe and Milner (2008)	Ratification of a preferential trade agreement; moving from a preferential trade agreement without an investment clause to one with a strict investment clause; moving from an agreement without any dispute settlement mechanism to one with such a mechanism (122 developing and transition economies)	It increases FDI by an equivalent of 0.274 percent of GDP. No effect for signed preferential trade agreements; increases FDI by an equivalent of 0.316 percent of GDP; increases FDI by an equivalent of 0.252 percent of GDP, respectively. All results reported over five-year period.
Cross-country	Colen, Persyn, and Guariso (2014)	Ratification of a bilateral investment agreements (13 countries in the former Soviet Union and Central and Eastern Europe)	It increases the stock of FDI by 1- 2 percent. Investments are highest for utilities and real estate and, to a lesser extent, banking and mining. No effect was found for manufacturing and services.
Cross-country	Egger and Merlo (2012)	Ratification of a bilateral investment agreement (Germany and 86 host countries)	A 12.6 percent increase in the number of affiliates, a 45 percent increase in FDI flows, a 25 percent increase in employment, and a 49 percent increase in assets. The FDI generated by signing and ratifying a bilateral agreement averages about €5 million per firm and €130 million per host country.
Cross-country	Haftel (2008)	Ratification of a bilateral investment agreement relative to its signing (U.S. and 120 host countries)	FDI to host country increases from 0.07 to 0.24 percent of GDP. There are no effects for signed bilateral agreements.
Cross-country	Leshner and Miroudot (2006)	Ratification of a preferential trade agreement with substantive investment provisions (177 countries)	It is associated with a 57.1 percent increase in FDI flows and a 20.8 percent increase in exports.
Cross-country	Paniagua and Myburgh (forthcoming)	Ratification of New York International Convention on the Recognition and Enforcement of Foreign Arbitral awards	It increases host country greenfield FDI flows by an average of 40 percent.
Cross-country	Yackee (2009)	Signing of bilateral investment agreements between the top 18 FDI source countries and the rest of the world	There was no effect on FDI flows.

Busse, Koniger, and Nunnenkamp (2010) use extensive FDI flow data from the United Nations Conference on Trade and Development (UNCTAD) for the years 1978-2004. They find that bilateral investment agreements have a particularly strong impact in developing countries. The authors estimate that



concluding bilateral investment agreements with all source countries would raise a host country's share of FDI by nearly 25 percent. Egger and Merlo (2012), using data on the foreign activity of German multinational firms, find that signing and ratifying bilateral investment agreements raises the number of firms in the average host country and year by 26 plants. The FDI generated by signing and ratifying a bilateral agreement is about €5 million per firm and, hence, €130 million per host country in a year.

Colen, Persyn, and Guariso (2014) analyze the heterogeneous effects of bilateral investment agreements across sectors. They use FDI stocks for 13 countries in the former Soviet Union and Central and Eastern Europe. They find that one additional bilateral agreement increases FDI stock by 1-2 percent. However, their results show large differences across sectors: for instance, bilateral investment agreements appear particularly successful in the utilities and real estate sectors, and to a lesser extent in banking and mining. By contrast, no significant effect is found in manufacturing and services. Given the limited development effects in the most affected sectors, the authors suggest further examination of sector effects and policies that could better stimulate economic development.

The status of IIAs also seems to matter. Haftel (2010) uses a comprehensive dataset on U.S. investment in developing countries and finds that only ratified bilateral agreements have a statistically significant effect on FDI. The study suggests that credible commitments subsume signaling and render signaling redundant. A jointly ratified bilateral investment agreement increases U.S. foreign investment in host countries from 0.07 to 0.24 percent of GDP. In contrast, signed bilateral agreements that are not in force fail to increase FDI flows.

New evidence shows the importance of specific investment provisions included in international investment agreements. Berger, Nunnenkamp, and Roy (2013) examine FDI flows for a large sample of developing countries in the years 1978–2004. They find that FDI reacts most positively to liberal admission rules, particularly national treatment provisions in the pre-establishment phase. Investor-state dispute settlement provisions appear to play a minor role. However, the authors note that this may be because of the smaller treaty sample and shorter timespan available for analyzing investor-state dispute settlement effects.

A comparison of bilateral investment and preferential trade agreements finds that the inclusion of investment provisions in preferential trade agreements can magnify effects on FDI. Buthe and Milner (2014) analyze FDI in 122 developing countries over the years 1971-2007. They find that more FDI is induced by ratified preferential trade agreements, which make commitments binding and more credible. Institutional differences also matter: for instance, preferential trade agreements with investment clauses or dispute settlement mechanisms lead to more FDI than those without such provisions. Furthermore, agreements with stricter clauses lead to even more investment.

Berger and others (2013) find that failing to include investment provisions in preferential trade agreements might not affect FDI, or even discourage it. Leshner and Miroudot (2006) find that, on their own, bilateral investment treaties do not affect investment flows. However, they show that investment provisions in preferential trade agreements are positively associated with trade and, to an even greater extent, FDI. Specifically, the existence of investment provisions in preferential trade agreements is

associated with 19 percent more exports and 35-45 percent more FDI flows. Though the study does not address potential endogeneity, it offers one of the most comprehensive analyses of investment provisions in preferential trade agreements.

Survey evidence by Gómez-Mera and others (2015) suggests that international economic agreements can facilitate cross-border investments. The authors find that 70 percent of investors from emerging economies primarily seek new markets. At the same time, they are deterred by physical and cultural distance between markets, a force particularly important for the services sector where a significant number of investors demonstrates high sensitivity to distance. For example, in the case of Brazil, authors find that investment sensitivity to distance for the services sectors is almost 80 percent greater than for manufacturers. Brazilian, but also South African investors are therefore more prone to invest within their prospective regions. This is in contrast to Indian and Korean investors who are more internationalized.

Experimental data drawn from the survey suggests that firms prefer to invest in countries that are members to trade and investment agreements because they allow them to benefit from lower barriers of access to other countries' markets and to export back to the home country. Bilateral investment treaties partly offset the costs associated with investing in distance or unfamiliar markets by contributing to regulatory clarity and stability. Trade agreements, in turn, increase the perceived attractiveness of a host country by providing firms with opportunities to access new markets and reduce the costs of trade. The authors conclude that the market-enhancing effects of these agreements appear to be more important than the signaling effects, or the commitment of governments to avoid predatory behavior.

Recent work by Paniagua and Myburgh (forthcoming) finds that the adoption of the New York International Convention on the Recognition and Enforcement of Foreign Arbitral Awards has a positive effect on net FDI inflows due to its role in enabling effective contract enforcement. The authors suggest that host countries that adopt the convention increase their FDI inflows by an average of 40 percent. The effects are larger for the size of investment than for their number. Indeed, for larger investments, the impact is twice that for smaller investments, as well as for countries with weaker institutions. In this regard, improving the quality of international commercial arbitration could also help multinational enterprises to expand through contracts with local partners and suppliers—a highly relevant consideration for global value chains.

These studies lead to several insights into research and policy. First, IIAs, if ratified, may increase FDI to participating countries. Second, certain investment provisions, particularly those ensuring market access to investors, are crucial. Third, the effects seem to vary by sector. However, future research should examine the dynamics—including in the context of global value chains. Fourth, including investment provisions in trade agreements can magnify the effects of such treaties, but the effectiveness of certain provisions—such as of the investor-state dispute settlement—requires further research. Finally, with the dramatic recent rise in investor-state disputes over international investment agreements (UNCTAD 2014), completely new research is needed on alternative investor-state dispute resolution policies and mechanisms. Such mechanisms have already produced positive results in several countries—most notably in the Republic of Korea— and could significantly affect both FDI attraction and retention. They could also

eliminate the public and private costs of international arbitration.

Finally, research could also examine more specific investment climate factors, including investor protection, affecting the expansion of NEMs. The literature in this field is nascent and focuses on the role of “cost” and “control” considerations of multinational companies throughout different parts of supply chains. Antras (2015) assesses US firms’ decisions to “make or buy” intermediate and final products and finds that they appear to rely less on offshoring (versus FDI intra-trade) when trade costs (and particularly freight costs) are high. Variation in contract enforcement across countries also appears to be an important determinant of the observed variation in the propensity of U.S. firms to move offshore, in particular in sectors and products that are more complex and therefore contract dependent. These findings suggest that lowering trade barriers and strengthening contractual enforcement could foster NEMs. However, more work could extend this new area of research to study specific channels of increasing contractual security, as well as to account for the variation and complexity of the relationships involved in non-equity modes of investment.

#### *D. Promoting linkages between FDI and domestic businesses*

##### *a. General considerations regarding linkages*

The literature shows that FDI can trigger multiple benefits in host countries. However, a better understanding of the specific contexts and transmission channels through which such benefits work is an essential precondition for policy-making. A key transmission channel is the linkage between FDI and domestic production.

Farole and Winkler (2012) develop a useful conceptual framework identifying three broad sets of mediating factors for FDI linkages:

- At the *domestic firm level*, studies identify R&D, human capital, technology gaps, firm size, export behavior, firm location, and sectoral competition. It is worthwhile noting that absorptive capacity of domestic firms and technology gaps vis-à-vis international levels are one of the most important mediating factors identified in studies (see for example Girma and Görg 2007; Blalock and Gertler 2009; and Farole Winkler 2012).
- At the *foreign investor level*, mediating factors include FDI motives, sourcing strategies, levels of foreign ownership, FDI home country and technology intensity.
- At the *host country and institutional level*, various factors can influence foreign and domestic firm characteristics as well as the transmission channels through which knowledge is transmitted from foreign to domestic firms. Such factors include a country’s income per capita, learning and innovation infrastructure, trade policy, business and investment climate, access to finance, and labor market regulations.

The central argument of this paper is that a stronger focus on investor characteristics and FDI motives could help identify the potential and unique impacts of different types of FDI. Indeed, this should be taken into account when designing impact assessments, as opposed to lumping together different kinds of FDI

into a single investment category presuming uniform behavior and objectives — an approach used by most prior studies.

A few recent econometric studies are a right step in this direction. Farole and Winkler (2014) suggest that spillovers simultaneously depend on the three sets of mediating factors described above (from Farole and Winkler 2012). Further, the authors argue that while absorptive capacity and host country characteristics play the biggest roles in determining spillovers, FDI characteristics initially determine the ease for achieving potential spillovers. Using a cross-sectional analysis of 25,000 manufacturing firms and survey evidence from selected countries and sectors, they find that in both cases, in the short term, market-seeking FDI is more likely than efficiency- and resource-seeking FDI to develop linkages with suppliers and customers. Market-seeking foreign investors tend to be more forward integrated and have a greater need for local management. They are also more likely to source from local markets and to provide assistance to suppliers than are efficiency- or resource-seeking investors— with resource-seeking investors doing the least local sourcing. In the short-term, efficiency-seeking foreign investors appear to be less integrated with the local economy thus far. This trend may stem from the fact that efficiency-seeking FDI tends to focus on relatively more sophisticated production of goods and services. It also requires higher quality standards as its output is geared to highly competitive international markets. Thus, although this type of FDI may have the greatest potential in terms of value-added spillovers in the long term, in the short term backward linkages may be more difficult to obtain as suppliers in host countries often lack the capacity to supply the quantity and quality of inputs required by foreign investors.

Sánchez-Martín, De Piniés, and Antoine (2015) analyze the determinants of backward linkages from FDI for 3,500 foreign subsidiaries worldwide. They confirm that, in the short-term, export-oriented FDI tends to generate fewer backward linkages than market-seeking FDI. Further, they suggest that this factor explains the low level of backward linkages in many service-exporting Caribbean Islands. The authors also find significant effects for the size of the economy, that is, a positive relationship between economic size and linkages due to availability of local suppliers with sufficient quality and capacity to meet the demands of multinationals. Certain sectors, such as the food, wood, furniture, and automobile sectors create more linkages than garments, electronics, and some services. Finally, foreign owned affiliates with foreign-licensed technology tend to develop less backward linkages with local companies than other foreign affiliates, possibly because they may have already identified international suppliers to serve their specific production needs or because local firms do not have sufficient capacity or quality to supply technologically complex inputs.

Further, Farole and Winkler (2014) and Sánchez-Martín, De Piniés, and Antoine (2015) find that while joint ventures are more likely to generate spillovers than totally foreign-owned firms, not all types of FDI develop joint ventures. Farole and Winkler find that market-seeking investors are far more likely to seek joint ventures than are export-oriented ones, which tend to strongly prefer 100 percent ownership. More research and knowledge is needed to fully understand these behaviors across sectors and types of joint contracts, along with the identification of appropriate policy measures.

From these studies, it is not possible to conclude, however, that export-oriented firms do not tend to generate linkages and spillovers. Piermartini and Rubínová (2014) use industry-level R&D and patent data in 29 countries for the period of 2000-2008. They find that greater participation in supply chains leads to greater transmission of knowledge through effects of foreign R&D spending on patent applications in host countries. The effects increase with the intensity of production network links between the sender and the recipient country. The elasticity of home country patenting with respect to foreign R&D is 0.0042 percent for most intensive production links. For example, if the United States doubled its R&D in transport equipment, the number of innovations in the sector in Canada would increase by 0.4 percent. The elasticity, however, declines rapidly with weaker supply chains. Additionally, mere imports or export-type platforms do not facilitate such spillovers. They only occur when a country is fully integrated in a global value chain network, meaning cases when a country offshores the production of certain components to re-import them back.

To conclude, the FDI typology seems to be quite relevant for a better understanding of spillover potential. It could therefore be applied more in research, and developed further to account for the specific characteristics within the broader FDI types. For example, not all efficiency-seeking investment will have the same effects on productivity, innovation, jobs quantity or quality, as was shown by Piermartini and Rubínová (2014). Equally, there is a substantial variation in market-seeking investment, which can generate many jobs and linkages. However, its potential to foster value-added in the long-term seems to vary. The experience of some countries shows that the transition from market- to efficiency-seeking investment can happen naturally over time as a part of multinational companies' expansion strategies. For host countries' FDI policies, it is important then to distinguish between market-seeking FDI that offers the potential to grow into becoming an efficiency-seeking, supply-chain enhancing operation— and market-seeking FDI that does not. Equally important will be to build local capacity to facilitate the transition to higher value-added segments of the value chain. All of these issues are areas for future research.

#### *b. Local content performance requirements*

As part of their policies to “promote” linkages, developed and developing countries have for decades imposed performance requirements on foreign and sometimes domestic investors in an effort to promote local industries, jobs, and/or exports. Performance requirements require investors to meet certain goals with respect to their operations in the host country.<sup>6</sup> They have been used even though they are generally prohibited by World Trade Organization (WTO) agreements. For example, the General Agreement on Tariffs and Trade, Trade Related Investment Measures, and Agreement on Subsidies and Countervailing Measures prohibit requirements for trade in goods because they violate the national treatment principle and distort trade flows. The General Agreement on Trade in Services has a similar but less stringent regime

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<sup>6</sup> Performance requirements either condition an investor's ability to formally start a business or to receive an investment incentive in the host country. Typical requirements include the use of a certain percentage of local inputs (local content requirements), the conditioning of imports on export volumes (trade balancing requirements), or requiring direct or indirect transfer of know-how to domestic firms (see UNCTAD 2007 for more examples).

for trade in services, as regulations follow sector-specific liberalization commitments.

The use of local content requirements in particular has increased in the wake of protectionism triggered by the global financial crisis. As a subcategory of performance requirements, local content requirements typically regulate the minimum amount of local goods and services used in production by foreign firms. These requirements can take several forms, including local content requirements for goods and services; tax, tariff, and price concessions conditioned on local procurement; import licensing procedures designed to encourage domestic purchases of certain products; and certain lines of business that can be conducted only by domestic firms (Hufbauer and others 2013).

The international debate on the appropriateness and effectiveness of local content performance requirements has been dominated by political economy concerns rather than by economic facts. Case studies suggest that the effects of local content performance requirements on trade, investment, jobs, and business efficiency are often at odds with host countries' development goals, including participation in global value chains by restricting access to intermediate inputs. A big challenge in drawing conclusions is the variety of policy instruments applied, as well as the almost complete lack of econometric evidence. Thus, these measures should be subjected to more research.

UNCTAD (2007) finds that local content performance requirements— and also other performance requirements, such as trade balancing, and export requirements—have had largely negative effects in Argentina, Ethiopia, Pakistan, the Philippines, and Vietnam, especially in the automotive industry. Indeed, they can undermine the long-term competitiveness of the sectors involved, as well as linkages to local firms.

Moran (1998, 2006, and 2011) investigates spillovers in the manufacturing sectors of several developing countries. The author suggests that local content performance requirements and others, such as joint venture requirements, generate technical, economic, managerial, and political economy problems for host countries.

Looking at China's experience with joint venture requirements, Long (2005) finds that their imposition hinders foreign affiliates from reaching the technological frontier in China, as in other emerging markets. Blonigen and Ma (2010) also find that foreign investors' share of exports by product category and foreign unit values relative to Chinese unit values have been increasing, not decreasing. Their data suggest that forced joint ventures with foreign firms may not have led to a greater catching-up phenomenon in output sophistication.

Hufbauer and others (2013) review 117 local content requirements introduced around the world between 2008 and 2013. They identify their adverse effects on trade, investment, and employment. The authors argue that in 2010, the requirements affected \$928 billion of trade in goods and services—5 percent of global trade—and lowered global trade by \$93 billion. Additional case study evidence shows the various detrimental effects of local content requirements in specific countries and sectors. For example, Canadian wind turbines, which were subject to local content requirements, cost about \$386 more to install per

kilowatt than American wind turbines. As a result the government of Ontario had to pay \$300 million more for installed electric capacity.

One way to assess the detrimental effects of local content requirements, specifically those mandating the local sourcing of goods, is to look at how countries' private sectors have actually benefited from more open regimes for product importation. Since local sourcing requirements by nature limit imports of inputs—which can be cheaper, of better quality and greater variety—looking at the missed opportunities from trade in such inputs will put a cost on such policies.

On this note, Rahardja and Varela (2013) examine the characteristics of firms that rely on imported intermediate inputs, and the role of these foreign intermediates in product quality upgrading and product diversification in the Indonesian manufacturing sector during 1998–2009. They find that users of imported inputs grow faster in terms of output, value added and employment; they are also more productive and pay higher wages than other firms.<sup>7</sup> The availability of imported inputs contributes to improved product quality. Finally, lower tariffs on inputs and increased usage of imported versions increase firms' product diversification processes.<sup>8</sup> In light of these results, the authors argue that facilitating imports of intermediate inputs is crucial to the performance of the most dynamic firms by allowing them to climb up the value chain.

Despite the heavy cost to investors and international competitors, many countries still impose local content requirements. China's wind industry policy, which included a range of heavy industrial policies, is a case in point. Kuntze and Moerenhout (2013) hypothesize that China's success in expanding wind energy was enabled by a number of concomitant factors, such as the large market for electricity and access to the Clean Development Mechanism. These provided substantial financial incentives to domestic investors and joint venture manufacturers. Importantly, the size of the market still made it profitable for foreign wind turbine manufacturers, such as Gamesa, to train local firms and sustain operations despite losing relative market share. Thus, it would seem that for technology transfer, the policy mix was successful and did not remove foreign players from the market too soon.

Local content requirements can be more successful in some cases than in others. Hufbauer and others (2013) show that most countries using them have larger than average GDP, and are less reliant on foreign trade and investment as a share of GDP. They may have a wider array of local suppliers and be less mindful of the costs associated with local content requirements than smaller countries. Moran (2014) hypothesizes that in markets such as China, foreign investors can sometimes achieve the economies of scale that make domestic industries elsewhere uncompetitive. In a handful of high-profile industries—wind energy, high-speed rail, and automotive—multinational corporations can trade the deployment of cutting-edge or near-cutting-edge technology for market access.

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<sup>7</sup> For example, the real wage premium obtained by a worker in a firm that sources 10 percent of its inputs from abroad is about 3.7 percent.

<sup>8</sup> A reduction in input tariffs by 1 percentage point increases the probability of producing high-quality products by almost 1 percent. A 10 percentage point increase in the share of imported intermediates on total inputs is associated with an increase in varieties produced by 1.22 percent.

For most countries, local content requirements can be risky and costly, not least because of frequent shortfalls in their implementation, particularly in low-income countries (Hufbauer and others 2013). Highly restrictive requirements are usually counterproductive if not matched with local firm and worker capacity. Subsidies to ensure learning might help to bridge the technology gap, but their effectiveness is likely a market- and technology-specific matter requiring further research. See table 5.

Table 5. Effects of local content performance requirements

Country	Study	Investor Entry Measure Studied	Effect
China (case study)	Long (2005)	Introduction of joint venture requirements	Use of technology advanced by the parent firm: <ul style="list-style-type: none"> <li>•32 percent of wholly owned foreign affiliates</li> <li>•40 percent of majority foreign-owned affiliates</li> <li>•23 percent of 50/50-owned affiliates</li> <li>•6 percent of majority Chinese-owned affiliates.</li> </ul>
Cross-country (case study)	Hufbauer and others (2013)	Introduction of local content requirements	They affected \$928 billion of global trade in goods and services (5 percent of global trade) in 2010. The trade reduction estimate was \$93 billion.
Cross-country (case study)	UNCTAD (2007) and Moran (1998, 2006, 2011)	Introduction of various performance requirements	Long-term competitiveness challenges due to technical, economic, managerial, and political economy inefficiencies in manufacturing.

## IV. Conclusion

The literature provides a compelling case for host country efforts aimed at attracting, enabling the entry, retaining and linking FDI with the domestic economy. The benefits of FDI go well beyond providing additional capital, and include potential productivity improvements, export upgrading, knowledge generation, and wage increases. However, such potential benefits are not automatic. Policy interventions responding to the specific country and investment contexts may be required. There is also a strong case for building an investment climate to maximize these potential spillovers, as well as for increasing countries' competitiveness for FDI. At the same time, they need to bear in mind that different types of FDI can generate different economic, social and other benefits in the short and long-term.

The literature review has provided evidence about the multi-dimensional complexity of investment policy. Not only are there numerous variables that may affect the attraction, retention, linkages and other spillovers of FDI, but there are also different types of FDI. Each requires differentiated policy mixes in order to maximize potential benefits. A significant part of the literature analyzing FDI often tends to swing from an extremely case-specific focus —analyzing FDI experiences in one particular country into a single sector during a given period — to the other side of the spectrum by tending to lump together FDI analysis as if the latter was a homogenous phenomenon. Such duality makes it difficult for governments to distill lessons from existing evidence —often derived from different contexts— for purposes of policy making. Governments need frameworks simple enough to enable them to draw logical inferences and clearly organize and prioritize the multiple and complex variables affecting the maximization of benefits from different types of investment. However, policy makers also need frameworks sophisticated enough to differentiate between the various kinds of FDI, including potential challenges and benefits for development. There seems to be a gap in the investment policy literature bridging these two



requirements. This gap would be critical in helping governments from developing countries to devise a coherent set of policies to maximize the benefits of FDI.

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