
Introduction

The stage is set to launch a “second generation” of research on the impact of foreign direct investment (FDI) on host economies in the developing world. As documented in the pages that follow, this second generation is distinguished by research that is more careful, thorough, and sophisticated than earlier investigations. It identifies “first-generation” research that remains credible and builds on it but often reveals that there are serious and sometimes fatal flaws in these previous studies.

The results of this new wave of research have profound implications for developed- and developing-country policymakers, multilateral financial institutions, national aid donors, international labor organizations, civil society groups and nongovernmental organizations (NGOs), and the corporate social responsibility community.

FDI flows come in at least three—and probably four—separate forms: FDI in extractive industries, FDI in infrastructure, and FDI in manufacturing, plus the underresearched field of FDI in services. Each form presents such distinctive policy challenges for developing-country host authorities, and generates such diverse impacts on the developing host economy, as to undermine the usefulness of any research that does not disaggregate the FDI flows.

At least four quite different inquiries arise from even a first-glance examination of the question of whether FDI contributes to host-country development. First, does FDI in the extractive sector generate substantial government revenues that are managed in a fiscally sound manner (no “Dutch disease”) with reasonable transparency and lack of corruption (no “resource curse”)? Second, does FDI in infrastructure provide reliable electricity, water, and other services to businesses and households with appropriate sharing of foreign exchange and demand-fluctuation risk? Third, does FDI in manufacturing raise the

productivity of host-country economic activities, make the host competitive in new sectors, and generate externalities that benefit local firms and workers? And fourth, does FDI in services (as well as the nonservices sector) “crowd in” or “crowd out” indigenous investment, and which outcome is more beneficial for host-country development?

Despite the standalone importance of each of these lines of inquiry, investigations commonly referred to as “benchmark studies” of the impact of FDI on the host economy invariably use aggregated data combining all four categories for FDI flows and stocks, as do most other investigations. The casualty list is long: Balasubramanyam, Salisu, and Sapsford (1996); Borensztein, de Gregorio, and Lee (1998); Bosworth and Collins (1999); De Mello (1999); Haveman, Lei, and Netz (2001); Reisen and Soto (2001); Hermes and Lensink (2003); Choe (2003); Carkovic and Levine (2005); Blonigen and Wang (2005); and Lensink and Morrisey (2006).¹

The use in these studies of aggregate data is like asking whether or not the FDI tree produces fruit punch (apples, oranges, bananas, and pears)? Or, more to the point, using aggregate data is like trying to find the common relationship between the impact of FDI on the oil industry of Nigeria (where the outcome depends on policies related to the resource curse and Dutch disease), the impact of FDI in the electrical power industry of Indonesia (where the outcome depends on policies related to the mismatch between foreign currency obligations and local revenue), the impact of FDI in the electronics industry of Malaysia (where the outcome depends on policies related to backward linkages and vertical spillovers), and the impact of FDI by Wal-Mart in the retail service sector of Mexico (where the outcome depends on policies related to the crowd-in/crowd-out investment debate).

Similarly, efforts to model FDI as a homogenous phenomenon and test with data that combine diverse kinds of FDI have to be restructured. These studies include the foundational works of Helpman (1984), Carr, Markusen, and Venables (1998), and Feenstra (2004), all of whom appear to be character-

1. Balasubramanyam, Salisu, and Sapsford (1996) use data from the United Nations Convention on Trade and Development (UNCTAD) consisting of aggregate flows of FDI into individual host countries. Borensztein, de Gregorio, and Lee (1998) use data from the Organization for Economic Cooperation and Development (OECD) that tally gross FDI originated in OECD member countries into developing economies on a yearly basis. Bosworth and Collins (1999) use balance of payments data from the International Monetary Fund (IMF) that divide capital flows into aggregate FDI, portfolio investment, and other financial flows (mostly bank loans). De Mello (1999) and Haveman, Lei, and Netz (2001) also use the IMF’s aggregate FDI statistics. Reisen and Soto use gross FDI inflows from World Bank national accounts data. Hermes and Lensink (2003), Choe (2003), and Carkovic and Levine (2005) also use World Bank data on gross inflows. Blonigen and Wang (2010) use annual aggregate FDI flows, added together by decade, using the same inputs as Borensztein, de Gregorio, and Lee (1998). Lensink and Morrisey (2006) use both the OECD data used by Borensztein, de Gregorio, and Lee (1998) and World Bank data on the FDI/GDP ratio.

Table 1.1 FDI in developing countries
(billions of dollars)

Sector	Flows, 2005–07	Stock, 2007
Extractive sector	31	223
Manufacturing and assembly	114	917
Infrastructure	32	319

Notes: These figures do not include the large and amorphous foreign direct investment (FDI) in services, except electricity, gas, water, and telecommunication services (aggregated here within infrastructure).

Source: UNCTAD (2009, annex tables A.1.4 and A.1.6).

izing multinational enterprise activities as engaging solely in multiplant manufacturing FDI while subsequently using aggregate data to check their models.²

All three (or four) forms of FDI are large in absolute terms and relative to each other. The flow of FDI into the extractive sector and infrastructure is more than half as large as FDI into manufacturing and assembly, as is the stock (table 1.1). None of the three can be subsumed within another category, nor can the distinctiveness of each be ignored. Who would continue to honor results from a database of which one-third of the observations can easily be shown should be left out for the purposes of the study (with an even higher proportion of rejected observations if FDI in the entire service sector is included as part of the data universe)?

The idea that FDI has some generalized positive or negative impact on host-country growth does not make sense. More importantly, phrasing the question this way obscures what may be very different kinds of effects, and muddles what are very distinctive policy challenges.

To illustrate that this is not merely a methodological issue, one need only review the much-cited foundational study “How does foreign direct investment affect economic growth?” by Borensztein, de Gregorio, and Lee (1998). Their investigation concluded that FDI is an important vehicle for the transfer of technology, contributing relatively more to growth than domestic investment. But they found that the higher productivity of FDI holds only when the host country has a minimum threshold stock of human capital. Their dataset for FDI flows covered all FDI originating in OECD member countries that was invested in developing economies on a yearly basis. As a result, they mixed FDI in the extractive and infrastructure sectors with FDI in manufacturing and services. Their findings include what they call the “puzzling” observation that there is a negative coefficient for the FDI variable in most specifications for

2. Markusen and Maskus (2001) assert that they use annual sales volume of nonbank manufacturing affiliates for their estimation results, but then refer to the annual sales data collected by the US Department of Commerce’s Bureau of Economic Analysis (BEA). The annual sales data collected by the BEA are for all nonbank affiliates, not just manufacturing affiliates.

countries with a low level of human capital, implying that FDI makes a negative contribution to growth (Borensztein, de Gregorio, and Lee 1998, 126).

Their sample includes 69 developing countries, but it is not possible to tell which countries are included or which have the lowest level of human capital, except to note that a distinctive proportion come from sub-Saharan Africa. If some fraction of these include host countries where the largest FDI flows are in extractive industries, with rent-seeking, corrupt leadership,³ this may explain the low or negative contribution to productivity in the host economy, not the low stock of human capital.⁴ Such a discovery would help reconcile their findings with abundant evidence elsewhere that FDI in manufacturing can in fact have a major positive impact on host economies with very low levels of human capital. The pages that follow document a positive relationship between manufacturing FDI and productivity increases in the host economies of Mauritius, Madagascar, Kenya, Bangladesh, El Salvador, the Dominican Republic, and Lesotho—to give but a few examples—during periods when measures of average schooling, absolute poverty, and per capita GDP were all extremely low.

A naïve reader of the “core” article by Borensztein, de Gregorio, and Lee might conclude that little priority should be assigned to either providing assistance to the poorest countries to enable them to attract low-skilled manufacturing FDI or ensuring that the poorest countries have access to developed-country markets for manufacturing FDI exports. The reader of the analysis in the present volume, on the other hand, would conclude just the opposite. In short, dissecting the relationship between type of FDI by sector and the impact on the host country is crucial not just for analytical reasons but to inform policy choices for host authorities and the array of governmental and nongovernmental players cited earlier.

Asking whether FDI makes a positive contribution to “development” involves multiple separate economic investigations and multiple areas in which economic and social externalities (positive and negative) are inextricably intertwined. The relationship between economic outcomes and governance and environmental outcomes is particularly close for FDI in extractive industries and infrastructure, but is often important for FDI in manufacturing and services as well. Within FDI in manufacturing and assembly—write large, to include agribusiness and horticulture—and FDI in services, there are quite distinctive kinds of contributions to investigate. FDI in manufacturing and FDI in services may increase the efficiency with which a host country does

3. See the discussion of the “resource curse” in chapter 2.

4. See the section in chapter 4 on spillovers and externalities for analysis of the competence of local businesses as a limiting factor for the generation of horizontal or vertical spillovers from manufacturing FDI to indigenous firms. The investigation of this crucial relationship between the skill intensity of FDI investor operations and the skill intensity of potential local suppliers is quite different from assessing whether FDI in manufacturing (or services, infrastructure, or natural resources) can have beneficial impacts on the host economy when the median level of human capital is low.

what it already does, with or without horizontal, vertical, and export externalities. Or, FDI may have transformational qualities, bringing entrepreneurship externalities, overcoming “idea gaps” (Romer 1992, 1994), generating “self discovery” (Hausmann and Rodrik 2003), and contributing to the “what-you-export-matters” effect by diversifying and upgrading the production base of the host economy. FDI may offer compensation and training premia, along with labor market externalities and (an underresearched outcome) labor-institution externalities. FDI may—or may not—augment the rate of host-country economic growth.

The evidence examined in this volume identifies 12 principal channels through which FDI can have a positive or negative impact on the real income, standard of living, and growth rate of the host economy (box 1.1). The analytics and evidence surrounding these channels are examined in detail in the chapters that follow, culminating in chapter 7 (as well as in the implications for policy in chapter 9).

Not only are the potential impacts of FDI varied and diverse, but host efforts to secure those potential benefits (and avoid potential damage) require particular kinds of policies to improve market functioning, supply public goods, set standards, and overcome idiosyncratic types of market failure.

Following this introductory chapter, this volume opens with two chapters that summarize the evidence on how FDI in the extractive sector and in infrastructure might impact the host economy, and what kinds of policies are most effective in maximizing the benefits and minimizing or eliminating negative effects. Here the need for external forces to help ensure good governance, protection of the environment, transparency in revenue flows, and prevention of corruption is particularly apparent. Each of these initial chapters—on FDI in the extractive sector and in infrastructure, respectively—reveals important gaps and loopholes in the contemporary policy agenda, and shows how anticorruption laws must be rewritten (including the US Foreign Corrupt Practices Act), how dispute settlement procedures must be reshaped, and how requirements of the Extractive Industries Transparency Initiative must be modified to raise standards for OECD investors while bringing Chinese, Russian, and other non-OECD investors into common compliance.

Chapter 4 then devotes more extensive attention to the need for a new generation of research on the relationship between manufacturing FDI and host-country development. It exposes disqualifying flaws in the first generation of econometric investigation, and shows how second-generation researchers are avoiding these mistakes and moving into new territory. It unravels puzzles in the search for spillovers and externalities, and shows how difficulties can be overcome. It demonstrates how firm survey data and industry case studies can be integrated with econometric investigation to pinpoint the channels through which spillovers take place and so assist in the design of host-country policy.

The chapter provides important new evidence on the types of activities and jobs and the level of wages associated with multinational manufacturing investment. It documents how carefully coordinated campaigns involving

Box 1.1 The 12 principal channels through which FDI impacts development

- Channel 1** FDI in the extractive sector: resource rents to fund host-country economic and social expenditures; environmental and governance externalities (positive or negative).
- Channel 2** FDI in infrastructure: cheaper, more reliable, expanded access to electricity, water, sewage, telecom, transport; environmental and governance externalities (positive or negative).
- Channel 3** FDI in manufacturing and assembly:¹ more or less efficient use of host-country resources and greater or lesser real income generated in the host economy (as measured by economic or social cost/benefit analysis of individual projects).
- Channel 4** FDI in manufacturing and assembly:² horizontal spillovers and externalities.
- Channel 5** FDI in manufacturing and assembly: vertical spillovers and externalities.
- Channel 6** FDI in manufacturing and assembly: horizontal and vertical export externalities.
- Channel 7** FDI in manufacturing and assembly: compensation premia and training premia.
- Channel 8** FDI in manufacturing and assembly: labor market externalities; labor institution externalities.
- Channel 9** FDI in manufacturing and assembly: diversification of the production and export base; expansion along the extensive frontier; entrepreneurship externalities, “ideas” (Romer 1992, 1994), “self-discovery” (Hausmann and Rodrik 2003), and contribution to the concept that “what you export matters.”
- Channel 10** FDI in manufacturing and assembly: upgrading of the production and export base from lower-skill-intensive to higher-skill-intensive activities; expansion along the extensive frontier; entrepreneurship externalities, “ideas” (Romer 1992, 1994), “self-discovery” (Hausmann and Rodrik 2003), and contribution to the concept that “what you export matters.”
- Channel 11** FDI in services: improve the productivity of specific service sectors; horizontal and vertical spillovers and externalities.
- Channel 12** FDI and higher or lower host economic growth rates.

1. Channels 3–10 (FDI in manufacturing and assembly) include FDI in agribusiness and horticulture.

2. Channels 4–10 (FDI in manufacturing and assembly) could include FDI in the extractive sector and infrastructure.

international and local labor groups and NGOs can combat sweatshop abuses and under certain (limited) circumstances raise the wages of the lowest-skilled workers. However, the chapter offers uncontested but surprising contemporary data to show that the predominant thrust of manufacturing FDI is not toward lowest-wage sectors like garments and footwear, but instead flows—by a factor of 14 to 1—into middle-skilled activities like auto parts and electronics, where wages and benefits are two to nine times greater than what lower-skilled plants pay. The chapter concludes by separating the genuine policy choices that confront host authorities and the broader pro-poor sustainable development community from today’s false debate about FDI and development that is filled with outdated, ill-considered, and counterproductive policy advice.

Chapter 5 takes a first look at new research on FDI in services—a large and vital area where research is just in its infancy—while chapter 6 builds on this to offer a fundamental critique of the debate over FDI crowding out or crowding in domestic investment. After examining three of the most prominent cases of trade-and-investment liberalization in specific sectors of host economies, chapter 6 provides a heretical demonstration that, at least initially, crowding out is not only likely to be inevitable but desirable. Trade and investment liberalization unleashes Schumpeterian winds of creative destruction that rearrange sector dynamics in ways that simple measurements of the amount of capital invested fail to capture entirely.

Chapter 7 examines how FDI can have transformational qualities to diversify and upgrade the production and export base of a host country. But important market failures and unappreciated coordination externalities prevent structural transformation from taking place easily or naturally. The chapter identifies the most important constraints to using FDI for structural transformation and the most successful approaches to overcoming them. From this vantage point, the chapter examines the value of the benefits from trade and investment liberalization and shows that conventional models underestimate the ability of FDI to place a host economy along the frontier of best practices in a given industry and to maintain the host at the frontier with real-time improvements in technology, management, and marketing. Drawing on the preceding analysis in this volume, the chapter shows what is needed for more accurate models and estimations. Do these potential benefits justify subsidies for FDI? The chapter shows how the standard economic calculus of whether to provide incentives for FDI is almost useless for real-life host authorities, and undertakes the tricky task of providing an alternative approach.

Chapter 8 reverses perspective and looks at FDI and globalization from the point of view of home economies in the developed world, particularly the United States. It reviews allegations and evidence that FDI exports jobs and siphons off capital from the home economy, and investigates whether the globalization of industry via FDI comes at the expense of firms and workers at home or, instead, complements and strengthens developed-country economic activity.

It scrutinizes new assertions—such as those by Paul Samuelson and Lawrence Summers—that multinational investment might relocate technology

once monopolized by developed countries to developing economies in a manner that damages the welfare of the firms, workers, and communities left behind. Noting the comment by Paul Samuelson (2004, 144) that “All of us Yankees, so to speak, were born with silver spoons in our mouths,” the chapter examines the evidence for whether multinational corporations (MNCs) might be taking those “silver spoons” and delivering them to “non-Yankees” in China, India, and other parts of the developing world. The chapter provides an in-depth look at contemporary evidence of exactly how outward investors from the developed world are—or are not—transforming the indigenous production base in China.

Chapter 9 draws policy conclusions for developed and developing countries, multilateral financial institutions, international labor organizations, civil society groups and NGOs, and corporate social responsibility advocates. Developing-country authorities face tasks that are much more selective and difficult than just saying “yes” to foreign investment. Developed countries and multilateral financial institutions will be surprised at how far they fall short in helping FDI to generate optimal benefits for developing countries. International labor, civil society groups and NGOs, and corporate social responsibility advocates will discover that they can contribute more to broad-based sustainable development if they reshape their agenda around the main-line activities of MNCs—as laid out here—rather than simply demanding that investors “give back” more to workers and communities. To be sure, there is nothing inherently wrong with corporate philanthropy, but the transformative power of MNCs comes through carefully constructed extractive industry, infrastructure, manufacturing, and services investments as laid out in the pages of this volume.

Finally, chapter 10 extracts lessons for the next generation of policy research and identifies obstacles and market imperfections in the international economics discipline that continue to hinder the most valuable and useful research from being undertaken.