

MAKING THE INVISIBLE VISIBLE

INVESTMENT PROMOTION AND
MULTINATIONAL PRODUCTION IN
LATIN AMERICA AND THE CARIBBEAN

CHRISTIAN VOLPE MARTINCUS

SPECIAL REPORT ON
INTEGRATION AND TRADE

MAKING THE INVISIBLE VISIBLE

Investment Promotion and
Multinational Production in
Latin America and the Caribbean

Christian Volpe Martincus

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Foreword

The global economic landscape has undergone a significant reconfiguration over the last decade due to the emergence and consolidation of a number of concurrent, interrelated developments. These include, first, a new wave of technological changes—the so-called digital transformation—that are substantially modifying the way people, firms, and governments interact, particularly in terms of why countries trade, how they trade, and what they trade. Second, trade policy tensions among major economies have led to higher trade and investment barriers and uncertainty around these. Third, there is a stronger demand for both timeliness and resilience. The latter is a consequence of the increased awareness of the risks associated with value chain disruptions caused by a series of natural disasters and the Covid-19 pandemic. In this sense, the severe implications of climate change have also made the green and sustainability imperatives clearer than ever.

These developments create both major challenges and major opportunities for Latin American and Caribbean (LAC) countries. The recent IDB flagship report *Trading Promises for Results* (2019) highlights how policies that favored deeper integration with the world economy through the reduction of trade costs have enabled these countries to accelerate their economic growth since the 1990s. However, this policy agenda is clearly unfinished and is thus one of the main challenges facing countries in the region if they are to make these opportunities into realities that support their quest for long-term growth and sustainable development.

While trade costs in LAC have declined in recent decades following the implementation of various policies that explicitly sought to reduce them, they have done so at a significantly lower rate than in North America, Europe, and Asia, thereby widening an already substantial competitive gap and limiting the region's integration and participation in the world economy. These relatively high costs can be traced back to at least three factors. First, tariff and nontariff barriers, which despite being lower than in the past in some LAC countries are still far from those prevailing in developed economies. Second, information frictions—that is, the cost of accessing information on foreign investment and trade opportunities. And third, the obstacles associated with cumbersome administrative procedures that exporters and importers must confront when trading from the region.

The IDB's Integration and Trade Sector has released a number of studies that have examined and contributed to understandings of the determinants and implications of these trade costs. These publications include *Unclogging the Arteries* (Mesquita Moreira, Volpe Martincus, and Blyde, 2008), *Bridging Regional Trade Agreements in the Americas* (Estevadeordal et al., 2009), *Odyssey in International Markets* (Volpe Martincus, 2010), *Too Far to Export* (Mesquita Moreira et al., 2013), *Synchronized Factories* (Blyde, Volpe Martincus, and Molina, 2014), *Out of the Border Labyrinth* (Volpe Martincus, 2016), and *Connecting the Dots* (Mesquita Moreira, 2018).

The influence of trade costs reaches beyond trade itself: they can also have a significant impact on the evolution and spatial patterns of foreign direct investment (FDI) and the overseas production of multinational firms through their networks of foreign affiliates. This is particularly the case with information frictions, especially in a highly uncertain economic environment. These frictions can make it hard for some individual countries to show up on the radars of multinational firms looking for alternative locations in which to carry out their economic activities.

Complementing the reports mentioned above, *Making the Invisible Visible* presents novel evidence on the effectiveness of investment promotion, a widely applied public policy that seeks to reduce information frictions, in influencing the location decisions of multinational firms and thus LAC countries' participation in multinational production.

The report opens with a detailed description of the evolution and distribution of multinational firms and their foreign affiliates across countries and sectors in the region. It then carefully maps the entities responsible for the policy in question, investment promotion agencies (IPAs), exploring their organization, activities, strategies, and operational approaches.

The report then draws on unprecedented microdata consisting of firm-level data on *both* these multinational firms' location decisions and their investment promotion assistance status in a dozen countries in the region over a number of years, to accurately establish both the average impacts of this assistance on these firms' decisions and the mechanisms and channels through which these impacts arise. The results consistently suggest that investment promotion has been effective in attracting multinational firms and increasing the region's participation in multinational production: IPA support has been associated with an increase in the probability of these firms establishing a first affiliate in their respective countries. Moreover, these results reveal that how IPAs are organized, what they do, and how they do it all influence these effects. In particular, the effects are larger when assistance takes the form of specialized information services. Furthermore, the impact of this assistance is greater when it is given to firms headquartered in countries and operating in sectors in which information barriers are more prominent.

In short, *Making the Invisible Visible* provides researchers, policymakers, and practitioners in international organizations and the private sector with robust evidence on *whether, what, how, and*

when investment promotion works, thereby helping them make better, more informed policy, operational, and business decisions. The report concludes with a discussion of emerging new issues in investment promotion policymaking and how they could be addressed to reach the next frontier and further increase the effectiveness of these public interventions.

Fabrizio Operti
Manager, Integration and Trade Sector
Inter-American Development Bank

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4. **Investment Promotion: How it Works, What Works, and When It Works**
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5. Where to Go and How to Get There: The Future of Investment Promotion

Christian Volpe Martincus

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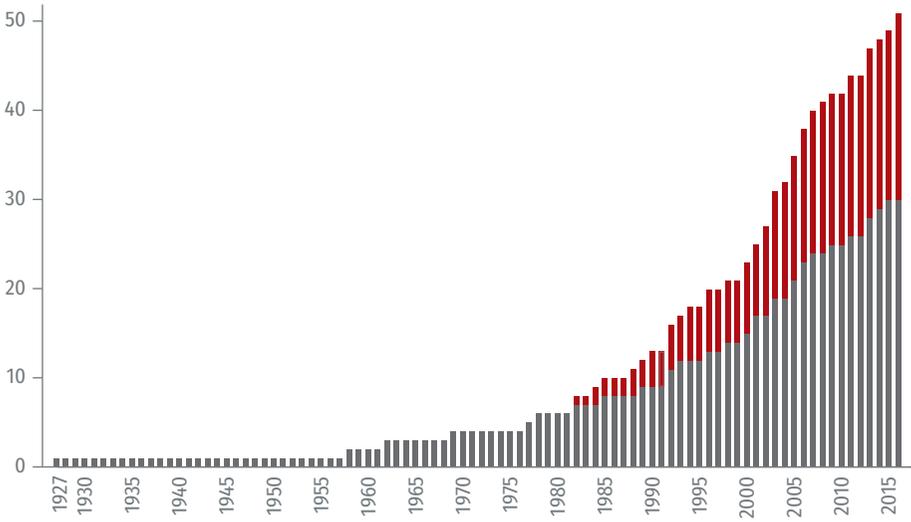
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Executive Summary

CAN INVESTMENT PROMOTION HELP COUNTRIES IN LATIN AMERICA AND THE CARIBBEAN BENEFIT FROM EMERGING INTERNATIONAL OPPORTUNITIES?

The context and the opportunities: In recent decades, global production has become increasingly fragmented. However, since the global financial crisis more than a decade ago, the overall trend toward globalization and increased multinational production has slowed and, crucially, certain changes to the underlying geographical patterns of the latter have emerged. This is partly a natural consequence of the unsustainable pace of expansion in previous decades, but a number of other factors have also been identified as mechanisms that might be contributing to these changes. These include the digital transformation, the introduction of a rising number of trade and investment policy interventions, the increased demand for timeliness, and greater awareness that global supply chains have vulnerabilities and that firms and countries thus need to build resilience to these. These global circumstances could create major opportunities for Latin America and the Caribbean (LAC) that could contribute significantly to economic recovery, long-term growth, and sustainable development.

Investment promotion as a means for leveraging potential opportunities: Transforming these opportunities into reality will not happen automatically, however. Information barriers are a major obstacle that must be addressed for this to happen. Nearly every

FIGURE 0.1 NUMBER OF COUNTRIES WITH IPAS, 1925–2017

Source: Authors' calculations based on IDB/OECD Survey of Investment Promotion Agencies (2017).

Note: The figure shows the number of countries with national IPAs. LAC countries are shown in red and non-LAC OECD countries are shown in dark gray.

country in the world, including those in LAC, have created dedicated organizations, investment promotion agencies (IPAs), to help them show up on investors' radars. IPAs provide a series of information services to lower information barriers and thereby attract multinational firms to their countries.

This report: The study zooms in on the effects of investment promotion policies and the mechanisms and channels through which these effects materialize. To do so, it draws on three main databases: first, the results of a highly detailed institutional survey of more than 50 IPAs in LAC and OECD countries; second, unique firm-level data from proprietary databases and relevant national sources on the worldwide location of multinational firms' foreign affiliates and their activities; and third, firm-level IPA assistance data for 12 Latin American countries over time. Using this data, the report begins by describing the evolution and patterns of LAC countries' participation in multinational production. It then provides an in-depth analysis of IPAs' institutional organization and

operational practices. Finally, the report presents the first-ever microeconomic evidence on the effects of IPA assistance on multinational firms' decisions to enter a host country by establishing a first foreign affiliate (*first establishment*) and expand their presence there by opening additional affiliates (*reinvestment*). It also examines how these effects vary according to IPAs' attributes and specific programs and to firm characteristics such as their home countries, sectors, size, and geographical network, and particularly whether and to what extent the effects are aligned with a reduction in information frictions, as captured by these characteristics.

LAC ON THE GLOBAL MULTINATIONAL PRODUCTION MAP

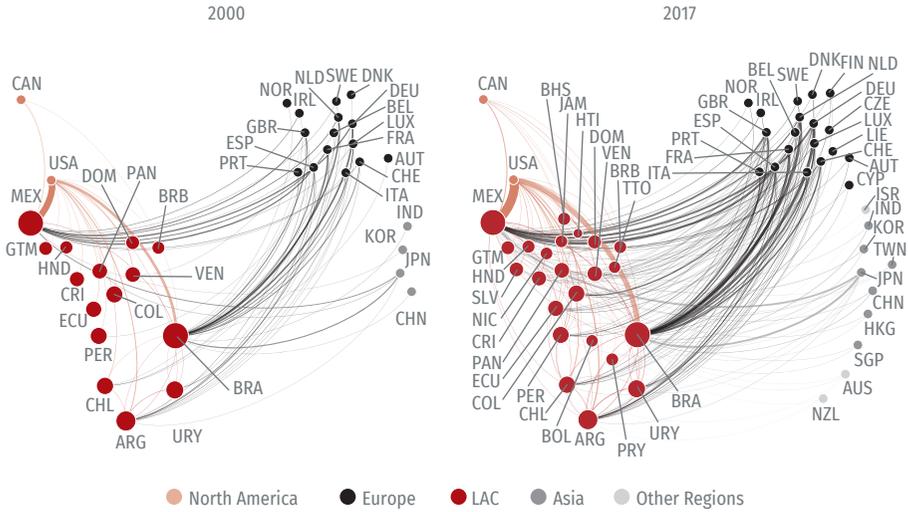
Overview: The number of parent multinational firms hosted by LAC increased by 88% between 2000 and 2017—almost 50 percentage points (p.p.) lower than the growth recorded in the rest of the world (133%). As a consequence, the total number reached roughly 15,000 in 2017, which amounted to 7.5% of the world total.

The number of multinational firms that are new to LAC countries averaged 400 every year and remained relatively stable between 2000 and 2017. In contrast, the annual rate of increase in the rest of the world doubled over this period (figure 0.2).

Host countries: Argentina, Brazil, and Mexico together hosted 57% of the multinational firms that were present in LAC in 2017 and 72% of the foreign affiliates of these firms. These countries also accounted for 86% of reinvestment (the establishment of additional affiliates by multinational firms already operating in the region).

Home regions and countries: Europe and North America accounted for almost 50% and 27%, respectively, of the total number of foreign affiliates of multinational firms operating in LAC in 2017. Asia and LAC itself were each responsible for 9% of this total. The most important home countries included the United States (25.2%), Spain (8.0%), and Germany (7.4%).

FIGURE 0.2 LAC ON THE CHANGING GLOBAL MULTINATIONAL PRODUCTION MAP, 2000 AND 2017



Source: Author's calculations based on data from WorldBase and national IPAs.
 Note: The nodes represent different countries. The size of the node represents the country's number of degrees (linkages) in logarithmic terms. The edges (lines) represent the number of foreign affiliates in the host country of the multinational firms that are headquartered in the home countries, also in logarithmic terms. Only edges where the number of foreign affiliates established in LAC is above 10 and nodes with at least one edge according to this criterion are shown.

Sectors: Almost 60% of the foreign affiliates of the multinational firms established in LAC operated in the manufacturing and nonfinancial services sectors (30% each). Certain individual subsectors stand out among these. In the manufacturing sector, machinery, chemical products, rubber products, fabricated metal products, and food products jointly accounted for 50% of the foreign affiliates. In the nonfinancial services sector, head offices and consultancy, office support and administration services, engineering, transportation services, and computer programming were jointly responsible for 45% of the foreign affiliates.

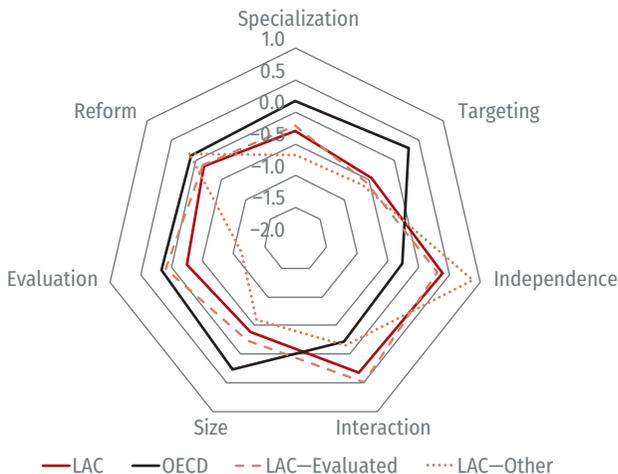
Multinational firms: The multinational firms present in LAC were significantly larger than their counterparts in other regions in terms of their total number of affiliates, the number of host coun-

tries in which they are present, and the number of sectors in which they are active through these affiliates. Around 40% of these firms had more than 50 foreign affiliates worldwide, and three-quarters of this subset had more than 100.

HOW TO SHOW UP ON MULTINATIONAL FIRMS' RADARS: THE MULTIPLICITY OF INVESTMENT PROMOTION APPROACHES

A multitude of approaches are available to policymakers for shaping their investment promotion strategies: These different approaches are reflected in *who* IPAs are (their organization and institutional aspects), *what* they do (their specific services and activities), and *how* they do it (their ways of doing business) (figure 0.3). These can, in turn, influence how effective IPAs are at attracting and retaining multinational firms.

FIGURE 0.3 OVERALL IPA SCORECARD, LAC VS. OECD IPAS, 2017



Source: Author's calculations based on IDB/OECD Survey of Investment Promotion Agencies (2017).

Note: "LAC-Evaluated" refers to the group of 12 LAC countries (out of the 21 included in the IPA mapping exercise) that participated in the IDB-led impact evaluation of IPA activities. A higher score implies a greater distance from the average and hence a higher degree of dissimilarity from the average IPA in the sample.

Who Investment Promotion Agencies Are

- **LAC IPAs have higher degrees of institutional independence than their OECD counterparts.**
 - *Board of directors:* In about half of LAC IPAs, the board of directors appoints the CEO or general manager.
 - *Sources of funding:* The share of public sources in IPAs' budgets is lower in LAC countries than OECD countries (65% compared to 98% in median terms).
- **LAC IPAs are significantly smaller than their OECD counterparts.**
 - *Budget and personnel:* The median LAC IPA has a total budget of US\$4.2 million while the OECD median IPA is over three times as high, at US\$13.9 million.¹ The ratio of investment promotion-specific budgets is even higher—US\$1.3 million for the median LAC IPA as compared to US\$5.5 million for the median OECD IPA. The median number of investment promotion staff is 21 in LAC IPAs and 40 in OECD IPAs. The latter have smaller shares of managerial and administrative positions and larger shares of professional positions relative to their LAC counterparts.
 - *Network of offices:* Whereas the median LAC IPA has no overseas office, the median OECD IPA has more than ten such offices. Moreover, six IPAs have more than 50 overseas offices (all from OECD countries), and 22 IPAs are not present abroad (13 of which are from LAC countries).

What Investment Promotion Agencies Do

- **LAC IPAs are less specialized than their OECD counterparts.**
 - *Mandates:* The median IPA has five different mandates, with LAC IPAs performing a slightly higher number of

¹ The absolute level of resources available to IPAs is a relevant metric because it determines the number and quality of services they can provide to multinational firms. Admittedly, the size of the IPAs' budget is positively correlated with the size and per-capita income of the country (Volpe Martincus and Sztajerowska, 2019). When measured relative to their respective countries' GDPs, the median LAC IPAs' investment promotion budget is slightly smaller than that of their OECD counterparts—US\$0.11 and US\$0.13 per US\$10,000 of GDP, respectively.

functions than their OECD counterparts. LAC IPAs are more often responsible for export promotion (65%) and green investment (55%), while OECD IPAs' most frequent secondary mandate tends to be innovation promotion (57%).²

- *Investment promotion functions:* Investment generation and investment facilitation and retention account for almost three-quarters of IPA investment promotion budgets and staffs. The median LAC IPA assigns slightly more resources to national image-building and policy advocacy.
 - *Activities:* LAC IPAs provide slightly more procedural services than information services relative to their OECD counterparts.
- **The LAC IPAs for which data is available provided support for approximately 100 multinational firms per year, on average, with a joint total of up to 1,500 firms per year between 2010 and 2017.**
 - *New establishments vs. reinvestments:* Around 75% of this assistance was provided to multinational firms that were not yet present in their countries at the time and hence sought to help them establish a first foreign affiliate there (*first establishment*).
 - *Home countries:* Almost two-thirds of the multinational firms that received IPA assistance were headquartered in Europe and North America (around one-quarter in the United States alone), roughly 18% in Asia, and 15% within LAC.
 - *Sectors:* More than 60% of the multinational firms that were assisted operated in the manufacturing and non-financial services sectors (roughly 30% in each). The sub-sectors with the highest percentage shares were electronics and machinery and computer programming, office support and administration services, head offices and consultancy, and engineering.

² "Green investment" refers to FDI in the environmental goods and services sectors and FDI in environmental-damage mitigation processes (i.e., the use of cleaner and/or more energy-efficient technologies).

- *Multinational firms:* Almost 50% of the multinational firms that were assisted had either no foreign affiliates (in other words, they were not actually multinationals yet) or just one and, when already operating abroad, did so in one country and one sector. Around 30% of the firms that received support had more than 10 overseas affiliates and were active in more than 10 countries and more than 10 sectors.
- *Assistance from single vs. multiple IPAs:* Around 90% of the multinational firms that were assisted received support from a single country's IPA throughout the sample period. Only 7% of these firms were assisted by two IPAs.

How Agencies Promote Investment

- **LAC IPAs have less-targeted promotion strategies than their OECD counterparts:** LAC IPAs prioritize/exclude sectors/countries, projects, or investors relatively less than their OECD counterparts.
 - *Home countries:* IPAs differ in the number and type of countries that they prioritize. The most-targeted economies are OECD and Asian countries including the United States, Germany, China, the United Kingdom, Japan, and France, which are prioritized by both LAC and OECD IPAs. In contrast, LAC countries are primarily prioritized by other countries in the region.
 - *Sectors:* IPAs also differ significantly in the width and specificity of their list of priority sectors. Overall, information and communication technologies, as well as energy and renewable energy, are more frequently targeted by OECD IPAs, while food processing industries are by LAC IPAs.
 - *Prioritization and assistance:* Multinational firms from priority countries that operated in priority sectors, and especially country-sectors, have a significantly higher probability of being assisted by IPAs, particularly for first establishment.

- **LAC IPAs have broad networks of interinstitutional collaborations:** The most common IPA partners include the ministry responsible for investment policy, embassies and consulates of both the IPA's country abroad and other countries at home, and the ministry of foreign affairs. Chambers of commerce, industry associations, and specific private firms are also important partners. Depending on their mandates, IPAs also interact with other bodies. For instance, some LAC IPAs and relatively more from the OECD interact with the ministry of education as part of the delivery of their human capital services.
- **LAC IPAs have less-developed evaluation approaches than their OECD counterparts:** LAC IPAs are less likely to have dedicated evaluation units and tend to use a narrower set of monitoring and performance assessment tools, which include client satisfaction surveys, consultations with relevant stakeholders, benchmarking exercises, case studies, quality control examinations, cost-benefit analyses, and particularly impact evaluations.

INVESTMENT PROMOTION IN LAC: HOW IT WORKS, WHAT WORKS, AND WHEN IT WORKS

- **Investment promotion has been effective in LAC**
 - *First establishment:* On average, IPA assistance increases the probability of multinational firms opening first affiliates in the region by 8.2 p.p. This is an economically relevant impact given that the unconditional likelihood of this is very low.³ Importantly, support from the national IPA made a significant difference in the 12 individual countries studied.⁴
 - *Reinvestment:* On average, IPA assistance raises the probability of multinational firms opening subsequent affiliates

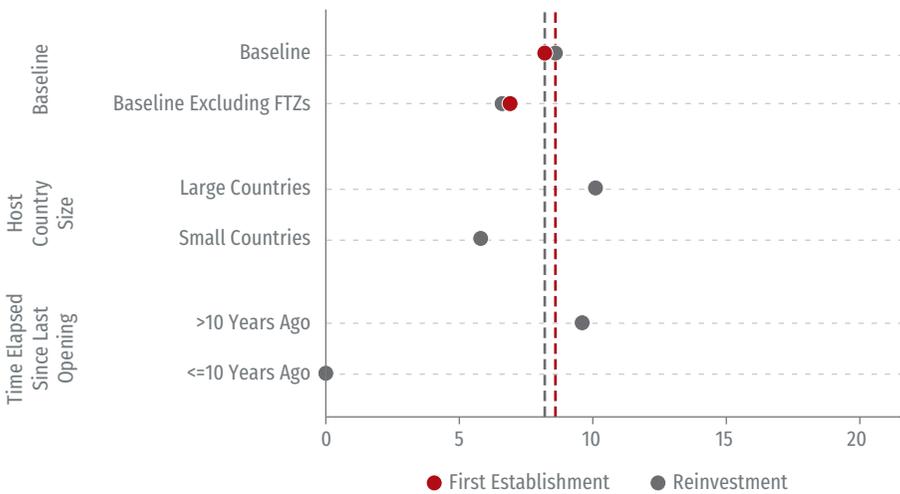
³ The empirical analysis considers a universe of more than 200,000 multinational firms. The number of these firms present in Latin American and Caribbean countries is only a small fraction of this total.

⁴ These individual countries are: Argentina, Brazil, Chile, Colombia, Costa Rica, Ecuador, El Salvador, Honduras, Mexico, Nicaragua, Peru, and Uruguay.

by 8.6 p.p. However, unlike what was observed for first establishment, support from the IPA primarily seems to affect additional openings of affiliates in the largest countries in the region, such as Mexico and, in particular, Brazil. Moreover, this is only the case when 10 years or more have passed since the multinational firm opened its previous affiliate(s) (figure 0.4 and table 0.1).

- **Who IPAs Are, What They Do, and How They Do It All Shape their Effectiveness**
 - **Who IPAs are matters**
 - *Legal status, reporting, and institutional context:* IPAs that are the sole public entities responsible for investment promotion at the national level, report to a ministry, and coexist with subnational counterparts that make parallel efforts in this area have a greater effect on the establishment of new multinational firms. In turn, institutional fragmentation in the form of mul-

FIGURE 0.4 INVESTMENT PROMOTION WORKS



Source: Author's calculations based on data from WorldBase and national IPAs.
 Note: The dots report the specific point estimates whereas the vertical lines correspond to the average effects of investment promotion assistance on first establishment (red) and reinvestment (dark gray).

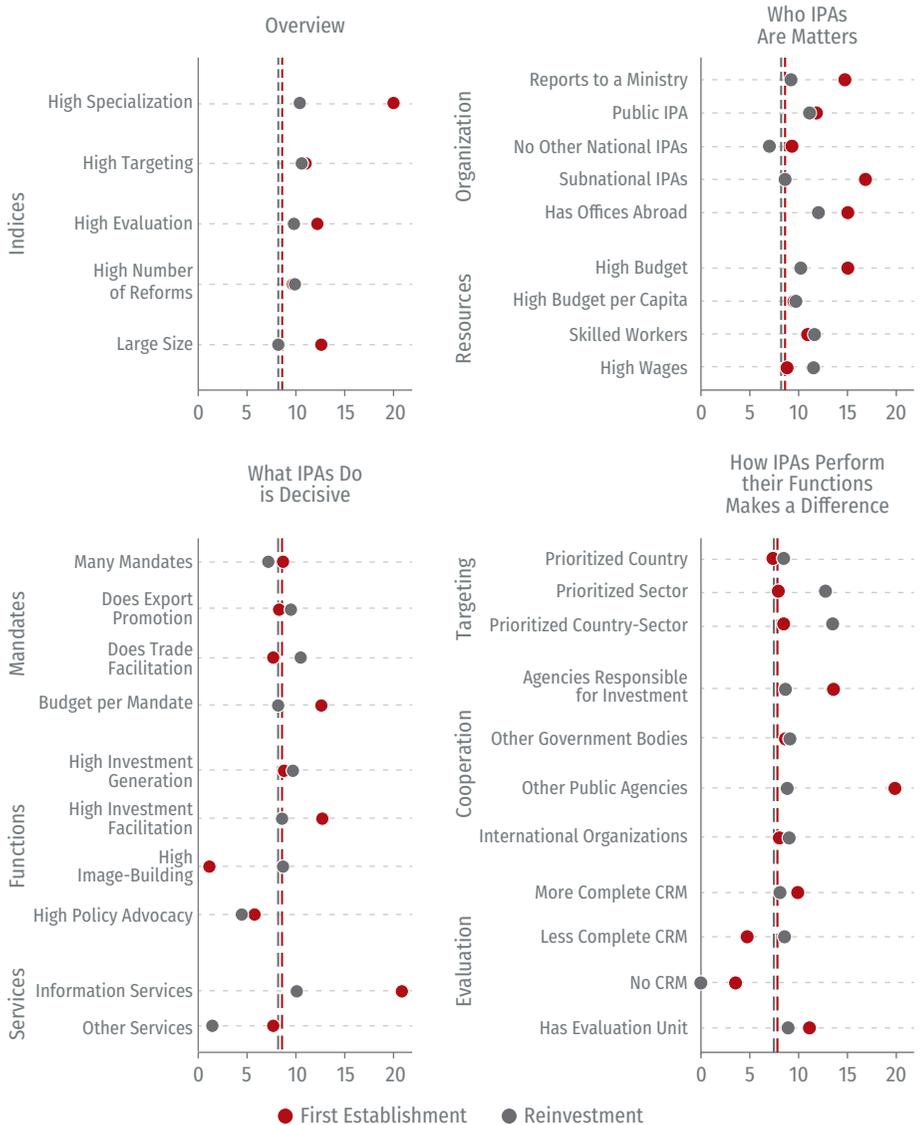
multiple agencies with overlapping functions in the same geographical areas results in IPA support being less effective.

- *Budget and personnel:* IPAs that have more financial means, particularly for investment promotion, and have more, better-qualified, and better-remunerated personnel tend to make more of an impact on attracting multinational firms.
- *Offices:* Having a larger network of offices appears to be more critical for affecting first establishment than for reinvestment.
- **What IPAs do is also decisive**
 - *Mandates:* IPAs with more, well-funded mandates that are also responsible for innovation promotion, green investment promotion, and regional development are more effective at getting new multinational firms to enter their countries.
 - *Investment promotion functions:* Greater specialization in investment generation and facilitation appears to work best to attract new multinational firms.
 - *Specific services:* IPAs' information services make the difference when it comes to attracting both new multinational firms and subsequent affiliates.
- **How IPAs perform their functions and activities also makes a difference**
 - *Targeting:* IPAs that target more intensively exert a greater influence on multinational firms' decisions to establish a first affiliate in the country. This is especially the case when the IPAs in question are also highly specialized.
 - *Cooperation:* IPAs that cooperate with the public agencies responsible for investment, other government bodies, and especially other public agencies perform substantially better than counterparts that operate independently from these entities when it comes to persuading multinational firms to locate in their coun-

tries. Key partners include the ministry of education; agencies responsible for fiscal incentives, free trade zones, and sectoral regulations; financial institutions; ministerial committees responsible for investment; and the ministries of economic affairs.

- *Monitoring and evaluation:* IPAs with more-developed monitoring frameworks and that have institutionalized evaluation practices by creating a dedicated unit are more effective at attracting new multinational firms (figure 0.5).
- **The Impacts of Investment Promotion are Largest When Information Barriers are Most Severe**
 - *Home countries:* Support from IPAs has the largest positive effect on multinational firms' decisions to establish a first affiliate and additional ones when these firms are headquartered in countries that are less familiar with the respective host economies or from which it is harder to gather relevant information, especially when these economies are targeted by IPAs. These are home countries with different languages and hence different historical, political, and social heritages from those of the host countries and that have relatively few immigrants from them. This particularly applies to countries in Asia, North America, and Europe.
 - *Sectors:* The effect of investment promotion assistance on both first establishment and reinvestment is strongest for multinational firms that are active in sectors producing differentiated goods and services in which their countries have a comparative advantage. Specifically, this effect is large for new-to-country and already established foreign firms operating in the manufacturing and nonfinancial services sectors and specific subsectors of these, such as machinery and administrative and business support, among the former, and motor vehicles and transportation services, among the latter. Moreover, investment promo-

FIGURE 0.5 WHO IPAS ARE, WHAT THEY DO, AND HOW THEY DO IT SHAPE THEIR EFFECTIVENESS



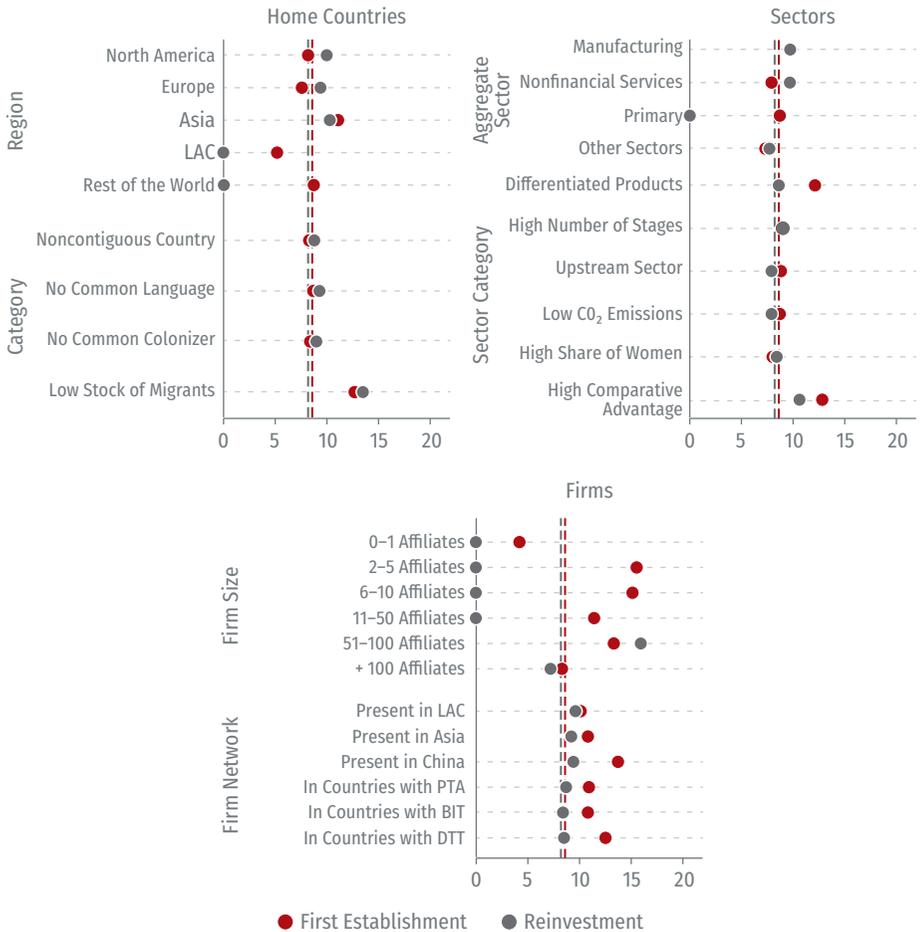
Source: Author's calculations based on data from WorldBase and national IPAs.

Note: The dots report the specific point estimates, whereas the vertical lines correspond to the average effects of investment promotion assistance on first establishment (red) and reinvestment (dark gray).

tion favors the entry of multinational firms in sectors that generate relatively less CO₂ emissions and appears to be neutral in terms of gender.

- *Multinational firms:* Investment promotion works best to attract medium-sized multinational firms—multinational firms with 2–10 affiliates worldwide, are present in 2–10 countries, and operate in 2–10 different sectors. It is less effective for firms at the other two extremes of the spectrum (firms operating in one sector and one country and in over 100 sectors and 100 countries). Support for reinvestment, in turn, tends to have the most impact on larger, more diversified multinational firms.
- *Global value chains:* IPA promotion activities have relatively stronger effects on the decisions of multinational firms that are already operating in Asia, specifically in China, to establish a first affiliate in their territories. The latter is the case for firms from the United States, Europe, and Asian countries other than China, particularly when products and services are differentiated and activities tend to be nonroutine (figure 0.6).
- **Investment promotion also affects the level of activity of multinational firms in host countries:** IPA assistance is associated with an average increase of more than 2% in the number of employees, almost 6% in total domestic purchases, and 6% in the total export values of multinational firms' foreign affiliates.
- **Investment promotion is cost-effective:** Taking into account both the benefits and costs of investment promotion, it is possible to establish that each US\$1 spent on investment promotion generated US\$41 of additional FDI in first establishments and US\$15 of additional FDI in reinvestment (subsequent establishments), for a total of US\$56 of additional FDI. Moreover, each US\$10,000 assigned to investment promotion was associated with the creation of 4 additional jobs in the case of first establishment and 1.5 additional jobs in that of reinvestment,

FIGURE 0.6 THE IMPACTS OF INVESTMENT PROMOTION ARE LARGEST WHEN INFORMATION BARRIERS ARE MOST SEVERE



Source: Author's calculations based on data from WorldBase and national IPAs.

Note: The dots report the specific point estimates, whereas the vertical lines correspond to the average effects of investment promotion assistance on first establishment (red) and reinvestment (dark gray).

for a total of 5.5 additional jobs.⁵ When the top 10% of projects by size are excluded, the benefit-cost ratio is US\$15 of additional FDI for each US\$1 allocated to investment promotion.

⁵ These ratios can be expected to differ across sectors. For instance, the financial means mentioned above may be associated with more job creation in service sectors that are intensive in human capital.

TABLE 0.1 THE IMPACT OF INVESTMENT PROMOTION ON MULTINATIONAL PRODUCTION: AN OVERVIEW

First establishment and reinvestment (Cross-country and within-country multinational production firms' extensive margins)		
Investment promotion works		
	First establishment	Reinvestment
Average impact	+	+
Impact excluding FTZ	+(<)	+(<)
Impact if opened > 10 years ago	NA	+
Impact if opened <= 10 years ago	NA	0
Impact in large countries	+(>)	+(>)
Impact in small countries	+(<)	+(<)
What works in investment promotion		
	First establishment	Reinvestment
<i>Who IPAs are</i>		
IPA characteristics	Specialization (+), size (+), evaluation (+), targeting (+), reform (+)	Targeting (+)
Reporting	Report to ministry (+)	Report to head of government (+)
Institutional ecosystem	Public (+), another national IPA (-), subnational IPAs (+)	Public (+)
Budget	Total budget (+), IP budget (+), budget per capita (+), budget as % of GDP (+)	IP budget (+)
Personnel profile	University education (+), higher salaries (+)	University education (+)
Offices	Offices abroad (+), domestic offices (+), office in country of the MNE (+)	Office in country of the MNE (+)
Office location	Asia (+) > North America (+) > Europe (+) > LAC (+)	North America (+) > Europe (+) > Asia (0) > LAC (0)

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TABLE 0.1 THE IMPACT OF INVESTMENT PROMOTION ON MULTINATIONAL PRODUCTION: AN OVERVIEW (continued)

<i>What IPAs do</i>		
Mandates	Number of mandates (+), budget per mandate (+), innovation promotion mandate (+), green investment mandate (+), regional development mandate (+)	Number of mandates (-), export promotion mandate (+), trade facilitation mandate (+)
Functions	Investment generation (+), investment facilitation (+), image-building (-), public advocacy (-)	
Activities—investment generation and facilitation	Highest: assistance with financing, matching programs, assistance with procedures, market studies	Highest: assistance with financing, capacity-building programs, matching programs, troubleshooting
Activities—image-building and policy advocacy	Highest: online marketing, public relations events abroad, production of reports, public relations event at home	Highest: public relations events abroad, production of reports, marketing in domestic media, informal feedback to the government
Information services	Information services (+)	Information services (+)
<i>How IPAs promote investment</i>		
Targeting	Prioritized country–sector (+) > prioritized country (+) > prioritized country (0)	Prioritized country–sector (+) > prioritized sector (+) > prioritized country (0)
Coordination and cooperation	With agencies responsible for investment (+), with other government bodies (+), with other public agencies (+), with international organizations (+)	With agencies responsible for investment (+), with international organizations (+)
Monitoring and evaluation	CRM tracks many activities > CRM tracks few activities > No CRM Has evaluation unit (+)	CRM tracks many activities = CRM tracks few activities > No CRM Has evaluation unit (+)

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TABLE 0.1 THE IMPACT OF INVESTMENT PROMOTION ON MULTINATIONAL PRODUCTION: AN OVERVIEW *(continued)*

<i>When investment promotion works</i>		
	First establishment	Reinvestment
Countries		
By region	Asia (+) > Rest of the World (+) > North America (+) > Europe (+) > LAC (+)	Asia (+) > North America (+) > Europe (+) > LAC (0) = Rest of the World (0)
By category	Contiguous country (-), common language (-), common colonizer (-), above-median stock of migrants (-), above-median trade familiarity (-)	Contiguous country (-), common language (-), common colonizer (-), above-median trade familiarity (+)
Assistance by other IPAs in LAC	Not assisted by another agency = assisted by another agency	Not assisted by another agency > assisted by another agency
Sectors		
Aggregate sectors	Manufacturing (+) > primary (+) > nonfinancial services (+) > other sectors (+)	Manufacturing = nonfinancial services > other sectors > primary (0)
Manufacturing sectors	Highest: machinery, chemicals, wood, paper and plastics, metals	Highest: motor vehicles, machinery
Nonfinancial services sectors	Highest: administrative and business support, transportation services, ICTs	Highest: transportation services, ICTs, administrative and business support
By category	Differentiated products (+), above-median number of stages (+), above-median upstreamness (+), above-median CO ₂ emissions (-)	Differentiated products (+)
Comparative advantage	Comparative advantage in trade (+), Comparative advantage in investment (+)	Comparative advantage in trade (+), comparative advantage in investment (+) [<i>only if prioritized</i>]

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TABLE 0.1 THE IMPACT OF INVESTMENT PROMOTION ON MULTINATIONAL PRODUCTION: AN OVERVIEW (continued)

Firms		
Firm size	Medium-sized MNEs (2–10 affiliates, 2–5 countries, 2–10 sectors) > large MNEs (10–100 affiliates, 6–50 countries, 6–50 sectors) > small MNEs (0–1 affiliates, countries, and sectors) > mega MNEs (+100 affiliates, + 50 countries, +50 sectors)	Large MNEs (50–100 affiliates, 6–50 countries, 6–50 sectors) > mega MNEs (+100 affiliates, + 50 countries, +50 sectors) Small and medium-sized MNEs (0)
Network of affiliates	Affiliates in LAC (+), affiliates in countries with a PTA/BIT/DTT (+)	Affiliates in LAC (+)
Presence in other regions	Presence in Asia (+), presence in China (+) [regardless of region of origin]	Presence in Asia (+), presence in China (+) [European firms]

**Level of activity of foreign affiliates in the host countries
(Within-country multinational production firms' intensive margin)**

Main outcomes	Total exports (+), number of employees (+), total domestic purchases (+), total domestic sales (0)
Export outcomes	Exports per destination (+), number of export destinations (0), exports per product (0), number of products exported (+), exports per buyer (0), number of buyers (+), probability of starting to export (0)
Other domestic outcomes	Number of suppliers (+), average purchase per supplier (0), number of buyers (0), average sale per buyer (0)

Source: Author's calculations based on estimation results reported in chapter 4 of this report.

Note: (+) denotes a positive and significant estimated effect, (0) refers to a nonsignificant estimated effect, and (>), (<) correspond to estimated effects that are significantly larger/smaller, respectively.

WHERE TO GO AND HOW TO GET THERE: THE FUTURE OF INVESTMENT PROMOTION

While this report's findings are encouraging, the challenge facing IPAs is how to remain relevant and further increase their effectiveness in the new global environment. To achieve this, IPAs need to:

- **Respond to the growing imperative to go digital.** IPAs need to leverage more and better ICTs and draw on the increasing availability of specialized digital tools to expand and improve their portfolio of services to assist clients more agilely and effectively.
- **Mainstream sustainability and gender equality in IPA promotion approaches and metrics.**
- **Improve promotion strategies by making them evidence-based.** A natural way of doing so would be to make systematic use of available trade and multinational production microdata by consistently applying new technologies and methods to predict the probability of multinational firms establishing a first affiliate or subsequent ones in the country in question.
- **Institutionalize monitoring and evaluation practices** and carry out systematic, deeper, more comprehensive impact assessments that go beyond direct effects and examine the indirect effects of investment promotion on the local economy.
- **Coordinate programs as much as possible**, especially innovation promotion, linkage promotion, and trade promotion, given the highly integrated nature of and intense complementarities between exports, FDI, and multinational production, particularly within specific global value chains.

INVESTMENT PROMOTION: WHY IT MATTERS AND WHAT WE NEED TO KNOW

1

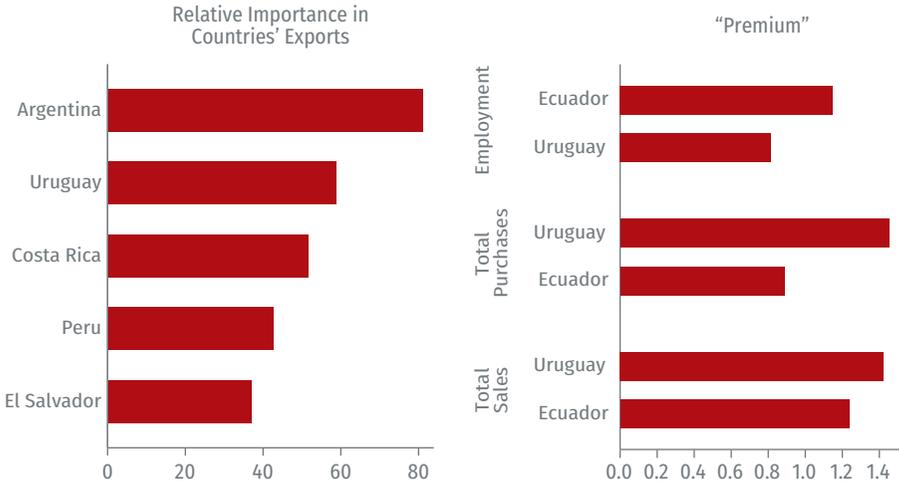
IN RECENT DECADES, GLOBAL PRODUCTION BECAME INCREASINGLY FRAGMENTED, WITH SOME COUNTRIES SPECIALIZING IN INTERMEDIATE STAGES OF PRODUCTION AND OTHERS SPECIALIZING IN FINAL STAGES, DESIGN, OR R&D.¹ As a result, multinational production—that is, production that is carried out by firms outside of their home country through their foreign affiliates—is a major distinguishing feature of the current global economic landscape.² Sales from foreign affiliates amount to approximately 40% of global GDP and are 40% larger than world exports.³ Penetration into new foreign markets and affiliate numbers in these countries—which capture the so-called extensive margin—account for a large share of the variation in this production across countries and have been responsible for the expansion of multinational firms over time.⁴

¹ Hummels, Ishii, and Yi (2001), Johnson and Noguera (2012), Fort (2017), and Antràs (2021a).

² A growing number of papers have examined the patterns, determinants, and implications of multinational production: Markusen (2002), Markusen and Maskus (2001), Yeaple (2003), Nunn and Trefler (2008), Antràs et al. (2009), Alfaro and Charlton (2009), Chen and Moore (2010), Antràs and Yeaple (2013), Irarrazabal, Moxnes, and Opromolla (2013), Alfaro and Chen (2014), Egger et al. (2014), Ramondo (2014), Ramondo, Rodríguez-Clare, and Tintelnot (2015), Conconi et al. (2016), Alvarez (2019), Garetto, Oldenski, and Ramondo (2019), and Head and Mayer (2019).

³ UNCTAD (2018). Multinational firms—including headquarters, domestic affiliates, and foreign affiliates—produce around 30% of the global output, generate approximately 50% of world exports and imports, and are responsible for about one-fourth of global employment (Cadestin et al., 2019).

⁴ Ramondo (2014), Ramondo, Rodríguez-Clare, and Tintelnot (2015), and Garetto, Oldenski, and Ramondo (2019).

FIGURE 1.1 FOREIGN AFFILIATES' RELATIVE IMPORTANCE AND "PREMIUM"

Source: Author's calculations based on data from WorldBase, national IPAs, and country tax and customs agencies.

Multinational firm affiliates are relevant economic actors in host economies. These firms are generally larger than their domestic counterparts along several dimensions, including sales, the number of firms they sell to, purchases, the number of firms they buy from, the number of employees, and exports. They also have higher labor productivity. Thus, multinational firms are responsible for substantial shares of total economic activity in the countries in which they operate (figure 1.1).

Importantly, the economic literature suggests that FDI, particularly multinational production, can have multiple benefits for receiving economies. It can facilitate access to international flows of knowledge, foreign technology, and other foreign resources and can thereby foster economic growth and development and increase national welfare.⁵ This is specifically the case when the host countries meet certain minimum conditions relating to their

⁵ Hanson (2001) and Alfaro (2017).

degree of financial development, the intensity of competition and level of openness, quality of infrastructure, availability of human capital, and local R&D and learning efforts.⁶

These positive effects arise through various channels, including demonstration and competition effects, labor turnover, and buyer–supplier linkages. For example, firms may imitate the business practices of foreign-owned rivals that they might have deemed too risky to adopt if they learned of them from local operators.⁷ By increasing local competition, the presence of foreign companies may also incentivize domestic firms to upgrade their capacities or use existing resources more efficiently.⁸ Furthermore, as multinational firms tend to adopt efficient and competitive management practices and provide employees with higher-quality training, they may also benefit local firms via labor turnover, especially that of highly skilled workers, and via spin-offs when former employees of multinational firms start their own businesses in their home countries.⁹ Moreover, multinational firms can affect the local economy through vertical production linkages with local firms along the supply chain.¹⁰ Thus, they may transfer knowledge to suppliers, provide them with technical assistance, and allow firms in downstream industries access to new (or improved) inputs.¹¹ As a consequence, multinational firms can also help enhance domestic export activities, both in terms of increasing the export orientation of firms and upgrading the quality of the products they sell abroad.¹²

⁶ Alfaro and Rodríguez-Clare (2004b), Wang and Blomström (1992), Borensztein, De Gregorio, and Lee (1998), and Blalock and Gertler (2002).

⁷ Wang and Blomström (1992).

⁸ Blomström and Kokko (1998).

⁹ Balsvik (2011), Muendler, Rauch, and Tocoian (2012), and Poole (2013).

¹⁰ Aitken et al. (1997), Javorcik (2004), Alfaro and Rodríguez-Clare (2004a), Alfaro Ureña et al. (2019), and Carballo, Marra de Artiñano, and Volpe Martincus (2019).

¹¹ Rodríguez-Clare (1996). In particular, interactions between multinational firms, foreign buyers, and local firms in the context of global value chains can be a conduit for knowledge acquisition that can lead to process and product innovation and industrial upgrading—which, in turn, may spill over to other firms that are not participating in the same supply chain (Gereffi, 1999, and Javorcik and Spatareanu, 2008).

¹² Aitken, Hanson, and Harrison (1997), Greenaway, Sousa, and Wakelin (2004), Harding and Javorcik (2012), Bajgar and Javorcik (2020), and Carballo et al. (2021).

However, starting with the global financial crisis more than a decade ago, the overall trend toward globalization and expanding multinational production has slowed and, crucially, some changes in the underlying geographical patterns of the latter have emerged. This is partly a natural consequence of the unsustainable pace of expansion in previous decades, but a number of other factors have also been identified as mechanisms that might be contributing to these changes.¹³

First, the world is undergoing a new wave of technological changes that are substantially affecting the way firms (and individuals and governments) interact with each other—the so-called *digital transformation*. On one hand, digitalization has made it possible to reduce trade costs—including the costs of transportation, logistics, and information and communication. This has profound implications for firms' engagement in international trade and the organization of their multinational production.¹⁴ On the other hand, new technologies such as robots, artificial intelligence (AI), or 3D printing can affect trade and investment by reducing the cost of performing certain tasks in the production process and thereby the opportunity cost of offshoring tasks to other countries. More specifically, the cost savings that high-wage countries typically enjoy when offshoring the labor-intensive stages of production to low-wage counterparts could decrease, thus potentially leading to lower levels of multinational production and trade in intermediates, especially when combined with rising wages in low-wage countries.¹⁵

Second, the world economy witnessed the introduction of a rising number of policy interventions in both trade and investment,

¹³ Antràs (2021b) and Mesquita Moreira et al. (2021).

¹⁴ Lendle and Vézina (2015), Lendle et al. (2016), Brynjolfsson, Xiang, and Meng (2019), Carballo et al. (2020), Chen and Wu (2020), Hui (2020), and Esteveordal, Rodríguez Chatruc, and Volpe Martincus (2020). See Chen and Volpe Martincus (2021) for a review.

¹⁵ Rodríguez Chatruc and Nieves Offidani (2019) and Artuc, Bastos, and Rijkers (2020). The latter study finds that a more intensive use of robots in developed countries is associated with larger exports to developing countries but also, to a lower extent, with larger imports from these countries.

which resulted in higher trade costs.¹⁶ This has intensified in recent years with the escalation of trade policy tensions between major economies, which has further raised these costs both directly, through actual increases in the level of trade policy barriers, and indirectly, through greater uncertainty around the levels of these barriers.¹⁷

These developments have already generated significant impacts on several outcomes, including prices, real incomes, employment, and trade flows.¹⁸ Importantly, trade policy changes have been asymmetric across both countries and sectors and have thus caused heterogeneous effects along these dimensions. Consequently, existing empirical evidence suggests that recent increases in US and Chinese tariffs have been associated with trade diversions toward third countries.¹⁹ For instance, higher US tariffs on Chinese products seem to have particularly benefited exports of office machinery and communication equipment from Taiwan, transportation equipment and electrical machinery from Mexico, all machinery sectors from the Europe Union, and communication equipment and furniture from Vietnam. Some other Latin American and Caribbean countries also appear to have registered export increases in specific sectors as a consequence of these tariff changes.²⁰

Third, the demand for timeliness has increased, which can be traced at least partially back to the dissemination of business practices such as just-in-time manufacturing and lean retailing. As was the case with events such as the eruptions of the Icelandic volcano Eyjafjallajökull in 2010 and the Japanese tsunami in 2011, the ongoing Covid-19 pandemic has reinforced awareness that global supply chains are vulnerable to disruptions that derive from excessive reliance on a limited number of geographically concentrated suppliers. The repercussions that temporary

¹⁶ Evenett (2019).

¹⁷ Graziano, Handley, and Limão (2020) and Graziano, Handley, and Limão (2021).

¹⁸ Fajgelbaum et al. (2020), Flaaen and Pierce (2020), and Handley et al. (2020).

¹⁹ Nicita (2019) and Bekkers and Schroeter (2020).

²⁰ Mesquita Moreira et al. (2021).

plant closures in China's Hubei province had on global production are testimony to these vulnerabilities.²¹ It has also shown that for critical goods such as medical supplies, there is a serious need to increase supply chain resilience (i.e., their ability to return to normal operations over an acceptable period) and robustness (i.e., their ability to maintain operations during a crisis).²²

More specifically, in addition to some automation-enabled reshoring, **resilience-building may require a diversification of the supplier base to minimize disruptions and is therefore likely to lead to this.** The latter may at least partially take the form of nearshoring (e.g., US-based firms could shift part of their supply chains away from Asia and into Mexico).²³

This global context could create opportunities for LAC countries as location and investment destinations for multinational firms and as origins of goods and services through exports from firms that are already established in their territories, primarily in sectors in which these countries have comparative advantages.²⁴ These opportunities could potentially contribute to the region's recovery in the aftermath of the pandemic and help create a solid basis for long-term growth and sustainable development.

However, making these potential opportunities a reality is far from automatic. In addition to policies that aim to improve the fundamentals of the economy and the overall business climate, governments around the world have resorted to industrial policies to attract multinational firms. These policies may encompass incentives for foreign firms in the form of income tax holidays, tariff exemptions, and subsidies for infrastructure, often combined under free zone regimes.²⁵ These kinds of interventions

²¹ Javorcik (2020).

²² Miroudot (2020).

²³ Javorcik (2020).

²⁴ Mesquita Moreira et al. (2021).

²⁵ Greenstone and Moretti (2003), Greenstone, Hornbeck, and Moretti (2010), Farole (2011), Davies and Francois (2018), Zeng (2015), and Davies and Desbordes (2018).

imply deviations from policy neutrality, thus creating price distortions.²⁶ In addition to these interventions, there are other “softer,” less controversial policies that neither distort prices nor involve direct financial support and primarily address trade costs.

Trade costs influence the level of multinational production, especially the extensive margin.²⁷ These costs include tariffs and nontariff measures, costs associated with regulations and administrative processes, and transportation and logistics costs, among others. The existing empirical evidence suggests that relatively low, homogeneous, stable tariffs and nontariff barriers are conducive to business development and growth.²⁸ Consistently, economic integration agreements—i.e., preferential trade agreements (PTAs), bilateral investment treaties (BITs), and double taxation treaties (DTTs)—have been found to favor the expansion of multinational firms along the extensive margin.²⁹ Similarly, clear, simple regulations and streamlined, expedited, predictable trade and investment procedures have a positive effect on cross-border operations.³⁰ The same holds for infrastructure projects that reduce transportation and logistics costs.³¹

Importantly, despite new technologies, information barriers are still a relevant component of these costs. As such, they are a major determinant of the geography of multinational production.³² This is particularly true in the current economic environment, characterized as it is by trade disputes and the pandemic,

²⁶ Harrison and Rodríguez-Clare (2010).

²⁷ Carr, Markusen, and Maskus (2001), Head and Mayer (2004), Head and Ries (2008), Ramondo (2014), and Ramondo, Rodríguez-Clare, and Tintelnot (2015).

²⁸ Mesquita Moreira and Stein (2019).

²⁹ Egger and Merlo (2012), Blonigen, Odenski, and Sly (2014), Blyde, Graziano, and Volpe Martincus (2015), Marra de Artiñano et al. (2019), and Sztajerowska (2021).

³⁰ Volpe Martincus (2016).

³¹ Mesquita Moreira et al. (2013), Volpe Martincus et al. (2014), Volpe Martincus, Carballo, and Cusolito (2017), Blyde and Molina (2015), and Alfaro and Chen (2019).

³² Rauch (1999), Anderson and van Wincoop (2004), Oldenski (2012), Keller and Yeaple (2013), Allen (2014), Alfaro and Chen (2018), and Atkin and Khandelwal (2020). It has been estimated that two countries that share a common language have 65% more bilateral affiliates than their counterparts with different languages (Ramondo, Rodríguez-Clare, and Tintelnot, 2015).

which is bringing about a reshaping of global value chains in a context of increased uncertainty.³³

More specifically, firms seeking to invest abroad must solve a high-dimensionality information problem. They must learn about the general and sector-specific regulations that need to be complied with and the costs and conditions involved in setting up and operating in the destination country. These include projected demand for their products and services in that country and from relevant partner countries, tax treatments, the processes and costs of exporting and importing their inputs, and the network of local suppliers along with the quality of their products and services. Crucially, firms pursuing cross-border economic opportunities must engage in a costly process of identifying business partners and assessing their reliability, trustworthiness, timeliness, and capabilities.³⁴

As a consequence, countries may offer suitable conditions but remain invisible to multinational firms. Information on these aspects can be highly incomplete, and gathering it can be very costly, especially in less popular or distant destinations such as developing economies in LAC. For instance, in Costa Rica, each topic-specific study for a given location or establishment costs between US\$5,000 and US\$10,000.³⁵ As a result, multinational firms may end up considering a small range of locations and disregard several potentially convenient alternatives.³⁶

Nearly all countries in the world, including those in LAC, have established IPAs to address these information barriers and get themselves onto investors' maps. These agencies provide information services that seek to lower information barriers, thereby

³³ Baldwin and Evenett (2020) and Fajgelbaum et al. (2020).

³⁴ Rangan and Lawrence (1999) and Rangan (2000).

³⁵ These figures come from a market study conducted by Costa Rica's national investment promotion agency, CINDE. Examples of these studies are reports on tax incentives, tailored simulations of profits and losses, and surveys of relevant firms established in the country based on interviews with their senior managers, etc.

³⁶ Loewendahl (2018).

attracting multinational firms to their countries.³⁷ Given its virtual nonexcludability and nonrival use, information gathered by these firms can spill over to other firms, thus generating free riding. These externalities are typically not included in the multinational firms' private assessments of the costs and benefits associated with doing business overseas and investing abroad. More specifically, the returns accruing to firms that make these new investments (private returns) would be lower than the returns for the economy as a whole (social returns), and investment in their development would then be suboptimal, thereby potentially providing a rationale for public intervention.³⁸ Indeed, investment promotion can be seen as a means to support firms' searches for new locations that counter the disincentive arising from potential free riding.³⁹

IPAs' information services can be grouped into four main categories: (i) *national image-building*, which encompasses actions that seek to improve perceptions of the country as an attractive investment location; (ii) *investment generation*, which entails identifying and approaching potential investors; (iii) *investment facilitation and retention*, which consists of assisting investors with analyzing business opportunities, obtaining permits for establishing a business in the country, and providing information on regulations and available incentives, as well as support for complying with and accessing these, respectively, and investment aftercare for multinational firms that are already operating in the country; and (iv) *policy advocacy*, which comprises all activities that seek to enhance the investment climate and also includes identifying the public inputs needed by the private sector, and coordinating with the rest of the public sector to deliver those inputs.⁴⁰ A priori, these activities are aligned with correcting market failures. National image-building and investment generation are thus primarily specific information services that, as mentioned above, can be viewed as a means

³⁷ Alfaro and Charlton (2007), Harding and Javorcik (2011), and Volpe Martincus and Sztajerowska (2019).

³⁸ Blyde, Volpe Martincus, and Molina (2014).

³⁹ As trade promotion does for exporting activities—Rauch (1996) and Volpe Martincus (2010).

⁴⁰ UNCTAD (2007, 2008), Harding and Javorcik (2011), and Blyde, Volpe Martincus, and Molina (2014).

of subsidizing firms' location searches that address potential free riding. Similarly, facilitation and policy advocacy are essentially actions that aim to solve coordination problems in the provision of public-sector inputs that facilitate investments.

Although investment promotion policies are ubiquitous, the existing literature on the impacts of investment promotion is limited, relies heavily on aggregate data, and thus only provides a view from the top. This is in stark contrast to other public policy areas that help firms overcome obstacles to their internationalization, such as export promotion.⁴¹ In this literature, investment promotion has been captured using various macro indicators in different settings. Broadly speaking, two main strategies have been followed to proxy investment promotion: a binary variable indicating the existence of an IPA or an IPA office in the host or home country, and whether specific sectors are targeted by the IPA.

Results based on the first approach are ambiguous. According to a study that associates investment promotion with the existence of an office representing a US state in Japan to explore its impact on the distribution of Japanese manufacturing firms' FDI across these states between 1980 and 1992, these offices did not appear to have been effective in attracting FDI from Japan. This may well reflect the fact that Japanese investors might have already been well informed about the different states, in which case information provided by these IPAs would not have made a difference.⁴² Another paper concludes, in contrast, that US state offices in Australia, Canada, France, Germany, Japan, the Netherlands, Switzerland, and the United Kingdom did influence FDI into US states between 1976 and 1996.⁴³

⁴¹ Export promotion aims to reduce information-related trade costs to make it easier for domestic firms to start selling and to expand their sales abroad. By now, a relatively large number of studies have assessed the effectiveness of these public interventions using micro data from several countries: Volpe Martincus and Carballo (2008, 2010), Volpe Martincus (2010), Cadot et al., (2015), van Biesebroeck, Konings, and Volpe Martincus (2016), Brooks and van Biesebroeck (2017), and Munch and Schaur (2018).

⁴² Head, Ries, and Swenson (1999).

⁴³ Bobonis and Shatz (2007).

In turn, the presence of national IPA offices in potential host economies has been reported to favor outward FDI from Japan and Korea, but only in politically risky countries, where the local business environment is harder to navigate and hence the need for accurate information is greater. Using a similar proxying approach, it has been shown that the existence of an IPA in a city did not lead to significantly more firm-level and city-level FDI in China in 2002–2007.⁴⁴

Macro evidence based on targeting indicates that investment promotion affects FDI positively. Most IPAs target some sectors,⁴⁵ usually those in which their countries have a comparative advantage and those that allow for diversification, thereby bringing new technologies and skills to host economies.⁴⁶ Changes in how IPAs target sectors have been used to identify the impact of investment promotion on FDI inflows.⁴⁷ Results from these studies indicate that FDI inflows were larger in sectors that were prioritized. For instance, based on sectoral FDI data from the US between 1990 and 2004, sectors were found to have received an estimated 155% more FDI after being targeted. This translated into an additional annual inflow of US\$17 million for the median country-sector combination.⁴⁸

Similarly, less developed European regions have been reported to be more likely to receive larger FDI inflows in given sectors when their subnational IPAs started targeting these sectors between 2003 and 2017.⁴⁹ Available analyses further suggest that IPAs that handle investors' inquiries more professionally and have higher-quality websites attract larger volumes of FDI.⁵⁰

⁴⁴ Ni (2017).

⁴⁵ Charlton et al. (2004).

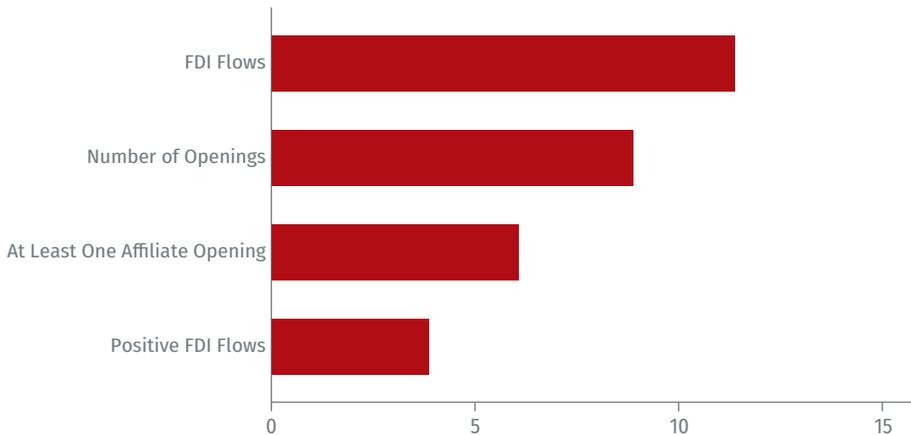
⁴⁶ Alfaro and Charlton (2007).

⁴⁷ Charlton and Davis (2007) and Harding and Javorcik (2011). These changes have also been exploited to establish the effects of sectoral FDI on sectoral growth, export quality, export volumes, and revealed comparative advantage. Alfaro and Charlton (2007), Harding and Javorcik (2012), and Harding et al. (2019).

⁴⁸ Harding and Javorcik (2011).

⁴⁹ Crescenzi, Di Cataldo, and Giua (2021).

⁵⁰ Harding and Javorcik (2013).

FIGURE 1.2 THE MACRO EVIDENCE

Source: Author's calculations based on data from WorldBase and the national central banks and IPAs of Argentina, Brazil, Chile, Colombia, Costa Rica, Ecuador, El Salvador, Honduras, Mexico, Nicaragua, Peru, and Uruguay.

Note: The figure reports the estimated impact of investment promotion assistance on FDI and the establishment of multinational firms' foreign affiliates, as obtained from data at the host country-home country-year level. The dependent variables of the estimation equations are: FDI inflows (in natural logarithm), the number of established foreign affiliates (in natural logarithms), a binary indicator that takes the value of 1 if at least one foreign affiliate of a multinational firm from the home country was established in the host country and 0 otherwise, and a binary indicator that takes the value of 1 if FDI inflows from the home country into the host country are positive and 0 otherwise. The main explanatory variable is a binary indicator that takes the value of 1 if at least one firm from the home country is assisted by the host country's IPA in the year in question and 0 otherwise. Covariates include a series of binary indicators for PTAs, BITs, and DTTs along with host country-home country fixed effects, host country-year fixed effects, home country-year fixed effects. Standard errors clustered at the country-pair level.

Overall, estimation results based on similar macro data are comparable for LAC countries (figure 1.2).

While certainly insightful, this existing literature does not include rigorous microeconomic evaluations of the causal impacts of investment promotion, thus leaving governments without crucial inputs for designing and guiding their policy actions. Notwithstanding the fact that the policy is actually implemented through different types of assistance to individual firms, there is no evidence on the absolute and relative numbers of firms that receive support, both in general and through specific programs (i.e., *the extensive margin of investment promotion policies*); the nature and intensity of the support provided (i.e., *the intensive*

margin of investment promotion policies); the impacts of this support on multinational firms' decisions to open a first affiliate in a country (i.e., *cross-country multinational production firms' extensive margin*), to expand their presence therein either through the establishment of additional affiliates (i.e., *within-country multinational production firms' extensive margin*) or increases in their activity level as measured by sales, employment, and exports (i.e., *within-country multinational production firms' intensive margin*), the potential heterogeneities of these impacts for different types of firms; and the cost-effectiveness of these interventions.

This report fills in these knowledge gaps precisely by zooming in on the effects of investment promotion policies and the mechanisms and channels thereof. To do so, it makes use of the results of a highly detailed institutional survey of more than 50 IPAs in LAC and OECD countries and unique firm-level data on *both* the worldwide location of multinational firms' foreign affiliates and their activities and IPA assistance for 12 LAC countries. This was gathered specifically for this study from proprietary databases covering the entire world and relevant national sources. Taking advantage of this data, the report begins by describing the evolution and patterns of LAC countries' participation in multinational production (chapter 2). It then analyzes the institutional organization and operational practices of IPAs in detail, including the extensive and intensive margins of their assistance to multinational firms (chapter 3). Next, the report presents the first-ever microeconomic evidence on the effects of this assistance on the extensive margin of firms' cross-country multinational production and the extensive and intensive margins of firms' within-country multinational production. It also examines how these effects vary according to the attributes and specific programs of the IPAs, and firms' home countries, sectors, size, and geographical networks, specifically the extent to which these are aligned with a reduction in information frictions (chapter 4). Based on these analyses, the report concludes with a series of policy recommendations for IPAs and governments that aim to help them make their interventions more effective (chapter 5).

A LARGER, MORE INTERCONNECTED WORLD: MORE COUNTRIES FOR MORE MULTINATIONAL FIRMS

INVESTMENT PROMOTION CAN BE BROADLY DEFINED AS A SET OF POLICY ACTIONS THAT ADDRESS INFORMATION BARRIERS IN ORDER TO ATTRACT MULTINATIONAL FIRMS TO ESTABLISH AFFILIATES AND INVEST IN SPECIFIC COUNTRIES AND ENABLE THEM TO UNDERTAKE SOME OF THEIR ACTIVITIES IN THE TERRITORIES OF THESE, WITH THE ULTIMATE GOAL OF FAVORING THE DEVELOPMENT OF LOCAL ECONOMIES, BOTH DIRECTLY AND INDIRECTLY THROUGH INTERPLAY WITH DOMESTIC ECONOMIC ACTORS. Hence, the main question around investment promotion from an economic policy perspective is whether it influences the spatial distribution of multinational firms' economic activities, particularly their production, and if so, how. This has clear implications for what data should be used to best measure this production and ascertain the role played by the policy in question.

This chapter begins by examining the variables that have been used in the literature to capture the behavior of multinational firms' activities along with their merits. It then characterizes the evolution of these activities and patterns of participation in them using the preferred measures (explicit indicators of multinational production) for LAC as a whole, LAC relative to other regions in the world, and individual LAC countries.

FDI AND MULTINATIONAL PRODUCTION: CONCEPTS AND MEASUREMENT

As mentioned above, investment promotion is a policy that mainly seeks to increase countries' involvement in multinational firms' economic activities, which is thus the relevant outcome variable. Furthermore, individual firms are the subject of the intervention being considered. The question then arises as to what the best measurement strategy is, given the available data. This is discussed next.

FDI Statistics

The standard approach to measuring engagement in multinational economic activity has been to use FDI statistics. There are two reasons for this. First, FDI data has been readily available, albeit up to a point and with clear limitations. Second, the early economics literature was eminently macro and thus focused on FDI as a particular type of financial flow across borders from home to host countries, as reported in balance of payment statistics, and associated aspects thereof. This included how home countries allocated their savings and held assets abroad and how host countries financed their capital formation and what burden they faced associated with the income from foreigners' claims on their capital (Lipsey, 2001, 2007; Markusen, 2002; and Ramondo et al., 2015).

These considerations lead to two key questions: what does FDI measure, exactly, and what is the actual coverage of this data? According to the IMF (2009), *FDI is a category of cross-border investment associated with a resident in one economy having control or a significant degree of influence on the management of an enterprise that is resident in another economy.*⁵¹ These control and influence relationships are considered to occur when a direct investor who resides in another economy holds 50% or more and 10% or

⁵¹ See also OECD (2008).

more of the voting power in a firm established in the domestic economy, respectively (OECD, 2008; IMF, 2009).⁵²

FDI statistics encompass direct investment positions (the value of the stocks of assets and liabilities at a point in time), financial transactions, and income flows associated with capital and credits between firms with a direct investment relationship. These statistics accordingly reflect how cross-border undertakings are financed: purchase and sale of shares, reinvestment of earnings, capital contributions and increases, and debt among firms in different countries (OECD, 2008; Rozemberg and Gayá, 2021).

Hence, **FDI data primarily captures cross-border investment financing modalities.** As a consequence, the spatial patterns of FDI may not necessarily correspond to those of multinational production, especially across industries (Lipsey, 2007). Thus, on the one hand, while the establishment of an affiliate in a country implies a change in the extensive margin of multinational production, it would not show up in the FDI statistics if it was financed with resources from local sources (Ramondo, Rodríguez-Clare, and Tintelnot, 2015).⁵³ On the other hand, these statistics may include financial transactions whose only purpose is to compensate losses in previous periods but not have any meaningful implications for production (Rozemberg and Gayá, 2021).

As for coverage, FDI data is available for most countries over long periods and is relatively homogeneous as it is generally produced based on a common methodology—the IMF’s Balance of Payment Manual and the OECD Benchmark Definition of FDI.⁵⁴ Having

⁵² This usually corresponds to ordinary shares in incorporated firms. When voting power is not based on ordinary shares or in the case of nonincorporated firms, equivalent measures are used.

⁵³ Relatedly, FDI reflects the country of origin of the financial transaction, which may not correspond with that of the ultimate owner’s location.

⁵⁴ The IMF methodology has been updated over time. The fact that some countries have adopted the most recent version (BPM6) whereas some peers are still using the previous version (BPM5) creates temporary discrepancies, at the very least (Rozemberg and Gayá, 2021). The OECD Benchmark Definition of FDI, 4th edition (BMD4), is fully consistent with the guidance in BPM6 but provides more detailed guidance on the compilation of FDI statistics, such as partner country and industry.

said that, it is worth making some qualifying observations on FDI data coverage.

First, the level of aggregation and detail of the data differs greatly across countries. Total FDI inflows and outflows and inward and outward stocks are easily accessible and are updated regularly for most economies in the world (UNCTADStat, 2020). However, bilateral (country-to-country) counterparts are only available and up-to-date for pairs involving developed countries (OECD, 2020) and some developing countries. The same is only true of bilateral-sectoral (country-to-country within given sectors) counterparts for a few individual economies. For instance, in LAC, only a subset of countries report FDI data disaggregated by sector—and even when they do so, this is generally based on broad sector definitions—and a small number of these release data disaggregated by home country–sector. Further, some countries have not yet published FDI data by home countries (table 2.1).

Second, FDI statistics are increasingly based on surveys of multinational firms.⁵⁵ These surveys cover representative samples of these firms instead of their entire population, and the design of the samples can differ largely across countries.⁵⁶ While these samples can be considered to be comprehensive in terms of values, as they include virtually all large multinational firms established in the respective countries, they leave varying shares of smaller counterparts out of the picture. Given that average sizes vary across sectors, this can result in differential, implicit sectoral biases in firms' extensive margins (e.g., there may be a relatively large number of services firms out of the picture). Importantly, these smaller multinational firms may be economically relevant, especially if they are concentrated in emerging and dynamic sectors and, as a whole, they have broad, diversified interactions with the local economy.

⁵⁵ This is a general trend in external sector statistics (BIS, 2009).

⁵⁶ Only a few countries—such as Korea—require all firms to report foreign direct investments. In LAC, countries such as Ecuador and Mexico have comprehensive registers of all foreign-owned firms.

TABLE 2.1 FDI STATISTICS FOR LATIN AMERICA AND THE CARIBBEAN

Country	Level of Disaggregation						Source
	Country		Sector		Country-sector		
	Inward	Outward	Inward	Outward	Inward	Outward	
Argentina	Yes	No	Yes (94)	Partial	No	No	BCRA
Bahamas	No	No	No	No	No	No	N/A
Barbados	No	No	No	No	No	No	N/A
Belize	No	No	No	No	No	No	N/A
Bolivia	Yes	No	Yes (11)	No	No	No	N/A
Brazil	Yes ^a	Yes ^a	Yes (73)	Yes (73)	Yes (73) ^a	No	BCB
Chile	Yes ^a	Yes ^a	Yes (13)	Yes (13)	No	No	BCC
Colombia	Yes ^c	Yes ^c	Yes (11)	Yes (11)	Yes (11) ^c	Yes (11) ^c	DNP
Costa Rica	Yes ^a	No	Yes (9)	No	Yes (9)	No	BCCR
Dominican Republic	Yes ^a	No	Yes (10)	No	No	No	BCRD
Ecuador	Yes ^a	No	Yes (9)	No	Yes (9)	No	BCE
El Salvador	Yes ^a	No	Yes (10)	No	No	No	BCR
Guatemala	Yes ^a	No	Yes (7)	No	Yes (7) ^a	No	BANGUAT
Guyana	No	No	No	No	No	No	N/A
Haiti	No	No	No	No	No	No	N/A
Honduras	Yes ^b	No	Yes (9)	No	No	No	BCH
Jamaica	No	No	Yes (7)	Yes (7)	No	No	BOJ
Mexico	Yes ^a	Yes ^a	Yes (282)	No	Yes (282)	No	SE
Nicaragua	No	No	No	No	No	No	N/A
Panama	Yes ^a	No	Yes (17)	No	No	No	INEC
Paraguay	Yes	No	Yes (33)	No	No	No	BCP
Peru	Yes ^{a,b}	No	Yes (15) ^b	No	Yes (15) ^b	No	ProInversión
Suriname	No	No	No	No	No	No	N/A
Trinidad and Tobago	No	No	No	No	No	No	N/A
Uruguay	Yes ^a	No	Yes (10)	No	No	No	BCU
Venezuela	No	No	No	No	No	No	N/A

Source: Author's research and Rozemberg and Gayà (2021).

Notes: a: main countries; b: stocks (not flows); and c: excluding oil sector.

A third, related point is that even within the subset of data that countries usually report, there are substantial differences in terms of quality. These can be traced back to the technical capabilities of the agencies that are responsible for this data (usually central banks), how the data is gathered and processed, and the transparency and quality of the information provided by the multinational firms surveyed. Furthermore, aggregate and disaggregate statistics for given countries can be produced by different agencies using different criteria, which results in inconsistent figures (Rozenberg and Gayá, 2021).

Last but not least, **the underlying microdata from surveys is rarely available for research purposes.** This is a crucial limitation for impact evaluation, given that investment promotion is essentially a firm-level policy.

Multinational Production Statistics

The aforementioned surveys conducted by national agencies are typically limited to foreign affiliates of multinational firms established in their respective countries. Only exceptionally do they ask anything about parent companies beyond ascertaining their nationality or, especially in developing countries such as those in LAC, inquire about the overseas activities of domestic multinational firms (Lipsey, 2001; and table 2.1, based on Rozenberg and Gayá, 2021, for LAC countries).

Moreover, with a few noteworthy exceptions such as the OECD's Activities of Multinational Enterprises (AMNE) Database, which covers a subset of OECD countries, **these official surveys have seldom been combined to allow for an internationally consistent characterization of the evolution and patterns of multinational production.** Furthermore, even if they were, it would be generally impossible to obtain a complete worldwide picture of this production and the specific role that developing countries play in this (e.g., multinational economic activities between them) due to the survey

limitations discussed above. Another important factor is that key firm-level data from these official surveys is not accessible.

These gaps are being filled by private providers who compile and publish firm-level databases on multinational firms, their foreign affiliates, and their activities across countries and over time. These worldwide databases include Dun and Bradstreet's WorldBase, Moody/Bureau van Dijk's Orbis, and Standard and Poor's S&P Capital IQ.⁵⁷

The information in these databases comes from a wide range of sources and is subject to standardization and multiple checks. For example, the data in Dun and Bradstreet's WorldBase—the database that is used in the analysis presented in this report—is gathered from public, local mercantile, and chamber of commerce registers, telephone directory and insolvency records, legal filings, websites, and dedicated studies, the quality of which is verified centrally through multiple automated and manual checks (Alfaro and Chen, 2012; and Dun and Bradstreet, 2019).

As of 2017, both WorldBase and Orbis included more than 220 million public and private firms in over 200 countries and territories. Of these, multinational firms are all parent firms that have or had at least one subsidiary in a different country. Multinationals are a relatively small subgroup of the complete samples, which largely consist of stand-alone businesses with no formal linkages to other peers. For instance, in 2017, WorldBase identified roughly 200,000 (global ultimate) parent multinational firms.⁵⁸

These proprietary databases generally include basic information on multinational firms and their foreign affiliates such as home/

⁵⁷ The OECD has recently launched the Analytical Database on Individual Multinationals and Affiliates (ADIMA) database, which includes publicly available data on 500 large multinational firms.

⁵⁸ As a reference, in 2010, the WorldBase sample consisted of almost 150,000 multinational firms, 500,000 foreign affiliates, and around one million foreign plants. UNCTAD data for the same year recorded 103,000 multinational firms and approximately 900,000 foreign affiliates/plants.

host country, year of establishment, and sector of activity. They also contain varying numbers of measures of their activities and performance, such as sales, number of employees, total exports, total imports, total assets, total liabilities, liquidity ratio, solvency ratio, and returns on assets.

In addition, there are databases that report investment announcements and “signals” (e.g., business news pointing to possible investments) such as the Financial Times’ fDi Markets.

LAC IPAs use these databases to monitor FDI and multinational production trends and as an input in the design of their promotion strategies (table 2.2).

It should be mentioned that while these databases include virtually every country in the world and allow microdata on unprecedentedly large numbers of firms to be accessed, their coverage is far from perfect. On the extensive margin, these databases follow substantially more firms than the typical central bank or statistical office FDI survey but do not encompass the entire population of multinational firms or their affiliates. On the intensive margin, when going beyond the basic information to consider activity and performance measures, the degree of coverage is even lower. This is particularly the case for developing countries (Ramondo et al., 2015).

Having said that, the empirical analysis whose results are presented in this report primarily focuses on the impact of investment promotion on the probability of multinational firms establishing a first or subsequent affiliate in a given country, which only requires basic information on these firms and thus makes use of the dimensions of the databases with the best coverage. In this sense and despite their limitations, these databases, particularly WorldBase, are some of the best available estimations of the global population of multinational firms (Alfaro and Charlton, 2009). Furthermore, given the potential limitations in its coverage, in this report, WorldBase is complemented with data on these firms from national sources

TABLE 2.2 DATABASES USED BY LAC IPAS

Databases	ARG	BRA	CHI	COL	CRI	SLV	JAM	NIC	PRY	TTO	URY	Total
Firm-Level Databases												
fDi Markets												8
Orbis												5
WorldBase												3
Gazelle												3
S&P Capital IQ												1
MarketLine												
Country- and Sector-Level Databases												
Central Bank—FDI Statistics												10
Central Bank—Balance of Payments												7
Statistical Office—Various Databases												7
OECD—FDI Statistics												7
IMF—WEO												6
UNCTAD—WIR												6
UNCTAD—Other Databases												6
ECLAC—FDI in LAC												6
ITC—Trade and Market Map												6
ECLAC—Other Databases												3
ITC—Investment Map												3
fDi Benchmark												3
Other Databases												11

Source: Author's calculations based on data kindly provided by national IPAs.

kindly provided by respective IPAs and other agencies. Moreover, for activity and performance measures (e.g., employment and exports), the study uses administrative microdata from national tax and customs agencies and relevant private-sector associations in selected Latin American countries. This allows the study to include such measures for practically all multinational firms that are identified in the dataset that results from combining WorldBase and national databases as well as for their domestic counterparts in the countries in question (see appendix A4.1 for details).

The following sections characterize the evolution and cross-country and cross-sector patterns of LAC participation in multinational production vis-à-vis that of other regions and those of its individual economies from 2000 to 2017 (see appendix A2.1). In particular, the analysis will focus on the number of (ultimate owner) multinational firms present in the different host regions/countries (*cross-country multinational production extensive margin*) and the actual number of foreign affiliates of these firms that are established and operating in these host regions/countries (*within-country multinational production extensive margin*), both in general and across home regions/countries, sectors/subsectors, and types of firms. In so doing, the empirical examination will specifically distinguish between the establishment of first affiliates by multinational firms that are new to the country (*first establishment*) and the establishment of subsequent affiliates by multinational firms already present in the country (*reinvestment*).

LATIN AMERICAN AND THE CARIBBEAN IN THE GLOBAL MULTINATIONAL PRODUCTION MAP

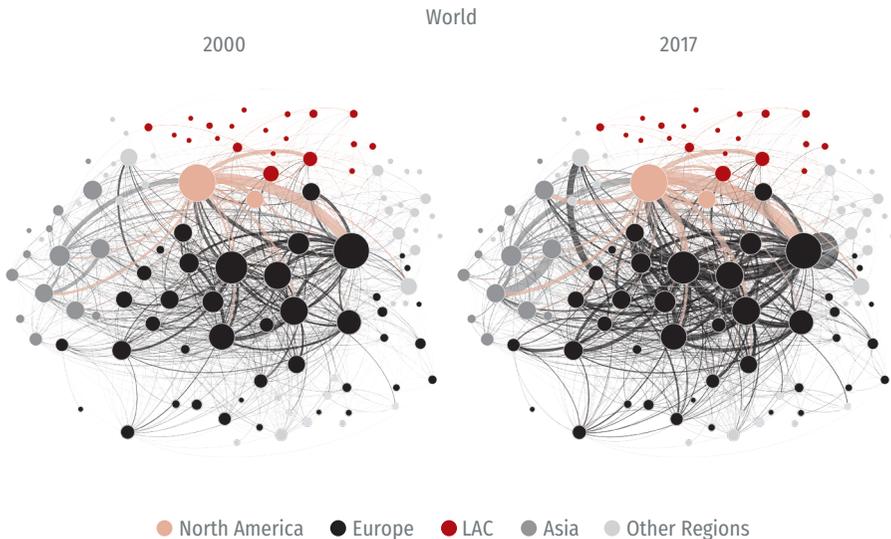
Overall Evolution, Cross-Region, and Cross-Country Patterns

The global multinational production map became larger and more densely interconnected as more multinational firms entered more countries after 2000. The total number of multinational firms—that

is, firms with at least an affiliate in a foreign country—more than doubled between 2000 and 2017, when it topped 200,000 (figure 2.1, upper panel). The total number of host countries (including territories with their own UN ISO 3 code) reached 216, and the average number of host countries per multinational firm slightly exceeded 1.7 in 2017. This number increased by 8.7% (from 2.1 to 2.3) for firms that were already active at the beginning of the sample period.

LAC's multinational production linkages have grown in recent decades (figure 2.1, lower panel). The number of parent multinational firms hosted by the region increased 88% between 2000 and 2017—almost 50 percentage points lower than the growth recorded in the rest of the world (133%). As a consequence, it

FIGURE 2.1 MULTINATIONAL FIRMS AND CHANGES IN THE GLOBAL MULTINATIONAL PRODUCTION MAP, 2000 AND 2017

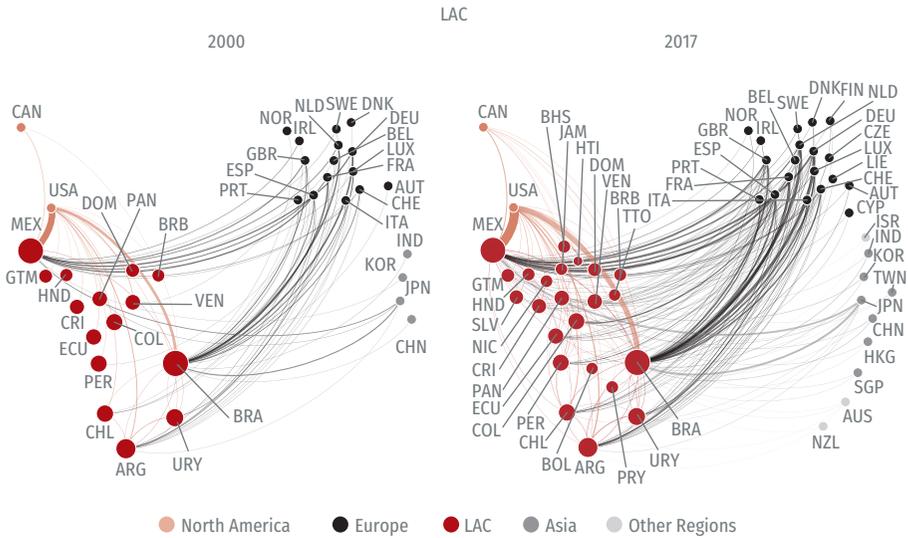


Source: Author's calculations based on data from WorldBase and national IPAs.

Note: The nodes represent different countries. The size of the node corresponds to the country's number of degrees (linkages) in logarithmic terms. The edges (lines) represent the number of foreign affiliates in the host country of the multinational firms that are headquartered in the home countries, also in logarithmic terms. Only edges where the number of foreign affiliates is above 50 and nodes with at least one edge according to this criterion are shown.

(continued on next page)

FIGURE 2.1 MULTINATIONAL FIRMS AND CHANGES IN THE GLOBAL MULTINATIONAL PRODUCTION MAP, 2000 AND 2017 (continued)



Source: Author's calculations based on data from WorldBase and national IPAs.
 Note: The nodes represent different countries. The size of the node represents the country's number of degrees (linkages) in logarithmic terms. The edges (lines) represent the number of foreign affiliates in the host country of the multinational firms that are headquartered in the home countries, also in logarithmic terms. Only edges where the number of foreign affiliates established in LAC is above 10 and nodes with at least one edge according to this criterion are shown.

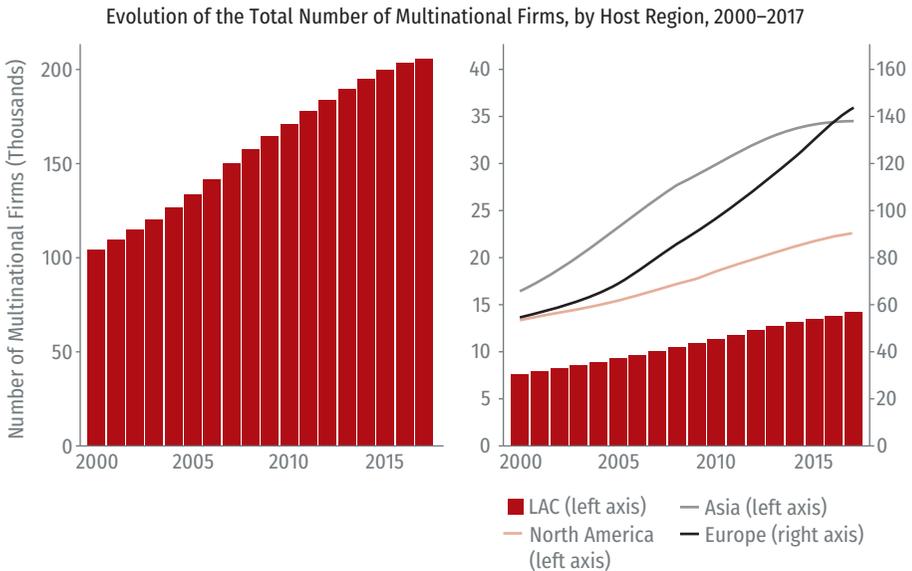
reached roughly 15,000 in 2017, which amounted to 7.5% of the world total.⁵⁹ Europe and Asia experienced significant expansions in the multinational production they host. In Europe, the number of multinational firms increased by 120% between 2004—when the Fifth Enlargement of the EU took place—and 2017, with the largest percentage increases coming from Bulgaria (681%) and Romania (417%). In Asia, this number rose 94% between 2001—when China accessed the WTO—and 2013, with China (145%) and India (143%) leading the expansion (figure 2.2, upper panel).

A similar overall picture emerges when looking at the evolution of the foreign affiliates of multinational firms. The total number

⁵⁹ As a reference, the region's share in global GDP is 7.2%.

of these affiliates established in LAC grew by almost 90% from 2000 to 2017 due to both first establishments and reinvestments. This number, which exceeded 45,000 in 2017, represents 6% of the worldwide total. It is the result of comparable upward movements in both the number of foreign affiliates of multinational firms that are new to the countries and the number of foreign affiliates of multinationals that were already present there in the early 2000s (71% and 94%, respectively) and to relatively larger increases in the former in recent years (2.9% relative to 2.5% on an annual average basis). In Asia, Europe, and North America, the number of foreign affiliates rose 145%, 155%, and 77%, respectively, from 2000 to 2017, when they amounted to 13%, 63%, and 9% of the world total. First establishments accounted for 42%, 46%, and 44% of the expansions, respectively (figure 2.2, lower panel).⁶⁰

FIGURE 2.2 EVOLUTION OF THE TOTAL NUMBER OF MULTINATIONAL FIRMS AND FOREIGN AFFILIATES, TOTAL AND BY HOST REGION, 2000–2017

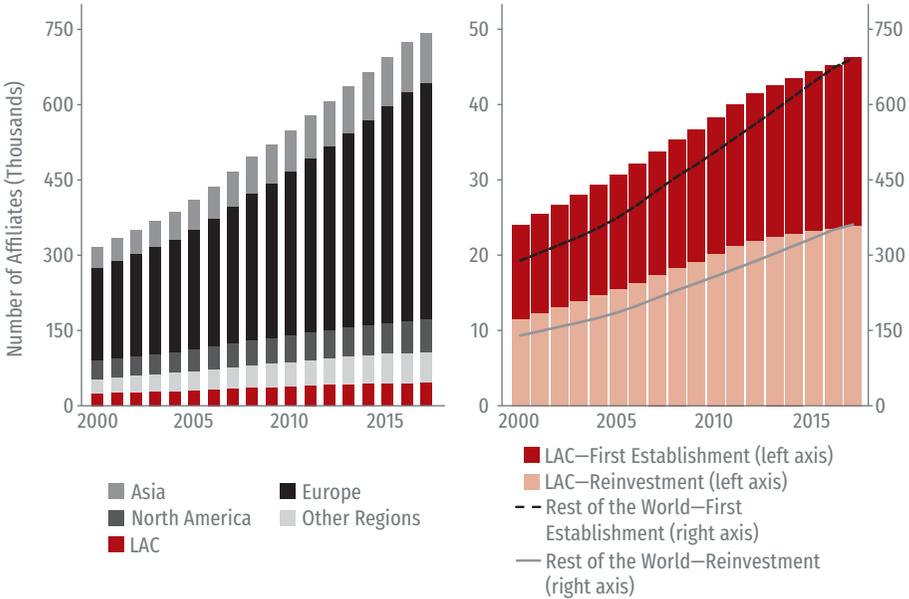


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⁶⁰ Data from BEA, EUROSTAT, and the OECD (AMNE) confirm both overall and geographic patterns.

FIGURE 2.2 EVOLUTION OF THE TOTAL NUMBER OF MULTINATIONAL FIRMS AND FOREIGN AFFILIATES, TOTAL AND BY HOST REGION, 2000–2017 (continued)

Evolution of the Total Number of Multinational Firms' Foreign Affiliates, by Host Region, 2000–2017



Source: Author's calculations based on data from WorldBase and national IPAs.

The number of multinational firms that are new to LAC countries averaged 400 every year and remained relatively stable between 2000 and 2017. In contrast, the annual rate of increase in the rest of world doubled over this period. More specifically, it grew from 4,500 to 9,000 between 2000 and 2008 (the year in which the global financial crisis started) and stayed at that level afterward. Establishments of new multinational firms in Europe accounted for a significant share (67%) of this growth after 2004 and throughout the rest of the period. The penetration of these firms into Asia also boosted this global increase until 2008 but its contribution to the total has declined consistently since (figure 2.3, upper panel).

The number of new foreign affiliates that multinational firms opened in LAC fell by more than 40% between 2000 and 2017.

More precisely, this number fluctuated around 1,400 between 2000 and 2012 and then decreased pronouncedly to less than 1,000 in 2017. This decrease can be primarily traced back to a substantial slowdown in reinvestment, as proxied by the number of additional foreign affiliates established by multinational firms that already had a presence in the region. As with parent multinational firms, the global trajectory followed an upward trend until 2008 and stabilized at around 27,000 affiliates per year afterward. Reinvestments—as defined above—accounted for roughly 55% of this annual number. The opening of new affiliates in Europe was the main driving force behind these aggregate developments: the region was responsible for 80% of the total number of new foreign affiliates established in 2017, 45% of which were reinvestments (figure 2.3, lower panel).

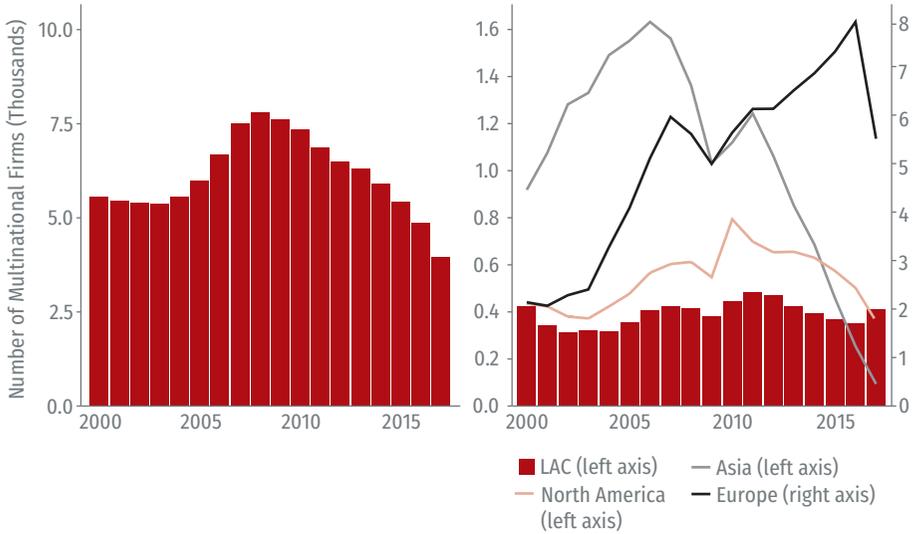
LAC had four multinational firms and seven foreign affiliates of these firms for every US\$1 billion of GDP in 2017. This is slightly below the global average of 4.5 and is one-third of the level observed in Europe but more than twice those of Asia and North America, which reflects the internal size of their domestic markets. On average, reinvestment accounts for approximately 51% of these totals across regions, a share that is relatively larger in North America (62%) and smaller in the rest of the world (42%) (figure 2.4, upper panel).

Argentina, Brazil, and Mexico together hosted 57% of the multinational firms and 72% of the foreign affiliates of these firms that were established in LAC in 2017. This is in line with what might be expected based on the size of these countries' economies, as proxied by GDP. The same holds for Colombia and Peru. The number of firms (affiliates) per US\$1 billion of GDP was 4.1 (6.9) for Argentina, 1.8 (7.0) for Brazil, 5.2 (10.7) for Mexico, 2.7 (3.8) for Colombia, and 5.3 (7.0) for Peru. Smaller countries tended to host relatively large numbers of multinational firms and overseas affiliates relative to their GDPs. This was the case for Costa Rica and Uruguay, for instance (figure 2.4, middle panel).

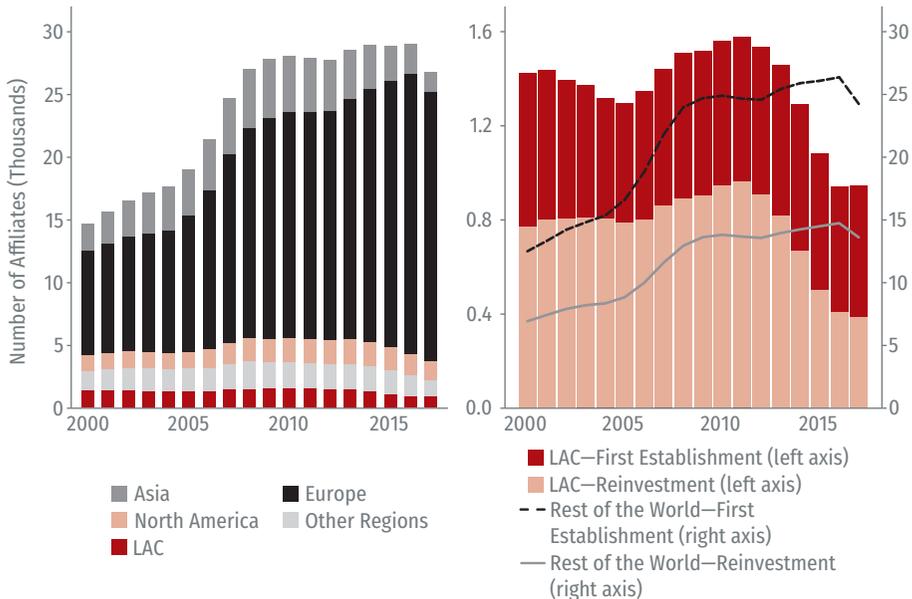
Reinvestment was even more highly concentrated in the larger Latin American countries—Argentina, Mexico, and especially

FIGURE 2.3 EVOLUTION OF THE NUMBER OF NEW MULTINATIONAL FIRMS AND FOREIGN AFFILIATES, TOTAL AND BY HOST REGION, 2000–2017

Evolution of the Number of New Multinational Firms, by Host Region, 2000–2017

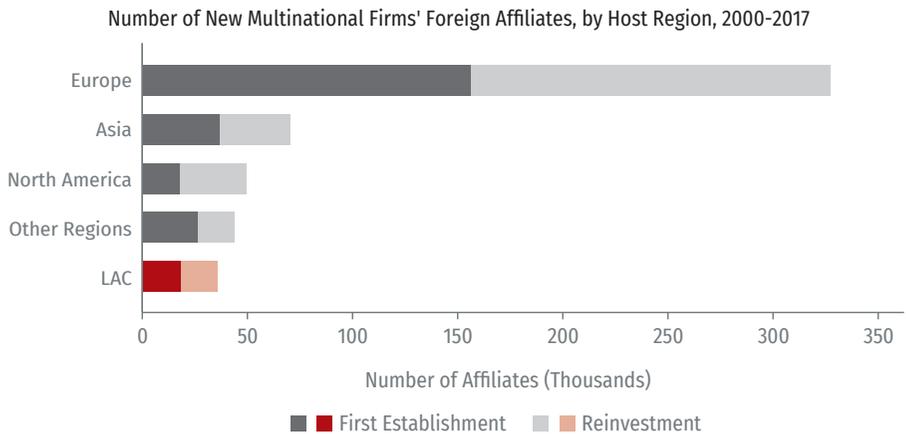


Evolution of the Number of New Multinational Firms' Foreign Affiliates, by Host Region, 2000–2017



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FIGURE 2.3 EVOLUTION OF THE NUMBER OF NEW MULTINATIONAL FIRMS AND FOREIGN AFFILIATES, TOTAL AND BY HOST REGION, 2000–2017 (continued)



Source: Author's calculations based on data from WorldBase and national IPAs.

Brazil—which is in keeping with their size. These three countries jointly accounted for 86% of the additional affiliates of multinational firms that were established in the region, which amounted to five for every US\$1 billion of GDP. Interestingly, Brazil and Mexico differ in terms of the channels through which multinational firms expanded their presence in their territories. Reinvestment is notably more important for Brazil, where it accounted for 74% of the total number of overseas affiliates present, compared to 51% in Mexico.⁶¹ Other countries with relatively high shares of reinvestment include Chile (37%), El Salvador (34%), and Colombia (30%) (figure 2.4, lower panel).⁶²

Home Regions and Countries

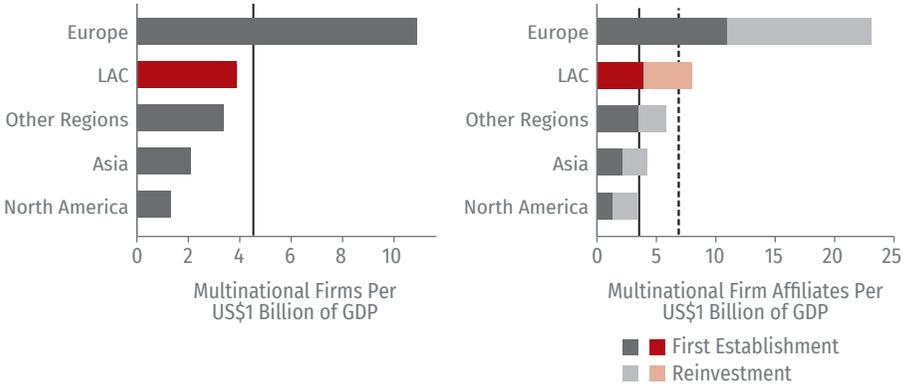
Europe and North America accounted for almost 50% and 27% of the total number of foreign affiliates of multinational firms

⁶¹ Note that, whereas Mexico has more multinational firms than Brazil, the opposite holds in terms of foreign affiliates.

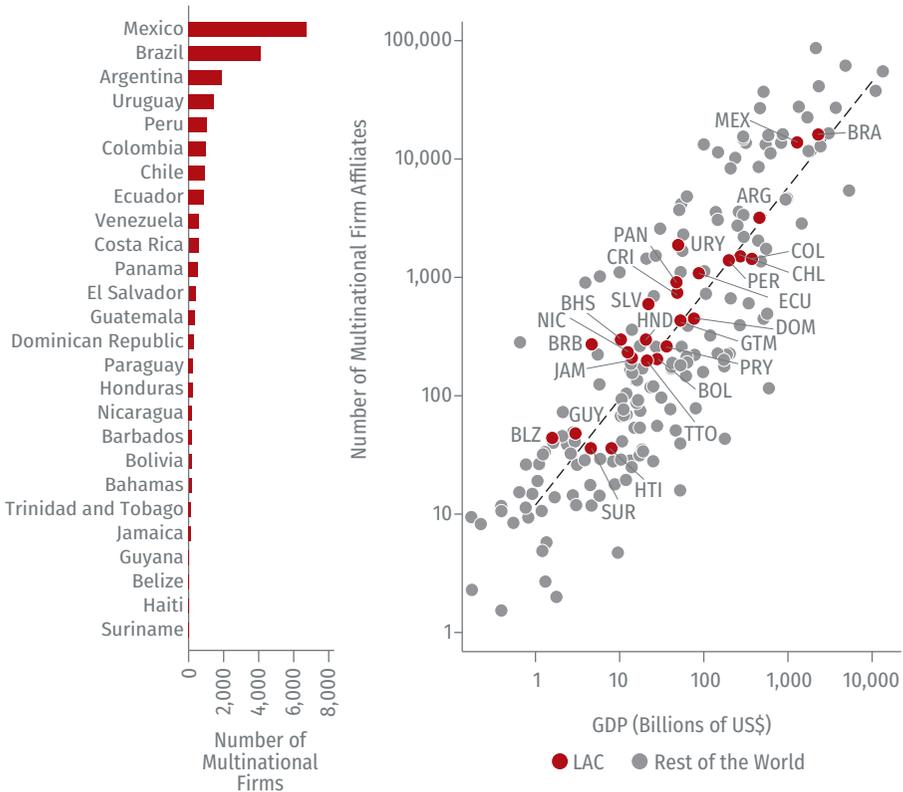
⁶² The reinvestment share is 13% in Belize and Guyana, 9% in Nicaragua, and 7% in Paraguay.

FIGURE 2.4 MULTINATIONAL FIRMS AND FOREIGN AFFILIATES, ABSOLUTE AND RELATIVE LEVELS, BY HOST REGION AND LAC HOST COUNTRY, 2017

Multinational Firms and Foreign Affiliates, Relative Levels, by Host Region, 2017



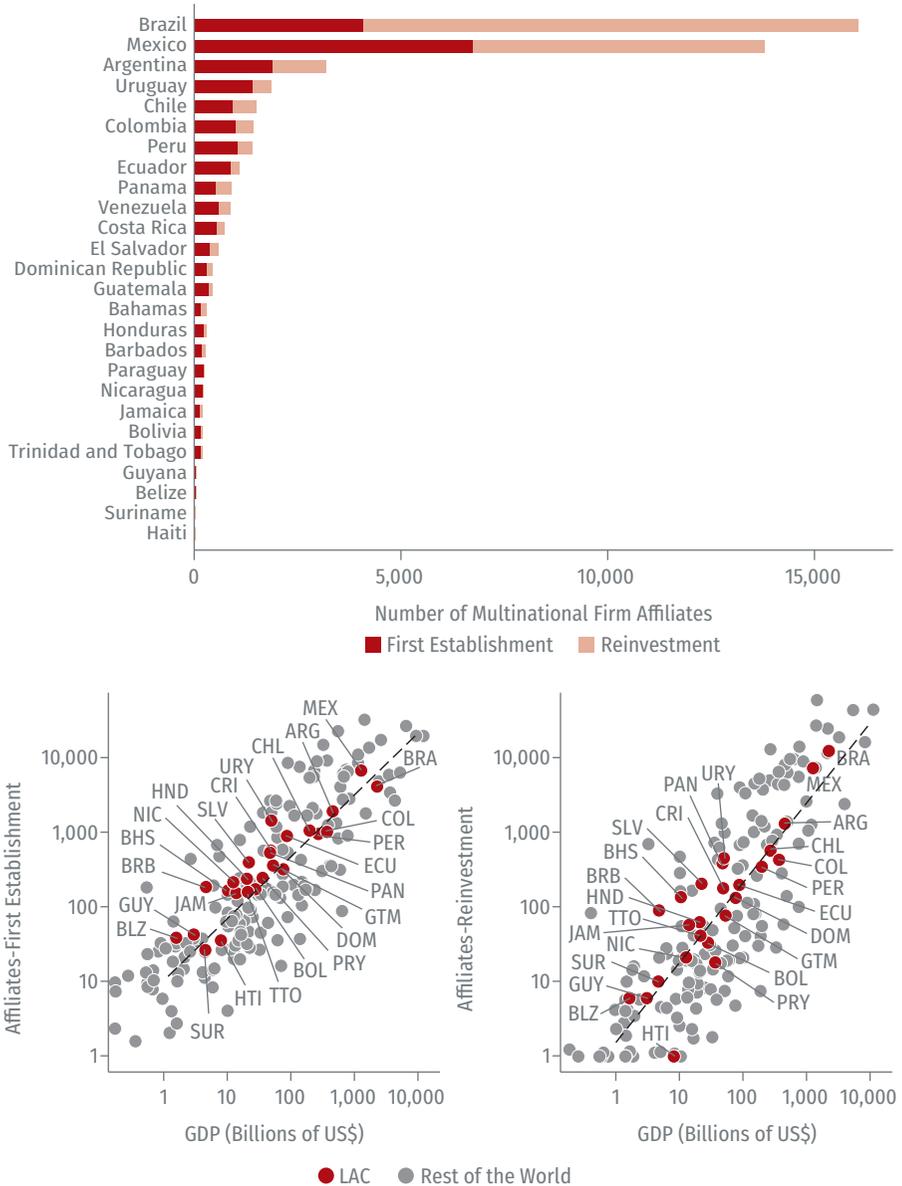
Multinational Firms, Absolute and Relative Levels, by LAC Host Country, 2017



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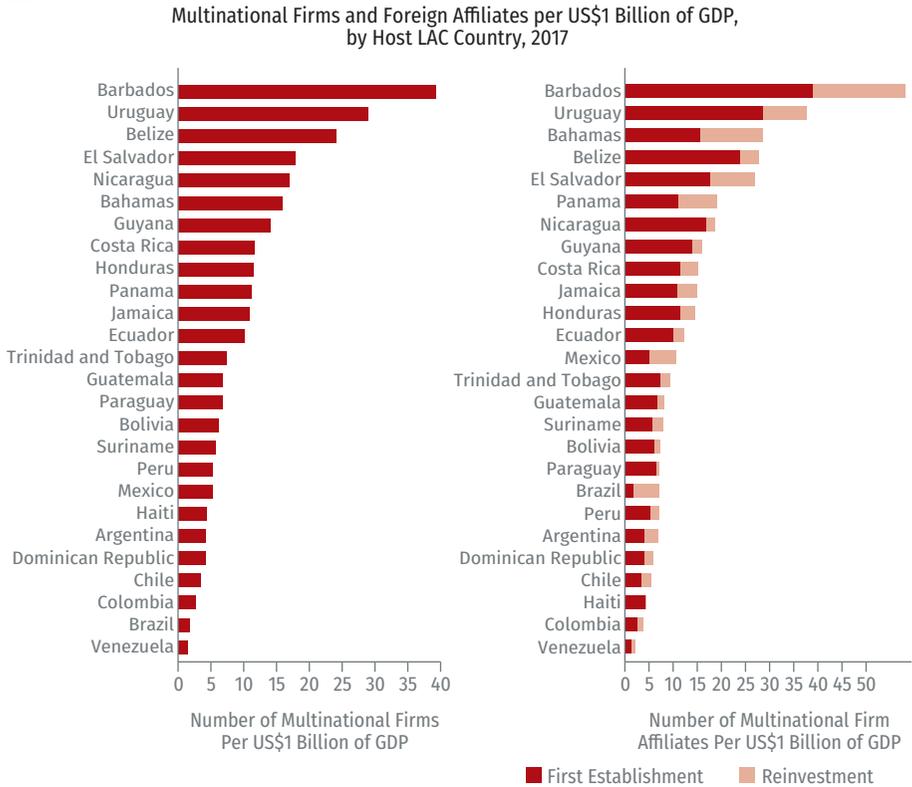
FIGURE 2.4 MULTINATIONAL FIRMS AND FOREIGN AFFILIATES, ABSOLUTE AND RELATIVE LEVELS, BY HOST REGION AND LAC HOST COUNTRY, 2017 (continued)

Multinational Firms' Foreign Affiliates, Absolute and Relative Levels, by Host LAC Country, 2017



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FIGURE 2.4 MULTINATIONAL FIRMS AND FOREIGN AFFILIATES, ABSOLUTE AND RELATIVE LEVELS, BY HOST REGION AND LAC HOST COUNTRY, 2017 (continued)

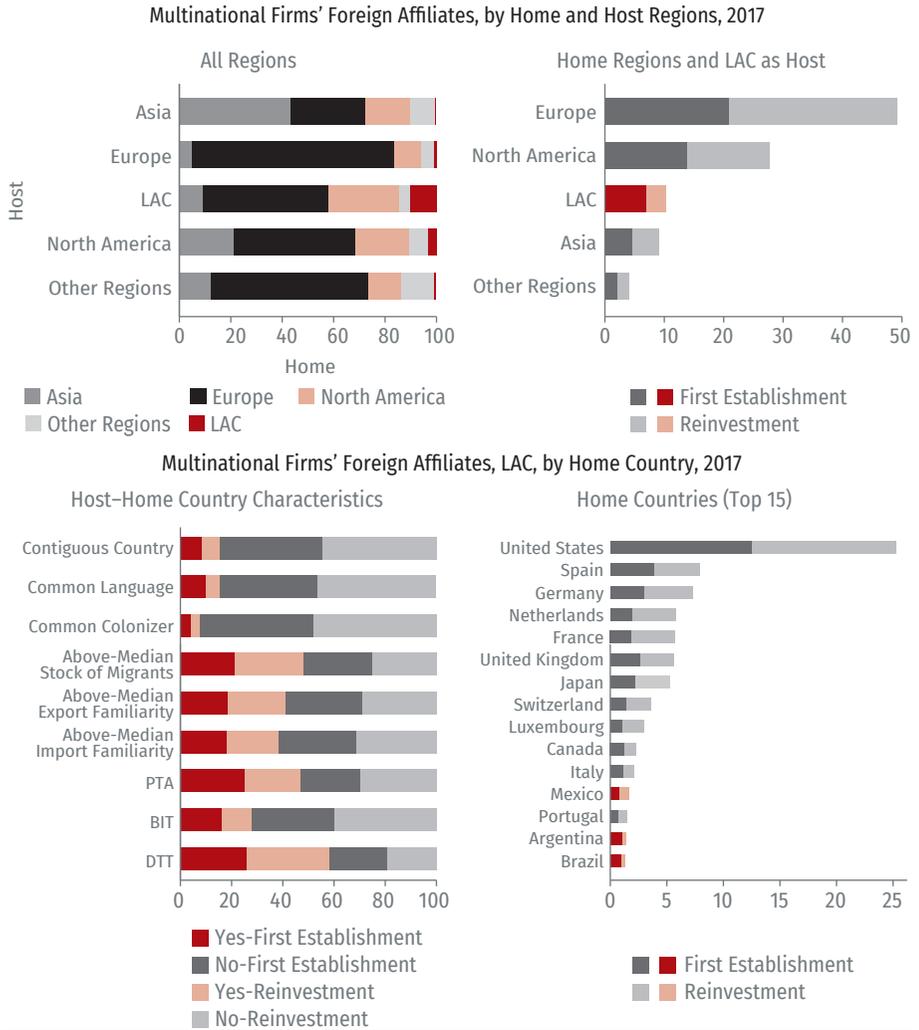


Source: Author’s calculations based on data from WorldBase, national IPAs, and the World Bank’s World Development Indicators.

operating in LAC in 2017, respectively. Asia and LAC itself were each responsible for 9% of this total. In Europe, the intraregional share was 75%; in Asia, it exceeded 45%. Within Asia, Europe and North America were responsible for 25% and 15% of the overseas affiliates active there, respectively. It is noteworthy that in LAC, only a third of the foreign affiliates corresponded to reinvestment by multinational firms, well below the approximately 50% observed in the other regions (figure 2.5, upper panel).

More than 80% of the foreign affiliates present in LAC belonged to multinational firms headquartered in countries that are not contig-

FIGURE 2.5 MULTINATIONAL FIRMS' FOREIGN AFFILIATES, BY HOME REGION AND COUNTRY, 2017



Source: Author's calculations based on data from WorldBase, national IPAs, CEPIL, Baier and Bergstrand (2017), Kohl et al. (2016), IOM, OECD, UNCTAD, World Bank, and WTO.

Note: *Above-Median Export/Import Familiarity* is a binary indicator that takes the value of 1 if the share of host-country exports to/imports from the home country is larger than the share of exports to/imports from the set of all other countries in the world except the host country itself toward the home country (as measured in 2000), and 0 otherwise. *Above-Median Stock of Migrants* is a binary indicator that takes the value of 1 if the number of migrants per capita from the home country living in the host country is higher than for the median country (as measured in 2000), and 0 otherwise.

uous, do not share a common language, and did not have a common colonizer. Between 50% and 60% of these affiliates were owned

by multinational firms whose home countries had relatively weaker pre-existing ties in terms of migration, exports, and imports, and were not connected with the host countries through trade agreements (PTAs). Interestingly, bilateral investment treaties (BITs) only covered 30% of these foreign affiliates, but double taxation treaties (DTTs) covered more than 60%.⁶³ The share of reinvestment is highest among countries with high export familiarity (55%), a relatively high stock of bilateral migrants (54%), or a DTT (55%), and lowest among those with a common language (35%) or a BIT (42%).

The most important home countries included the United States (25.2%), Spain (8.0%), Germany (7.4%), the Netherlands (5.8%), France (5.7%), the United Kingdom (5.6%), and Japan (5.3%) (figure 2.5, lower panel).

Sectors and Subsectors

Almost 60% of the foreign affiliates of multinational firms established in LAC operated in the manufacturing and nonfinancial services sector (30% in each sector). This sectoral composition is relatively similar to that observed in Asia and North America. In Europe (and the rest of the world), in contrast, both financial and nonfinancial services had relatively larger shares, which jointly added up to more than 50%. Overall, the sectoral pattern is similar for first establishment and reinvestment (figure 2.6, upper panel).

Based on the attributes of their specific sectors, the sectoral distribution of these foreign affiliates can be mapped into a rich picture consisting of a number of relevant policy dimensions such as the level of information barriers, inclusion and gender equality, sustainability, digitalization, and automation. **Most of the affiliates were active in sectors that produce differentiated goods and services. Specifically, they were sectors in which countries did**

⁶³ It is noteworthy that first establishments are proportionally more important for bilateral investment treaties than for trade agreements and double taxation treaties.

not have a revealed comparative advantage in trade and women accounted for a relatively large share of the total employment. They generated relatively low CO₂ emissions and involved routine tasks but did not exhibit clear sectoral biases in terms of the number of stages involved, how upstream the activities performed are, and their suitability for telework. More precisely, around 50% of these affiliates belong to sectors whose number of stages is above the median and their tasks are automatable and can be carried out remotely. The same holds for sectors in which countries have “comparative advantage in terms of investment” (figure 2.6, middle panel).

In particular, certain individual subsectors stand out, including some within manufacturing in which countries in the region have a comparative advantage. This is the case with machinery, chemical products, rubber products, fabricated metal products, and food products within the manufacturing sector, which jointly accounted for 50% of the foreign affiliates in this sector. In the nonfinancial services sector, head offices and consultancy, office support and administration services, engineering, transportation services, and computer programming were jointly responsible for 45% of the foreign affiliates (figure 2.6, lower panel).⁶⁴

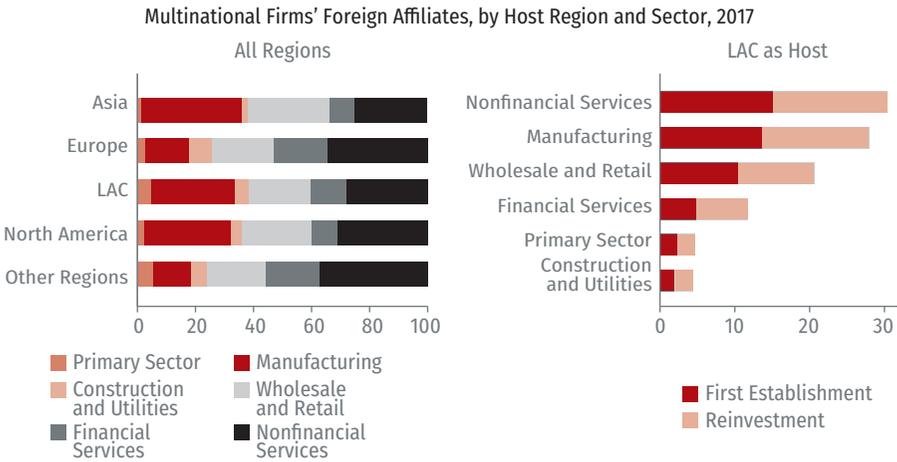
It is worth noting that the shares of electronics and computer manufacturing are more than three times higher in Asia than in LAC, whereas those of computer programming and scientific research are twice as high.⁶⁵ However, LAC has higher shares in food and beverage manufacturing (25% higher), air and land transportation (three times higher), and accommodation (two times higher).⁶⁶

⁶⁴ Only 0.2% of the foreign affiliates established in LAC operate in the subsectors research and experimental development on natural sciences and engineering and research and experimental development on social sciences and humanities. The percentage share is two times higher in Asia and Europe and almost three times higher in North America.

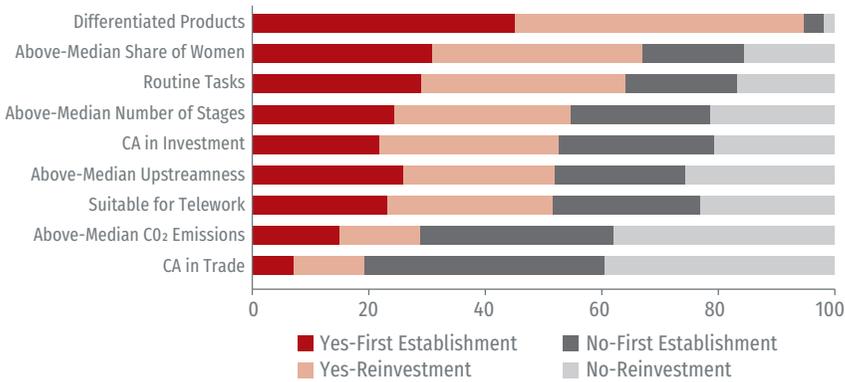
⁶⁵ The share of the former subsectors is two times higher in North America than in LAC.

⁶⁶ The share of food and beverage manufacturing in LAC is two times higher than in Europe.

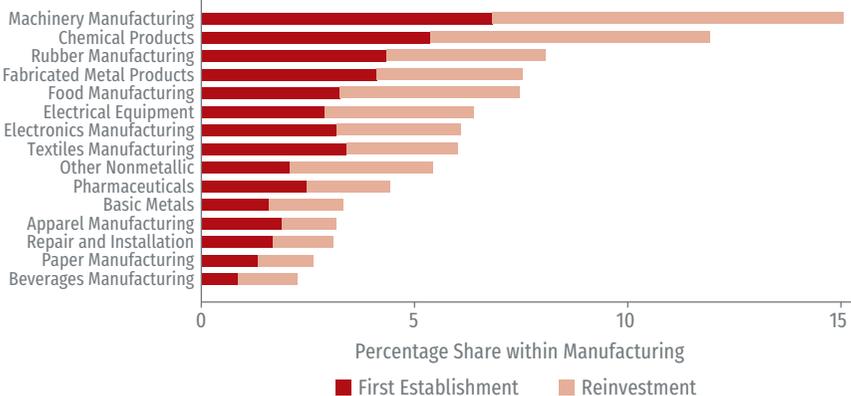
FIGURE 2.6 MULTINATIONAL FIRMS' FOREIGN AFFILIATES, BY SECTOR AND SUBSECTOR, 2017



Multinational Firms' Foreign Affiliates, LAC, by Sector Characteristics, 2017

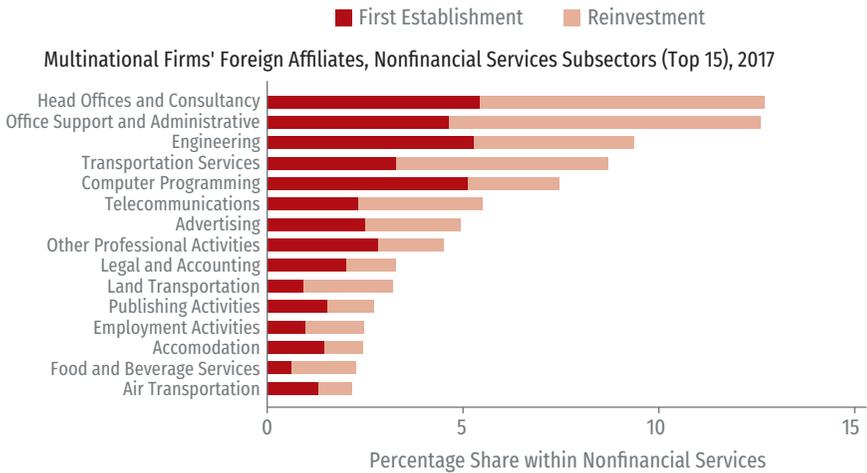


Multinational Firms' Foreign Affiliates, Manufacturing Subsectors (Top 15)



(continued on next page)

FIGURE 2.6 MULTINATIONAL FIRMS' FOREIGN AFFILIATES, BY SECTOR AND SUBSECTOR, 2017 (continued)



Source: Author's calculations based on data from WorldBase, national IPAs, Rauch (1999), Antràs et al. (2012), Acemoglu and Restrepo (2019), Dingel and Neiman (2020), OECD, US Bureau of Labor Statistics (BLS), and UNCTAD.

Note: The figures on the lower panel report the percentage share within the respective sector. *Differentiated Products* is a binary indicator that takes the value of 1 if the median affiliate of the multinational firm operates in a sector where most products (or services) are differentiated according to the definition in Rauch (1999), and 0 otherwise. *Above-Median Number of Stages* is a binary indicator that takes the value of 1 if the sector's number of production stages is higher than that of the median sector as computed based on data from Antràs et al. (2012), and 0 otherwise. *Above-Median Upstreamness* is a binary indicator that takes the value of 1 if the sector has an average distance from final use that is higher than that of the median sector as computed based on data from Antràs et al. (2012), and 0 otherwise. *Routine Tasks* is a binary indicator that takes the value of 1 if the sector has a share of routine tasks that is higher than that of the median sector as computed based on data from Acemoglu and Restrepo (2019), and 0 otherwise. *Suitable for Telework* is a binary variable that takes the value of 1 if the sector has a share of occupations that can be performed remotely that is higher than that of the median sector as computed based on data from Dingel and Neiman (2020), and 0 otherwise. *Revealed Comparative Advantage in Investment* is a binary variable that takes the value of 1 for a given host country-sector combination if the ratio of the number of affiliates in the sector in a host country to the total number of affiliates in the country is higher than this ratio for all other countries in the world, and 0 otherwise. *Revealed Comparative Advantage in Trade* is a binary variable that takes the value of 1 for a given host country-sector combination if the ratio of exports of products in the sector from the home country to this country's total exports is higher than this ratio for all other countries in the world, and 0 otherwise. *Above-Median CO₂ Emissions* is a binary variable that takes the value of 1 if the CO₂ emissions generated by the sector relative to its level of activity in OECD countries (in 2013) are higher than those of the median sector as computed based on data from OECD, and 0 otherwise. *Above-Median Share of Women* is a binary variable that takes the value of 1 if the share of women in the sector's total number of employees in the United States (in 2000) is higher than that of the median sector, as computed based on data from the BLS, and 0 otherwise.^a

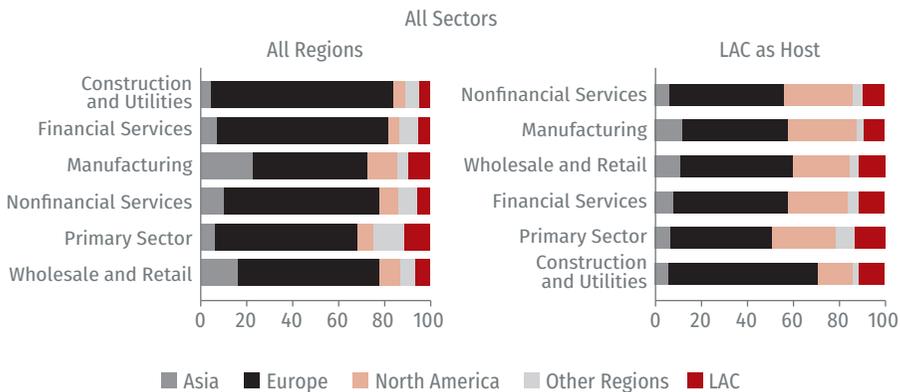
^a Data for the earliest available year has been used for all sector-level variables so as to minimize potential changes due to investment promotion activities themselves.

Regions, Sectors, and Subsectors

LAC did not exhibit strong sectoral differences in the geographical origin of multinational firms' foreign affiliates. Still, Asian affiliates are relatively more prevalent in manufacturing—especially

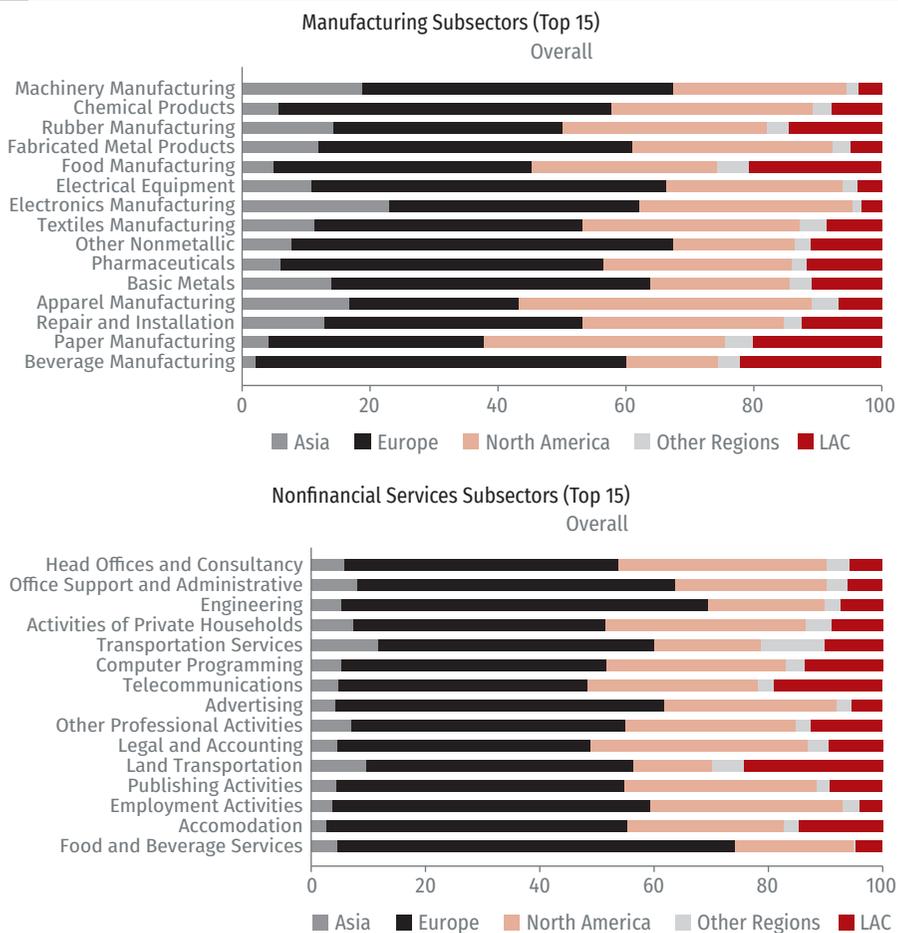
in electronics, machinery, rubber, and apparel—and relatively less important in the primary sector. Multinational affiliates from LAC itself are more predominant in the primary sector (13%). Within manufacturing and nonfinancial services, intraregional investment is especially predominant among inland transportation services (24%), food and beverage manufacturing (21%), paper manufacturing (19%), and telecommunications (19%). Indeed, in these subsectors, LAC itself has a high share in reinvestments relative to its overall low level. Europe’s shares are largest in construction and utilities (65%) and nonfinancial services (50%). Within manufacturing and nonfinancial services, Europe plays a significant role in the manufacturing of other nonmetallic products (60%) and beverages (58%), food and beverage services (69%), and engineering (64%), respectively. In general, the European share is higher for reinvestment across sectors and subsectors. Finally, for North America, the largest share is found in manufacturing (30%) and nonfinancial services (29%). Within manufacturing, the largest share is in apparel (46%) and paper manufacturing (38%); within nonfinancial services, it is in professional services (legal, accounting, head offices, and consulting, with 38%) (figure 2.7).

FIGURE 2.7 MULTINATIONAL FIRMS’ FOREIGN AFFILIATES, BY HOME REGION AND SECTOR AND SUBSECTOR, 2017



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FIGURE 2.7 MULTINATIONAL FIRMS' FOREIGN AFFILIATES, BY HOME REGION AND SECTOR AND SUBSECTOR, 2017 (continued)



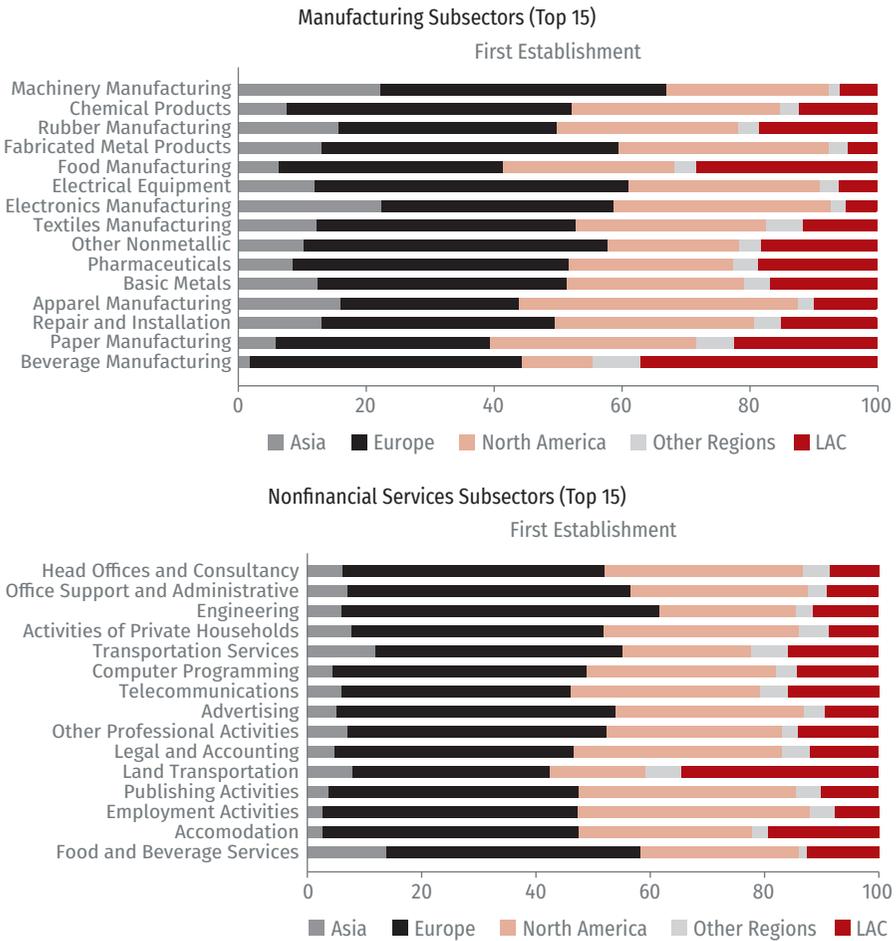
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Multinational Firm Profile: Size and Network of Affiliates

The multinational firms present in LAC were significantly larger than their counterparts in other regions in terms of the total number of foreign affiliates, the number of host countries in which they are present, and the number of sectors in which they are active through these affiliates.⁶⁷ Around 40% of these firms had more than

⁶⁷ Kolmogorov-Smirnov tests clearly indicate that these differences are statistically significant.

FIGURE 2.7 MULTINATIONAL FIRMS' FOREIGN AFFILIATES, BY HOME REGION AND SECTOR AND SUBSECTOR, 2017 (continued)

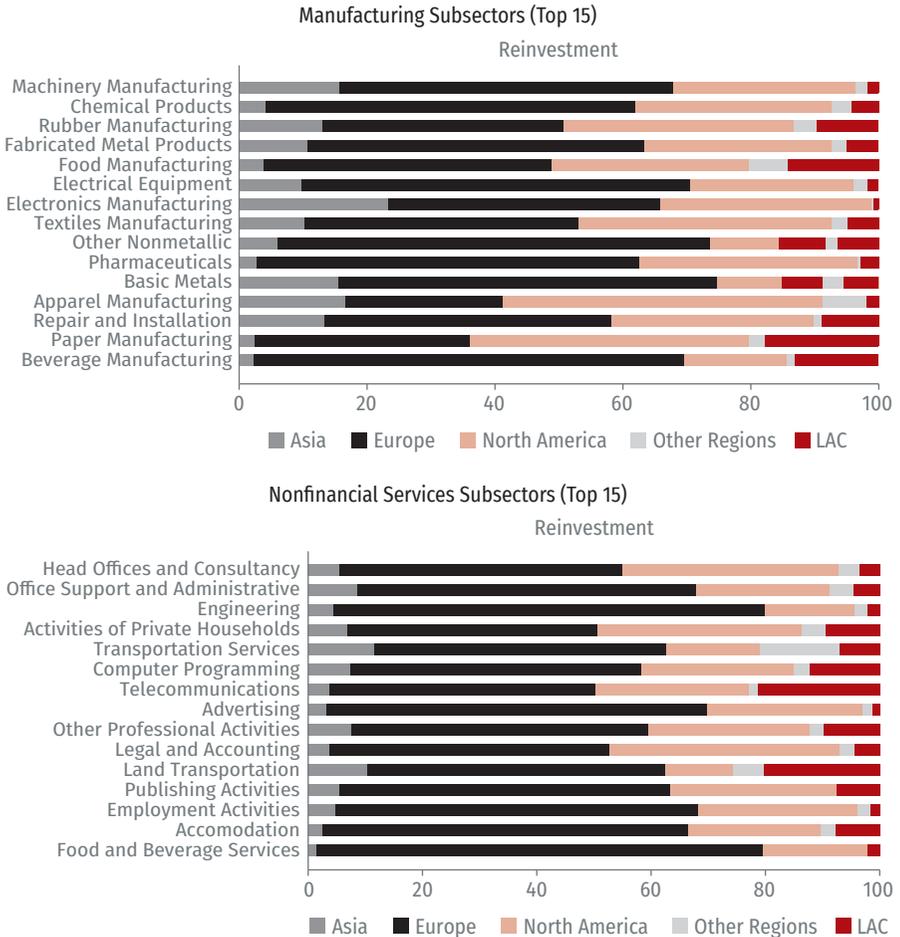


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50 foreign affiliates worldwide, and around 75% of this subgroup had more than 100. Roughly 55% of the multinational firms present in LAC had operations in more than 10 countries and 10 sectors, with most of them doing so in 11–50 (figure 2.8, first, second, and third panels).

There were significant differences in the relative importance of large and small multinational firms in first and subse-

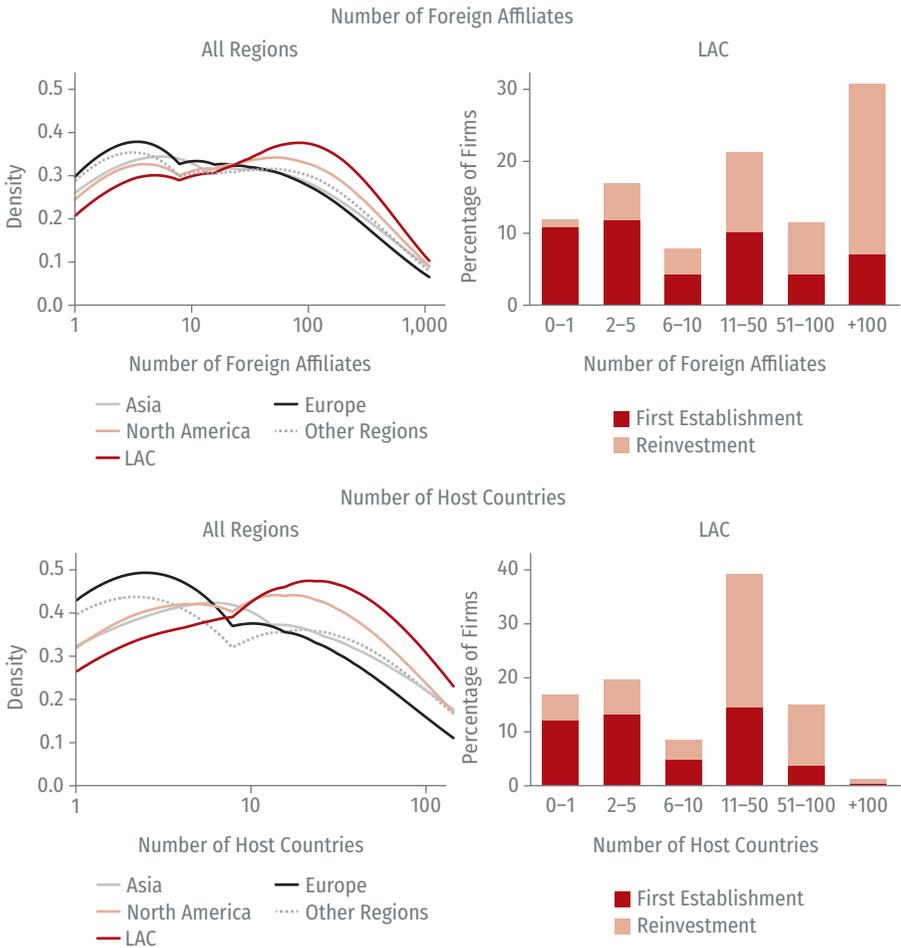
FIGURE 2.7 MULTINATIONAL FIRMS’ FOREIGN AFFILIATES, BY HOME REGION AND SECTOR AND SUBSECTOR, 2017 (continued)



Source: Author’s calculations based on data from WorldBase and national IPAs.

quent establishments. Firms with more than 100 foreign affiliates worldwide accounted for roughly 45% of all reinvestment but only 14% of all first establishments, whereas their counterparts with less than five affiliates globally were responsible for only 18% of the former but 57% of the latter (figure 2.8, first, second, and third panels). A similar pattern can be observed with regards to the number of countries and sectors in which multinational firms operate.

FIGURE 2.8 MULTINATIONAL FIRMS, BY SIZE, 2017

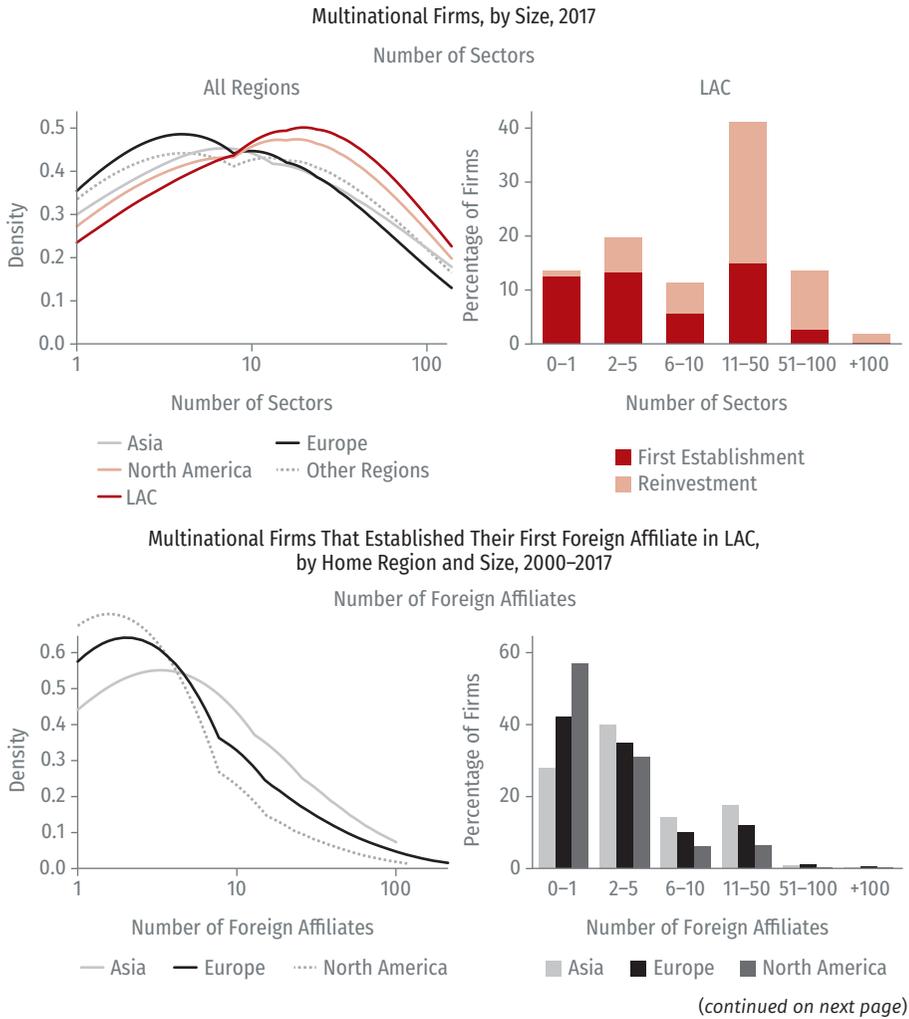


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Specifically, among multinational firms that established their first foreign affiliate in LAC between 2000 and 2017, those headquartered in Asia were significantly larger than their counterparts from Europe and North America (figure 2.8, fourth panel).

Multinational firms from North America are more likely to have foreign affiliates in both LAC and Asia. Approximately 50% of

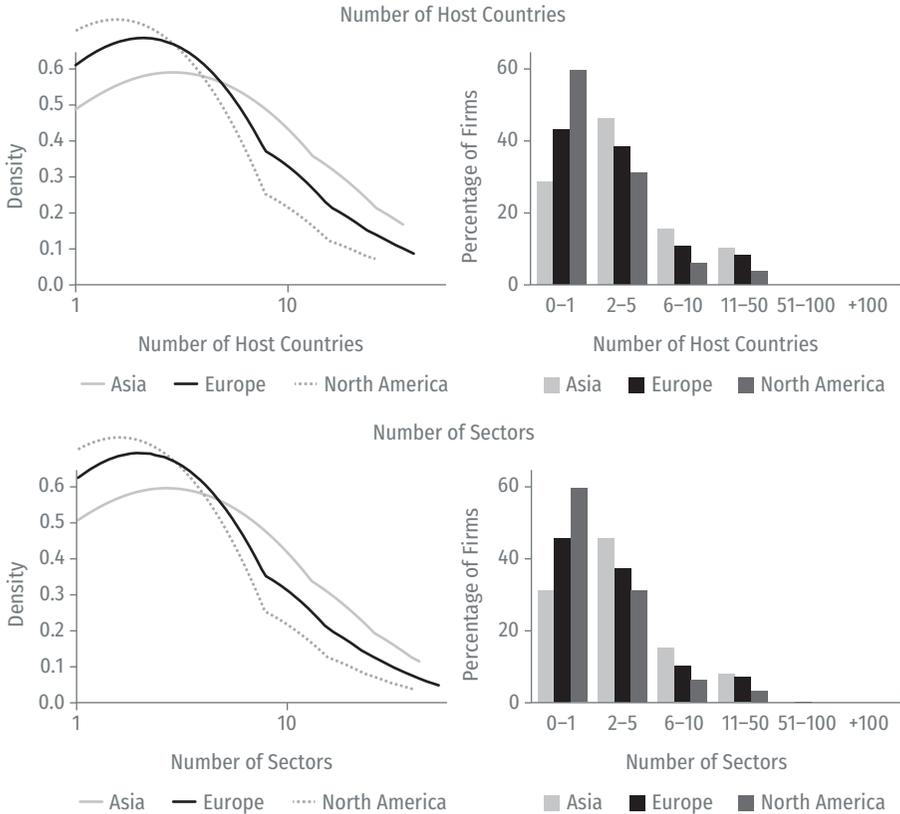
FIGURE 2.8 MULTINATIONAL FIRMS, BY SIZE, 2017 (continued)



these firms have affiliates in both regions and 35% in LAC and China, specifically. The respective figures are substantially smaller for European multinational firms—35% and 20%, respectively. The specific margins through which LAC could benefit from a potential spatial reconfiguration of multinational production could accordingly likely differ across these regions, with the extensive margin playing a more relevant role in Europe and the intensive

FIGURE 2.8 MULTINATIONAL FIRMS, BY SIZE, 2017 (continued)

Multinational Firms That Established Their First Foreign Affiliate in LAC, by Home Region and Size, 2000–2017

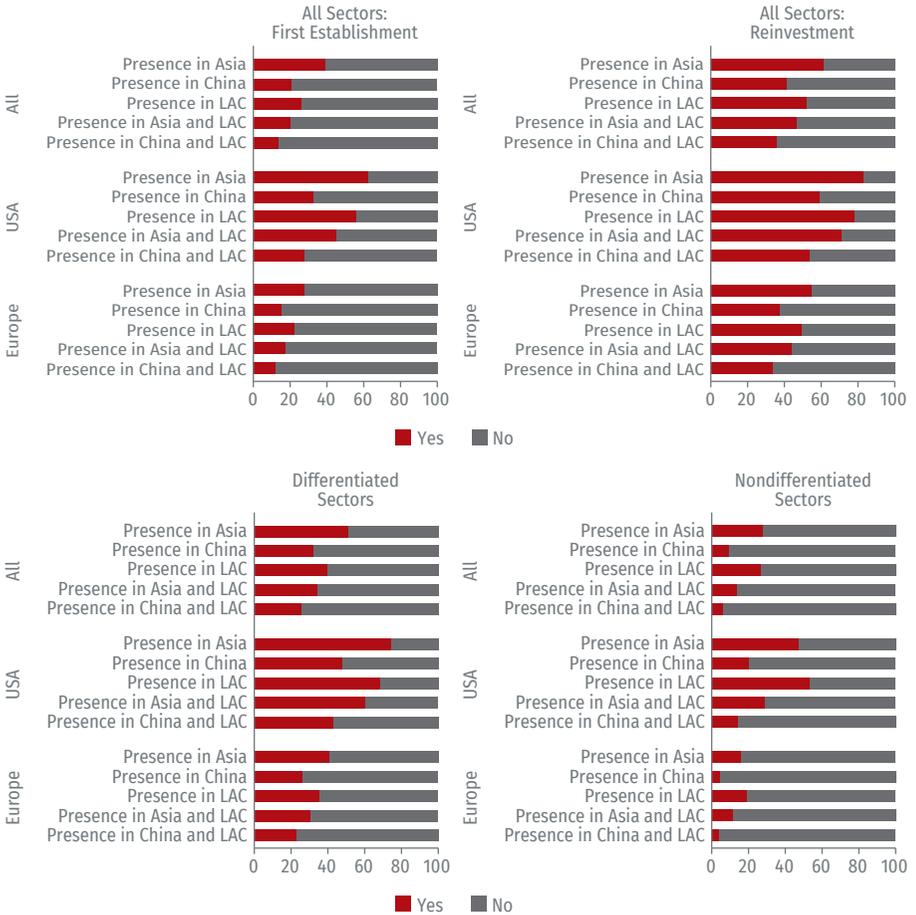


Source: Author's calculations based on data from WorldBase and national IPAs.
 Note: In the first, second, and third panels, the sample includes all multinational firms present in the region in question in 2017. In the fourth, fifth, and sixth panels, the sample is restricted to multinational firms that entered for the first time in LAC between 2000 and 2017.

margin having a stronger influence in North America. Overall, the number of multinational firms that have foreign affiliates in both LAC and Asia is significantly larger for those that have reinvested in LAC and operate in differentiated sectors.⁶⁸ No substantial dif-

⁶⁸ Among multinational firms with foreign affiliates in both LAC and Asia, the share of the latter region in the total number of these affiliates is substantially larger in machinery manufacturing, electronics manufacturing, and computer programming.

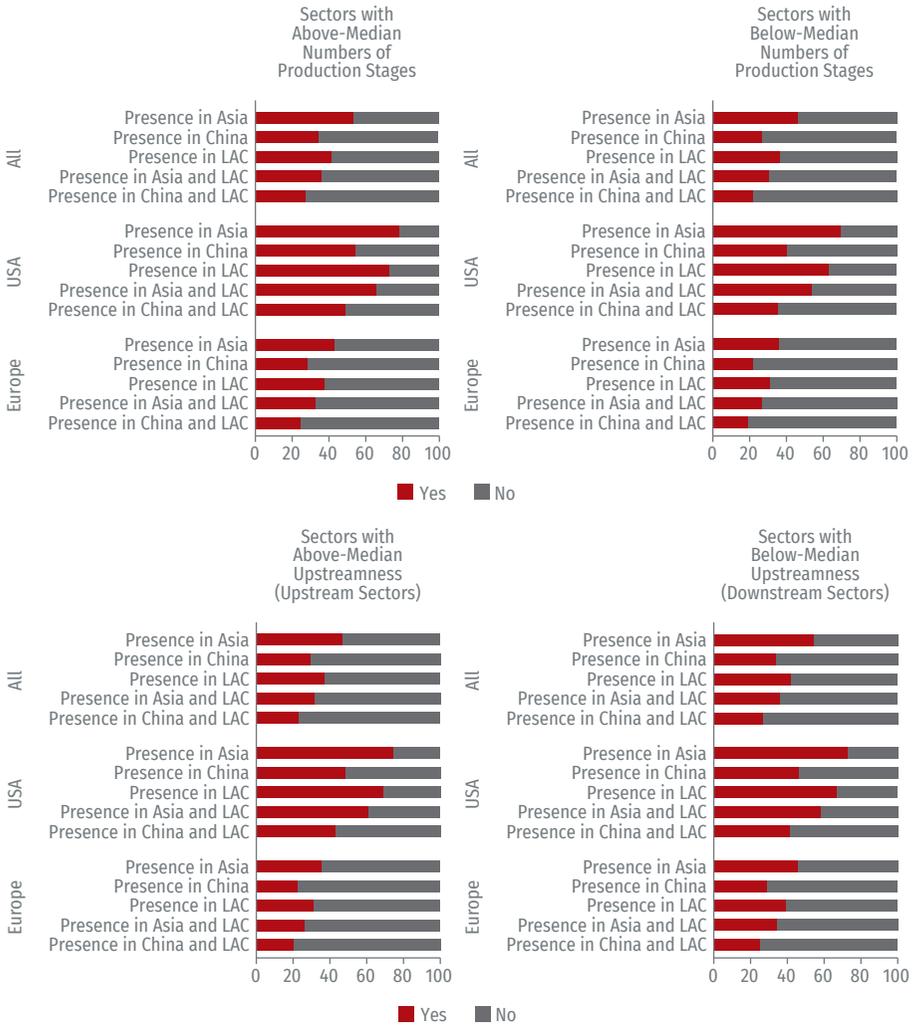
FIGURE 2.9 OFFSHORING STRATEGIES: MULTINATIONAL FIRMS WITH A PRESENCE IN ASIA/CHINA AND LAC, 2017



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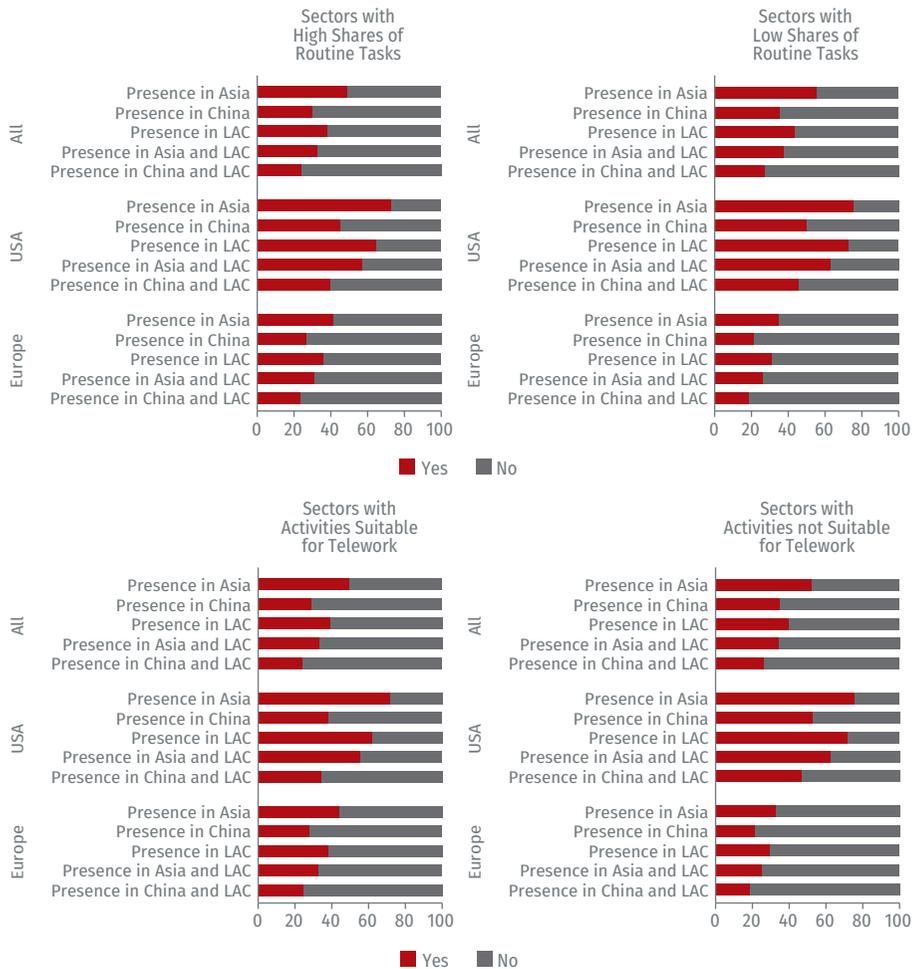
ferences are observed across sectors with varying degrees of routineness or teleworkability for their activities, level of upstreamness, or number of stages (figure 2.9).

FIGURE 2.9 OFFSHORING STRATEGIES: MULTINATIONAL FIRMS WITH A PRESENCE IN ASIA/CHINA AND LAC, 2017 (continued)



(continued on next page)

FIGURE 2.9 OFFSHORING STRATEGIES: MULTINATIONAL FIRMS WITH A PRESENCE IN ASIA/CHINA AND LAC, 2017 (continued)



Source: Author's calculations based on data from WorldBase, national IPAs, and sources indicated below. Note: *Differentiated Sectors* is a binary indicator that takes the value of 1 if the median affiliate of the multinational firm operates in a sector where most products (or services) are differentiated according to the definition in Rauch (1999), and 0 otherwise. *Above-Median Number of Stages* is a binary indicator that takes the value of 1 if the sector's number of production stages is higher than that of the median sector as computed based on data from Antràs et al. (2012), and 0 otherwise. *Above-Median Upstreamness* is a binary indicator that takes the value of 1 if the sector has an average distance from final use that is higher than that of the median sector as computed based on data from Antràs et al. (2012), and 0 otherwise. *Routine Tasks* is a binary indicator that takes the value of 1 if the sector has a share of routine tasks that is higher than that of the median sector as computed based on data from Acemoglu and Restrepo (2019), and 0 otherwise. *Suitable for Telework* is a binary variable that takes the value of 1 if the sector has a share of occupations that can be performed remotely that is higher than that of the median sector as computed based on data from Dingel and Neiman (2020), and 0 otherwise.

APPENDIX A2.1: MULTINATIONAL PRODUCTION IN LAC

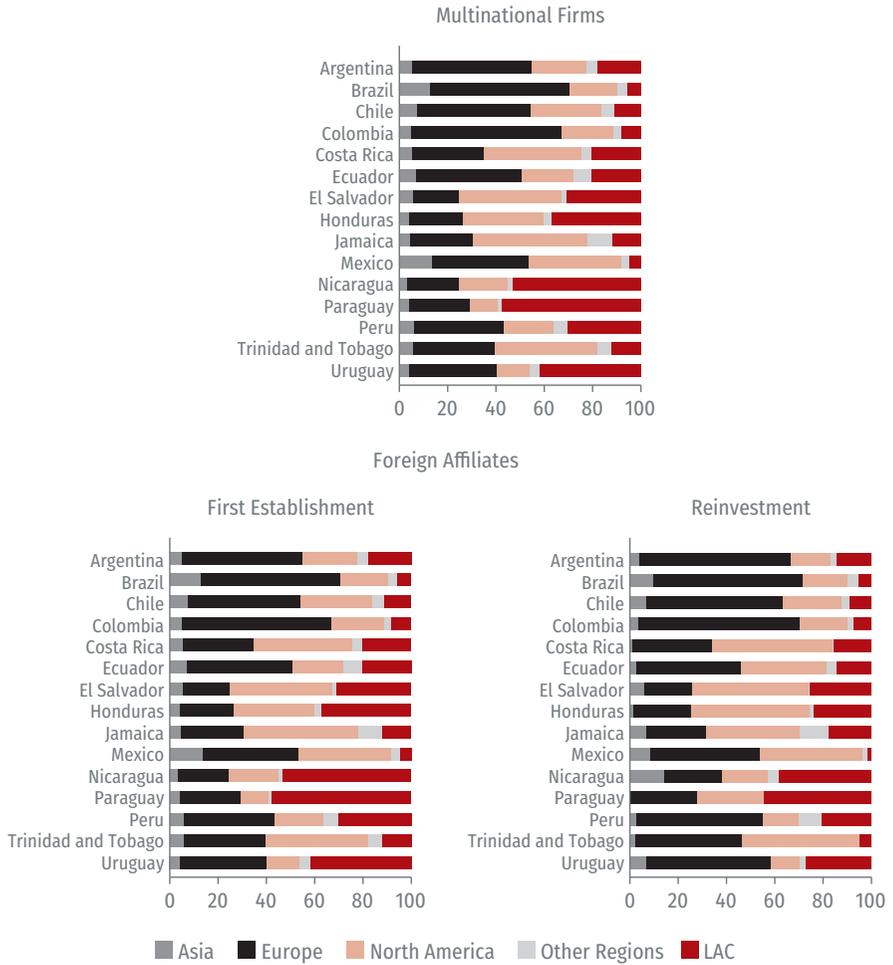
There are significant differences in terms of the home regions, sectors, and size categories of multinational firms across LAC countries.⁶⁹ Multinational firms from Asia are relatively more important in the larger economies (Brazil and Mexico) and Nicaragua, in the case of reinvestment; those from North America, particularly the United States, are significant in nearby countries (Costa Rica, El Salvador, Honduras, Jamaica, Mexico, and Trinidad and Tobago); those from Europe in Argentina, Brazil, Chile, and Colombia; and those from within LAC itself in relatively smaller Latin American countries (El Salvador, Honduras, Nicaragua, Paraguay, and Uruguay) but not in the larger ones (Brazil and Mexico).

The share of multinational firms operating in the primary sector is relatively larger in Ecuador, Nicaragua, Peru, Trinidad and Tobago (where it is even more pronounced in the case of reinvestment), and Uruguay. The same is true of firms active in manufacturing in the larger economies (Argentina, Brazil, and Mexico), smaller ones with established free trade zone regimes (El Salvador, Honduras, and Paraguay), and firms in the nonfinancial services sector in Colombia, Costa Rica, and Jamaica.

Large multinational firms—those with more than 100 foreign affiliates worldwide—are relatively more predominant in Chile (38% of all affiliates belong to such firms), Brazil (35%), Argentina (33%), Mexico (27%), and Costa Rica (27%). They account for 50% or more of reinvestment in all of these countries. Firms at the other extreme of the size spectrum, with up to 10 foreign affiliates around the globe, are relatively more prevalent in Paraguay (68%), Nicaragua (67%), El Salvador (61%), Uruguay (60%), Honduras (56%), and Ecuador (54%). In these countries, small multinational firms account for more than 60% of the instances of first establishment.

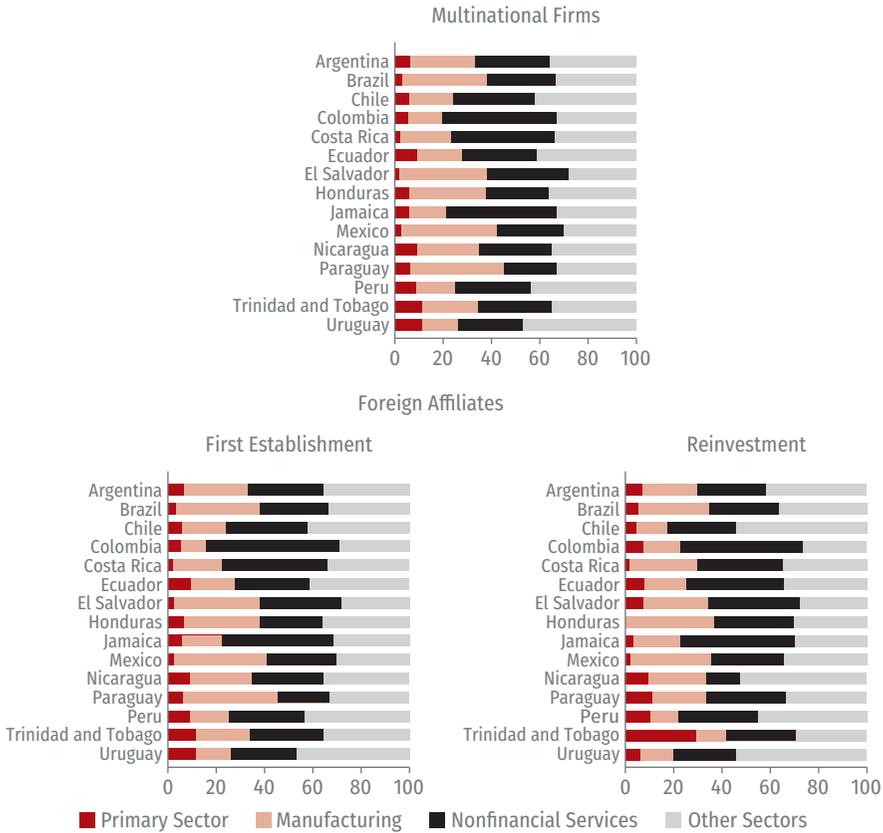
⁶⁹ The appendix presents detailed characterizations of the extensive margin of multinational production in countries for which either complete or partial firm-level data on IPA assistance are available. These characterizations are not restricted to assisted multinational firms, though, but cover the entire economy.

FIGURE A2.1.1 MULTINATIONAL FIRMS AND THEIR FOREIGN AFFILIATES IN SELECTED LAC COUNTRIES, BY HOME REGIONS, 2017



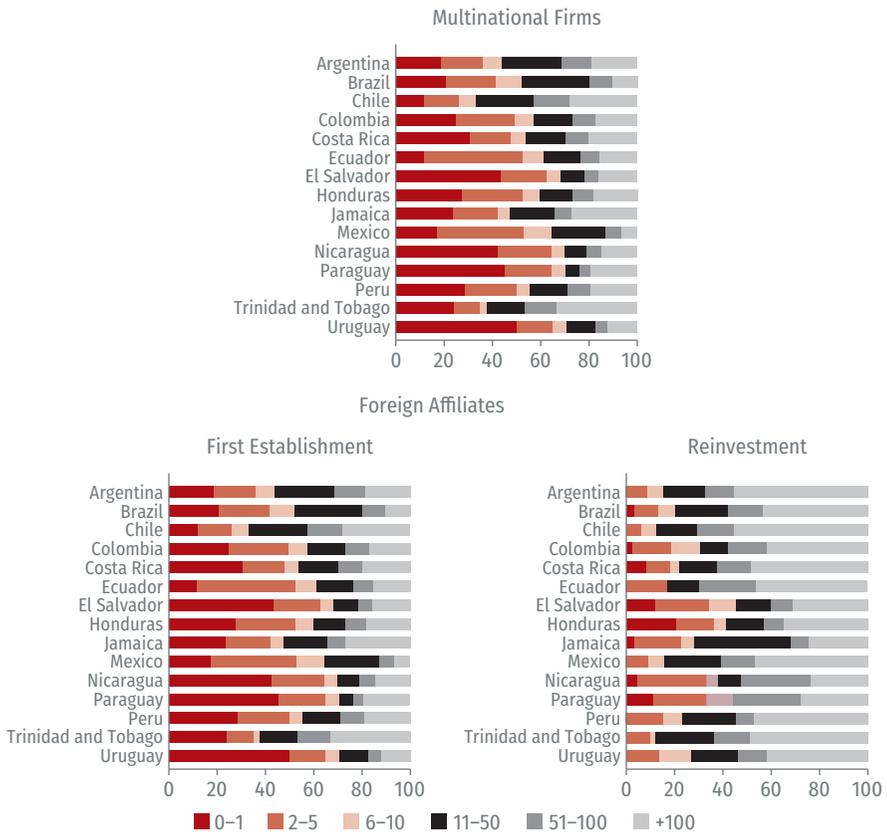
Source: Author's calculations based on data from WorldBase and the national IPAs of Argentina, Brazil, Chile, Colombia, Costa Rica, Ecuador, El Salvador, Honduras, Jamaica, Mexico, Nicaragua, Paraguay, Peru, Trinidad and Tobago, and Uruguay.

FIGURE A2.1.2 MULTINATIONAL FIRMS AND THEIR FOREIGN AFFILIATES IN SELECTED LAC COUNTRIES, BY SECTORS, 2017



Source: Author's calculations based on data from WorldBase and the national IPAs of Argentina, Brazil, Chile, Colombia, Costa Rica, Ecuador, El Salvador, Honduras, Jamaica, Mexico, Nicaragua, Paraguay, Peru, Trinidad and Tobago, and Uruguay.

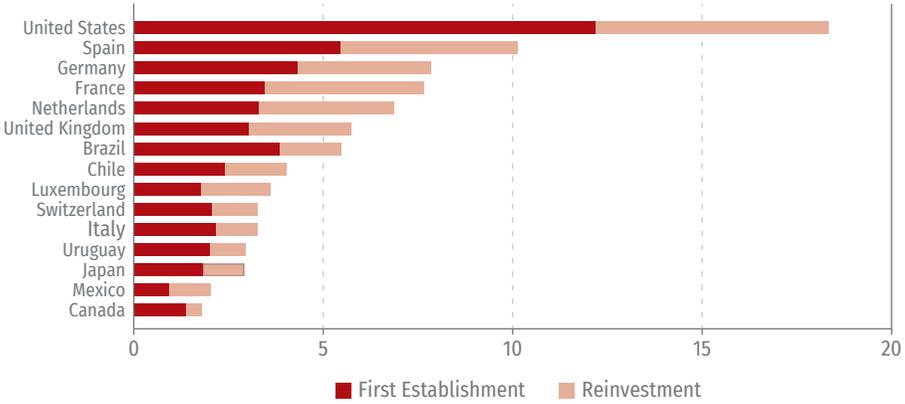
FIGURE A2.1.3 MULTINATIONAL FIRMS AND THEIR FOREIGN AFFILIATES IN SELECTED LAC COUNTRIES, BY FIRM SIZE CATEGORY, 2017



Source: Author's calculations based on data from WorldBase and the national IPAs of Argentina, Brazil, Chile, Colombia, Costa Rica, Ecuador, El Salvador, Honduras, Jamaica, Mexico, Nicaragua, Paraguay, Peru, Trinidad and Tobago, and Uruguay.

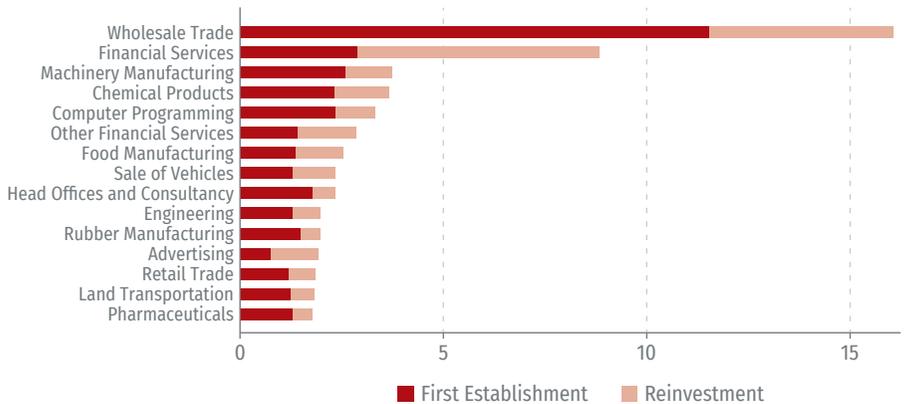
A2.1.ARG Argentina

FIGURE A2.1.ARG.1 MULTINATIONAL FIRMS AND THEIR FOREIGN AFFILIATES IN ARGENTINA, BY HOME COUNTRY (TOP 15), PERCENTAGE SHARE, 2017



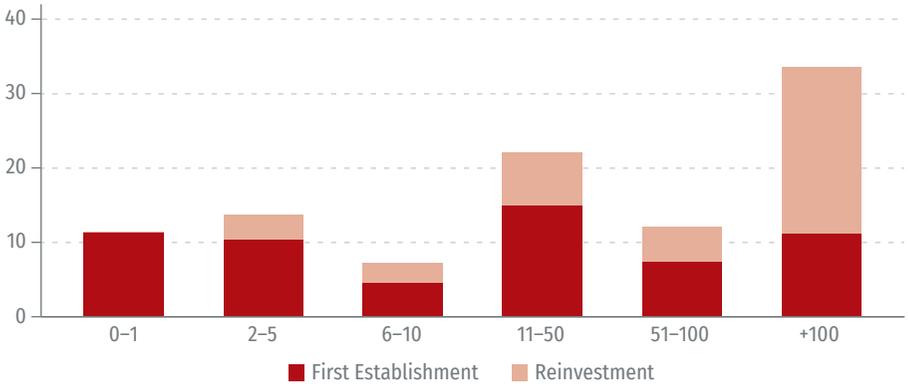
Source: Author's calculations based on data from WorldBase and Argentina's national IPA.

FIGURE A2.1.ARG.2 MULTINATIONAL FIRMS AND THEIR FOREIGN AFFILIATES IN ARGENTINA, BY SUBSECTOR (TOP 15), PERCENTAGE SHARE, 2017



Source: Author's calculations based on data from WorldBase and Argentina's national IPA.

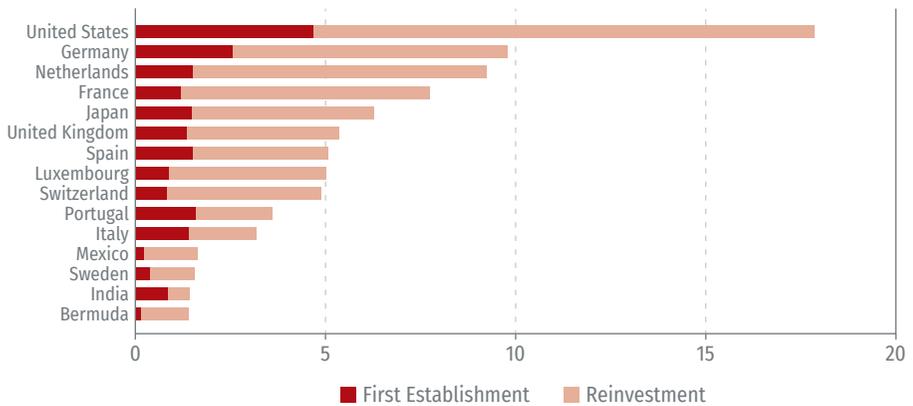
FIGURE A2.1.ARG.3 MULTINATIONAL FIRMS AND THEIR FOREIGN AFFILIATES IN ARGENTINA, BY FIRM SIZE CATEGORY, PERCENTAGE SHARE, 2017



Source: Author's calculations based on data from WorldBase and Argentina's national IPA.

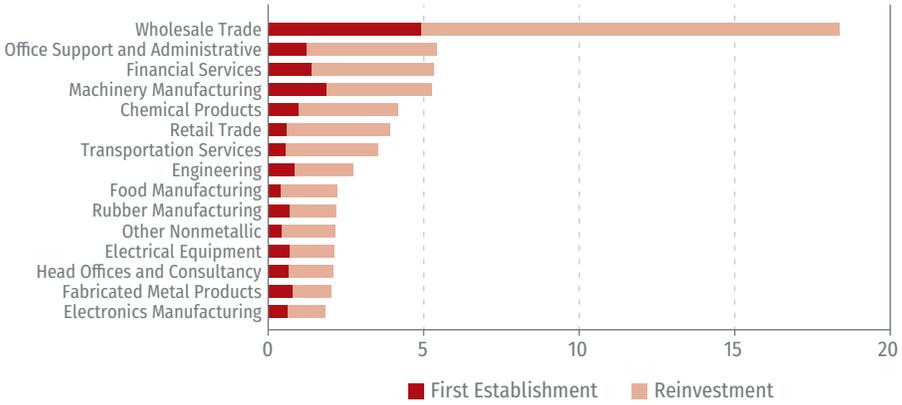
A2.1.BRA Brazil

FIGURE A2.1.BRA.1 MULTINATIONAL FIRMS AND THEIR FOREIGN AFFILIATES IN BRAZIL, BY HOME COUNTRY (TOP 15), PERCENTAGE SHARE, 2017



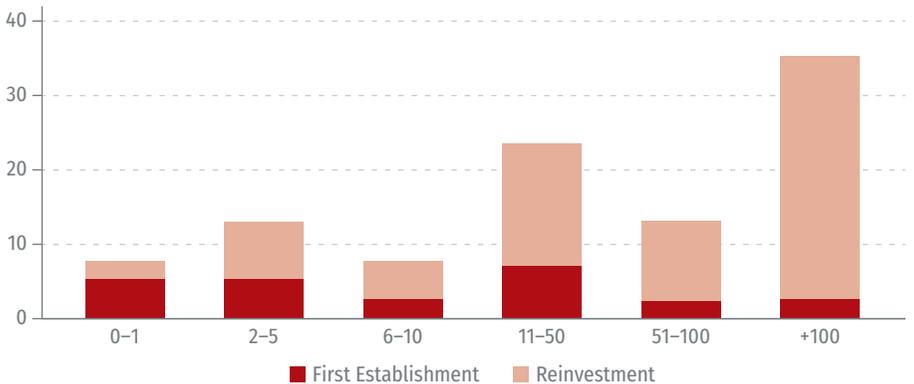
Source: Author's calculations based on data from WorldBase and Brazil's national IPA.

FIGURE A2.1.BRA.2 MULTINATIONAL FIRMS AND THEIR FOREIGN AFFILIATES IN BRAZIL, BY SUBSECTOR (TOP 15), PERCENTAGE SHARE, 2017



Source: Author's calculations based on data from WorldBase and Brazil's national IPA.

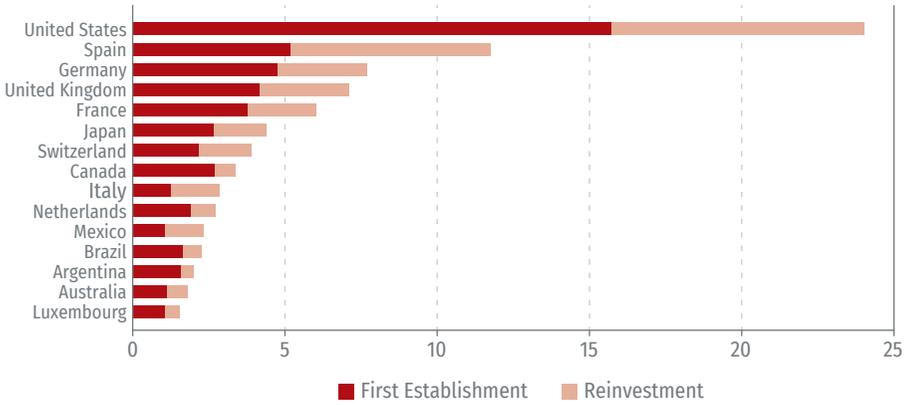
FIGURE A2.1.BRA.3 MULTINATIONAL FIRMS AND THEIR FOREIGN AFFILIATES IN BRAZIL, BY FIRM SIZE CATEGORY, PERCENTAGE SHARE, 2017



Source: Author's calculations based on data from WorldBase and Brazil's national IPA.

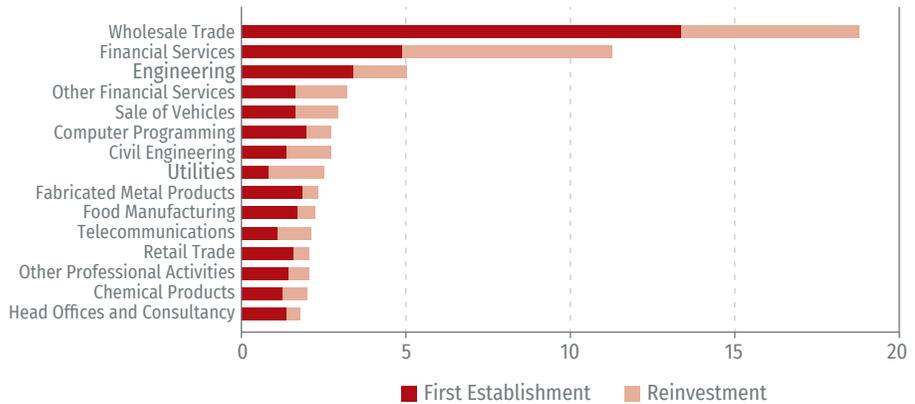
A2.1.CHI Chile

FIGURE A2.1.CHI.1 MULTINATIONAL FIRMS AND THEIR FOREIGN AFFILIATES IN CHILE, BY HOME COUNTRY (TOP 15), PERCENTAGE SHARE, 2017



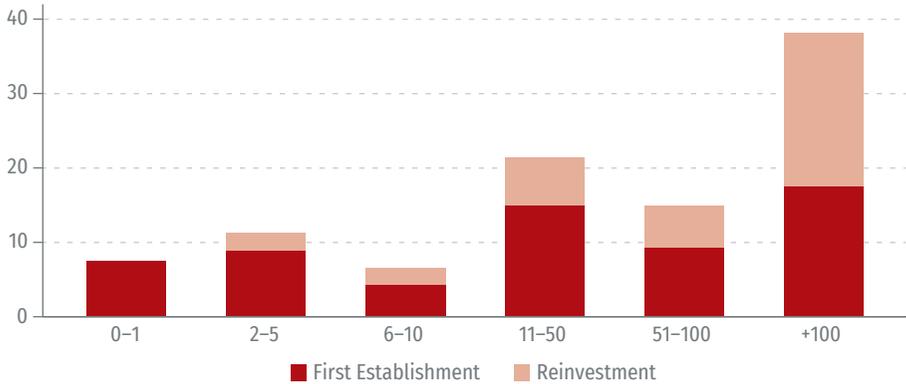
Source: Author's calculations based on data from WorldBase and Chile's national IPA.

FIGURE A2.1.CHI.2 MULTINATIONAL FIRMS AND THEIR FOREIGN AFFILIATES IN CHILE, BY SUBSECTOR (TOP 15), PERCENTAGE SHARE, 2017



Source: Author's calculations based on data from WorldBase and Chile's national IPA.

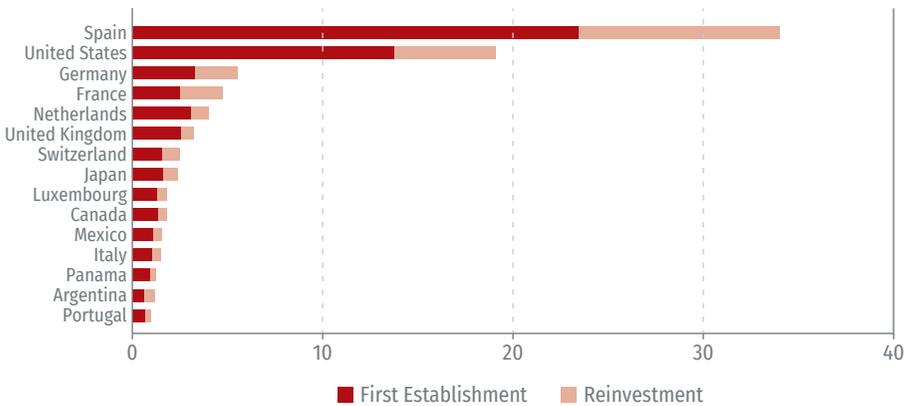
FIGURE A2.1.CHI.3 MULTINATIONAL FIRMS AND THEIR FOREIGN AFFILIATES IN CHILE, BY FIRM SIZE CATEGORY, PERCENTAGE SHARE, 2017



Source: Author's calculations based on data from WorldBase and Chile's national IPA.

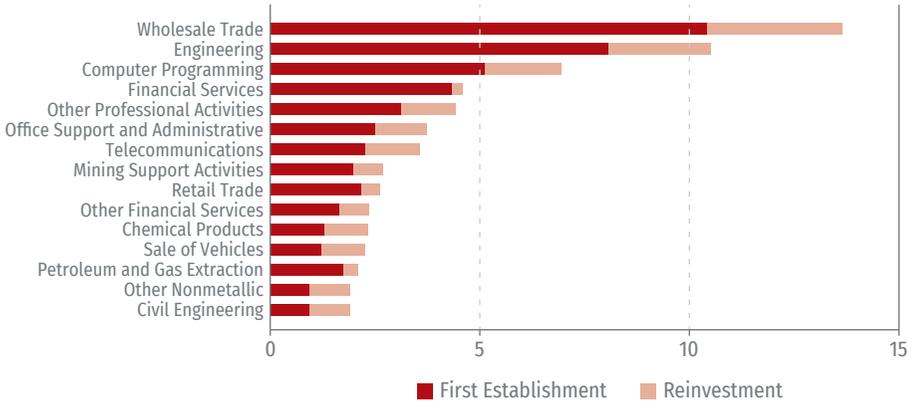
A2.1.COL Colombia

FIGURE A2.1.COL.1 MULTINATIONAL FIRMS AND THEIR FOREIGN AFFILIATES IN COLOMBIA, BY HOME COUNTRY (TOP 15), PERCENTAGE SHARE, 2017



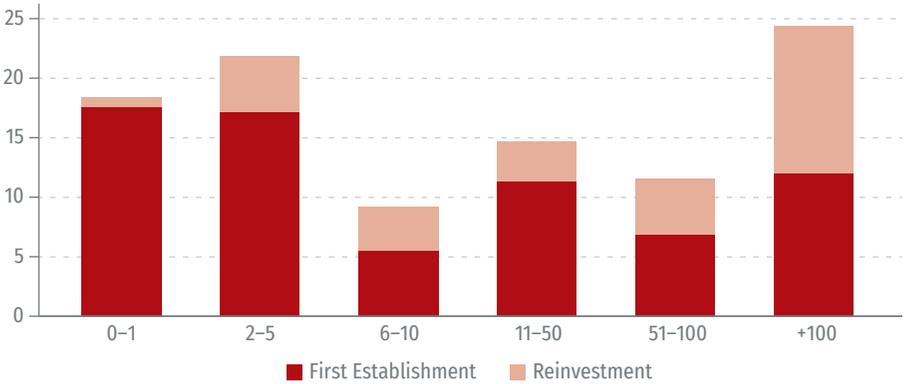
Source: Author's calculations based on data from WorldBase and Colombia's national IPA.

FIGURE A2.1.COL.2 MULTINATIONAL FIRMS AND THEIR FOREIGN AFFILIATES IN COLOMBIA, BY SUBSECTOR (TOP 15), PERCENTAGE SHARE, 2017



Source: Author's calculations based on data from WorldBase and Colombia's national IPA.

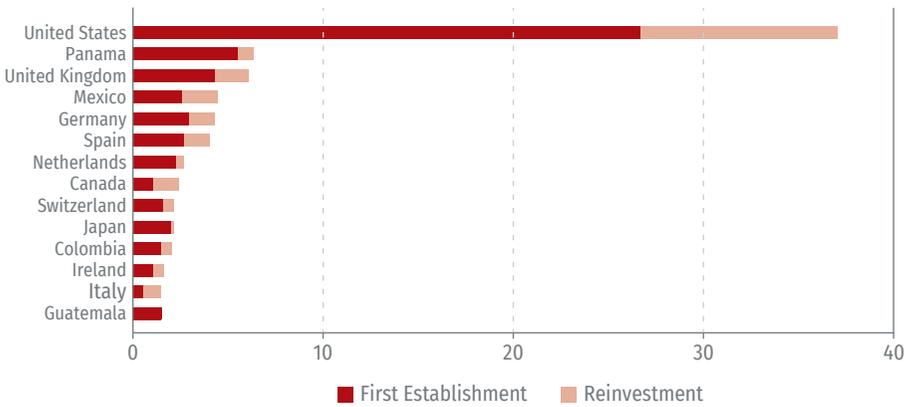
FIGURE A2.1.COL.3 MULTINATIONAL FIRMS AND THEIR FOREIGN AFFILIATES IN COLOMBIA, BY FIRM SIZE CATEGORY, PERCENTAGE SHARE, 2017



Source: Author's calculations based on data from WorldBase and Colombia's national IPA.

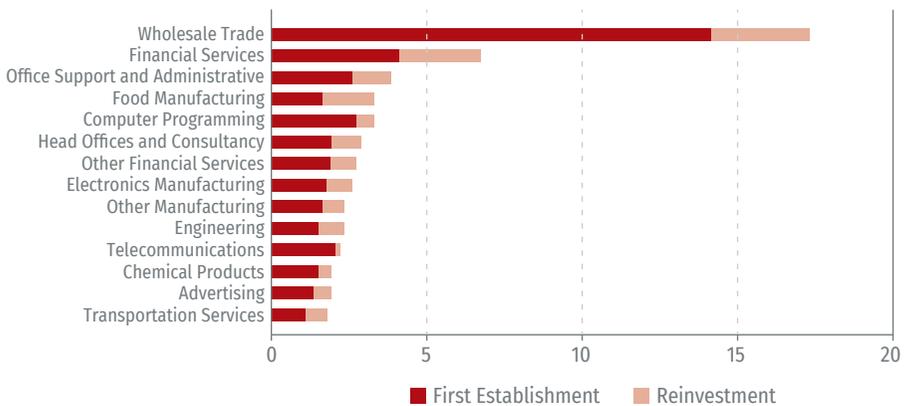
A2.1.CRI Costa Rica

FIGURE A2.1.CRI.1 MULTINATIONAL FIRMS AND THEIR FOREIGN AFFILIATES IN COSTA RICA, BY HOME COUNTRY (TOP 15), PERCENTAGE SHARE, 2017



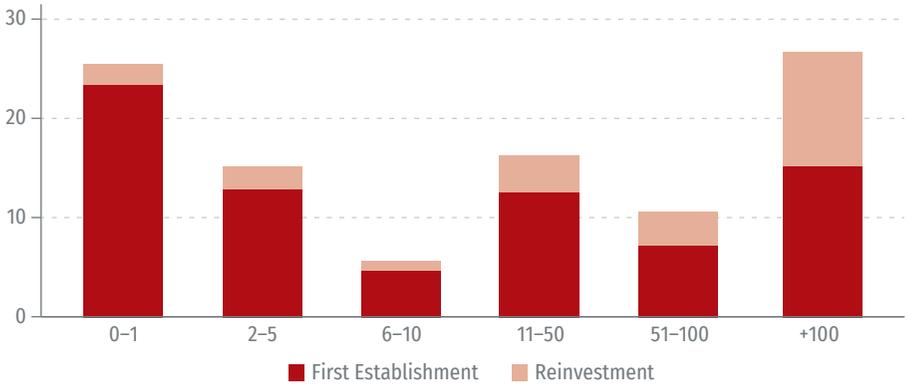
Source: Author's calculations based on data from WorldBase and Costa Rica's national IPA.

FIGURE A2.1.CRI.2 MULTINATIONAL FIRMS AND THEIR FOREIGN AFFILIATES IN COSTA RICA, BY SUBSECTOR (TOP 15), PERCENTAGE SHARE, 2017



Source: Author's calculations based on data from WorldBase and Costa Rica's national IPA.

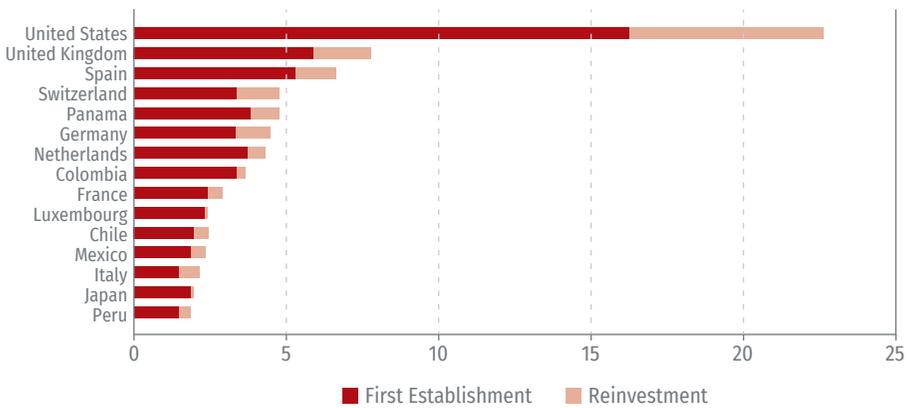
FIGURE A2.1.CRI.3 MULTINATIONAL FIRMS AND THEIR FOREIGN AFFILIATES IN COSTA RICA, BY FIRM SIZE CATEGORY, PERCENTAGE SHARE, 2017



Source: Author's calculations based on data from WorldBase and Costa Rica's national IPA.

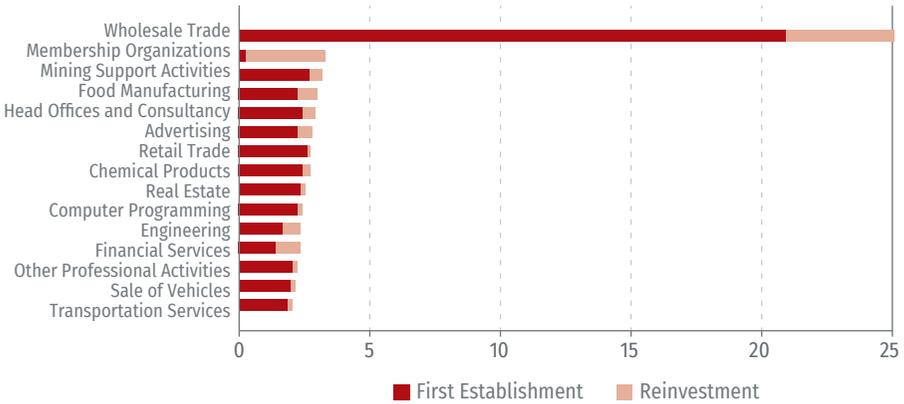
A2.1.ECU Ecuador

FIGURE A2.1.ECU.1 MULTINATIONAL FIRMS AND THEIR FOREIGN AFFILIATES IN ECUADOR, BY HOME COUNTRY (TOP 15), PERCENTAGE SHARE, 2017



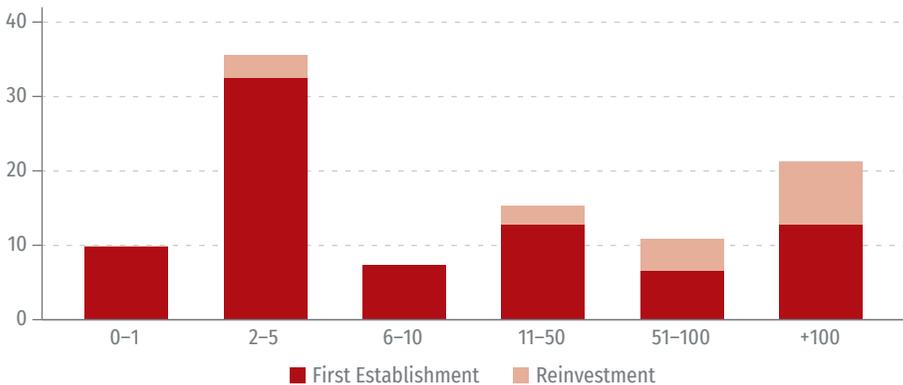
Source: Author's calculations based on data from WorldBase and Ecuador's national IPA.

FIGURE A2.1.ECU.2 MULTINATIONAL FIRMS AND THEIR FOREIGN AFFILIATES IN ECUADOR, BY SUBSECTOR (TOP 15), PERCENTAGE SHARE, 2017



Source: Author's calculations based on data from WorldBase and Ecuador's national IPA.

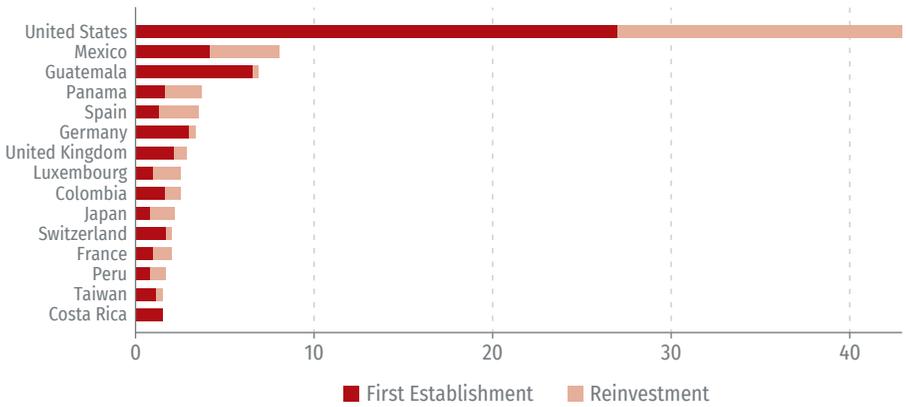
FIGURE A2.1.ECU.3 MULTINATIONAL FIRMS AND THEIR FOREIGN AFFILIATES IN ECUADOR, BY FIRM SIZE CATEGORY, PERCENTAGE SHARE, 2017



Source: Author's calculations based on data from WorldBase and Ecuador's national IPA.

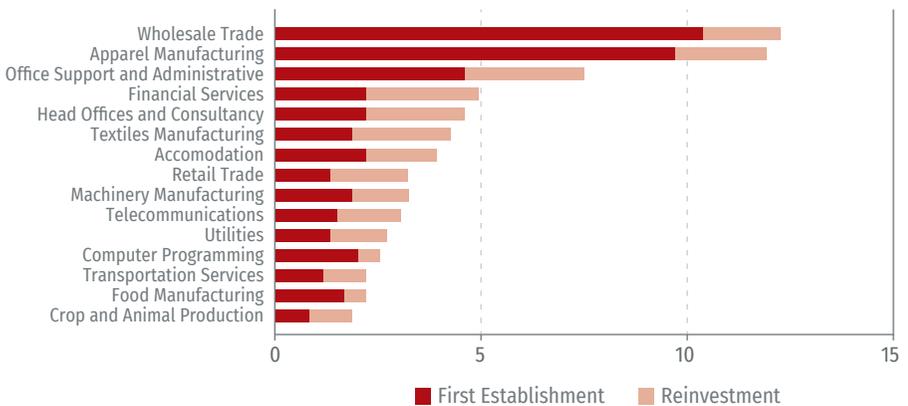
A2.1.SLV El Salvador

FIGURE A2.1.SLV.1 MULTINATIONAL FIRMS AND THEIR FOREIGN AFFILIATES IN EL SALVADOR, BY HOME COUNTRY (TOP 15), PERCENTAGE SHARE, 2017



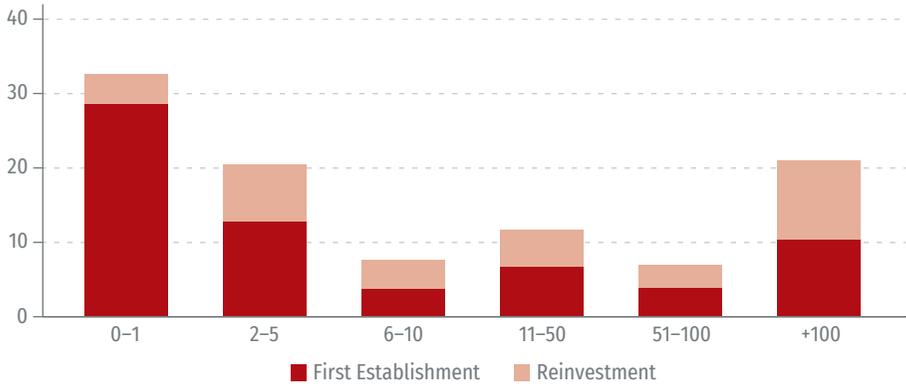
Source: Author's calculations based on data from WorldBase and El Salvador's national IPA.

FIGURE A2.1.SLV.2 MULTINATIONAL FIRMS AND THEIR FOREIGN AFFILIATES IN EL SALVADOR, BY SUBSECTOR (TOP 15), PERCENTAGE SHARE, 2017



Source: Author's calculations based on data from WorldBase and El Salvador's national IPA.

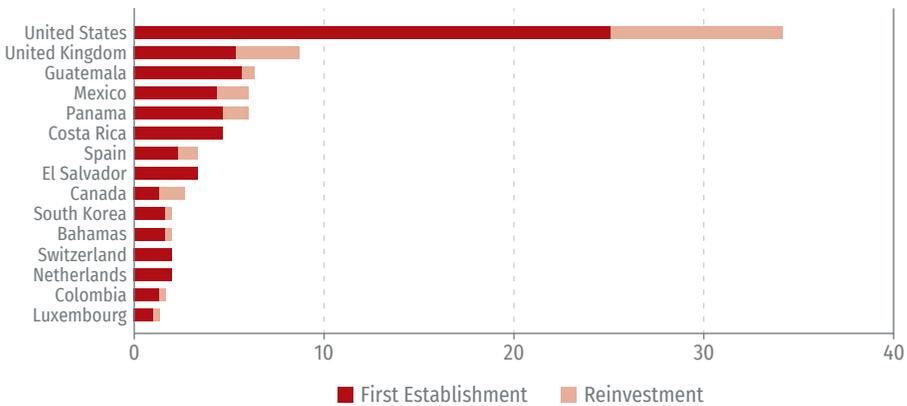
FIGURE A2.1.SLV.3 MULTINATIONAL FIRMS AND THEIR FOREIGN AFFILIATES IN EL SALVADOR, BY FIRM SIZE CATEGORY, PERCENTAGE SHARE, 2017



Source: Author's calculations based on data from WorldBase and El Salvador's national IPA

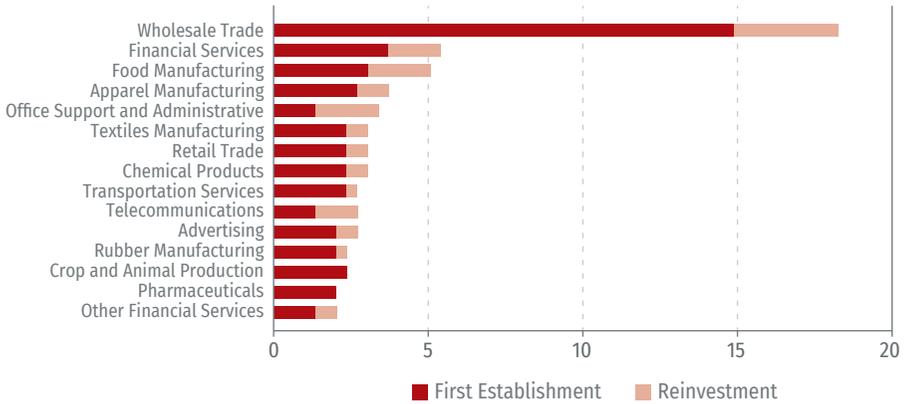
A2.1.HND Honduras

FIGURE A2.1.HND.1 MULTINATIONAL FIRMS AND THEIR FOREIGN AFFILIATES IN HONDURAS, BY HOME COUNTRY (TOP 15), PERCENTAGE SHARE, 2017



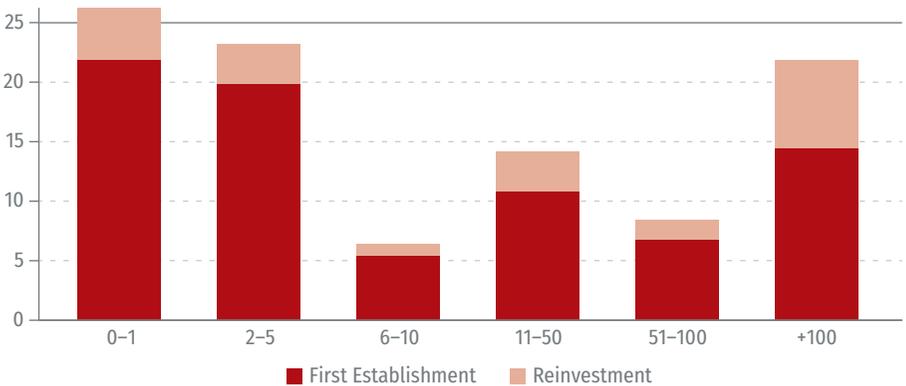
Source: Author's calculations based on data from WorldBase and Honduras's national IPA.

FIGURE A2.1.HND.2 MULTINATIONAL FIRMS AND THEIR FOREIGN AFFILIATES IN HONDURAS, BY SUBSECTOR (TOP 15), PERCENTAGE SHARE, 2017



Source: Author's calculations based on data from WorldBase and Honduras's national IPA.

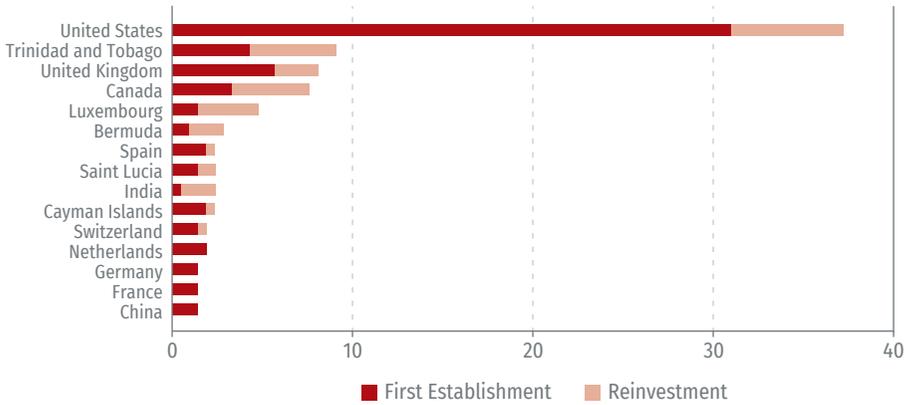
FIGURE A2.1.HND.3 MULTINATIONAL FIRMS AND THEIR FOREIGN AFFILIATES IN HONDURAS, BY FIRM SIZE CATEGORY, PERCENTAGE SHARE, 2017



Source: Author's calculations based on data from WorldBase and Honduras's national IPA.

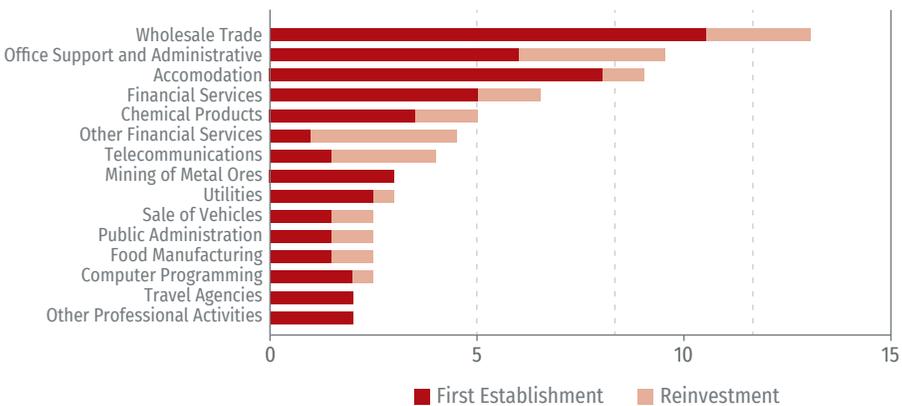
A2.1.JAM Jamaica

FIGURE A2.1.JAM.1 MULTINATIONAL FIRMS AND THEIR FOREIGN AFFILIATES IN JAMAICA, BY HOME COUNTRY (TOP 15), PERCENTAGE SHARE, 2017



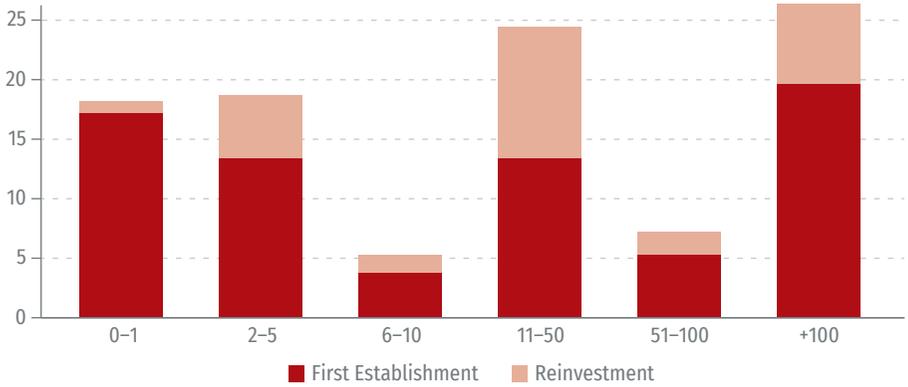
Source: Author's calculations based on data from WorldBase and Jamaica's national IPA.

FIGURE A2.1.JAM.2 MULTINATIONAL FIRMS AND THEIR FOREIGN AFFILIATES IN JAMAICA, BY SUBSECTOR (TOP 15), PERCENTAGE SHARE, 2017



Source: Author's calculations based on data from WorldBase and Jamaica's national IPA.

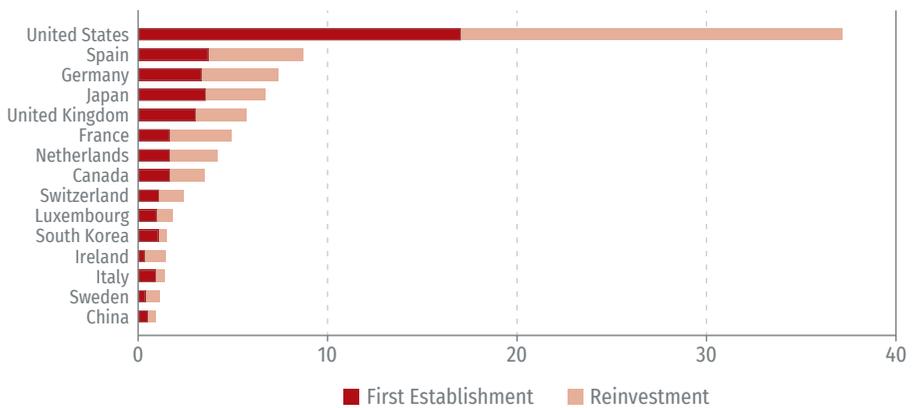
FIGURE A2.1.JAM.3 MULTINATIONAL FIRMS AND THEIR FOREIGN AFFILIATES IN JAMAICA, BY FIRM SIZE CATEGORY, PERCENTAGE SHARE, 2017



Source: Author's calculations based on data from WorldBase and Jamaica's national IPA.

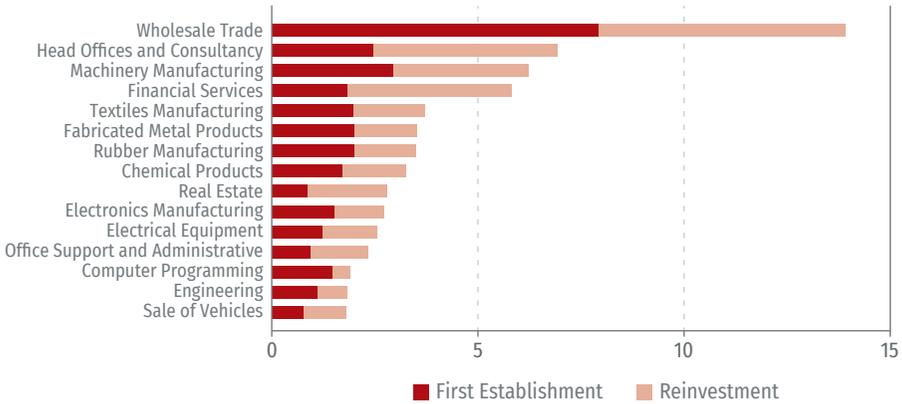
A2.1.MEX Mexico

FIGURE A2.1.MEX.1 MULTINATIONAL FIRMS AND THEIR FOREIGN AFFILIATES IN MEXICO, BY HOME COUNTRY (TOP 15), PERCENTAGE SHARE, 2017



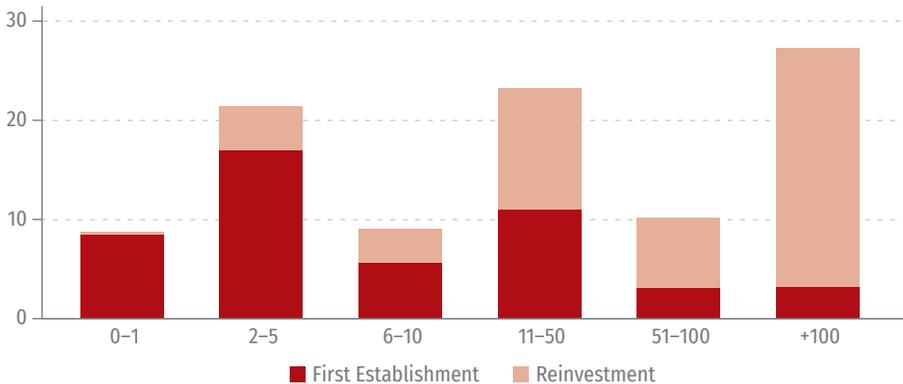
Source: Author's calculations based on data from WorldBase and Mexico's national IPA.

FIGURE A2.1.MEX.2 MULTINATIONAL FIRMS AND THEIR FOREIGN AFFILIATES IN MEXICO, BY SUBSECTOR (TOP 15), PERCENTAGE SHARE, 2017



Source: Author's calculations based on data from WorldBase and Mexico's national IPA.

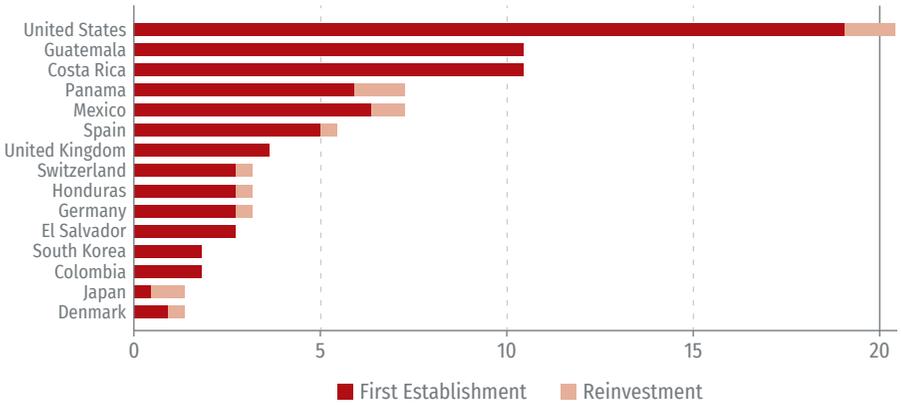
FIGURE A2.1.MEX.3 MULTINATIONAL FIRMS AND THEIR FOREIGN AFFILIATES IN MEXICO, BY FIRM SIZE CATEGORY, PERCENTAGE SHARE, 2017



Source: Author's calculations based on data from WorldBase and Mexico's national IPA.

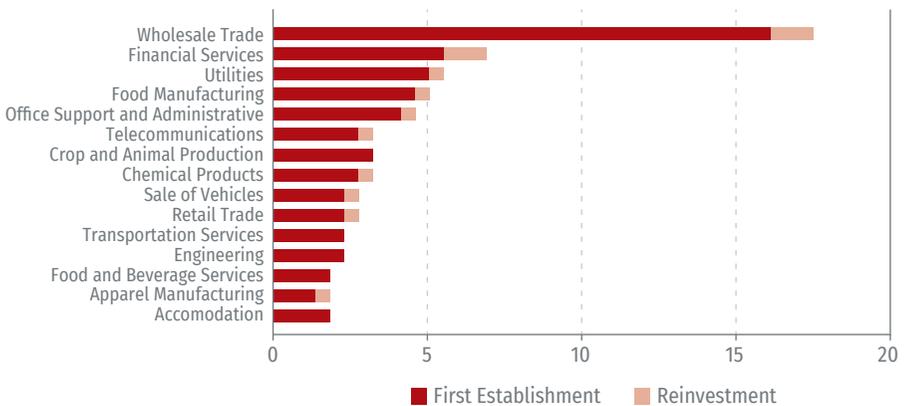
A2.1.NIC Nicaragua

FIGURE A2.1.NIC.1 MULTINATIONAL FIRMS AND THEIR FOREIGN AFFILIATES IN NICARAGUA, BY HOME COUNTRY (TOP 15), PERCENTAGE SHARE, 2017



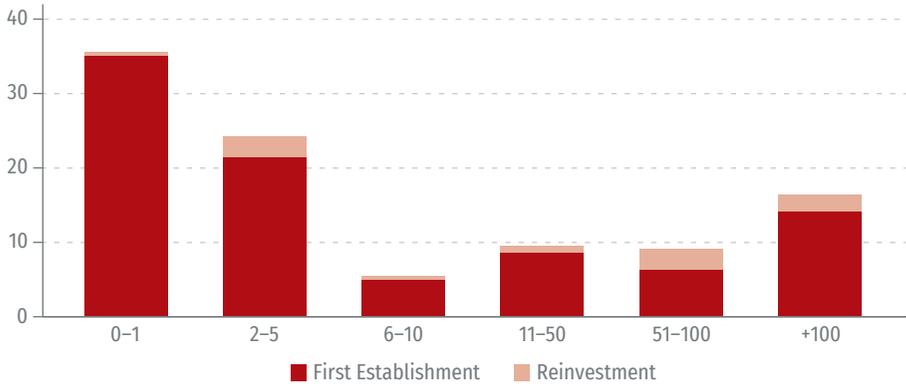
Source: Author's calculations based on data from WorldBase and Nicaragua's national IPA.

FIGURE A2.1.NIC.2 MULTINATIONAL FIRMS AND THEIR FOREIGN AFFILIATES IN NICARAGUA, BY SUBSECTOR (TOP 15), PERCENTAGE SHARE, 2017



Source: Author's calculations based on data from WorldBase and Nicaragua's national IPA.

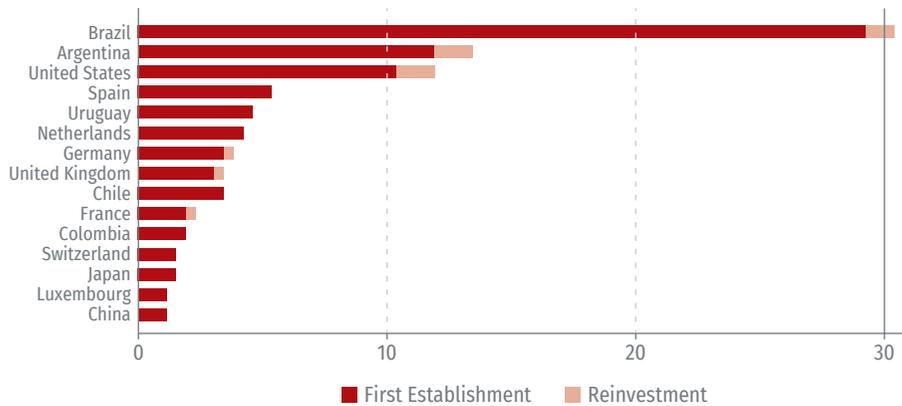
FIGURE A2.1.NIC.3 MULTINATIONAL FIRMS AND THEIR FOREIGN AFFILIATES IN NICARAGUA, BY FIRM SIZE CATEGORY, PERCENTAGE SHARE, 2017



Source: Author's calculations based on data from WorldBase and Nicaragua's national IPA.

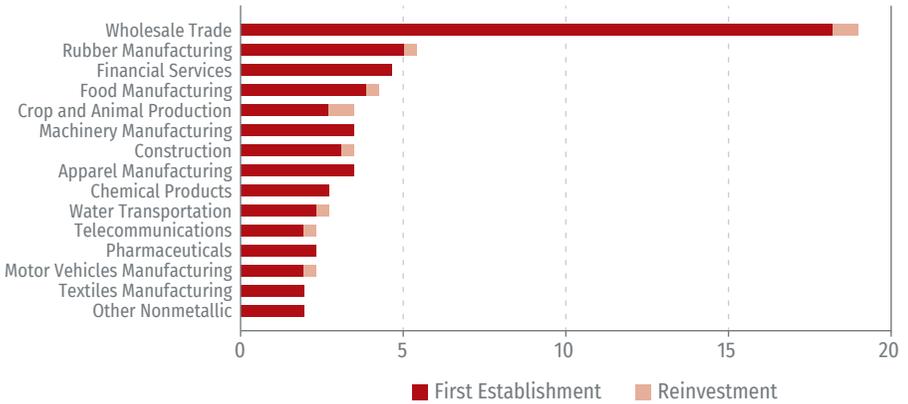
A2.1.PRY Paraguay

FIGURE A2.1.PRY.1 MULTINATIONAL FIRMS AND THEIR FOREIGN AFFILIATES IN PARAGUAY, BY HOME COUNTRY (TOP 15), PERCENTAGE SHARE, 2017



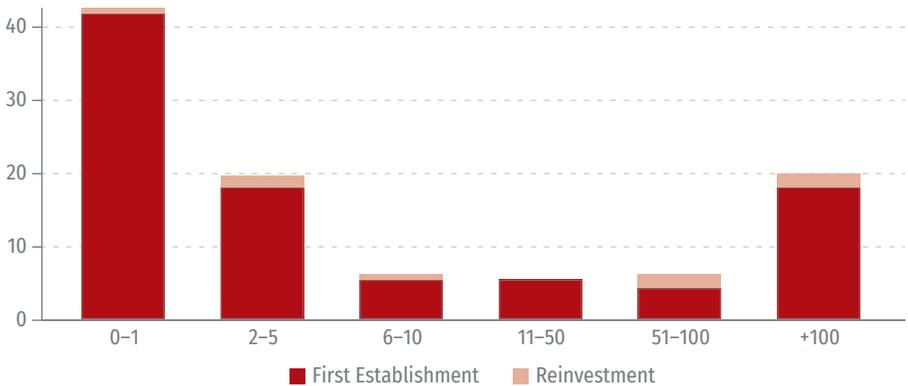
Source: Author's calculations based on data from WorldBase and Paraguay's national IPA.

FIGURE A2.1.PRY.2 MULTINATIONAL FIRMS AND THEIR FOREIGN AFFILIATES IN PARAGUAY, BY SUBSECTOR (TOP 15), PERCENTAGE SHARE, 2017



Source: Author's calculations based on data from WorldBase and Paraguay's national IPA.

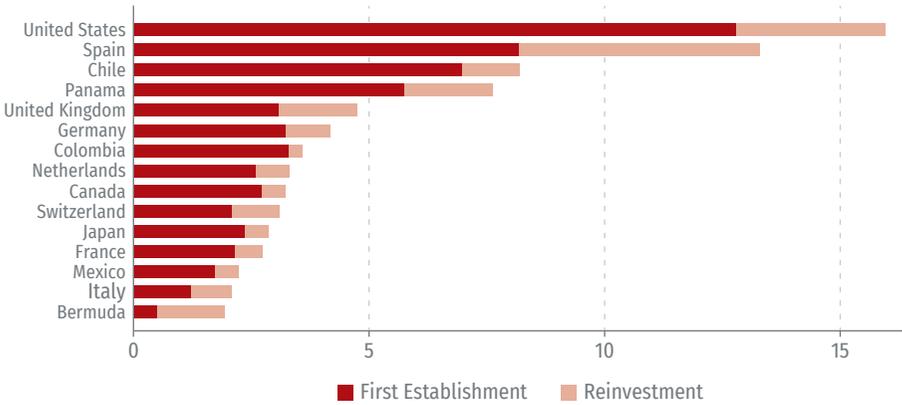
FIGURE A2.1.PRY.3 MULTINATIONAL FIRMS AND THEIR FOREIGN AFFILIATES IN PARAGUAY, BY FIRM SIZE CATEGORY, PERCENTAGE SHARE, 2017



Source: Author's calculations based on data from WorldBase and Paraguay's national IPA.

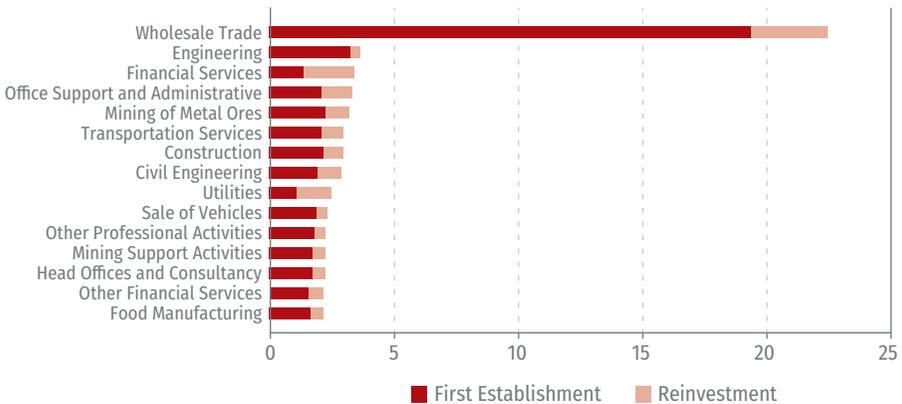
A2.1.PER Peru

FIGURE A2.1.PER.1 MULTINATIONAL FIRMS AND THEIR FOREIGN AFFILIATES IN PERU, BY HOME COUNTRY (TOP 15), PERCENTAGE SHARE, 2017



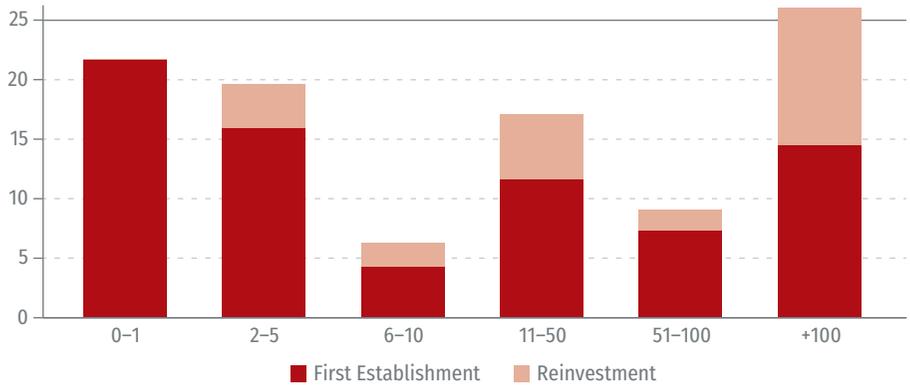
Source: Author's calculations based on data from WorldBase and Peru's national IPA.

FIGURE A2.1.PER.2 MULTINATIONAL FIRMS AND THEIR FOREIGN AFFILIATES IN PERU, BY SUBSECTOR (TOP 15), PERCENTAGE SHARE, 2017



Source: Author's calculations based on data from WorldBase and Peru's national IPA.

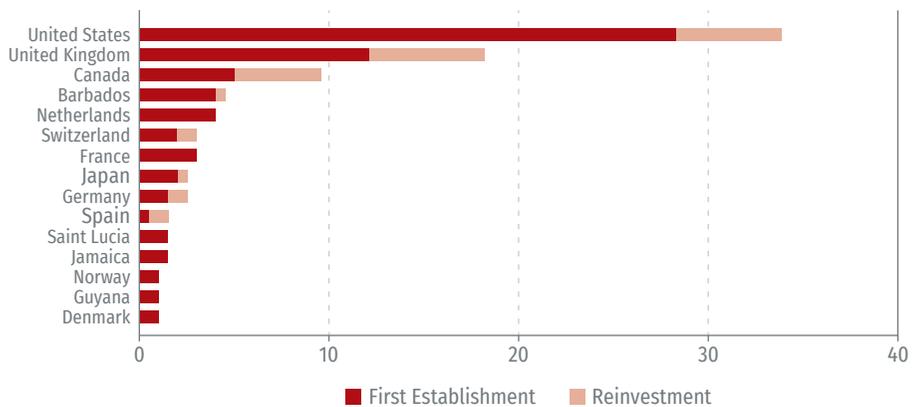
FIGURE A2.1.PER.3 MULTINATIONAL FIRMS AND THEIR FOREIGN AFFILIATES IN PERU, BY FIRM SIZE CATEGORY, PERCENTAGE SHARE, 2017



Source: Author's calculations based on data from WorldBase and Peru's national IPA.

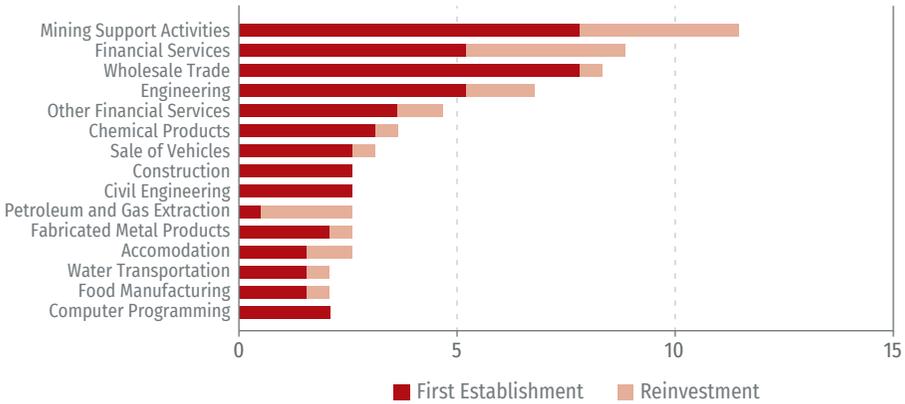
A2.1.TTO Trinidad and Tobago

FIGURE A2.1.TTO.1 MULTINATIONAL FIRMS AND THEIR FOREIGN AFFILIATES IN TRINIDAD AND TOBAGO, BY HOME COUNTRY (TOP 15), PERCENTAGE SHARE, 2017



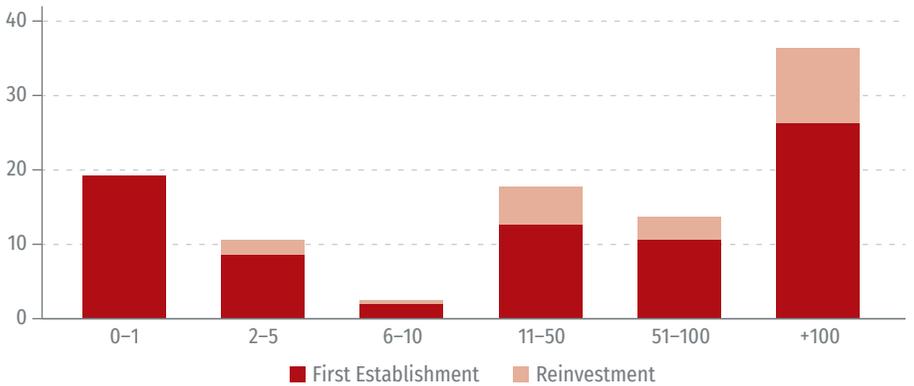
Source: Author's calculations based on data from WorldBase and Trinidad and Tobago's national IPA.

FIGURE A2.1.TTO.2 MULTINATIONAL FIRMS AND THEIR FOREIGN AFFILIATES IN TRINIDAD AND TOBAGO, BY SUBSECTOR (TOP 15), PERCENTAGE SHARE, 2017



Source: Author's calculations based on data from WorldBase and Trinidad and Tobago's national IPA.

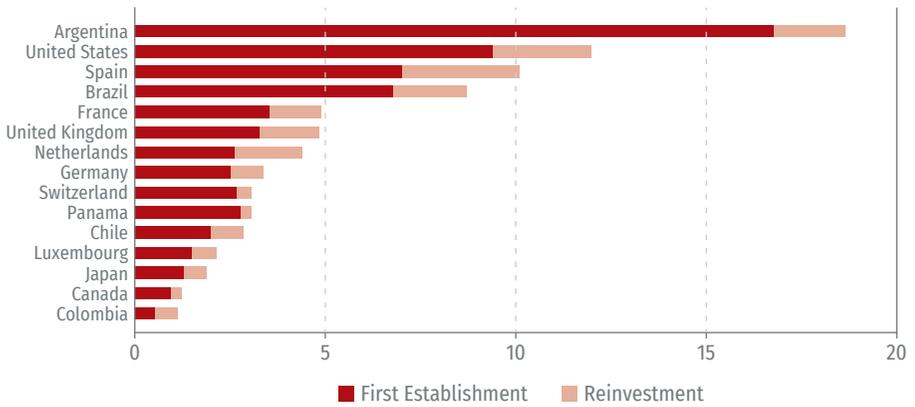
FIGURE A2.1.TTO.3 MULTINATIONAL FIRMS AND THEIR FOREIGN AFFILIATES IN TRINIDAD AND TOBAGO, BY FIRM SIZE CATEGORY, PERCENTAGE SHARE, 2017



Source: Author's calculations based on data from WorldBase and Trinidad and Tobago's national IPA.

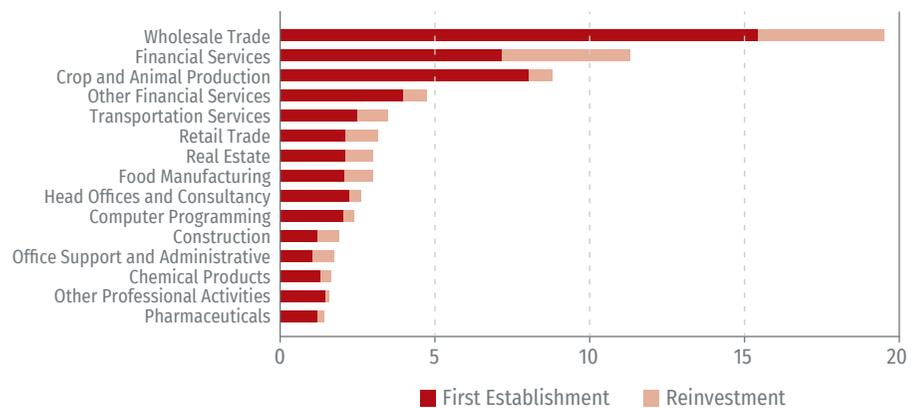
A2.1.URY Uruguay

FIGURE A2.1.URY.1 MULTINATIONAL FIRMS AND THEIR FOREIGN AFFILIATES IN URUGUAY, BY HOME COUNTRY (TOP 15), PERCENTAGE SHARE, 2017



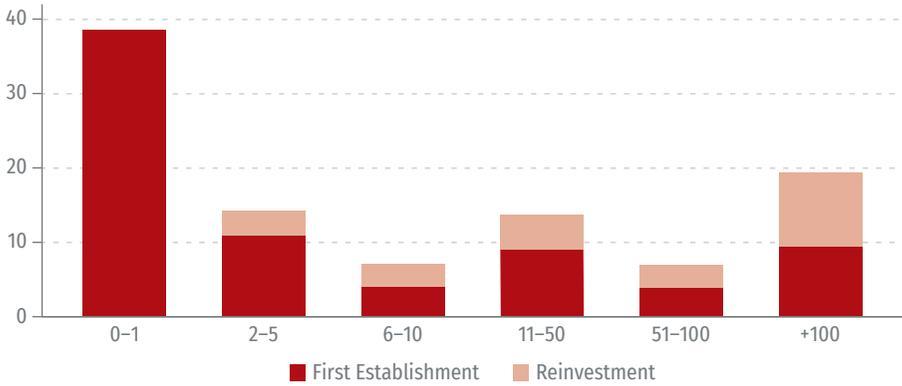
Source: Author's calculations based on data from WorldBase and Uruguay's national IPA.

FIGURE A2.1.URY.2 MULTINATIONAL FIRMS AND THEIR FOREIGN AFFILIATES IN URUGUAY, BY SUBSECTOR (TOP 15), PERCENTAGE SHARE, 2017



Source: Author's calculations based on data from WorldBase and Uruguay's national IPA.

FIGURE A2.1.URY.3 MULTINATIONAL FIRMS AND THEIR FOREIGN AFFILIATES IN URUGUAY, BY FIRM SIZE CATEGORY, PERCENTAGE SHARE, 2017



Source: Author's calculations based on data from WorldBase and Uruguay's national IPA.

HOW TO SHOW UP ON MULTINATIONAL FIRMS' RADARS: THE MULTIPLICITY OF INVESTMENT PROMOTION APPROACHES⁷⁰

A MULTITUDE OF APPROACHES ARE AVAILABLE TO POLICYMAKERS FOR SHAPING THEIR INVESTMENT PROMOTION STRATEGIES.

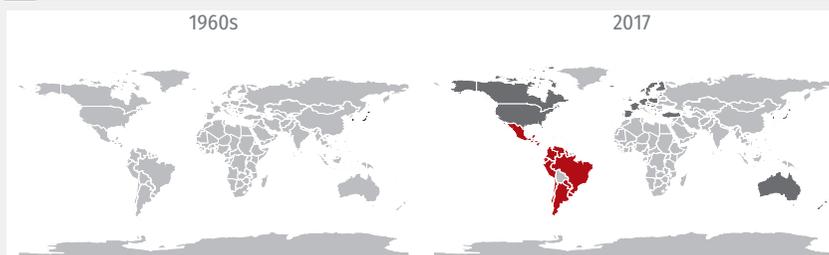
IPAs' organization strategies, services, and ways of doing business reflect these different approaches. To evaluate them and distill key operational insights from the microeconomic evaluations presented in chapter 4, a common understanding and classification of IPAs' key characteristics across different countries is required. This was the main objective of the IDB's mapping of IPAs, undertaken jointly with the OECD, which gathered and presented detailed up-to-date information on the organizational structure, activities, and operational modalities of more than 50 IPAs, including those of 21 countries in LAC and nearly all advanced OECD economies (see box 3.1). This chapter presents key aspects of LAC countries' IPAs by benchmarking them against the regional and OECD averages and highlighting commonalities and points of differentiation, whose implications for their effectiveness will be formally evaluated in chapter 4.

⁷⁰ This chapter is primarily based on Volpe Martincus and Sztajerowska (2019).

BOX 3.1: SOLVING THE INVESTMENT PROMOTION PUZZLE: MAPPING INVESTMENT PROMOTION AGENCIES IN LAC AND OECD

The institutional landscape of investment promotion has changed significantly over the last 30 years. The number of LAC and OECD countries with IPAs has quadrupled in this time (figure B3.1). In addition, most existing IPAs have undergone major institutional reforms and restructuring. Nearly one in five agencies experienced at least one important reform in the past five years. As such, it has become critical to accurately document these developments and provide investment professionals and policymakers with a detailed guide on the whos, the whats, and the hows of investment promotion.

FIGURE B3.1 PROLIFERATION OF IPAS OVER TIME



Source: Volpe Martincus and Sztajerowska (2019).

The IDB report *How to Solve the Investment Promotion Puzzle* (Volpe Martincus and Sztajerowska, 2019) aimed to fill this gap by providing consistent, detailed information on the organization, functions, activities, and operational modalities of IPAs across more than 50 countries in LAC and the OECD. The report used the data from a comprehensive joint IDB/OECD survey of IPAs. National IPAs from 21 LAC countries and 30 (of the 33) non-LAC OECD countries took part in this initiative.^a The participating LAC countries are: Argentina**, Barbados, Brazil**, Chile**, Colombia**, Costa Rica**, the Dominican Republic, Ecuador**, El Salvador**, Guatemala, Guyana, Haiti, Honduras**, Jamaica*, Mexico**, Nicaragua**, Paraguay*, Peru**, Trinidad and Tobago*, Uruguay**, and Venezuela.^b IPAs from 12 of these countries (marked **) provided the data needed to conduct an econometric evaluation of the impact of their investment promotion activities, the results of which are presented in this report, and three more (marked *) shared partial data that will allow this exercise to be completed in the future.

(continued on next page)

BOX 3.1: SOLVING THE INVESTMENT PROMOTION PUZZLE: MAPPING INVESTMENT PROMOTION AGENCIES IN LAC AND OECD *(continued)*

The mapping exercise permitted information to be gathered on institutional characteristics of IPAs, which is used in this report to identify which aspects of IPAs are associated with their assistance having larger positive effects on multinational firms' location decisions. It also served as both a reference and an input for policy dialogues among IPAs in different fora on best investment promotion (and facilitation) practices.^c

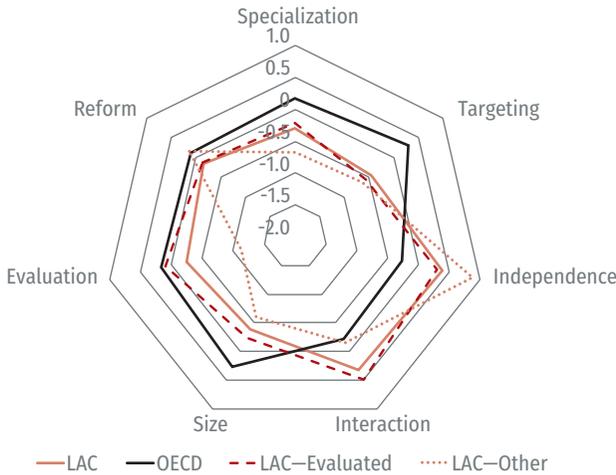
^a The participating non-LAC OECD countries are Australia, Austria, Canada, Czech Republic, Denmark, Finland, France, Estonia, Germany, Greece, Hungary, Iceland, Ireland, Israel, Korea, Latvia, Japan, the Netherlands, New Zealand, Norway, Poland, Portugal, Slovak Republic, Slovenia, Spain, Sweden, Switzerland, Turkey, the United Kingdom, and the United States.

^b Mexico's national IPA, ProMéxico, was closed in 2018. There have also been substantial institutional changes in Ecuador since 2018. Specifically, the Ministry of Production, Foreign Trade, Investments, and Fisheries is now responsible for investment promotion. Moreover, PromPerú has been tasked with investment promotion since 2020. Finally, Honduras's FIDE closed down that year.

^c The survey was also used to map IPAs in other regions and has led to a series of OECD publications with specific regional focuses (e.g., OECD, the Middle East and Africa, and Eurasia).

OVERVIEW: HOW DO AGENCIES DIFFER ON KEY DIMENSIONS?

The key characteristics of IPAs, such as their overall size; the number of recent major institutional reforms; the degree of institutional independence; and the extent of specialization, targeting, interaction with others, and evaluation can be summarized through indices such as those developed in Volpe Martincus and Sztajerowska (2019). As shown in figure 3.1, these indices allow major cross-country differences between IPAs in LAC and those in advanced economies to be visualized rapidly (see appendix 3.1 for a definition of the individual and overall benchmarking indices). In general, LAC IPAs tend to be smaller, less specialized, and target their assistance less than their non-LAC OECD counterparts. On the other hand, they have higher degrees of institutional independence (at times to compensate for the weaknesses in the local business climate) and interact extensively with relevant

FIGURE 3.1 OVERALL IPA SCORECARD

Source: Author's calculations based on IDB/OECD Survey of Investment Promotion Agencies (2017).

Note: "LAC-Evaluated" refers to the 12 countries that participated in the IDB-led impact evaluation of IPAs' activities, out of a total of 21 that were included in the IPA mapping exercise (see box 3.1 for the full list). A higher score implies a greater distance from the average and hence greater dissimilarity from the average IPA in the sample.

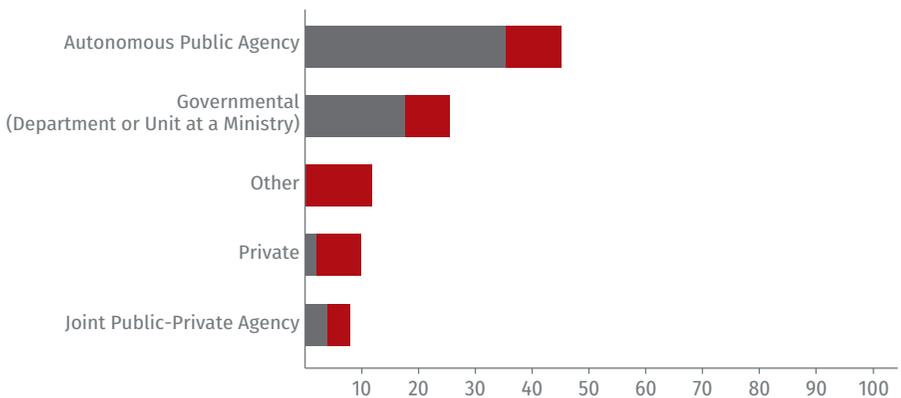
stakeholders. Overall, the LAC agencies that participated in the impact evaluation exercises whose results are presented in chapter 4 are closer to the frontier of OECD economies than their other LAC counterparts (the scorecards of individual IPAs are presented in appendix 3.2.).

Various institutional, operational, and strategic differences can influence the effectiveness of IPAs at attracting and retaining multinational firms. While the IPA scorecards capture differences in agencies' overall character and strategic orientation, each aspect can reveal important differences in organizational, managerial, and operational choices. The following sections explain these differences across IPAs, laying the groundwork for the formal evaluation of how they influence IPAs' ability to attract multinational firms in chapter 4. Specifically, this chapter describes in more detail *who* the agencies are (key institutional aspects), *what* they do (specific services and activities), and *how* they do it.

WHO INVESTMENT PROMOTION AGENCIES ARE

Most IPAs are autonomous public agencies.⁷¹ The remaining ones are either part of the government (such as a unit at a relevant ministry) or private and joint public–private entities, the latter being particularly common in LAC (figure 3.2). **Most IPAs in LAC and OECD countries report to one or several ministries, the most common being the ministry of industry, trade, and investment (72%) in LAC and the ministry of the economy (45%) in OECD countries.** Many IPAs also have a board of directors (86%), which serve supervisory, strategic, planning, and advisory functions. In about half of LAC IPAs, the board of directors appoints the CEO or general manager: this, together with aspects such as the share of nonpublic-sector members on the board and funding sources, translates into LAC IPAs generally having greater institutional independence.

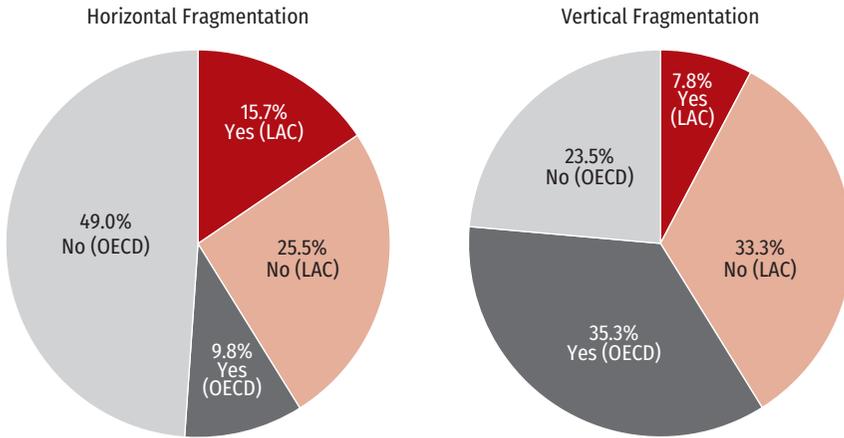
FIGURE 3.2 IPAS' LEGAL STATUS, 2017



Source: Author's calculations based on IDB/OECD Survey of Investment Promotion Agencies (2017).

Note: The figure presents the percentage share of IPAs with alternative legal statuses. LAC countries are shown in red and non-LAC OECD countries are shown in dark gray.

⁷¹ The institutional architecture of the ecosystem of public agencies supporting private-sector firms and the organizational design of each of these agencies have important political economy implications (Crespi et al., 2014; and Mesquita Moreira and Stein, 2019). These are worth examining in a dedicated separate study.

FIGURE 3.3 HORIZONTAL AND VERTICAL ORGANIZATIONAL FRAGMENTATION, 2017

Source: Author's calculations based on IDB/OECD Survey of Investment Promotion Agencies (2017).

Note: The figure on the left presents the percentage share of IPAs that coexist with at least other national entity that also performs investment promotion functions (horizontal fragmentation), whereas the figure on the right presents the percentage share of IPAs that coexist with at least one subnational entity that also performs investment promotion functions (vertical fragmentation). LAC countries are shown in red and non-LAC OECD countries are shown in gray.

National IPAs can coexist with other national or subnational agencies that perform the same or related functions. The presence of another national agency that is responsible for investment promotion (horizontal fragmentation) is relatively more prevalent in LAC than in OECD countries (figure 3.3). Many more OECD IPAs, in turn, cooperate with regional agencies to perform their functions (vertical fragmentation). The degree of fragmentation and cooperation may have major implications for the efficiency of resource allocation and thus on the impact of IPAs. A multiplicity of actors with similar functions at the national level can thus dilute efforts and create confusion among investors, thereby reducing IPAs' overall effectiveness. In contrast, vertical fragmentation, when accompanied by proper cooperation with regional bodies, can be associated with stronger investment promotion effects.

Agencies also vary significantly in terms of the overall size of the financial and human resources available to them. The median IPA

has a total annual budget of US\$7 million and an annual budget for investment promotion of US\$2.3 million, but there are significant differences across agencies (figure 3.4). LAC agencies tend to have smaller budgets than their OECD counterparts: **the median IPA in LAC has a total budget of US\$4.2 million while the OECD median is over three times as high—US\$13.9 million.**⁷² The ratio of investment promotion-specific budgets is even higher: US\$1.3 million for the median LAC IPA as compared to US\$5.5 million for the median OECD IPA.⁷³ The median IPA employs 104 staff, 30 of whom work on investment promotion. Some IPAs have nearly 2,000 staff focusing on this area while others have just one person doing so. **The median number of investment promotion staff is 21 at LAC IPAs and 40 at OECD IPAs,** which again reveals that LAC IPAs have fewer resources.

Most IPAs rely primarily on financial resources that are assigned directly to them by the public sector and apply a large proportion of these resources to personnel and consultancy expenses. In general, the share of public sources in IPAs' budgets is lower in LAC countries than in OECD countries (65% compared to 98%, respectively), as more LAC IPAs earn an income from their own assets, receive financing from international organizations, and rely on other sources.⁷⁴ In terms of budget use, in both regions about half of IPA budgets goes toward personnel costs.⁷⁵ This highlights the fact that human resources are one of IPAs' most valued assets.

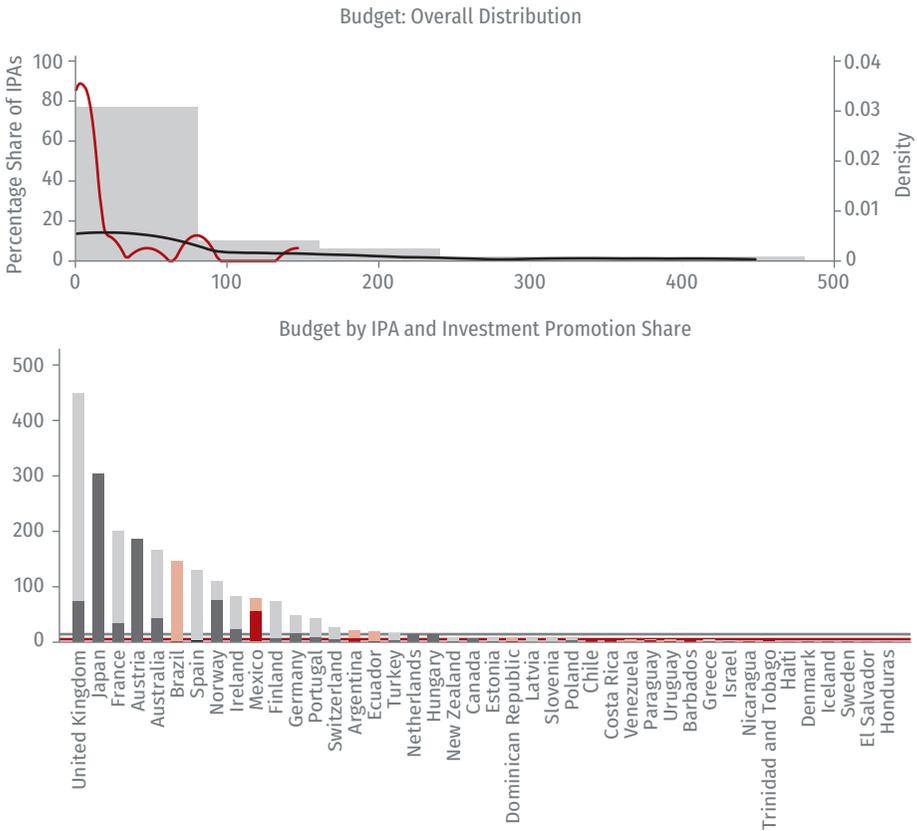
⁷² The investment promotion budget of the median LAC IPA is US\$1.3 million, whereas that of the median OECD IPA is more than four times larger—US\$5.5 million.

⁷³ The absolute level of resources available to IPAs is a relevant metric because it determines the number and quality of services they can provide to multinational firms. Now, admittedly, the size of each IPAs' budget is positively correlated with the size and per-capita income of the country (Volpe Martincus and Sztajerowska, 2019). When measured relative to the respective countries' GDPs, the median LAC IPAs' investment promotion budget is slightly smaller than that of their OECD counterparts—US\$0.11 and US\$0.13 per US\$10,000 of GDP in LAC and the OECD, respectively.

⁷⁴ The source of financing can have major consequences on IPAs' independence to design and implement programs (see the Institutional Independence Index below and Appendix 3.2).

⁷⁵ Some countries also spend a relatively high share of their budget on operating expenditure, which includes travel and promotion material (e.g., Brazil, Guyana, El Salvador).

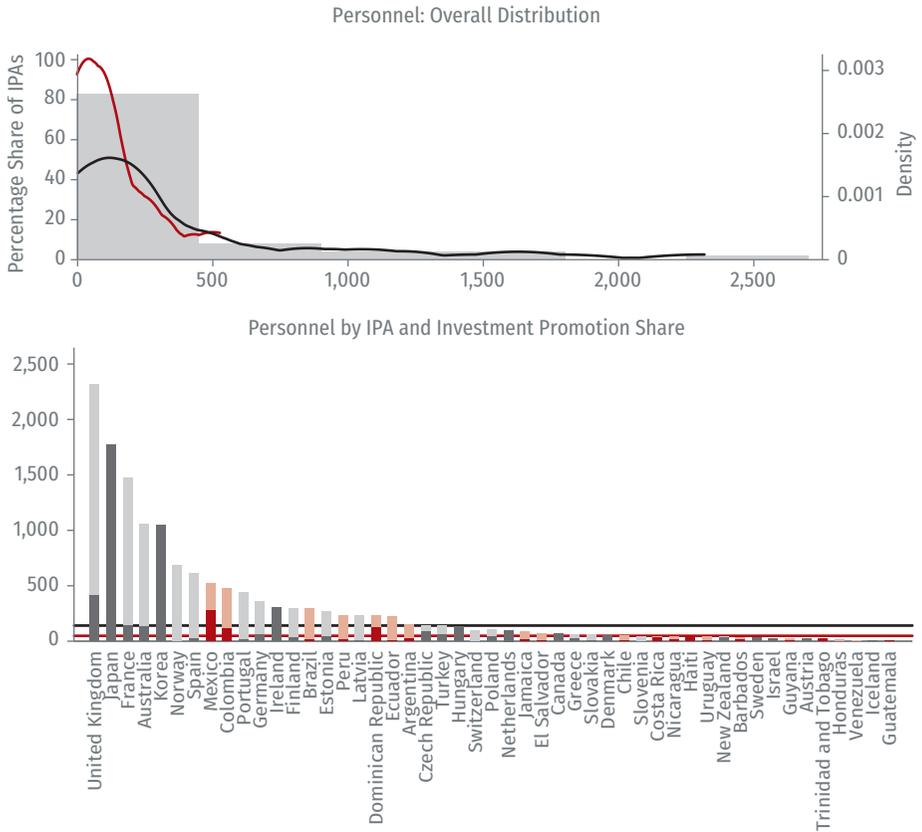
FIGURE 3.4 IPAS' BUDGETS AND PERSONNEL, 2016



(continued on next page)

IPA staff tend to be highly educated and largely have relevant work experience. More than 97.5% of the median IPAs' personnel hold undergraduate or postgraduate degrees, and one-third have had previous private-sector experience (figure 3.5).

However, IPAs distribute their staff differently across functions. LAC IPAs have larger shares of managerial and administrative positions and lower shares of professional positions relative to their OECD peers. They also apply different pay schemes. For example, professional and administrative positions and nonpayroll employees in several LAC IPAs are paid higher wages than the relevant

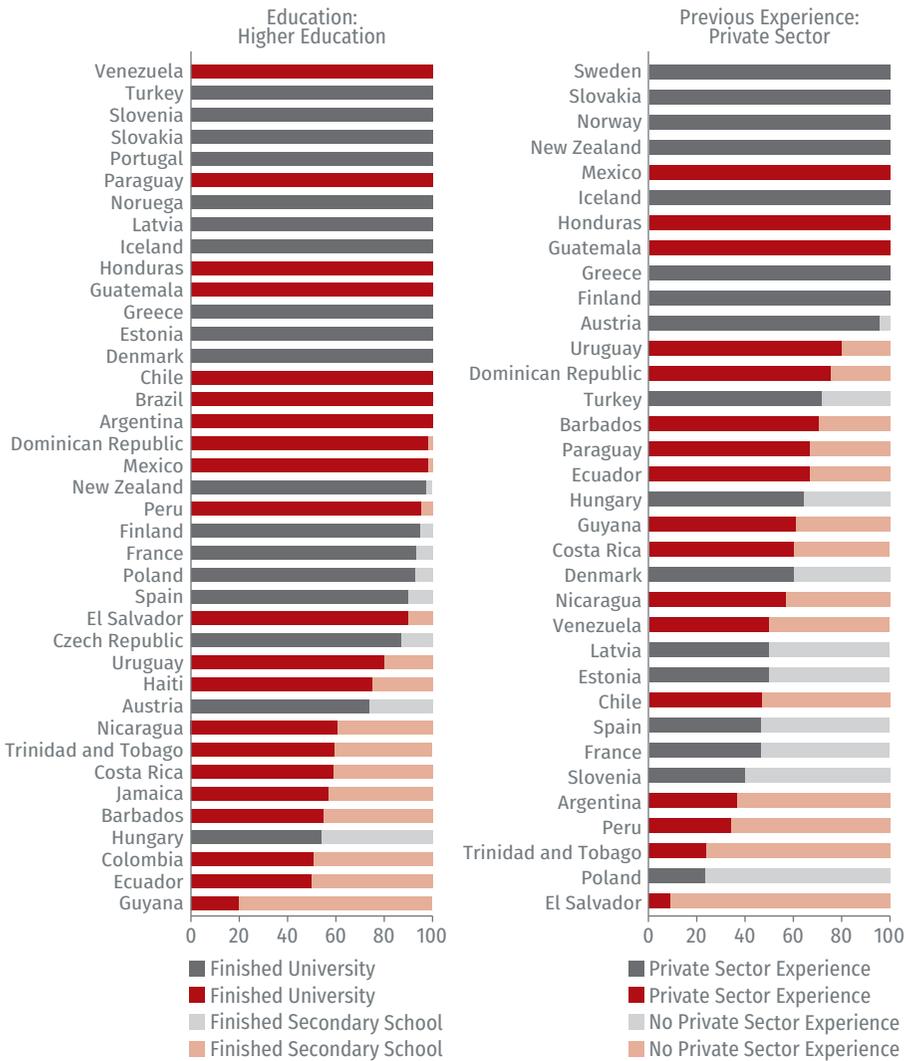
FIGURE 3.4 IPAS' BUDGETS AND PERSONNEL, 2016 (continued)

Source: Author's calculations based on IDB/OECD Survey of Investment Promotion Agencies (2017).

Note: The figures in the first and second panels present a histogram of the distribution of IPAs' total budgets along with the respective kernel density estimate (first panel) and each IPA's total budget (in US\$ million) with the respective share of this assigned to investment promotion (second panel). In the histogram, the x-axis measures the IPAs' budgets, and the y-axis measures the percentage of agencies (left) and the associated density (right). The figures in the third and fourth panels present a histogram of the distribution of IPAs' total number of employees along with the respective kernel density estimate (third panel), and each agency's total number of employees with the respective share of these assigned to investment promotion (fourth panel). In the histogram, the x-axis measures the IPAs' total number of employees, and the y-axis measures the percentage of agencies (left) and the associated density (right). In the figures with vertical bars, the horizontal lines correspond to the regional medians. LAC countries are shown in red and non-LAC OECD countries are shown in gray.

public-sector (and even market) comparison while the same holds true for managerial positions in OECD IPAs. Both the quantity and quality of staff—as proxied by education, prior experience, and salary level—can have a major effect on IPAs' ability to engage successfully with multinational firms and influence their location decisions.

FIGURE 3.5 IPA PERSONNEL PROFILE, 2016



Source: Author's calculations based on IDB/OECD Survey of Investment Promotion Agencies (2017).
 Note: The figure presents the distribution of IPAs' total number of employees by level of education (completed superior education vs. rest) and previous experience (private sector vs. rest; left and right panels, respectively). LAC countries are shown in red and non-LAC OECD countries are shown in gray.

Last but not least, IPAs also differ according to how extensive the network of their offices at home and abroad are, which can also influence their ability to facilitate lead generation and investor assistance and, ultimately, multinational firms' location decisions.

FIGURE 3.6 SPATIAL DISTRIBUTION OF OVERSEAS OFFICES OVER TIME: LAC AND OECD



Source: Author's calculations based on IDB/OECD Survey of Investment Promotion Agencies (2017).

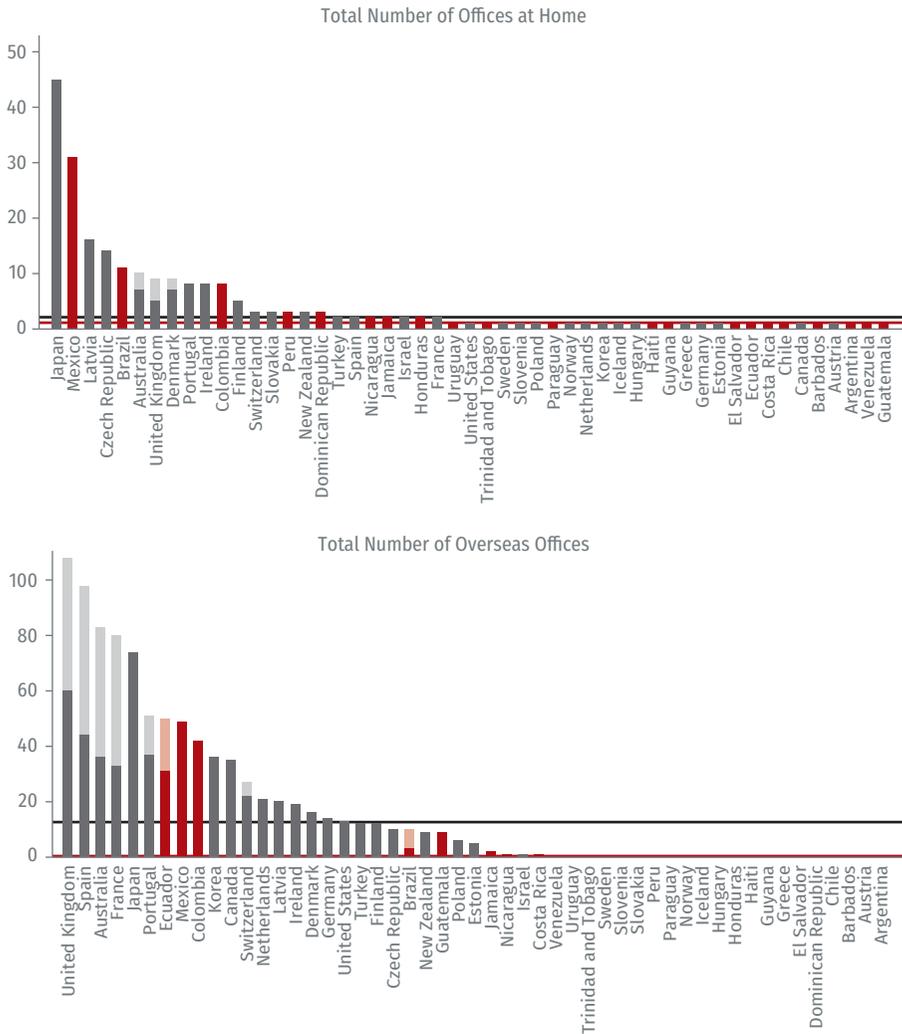
Note: The figure presents world maps showing IPAs' overseas office networks in different decades. Some overseas offices may correspond to predecessor agencies (e.g., Barbados). LAC countries are shown in red and non-LAC OECD countries are shown in dark gray.

Overall, with time, more agencies have opened new offices abroad, resulting in their average number of foreign offices increasing from about 3 in the 1960s to 15 in more recent years (figure 3.6). This expansion process has tended to be gradual, although some countries have opened multiple offices in particular years (e.g., Colombia). Today, there are large differences in IPAs' numbers of offices at home and abroad (figure 3.7): some agencies have no domestic or foreign offices and others benefit from extensive networks of these.

OECD IPAs have wider office networks than those of their LAC counterparts. Whereas the median LAC IPA has no overseas office, the median OECD IPA has more than ten. Furthermore, six IPAs (all of which are from OECD countries) have more than 50 overseas offices, and 22 IPAs (13 of which are from LAC countries) have no overseas presence at all (figure 3.7, lower panel).

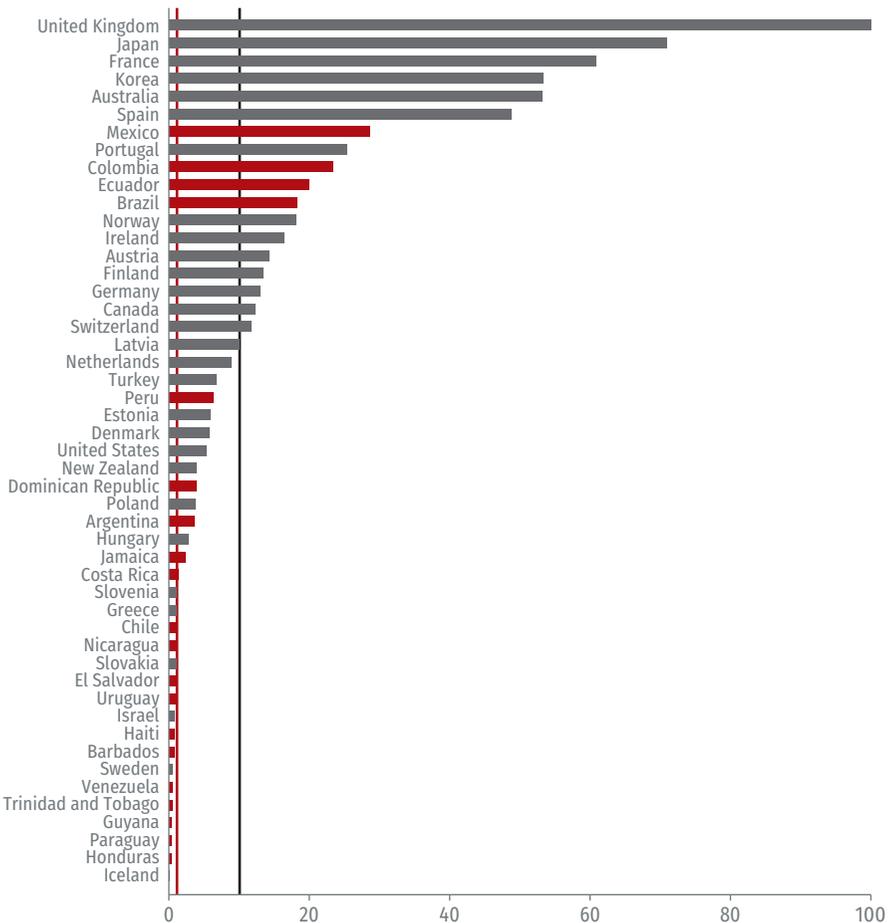
These different institutional aspects and endowments in financial, human, and physical resources inform IPAs' overall sizes and levels of institutional independence. They are summarized in the IPA Overall Size Index and Institutional Independence Index, which are shown in figures 3.8 and 3.9, respectively. In gen-

FIGURE 3.7 NUMBER OF OFFICES AT HOME AND ABROAD BY IPA, 2017



Source: Author’s calculations based on IDB/OECD Survey of Investment Promotion Agencies (2017).
 Note: The figure presents the total number of each IPA’s offices, both at home (top panel) and abroad (bottom panel), along with the regional medians. LAC countries are shown in red and non-LAC OECD countries are shown in gray.

eral, LAC IPAs tend to be both smaller and more independent than their OECD counterparts. Size and institutional independence can have implications for how IPAs impact multinational firms’ location behavior. Size can thus be related to the number of

FIGURE 3.8 IPA OVERALL SIZE INDEX, 2017

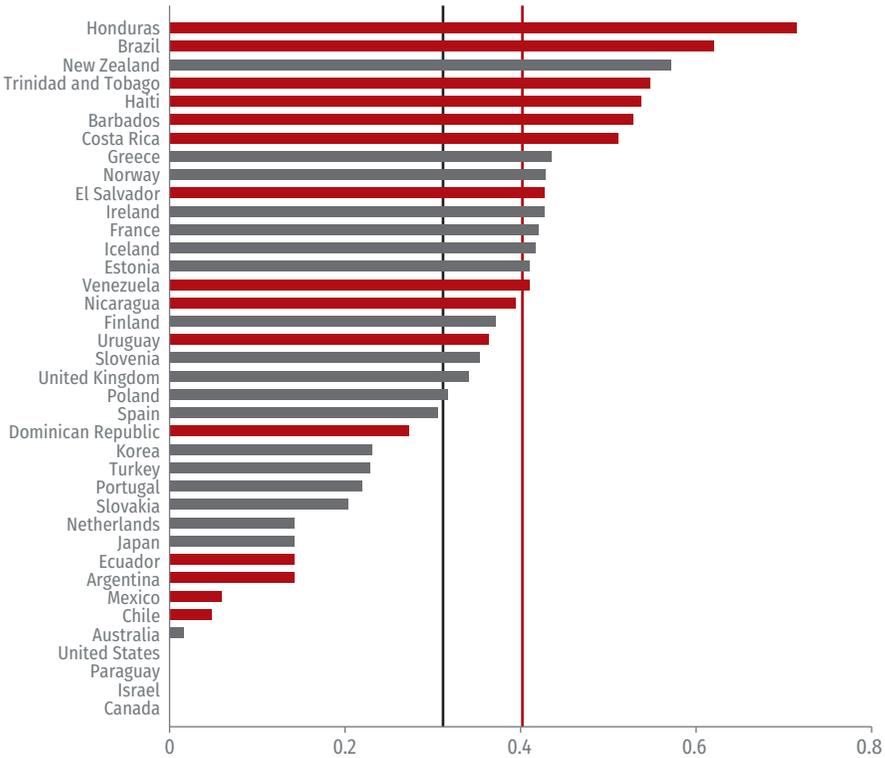
Source: Author's calculations based on IDB/OECD Survey of Investment Promotion Agencies (2017).

Note: The figure presents the overall size index for each IPA for which this could be computed based on reported data on relevant variables, along with the regional medians. The overall size index is a simple average of the relative size of IPAs' budget, personnel, and network of overseas offices. LAC countries are shown in red and non-LAC OECD countries are shown in dark gray.

investors assisted and the quality of the services provided to them. Institutional independence, in turn, can be a means of dealing with public administration inefficiencies.⁷⁶

⁷⁶ Volpe Martincus and Sztajerowska (2019) show that IPAs that score higher on institutional independence correspond to countries with lower levels of government efficiency. Admittedly, however, more independent agencies could be end up being less accountable to taxpayers and more vulnerable to political capture.

FIGURE 3.9 IPA INSTITUTIONAL INDEPENDENCE INDEX, 2017



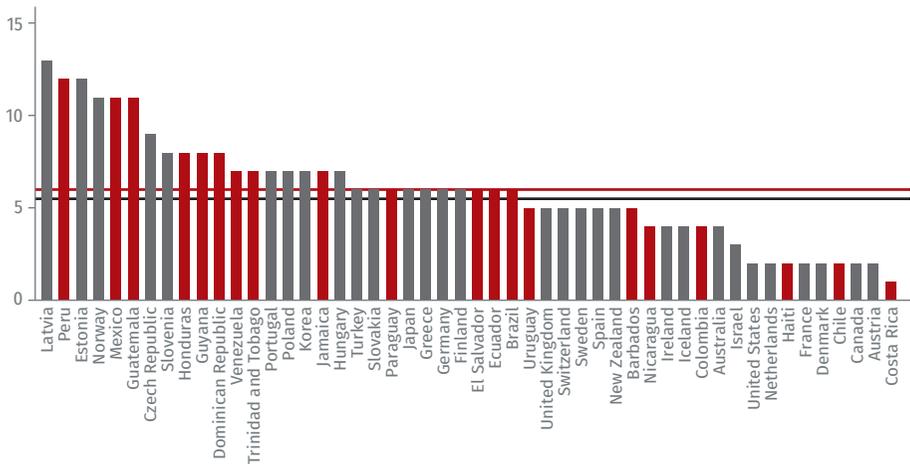
Source: Author's calculations based on IDB/OECD Survey of Investment Promotion Agencies (2017).

Note: The figure presents the institutional independence index for each IPA for which this could be computed, based on reported data on relevant variables, along with the regional medians. The institutional independence index is a simple average of a set of binary variables capturing legal status, reporting scheme, budget sources, composition and responsibilities of the board of directors, and contractual freedom. The index varies from 0 (least independence) to 1 (maximum independence). LAC countries are shown in red and non-LAC OECD countries are shown in dark gray.

WHAT INVESTMENT PROMOTION AGENCIES DO

Mandates

While all IPAs are created with the core mandate of promoting and attracting inward foreign investment, they differ in the number and type of secondary functions they perform. The median IPA has five different mandates, with LAC IPAs performing a slightly higher number of functions than their OECD counterparts.

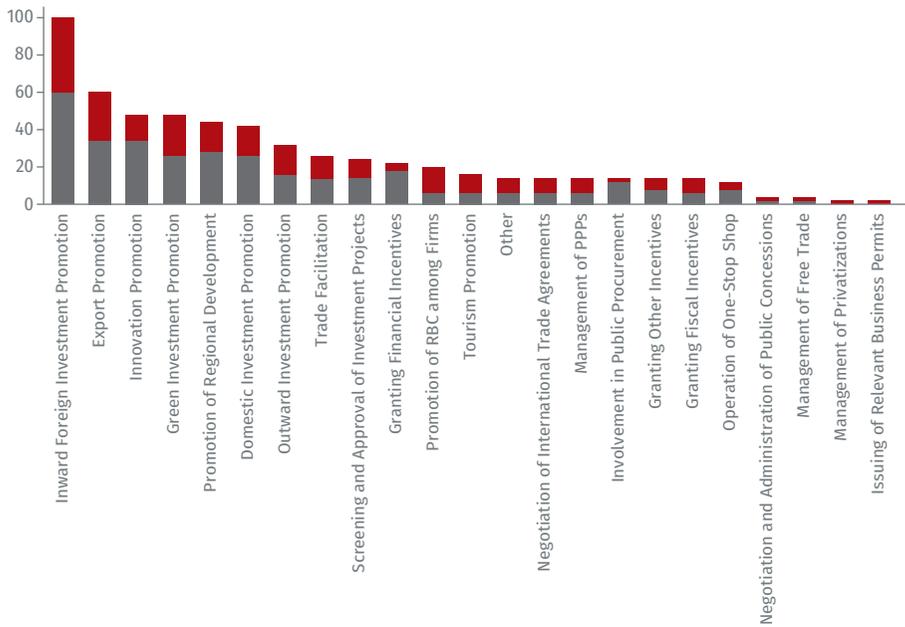
FIGURE 3.10 TOTAL NUMBER OF IPA MANDATES, 2017

Source: Author's calculations based on IDB/OECD Survey of Investment Promotion Agencies (2017).

Note: The figure shows the total number of IPA mandates, along with the regional medians. LAC countries are shown in red and non-LAC OECD countries are shown in dark gray.

The total number of these mandates varies significantly across IPAs, however: some IPAs have only one core mandate (inward FDI promotion) and some have more than 10 (figure 3.10). Export, innovation, and green investment promotion are the most common additional mandates of both LAC and OECD IPAs. Nevertheless, there are differences between these country groupings. **While among OECD IPAs innovation promotion tends to be the most frequent secondary mandate (57%, on par with export promotion), LAC IPAs are more often responsible for export promotion (65%) and green investment (55%), followed by the promotion of domestic investment, regional development, and outward FDI (40% each; figure 3.11).**⁷⁷ The number and type of mandates can affect the level of resources that IPAs devote to each task and the degree of coordination with complementary policies, which in turn influences how IPAs shape their countries' participation in multinational production.

⁷⁷ "Green investment" refers to FDI in environmental goods and services sectors and FDI in environmental-damage mitigation processes (i.e., use of cleaner and/or more energy-efficient technologies).

FIGURE 3.11 FREQUENCY OF IPA MANDATES, 2017

Source: Author's calculations based on IDB/OECD Survey of Investment Promotion Agencies (2017).

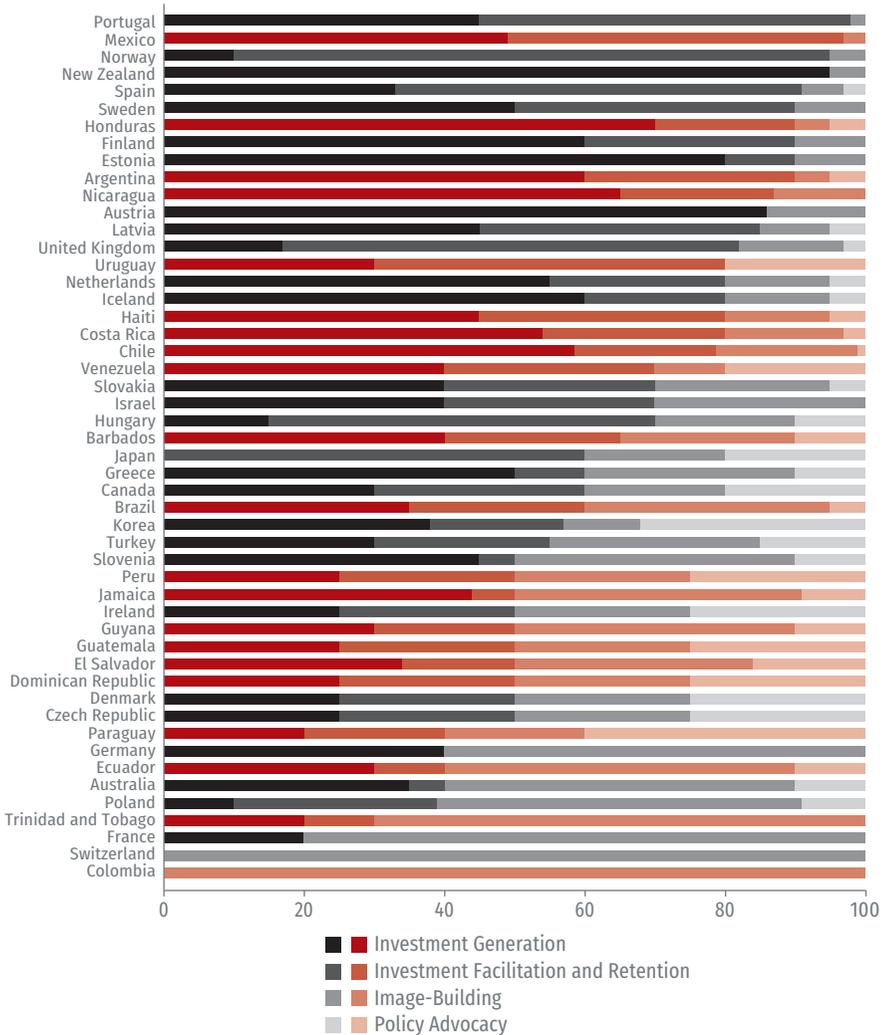
Note: The figure shows the percentage share of IPAs with each mandate. LAC countries are shown in red and non-LAC OECD countries are shown in dark gray.

Functions and Activities

Besides their formal mandates, IPAs may differ in how they allocate their resources across the different functions they perform as well as in the number and type of specific activities that they carry out. All IPAs perform four broad functions: image-building, investment generation, investment facilitation and retention, and policy advocacy.⁷⁸ Investment generation and investment facilitation and retention tend to account for most IPA resources and can accordingly be considered to be their core functions. Together, they account for almost three-quarters of IPAs investment promotion budgets and staff. While the two regions show broadly similar patterns in this regard, the median LAC IPA assigns slightly more resources to

⁷⁸ See chapter 1 for a general definition of these broad functions.

FIGURE 3.12 PERCENTAGE SHARE OF MAIN FUNCTIONS IN IPA BUDGETS, BY IPA, 2016



Source: Author's calculations based on IDB/OECD Survey of Investment Promotion Agencies (2017).

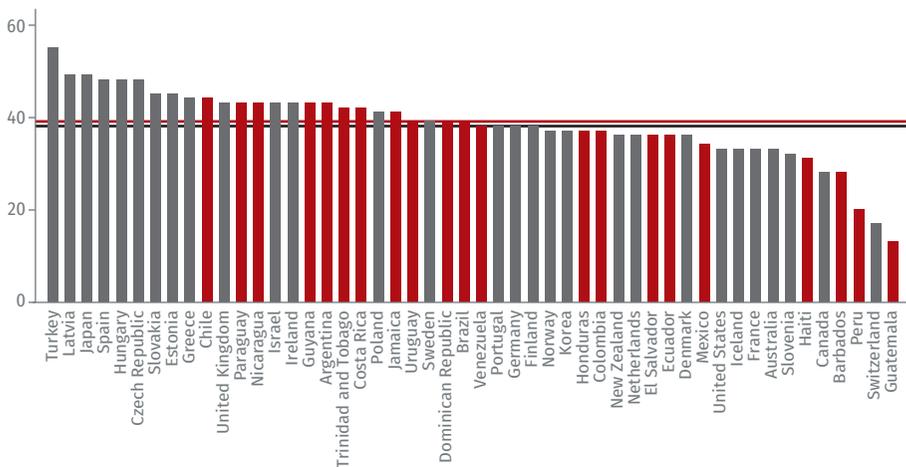
Note: The figure shows the percentage share of each investment promotion function in each IPA's total investment promotion budget. LAC countries are shown in red and non-LAC OECD countries are shown in gray.

image-building and policy advocacy. All the same, large differences persist across countries (figure 3.12). This prompts the question of whether and how far the allocation of budgets and staff across functions is associated with IPAs' abilities to attract multinational firms.

As part of their broad functions, the median IPA executes approximately 40 different actions to promote FDI. These may include providing promotional and information materials to investors; handling inquiries; organizing or attending general or sector-specific roadshows, fairs, and events at home and abroad; organizing site visits and relevant meetings with investors, officials, potential suppliers, and clients; and providing assistance with obtaining licenses, securing financing, or recruiting staff (see box 3.2). The total number of such activities ranges from 13 to 55 (figure 3.13). LAC IPAs generally perform a similar number of specific actions as their OECD peers.

The specific services offered by IPAs remain an important point of differentiation. While most IPAs execute the full range of possible investment generation activities, there are significant differences in the types of activities that IPAs carry out in performing their other functions, particularly investment facilitation and retention and policy advocacy (figure 3.14). For example, OECD IPAs provide more frequent support for firms with securing financing and

FIGURE 3.13 TOTAL NUMBER OF SPECIFIC INVESTMENT PROMOTION ACTIVITIES BY AGENCY, 2017



Source: Author's calculations based on IDB/OECD Survey of Investment Promotion Agencies (2017).

Note: The figure shows the total number of specific investment promotion activities carried out by each IPA, along with the regional medians. LAC countries are shown in red and non-LAC OECD countries are shown in dark gray.

BOX 3.2: IPAS' CORE FUNCTIONS AND SPECIFIC ACTIVITIES

IPAs can perform a varied mix of activities across the four main investment promotion functions (image-building, investment generation, facilitation, and retention, and policy advocacy). Examples of these activities are listed below to illustrate the scope and nature of their operations as well as the type of services they tend to provide firms:

- **Image-Building**

- *Marketing activities*: website; international and local media; promotion material; web services.
- *Public relations events*: attending general roadshows, business fora, fairs, etc.; organizing general missions abroad; hosting general incoming missions.

- **Investment Generation**

- *Intelligence gathering*: raw data analysis; market studies.
- *Events*: attending sector-specific roadshows, business fora, fairs at home; organizing sector- or investor-specific missions abroad; hosting sector-/investor-specific incoming missions.
- *Direct contacts with investors*: one-to-one meetings initiated by the IPA; proactive campaigns; one-to-one meetings initiated by investors; inquiry/request handling.

- **Investment Facilitation and Retention**

- *Assistance with project definition*: airport pickups; information on local suppliers/clients; working meetings; site visits.
- *Assistance with administrative procedures*: assistance with business/tax registration; assistance with obtaining licenses; assistance with obtaining land and construction approvals; assistance with obtaining visas and work permits; assistance with utilities; assistance with legal issues; assistance with obtaining financing.
- *Aftercare services*: structured troubleshooting with individual investors; ombud intervention; conflict mitigation.
- *Matching, linkages, and other business support programs*: linkage programs; local supplier database; capacity-building support for local firms; matchmaking service between investors and local firms; cluster programs; personnel recruitment programs.

- **Policy Advocacy**

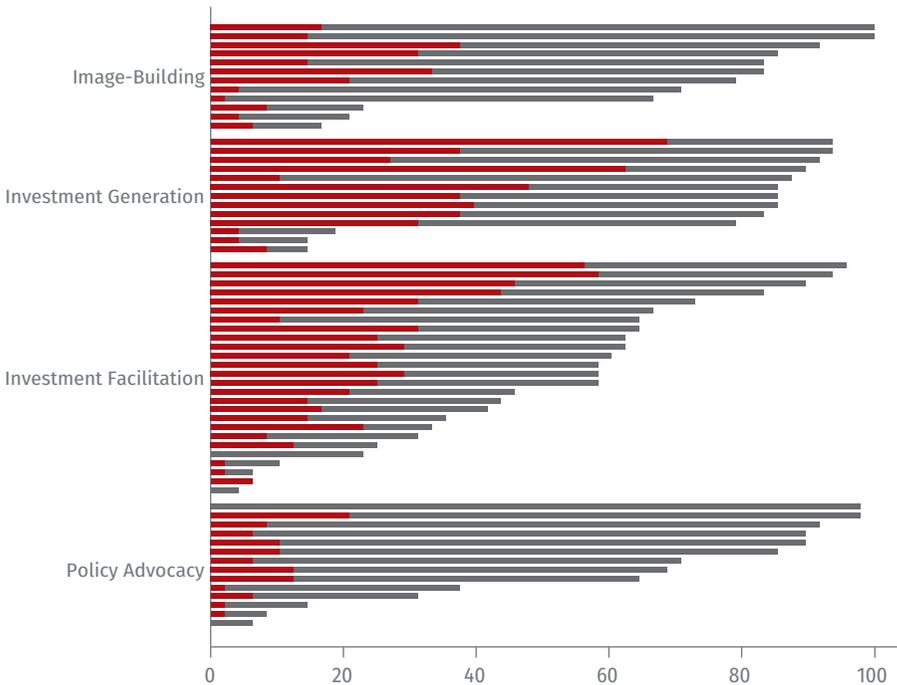
- *Actions to monitor investment climate*: tracking of available rankings; meetings with the private sector or business associations; surveys of IPAs' overseas offices or embassies and consulates; surveys of foreign investors; surveys of domestic firms investing at home/abroad; surveys of expats; inputs on regulatory impact assessment (RIA).

(continued on next page)

BOX 3.2: IPAS’ CORE FUNCTIONS AND SPECIFIC ACTIVITIES *(continued)*

- *Formal feedback to the government on how to improve investment climate:* meetings with the prime minister/president or other agencies; participation in an intergovernmental taskforce/council on investment climate reforms; production of reports or position papers.
- *Informal feedback to the government on investment climate:* participation in periodic meetings with the private sector; public awareness campaigns or events.

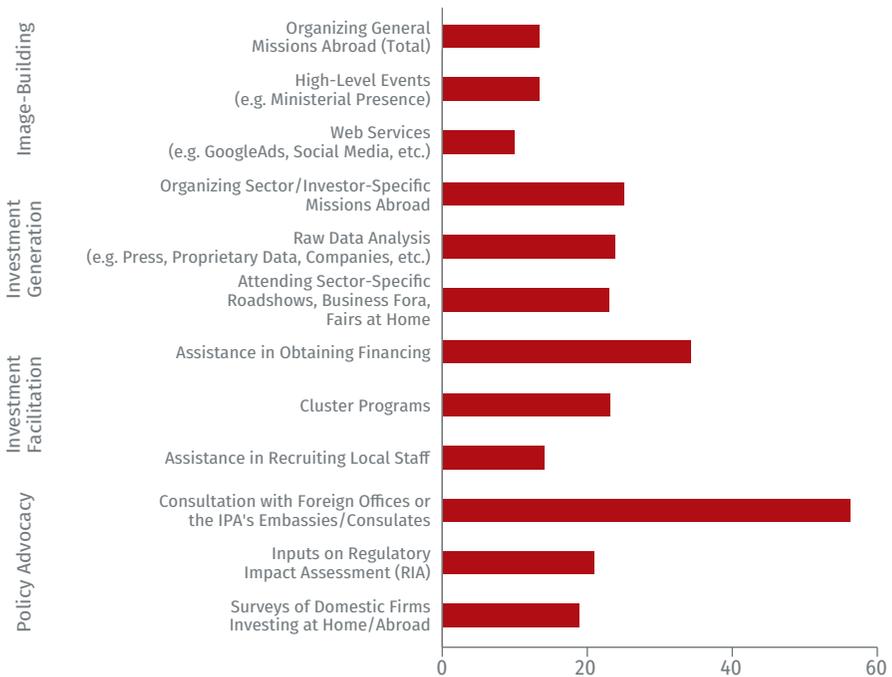
FIGURE 3.14 NUMBER OF IPAS THAT CARRY OUT SPECIFIC ACTIVITIES ACROSS FUNCTIONS, 2017



Source: Author’s calculations based on IDB/OECD Survey of Investment Promotion Agencies (2017).
 Note: The figure shows the percentage share of IPAs carrying out each specific promotion activity across functions. LAC countries are shown in red and non-LAC OECD countries are shown in dark gray.

running cluster programs as part of their investment facilitation and retention efforts than LAC IPAs do (figure 3.15). Meanwhile, ombud services and the provision of capacity-building support for local firms are more common among LAC IPAs.

FIGURE 3.15 DIFFERENCES IN THE PERCENTAGE SHARE OF IPAS CARRYING OUT A SPECIFIC ACTIVITY ACROSS FUNCTIONS AND REGIONS—TOP THREE ACTIVITIES, 2017



Source: Author's calculations based on IDB/OECD Survey of Investment Promotion Agencies (2017).

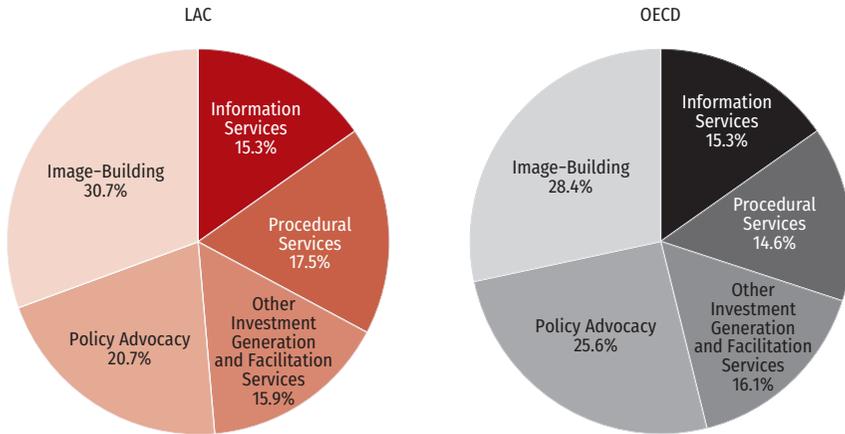
Note: The figure shows the percentage-point difference between the share of OECD IPAs and LAC IPAs performing a particular activity for the top three activities for which the difference is the largest within each core investment promotion function. A positive value indicates that a larger share of OECD IPAs perform a given activity.

Information and procedural services account for a major share of IPA investment generation and facilitation activities (figure 3.15).

Information services consist of providing investors with accurate information about local business, legal issues, and other factors (e.g., handling inquiries by phone or email or holding one-to-one meetings with investors), whereas *procedural services* relate to assisting investors with establishing operations in the country (e.g., facilitating site selection, obtaining relevant permits, and making contact with local authorities).⁷⁹ Each of these two types of services

⁷⁹ *Information services* include any activities that pertain to providing investors with information, including by handling investor requests and inquiries, providing detailed explanations of sector-specific set-up process, and

FIGURE 3.16 DISTRIBUTION OF SPECIFIC INVESTMENT PROMOTION ACTIVITIES ACROSS MAIN FUNCTIONS AND TYPES—ACTIVITIES OF A MEDIAN IPA BY REGION, PERCENTAGE SHARE, 2017



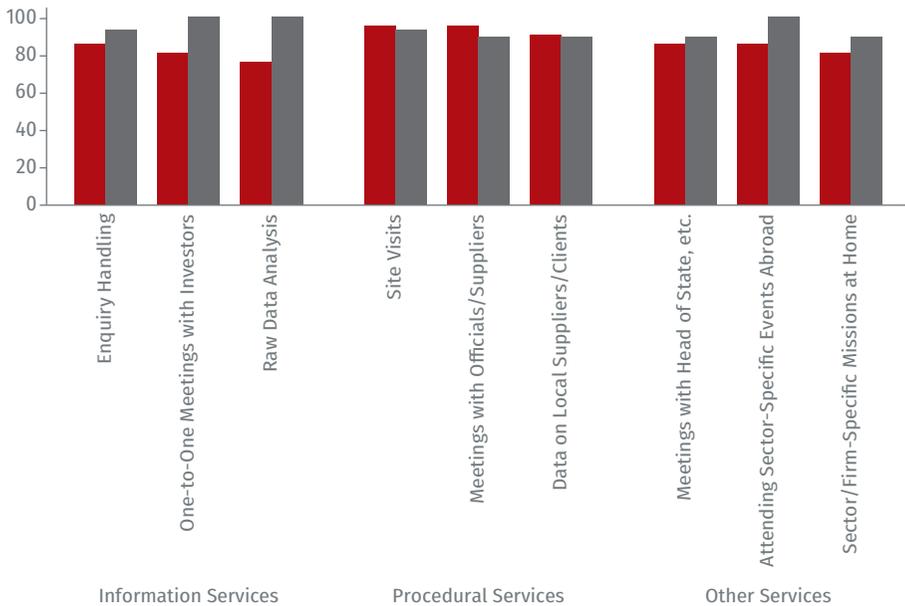
Source: Author's calculations based on IDB/OECD Survey of Investment Promotion Agencies (2017).

Note: The figures above are pie charts reporting the normalized percentage share of information services, procedural services, and other core investment promotion functions in the median IPA's total number of investment promotion activities in the region (LAC on the left and OECD on the right). LAC countries are shown in red and non-LAC OECD countries are shown in gray.

account for about one-third of IPA investment generation and facilitation activities. These shares are broadly comparable across the two regions, although a slightly higher share of LAC IPAs perform procedural services than information services relative to OECD IPAs (figure 3.16). Handling investor requests and inquiries by phone and email and one-to-one meetings with investors are the information services that are most frequently provided in both LAC and the OECD (figure 3.17). Meanwhile, OECD IPAs tend to undertake raw data analysis more frequently than LAC IPAs, which they do by analyzing press reports, conducting company interviews, and through the use of proprietary data (100% of OECD IPAs compared to 76% of LAC IPAs). Given that information ser-

organizing meetings with potential suppliers and clients to learn about prices and local conditions, among others. *Procedural services* refer to assistance with obtaining various licenses and permits (e.g., business and tax registration, land and construction approvals, sector licenses, visa and work permits, and utilities), assistance with obtaining financing and solving legal issues, and structured troubleshooting and ombud services, among others.

FIGURE 3.17 TOP SPECIFIC INVESTMENT GENERATION AND FACILITATION ACTIVITIES ACROSS TYPES, 2017



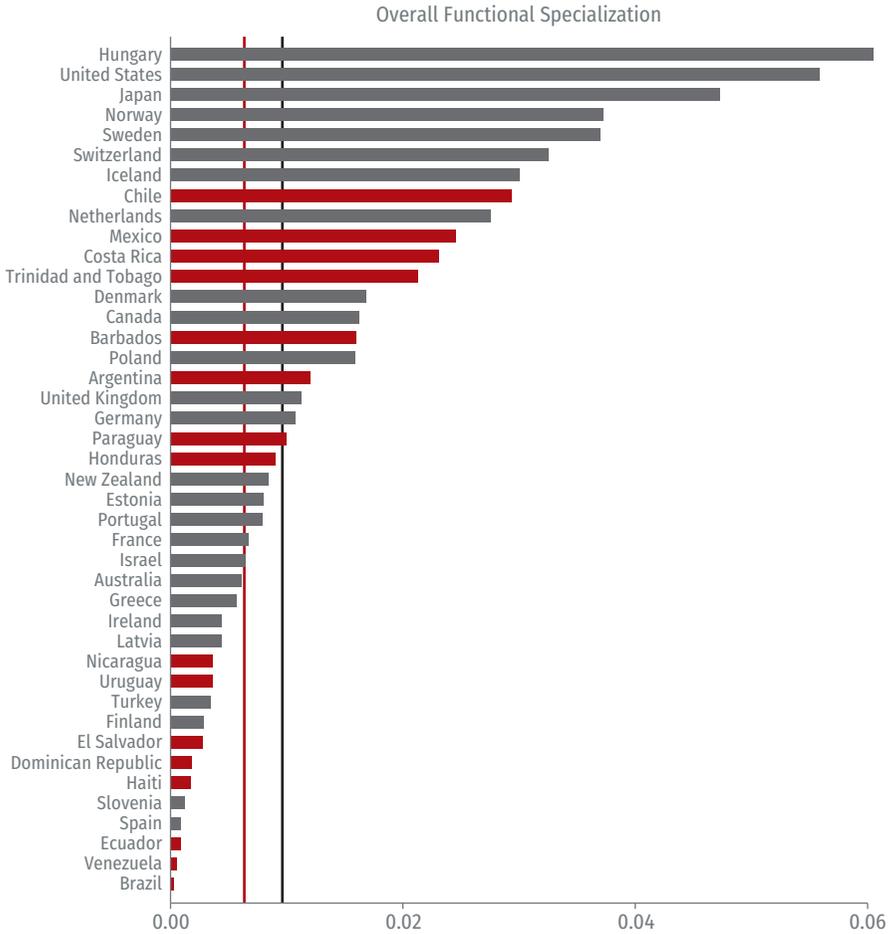
Source: Author's calculations based on IDB/OECD Survey of Investment Promotion Agencies (2017).

Note: The figure shows the percentage share of IPAs in each region carrying out a specific investment generation or facilitation activity by type of activity for the three activities that are most frequently carried out by IPAs in both regions. LAC countries are shown in red and non-LAC OECD countries are shown in dark gray.

vices are the most direct way to reduce information frictions that affect multinational production, ascertaining their relative effects on multinational firms' location decisions is particularly important.

IPAs specialize to different degrees. They differ in terms of the relative importance they place on core and specific functions, as measured by how they allocate their resources and the different services they provide to firms. These characteristics can be summarized in two related IPA specialization indices (figure 3.18). The first of these measures the IPA's overall level of specialization in investment promotion and the main specific investment promotion functions. The second index measures the degree to which IPAs allocate resources and carry out specific activities to deliver on their core functions

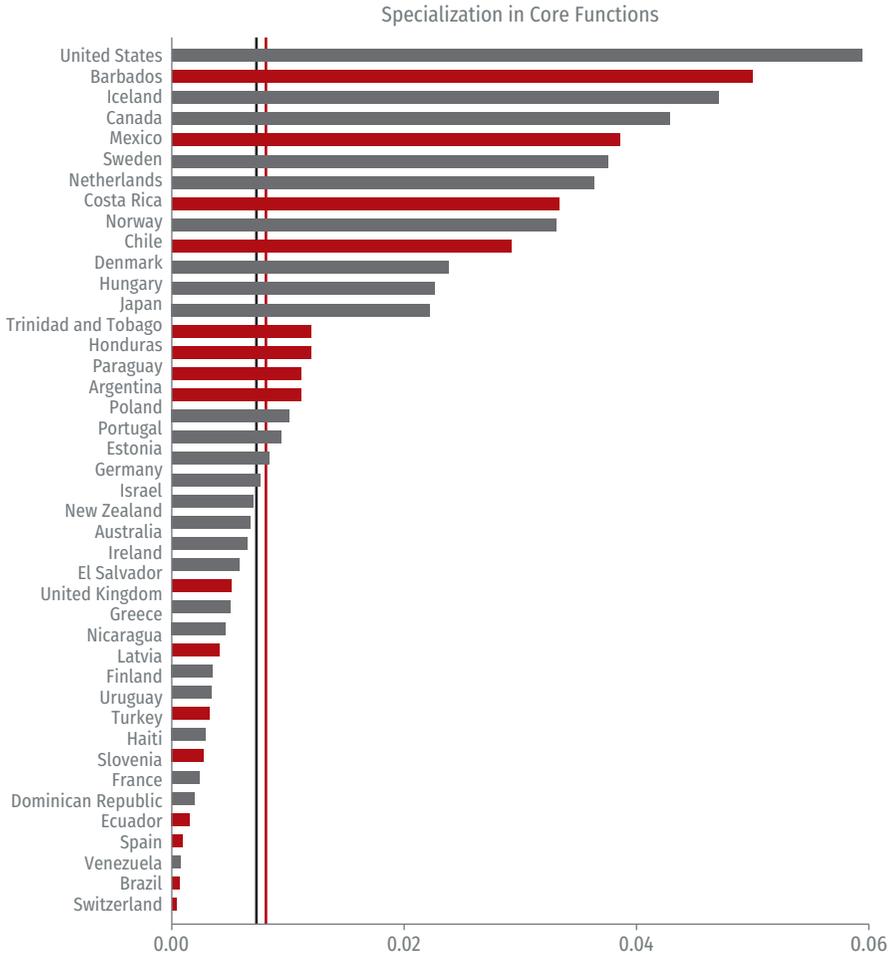
FIGURE 3.18 IPAS' OVERALL FUNCTIONAL SPECIALIZATION AND SPECIALIZATION IN CORE FUNCTIONS, 2016



(continued on next page)

of investment generation and retention and facilitation, in particular. Taken together, the two indices capture an IPA's degree of specialization. Generally speaking, while both LAC and OECD IPAs specialize similarly in core functions, the latter have a higher overall level of specialization. As this can translate into the share of resources and time devoted to given tasks and hence the quality of the services IPAs provide, it can also affect their effectiveness.

FIGURE 3.18 IPAS' OVERALL FUNCTIONAL SPECIALIZATION AND SPECIALIZATION IN CORE FUNCTIONS, 2016 (continued)

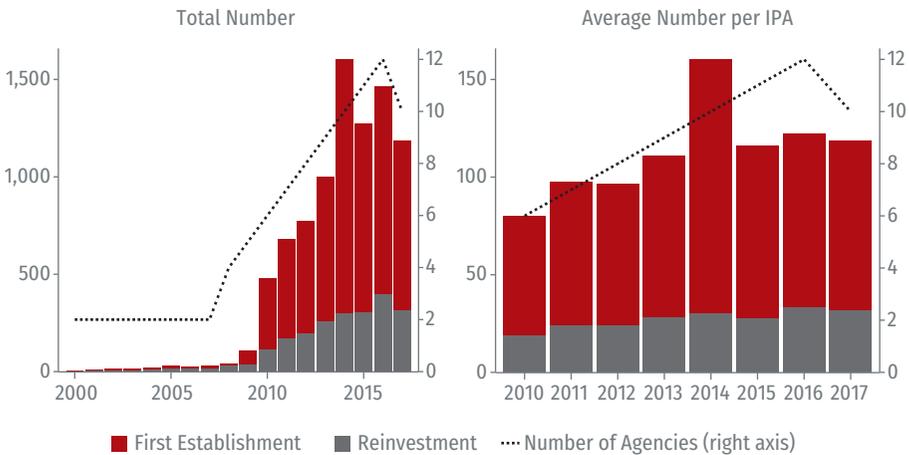


Source: Author's calculations based on IDB/OECD Survey of Investment Promotion Agencies (2017).
 Note: The figures show IPAs' overall specializations across investment promotion functions (top panel, previous page) and their specializations in core functions (investment generation and investment facilitation and retention; bottom panel), considering both budget allocation and the distribution of their specific promotional activities across such functions, along with the regional medians. The overall functional specialization index is the share of the IPA's total budget that is allocated to investment promotion multiplied by a sum of the square of the ratios of the share of the IPA's budget for investment promotion that is allocated to each function multiplied by the share of the IPA's number of activities for each function in its total number of activities. The core function specialization index is the share of the IPA's total budget allocated to investment promotion multiplied by the share of the IPA's budget for investment promotion that is allocated to investment generation and investment facilitation and retention and the inverse of the sum of the IPA's total number of investment generation activities and investment facilitation and retention activities. The scores for these indices range from 0 (least specialization) to 1 (maximum specialization). LAC countries are shown in red and non-LAC OECD countries are shown in dark gray.

IPAs' Actual Assistance Patterns

On average, the Latin American IPAs for which firm-level data is available provided support to approximately 100 multinational firms per year between 2010 and 2017.⁸⁰ Data from 12 Latin American IPAs reveals that they jointly assisted up to 1,500 firms per year during this period.⁸¹ Around 75% of this assistance was provided to multinational firms that were not operating in their countries at that time and hence aimed to help them establish their first foreign affiliate there (*first establishment*; figure 3.19, see appendix 3.3 for a detailed description

FIGURE 3.19 MULTINATIONAL FIRMS ASSISTED BY LAC-12 IPAs, 2000–2017



Source: Author's calculations based on data from WorldBase and the national IPAs of Argentina, Brazil, Chile, Colombia, Costa Rica, Ecuador, El Salvador, Honduras, Mexico, Nicaragua, Peru, and Uruguay.

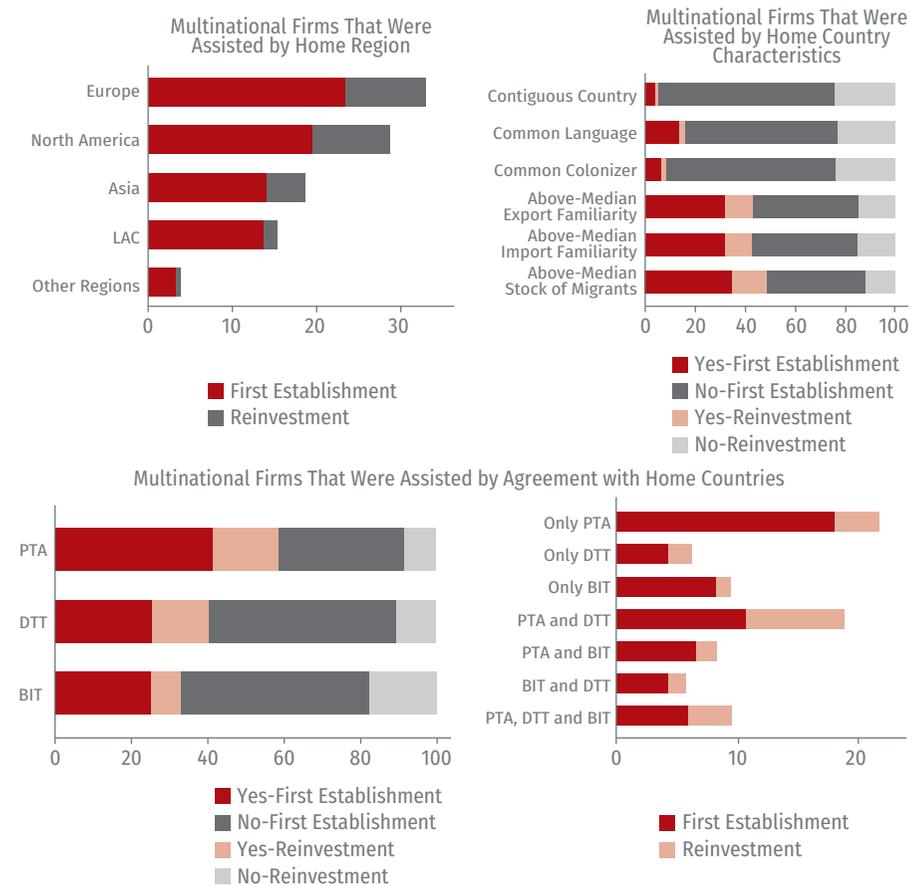
⁸⁰ The number of multinational firms that were assisted was significantly higher in 2014 (150 firms). This number is clearly an outlier and is related to a significant increase in the number of multinational firms assisted by Uruguay XXI that year.

⁸¹ These 12 countries are Argentina, Brazil, Chile, Colombia, Costa Rica, Ecuador, El Salvador, Honduras, Mexico, Nicaragua, Peru, and Uruguay. Firm-level data on assistance is also available for Jamaica, Paraguay, and Trinidad and Tobago. However, these are limited to assistance associated with actual first or subsequent establishments. Given that this data is not consistent with the data for the other IPAs, it has not been included in this analysis.

of the respective data and appendix 3.4 for each IPA's assistance patterns).

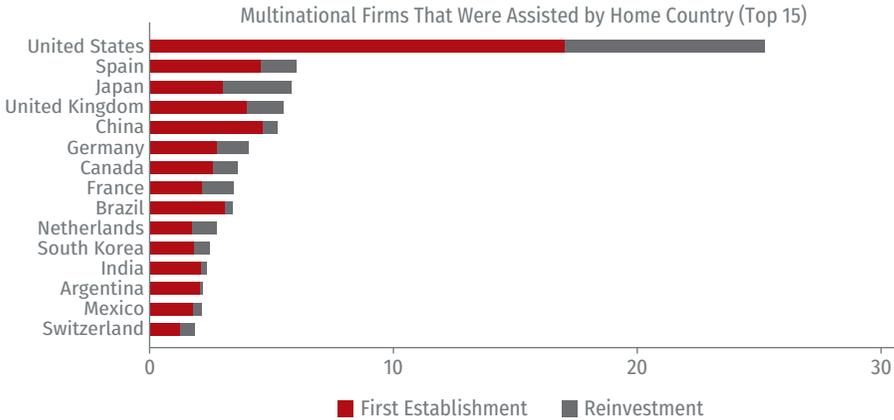
Roughly 65% of multinational firms that were assisted were headquartered in Europe and North America, roughly 18% in Asia, and 15% within LAC itself. The percentage share of this assistance that corresponded to first establishments was higher for Asia and LAC—90% and 75%, respectively—than for Europe and North America—71% and 68%, respectively—(figure 3.20, upper panel).

FIGURE 3.20 MULTINATIONAL FIRMS THAT WERE ASSISTED, BY HOME REGION AND COUNTRY, 2000–2017



(continued on next page)

FIGURE 3.20 MULTINATIONAL FIRMS THAT WERE ASSISTED, BY HOME REGION AND COUNTRY, 2000–2017 (continued)



Source: Author's calculations based on data from WorldBase, the national IPAs of Argentina, Brazil, Chile, Colombia, Costa Rica, Ecuador, El Salvador, Honduras, Mexico, Nicaragua, Peru, and Uruguay; CEPII Baier and Bergstrand (2017); Kohl et al. (2016); IMO; OECD; UNCTAD; World Bank; and WTO.

Note: *Above-Median Export/Import Familiarity* is a binary indicator that takes the value of 1 if the share of host country exports to/imports from the home country is larger than the share of exports to/imports from the set of all other countries in the world except the host country itself toward the home country (as measured in 2000), and 0 otherwise. *Above-Median Stock of Migrants* is a binary indicator that takes the value of 1 if the number of migrants per capita from the home country living in the host country is higher than that for the median country (as measured in 2000), and 0 otherwise.

In general, support concentrated on multinational firms whose home countries have relatively weak geographical, political, cultural, and economic ties with the potential host countries and for which information barriers are thus likely to be more severe. More than 80% of these firms are from countries that are not contiguous, have different languages, and did not have common colonizers; and approximately 60% of them are from countries with which trade (export and import) relationships are not especially intense and thus familiarity is relatively low. It must be acknowledged that cross-country linkages through migration are an exception to this general pattern as no bias seems to prevail—that is, assistance is similarly distributed between home countries with relatively high and relatively low bilateral migrant stocks (figure 3.20, upper panel). It is also worth noting that there are no clear differences

between support for first establishment and reinvestment along these dimensions.

Approximately 80% of multinational firms that were assisted are headquartered in countries with which the host economies have some form of economic integration agreement. The specific percentage shares are roughly 60% for PTAs, 40% for DTTs, and 35% for BITs, with the modal combination of agreements—that is, PTAs and DTTs—accounting for almost 20% of these firms.

The share of assistance for firms that are new to the country is lowest when PTAs are in place between host and home countries (63%) and highest when BITs are present (76%). For country pairs that are connected through a single agreement, the shares of support for first establishment range from 69% for DTTs to 87% for BITs, whereas for combinations of agreements, these shares go from 57% for PTA-DTT to 80% for PTA-BIT (figure 3.20, middle panel).

In terms of individual countries, around one-quarter of all multinational firms that were assisted were from the United States, and the distribution of assistance between first establishment and reinvestment varies by home economy. Although their shares were significantly lower than that of the United States, other important home countries included Spain, Japan, the United Kingdom, and China, each with a share above 5%. Support for multinational firms that were new to the countries was higher for those based in China (89%) and Spain (76%), whereas that for their counterparts that were already operating in the respective territories to open additional affiliates was higher for those from the United States (32%), Japan (48%), and United Kingdom (27%; figure 3.20, lower panel).

More than 60% of multinational firms that were assisted operated in the manufacturing and nonfinancial services sectors (roughly 30% each), with assistance to first establishments being more prevalent for the latter. Around 20% of these firms belong to the financial sector, and less than 5% of them to the primary sector

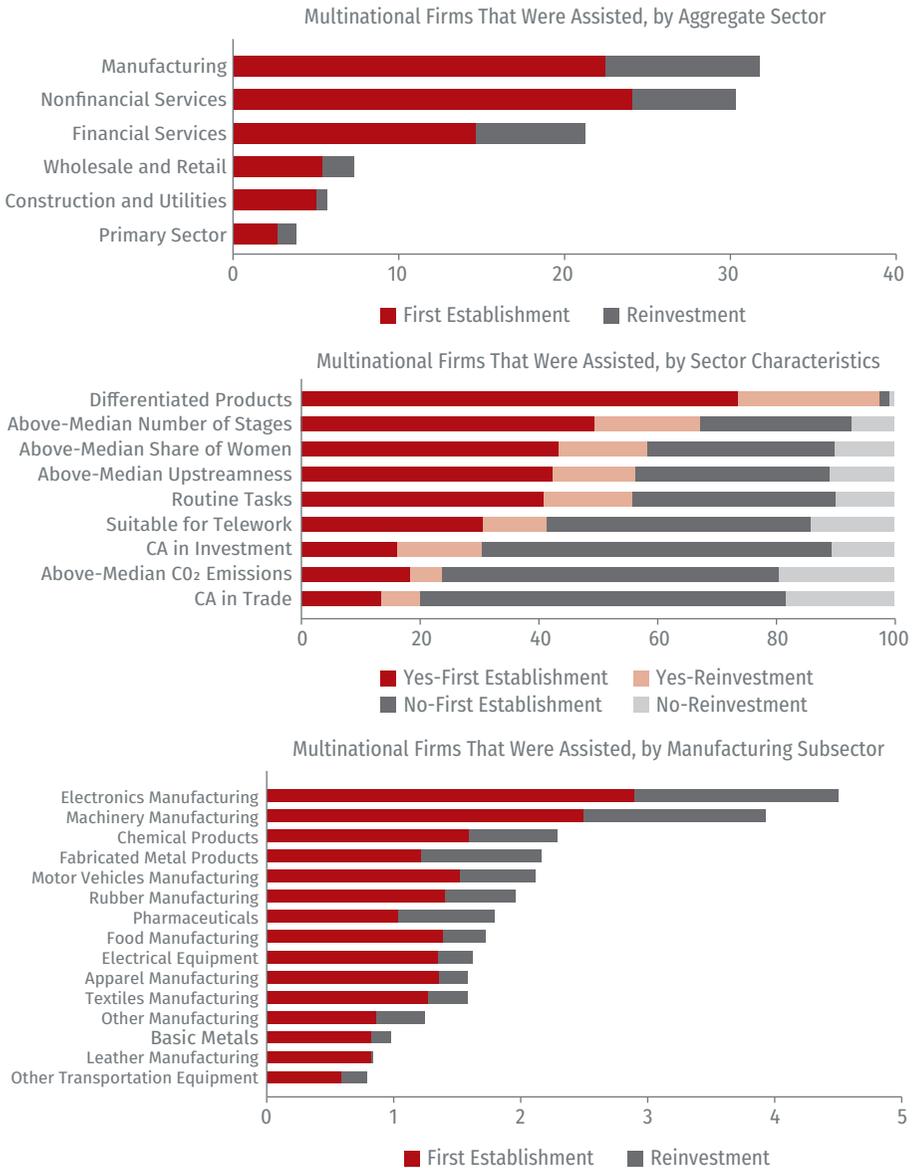
(figure 3.21, first panel). Consistently, **virtually all the multinational firms that received assistance from IPAs produce differentiated goods and services** (figure 3.21, second panel).

Multinational firms that were assisted were active in sectors in which there were no comparative advantages in trade but which entailed a relatively large number of production stages, were relatively more upstream, and whose activities were relatively more automatable and less easy to perform remotely. They also tended to operate in sectors with relatively low CO₂ emissions levels and that had higher shares of women in their labor force. Specifically, more than 60% of these firms belonged to sectors that involved several stages of production and were relatively less polluting, almost 60% of them carried out activities that tended to be upstream, had a high degree of routineness, and employed relatively more women, but only 40% of these activities are suited to telework (figure 3.21, second panel). Assistance with first establishments accounted for approximately three-quarters of the total assistance provided in each of these groups.

The manufacturing and nonfinancial subsectors with the highest percentage shares among the multinational firms that were assisted were electronics and machinery (more than 4% each) and computer programming, office support and administration services, head offices and consultancy, and engineering (more than 3% each). Support for reinvestment was relatively more prevalent among the manufacturing subsectors mentioned above (30%, on average), whereas that for first establishment was more predominant among the services subsectors listed (79%, on average).

Other manufacturing subsectors—which accounted for more than 2% of the multinational firms that received assistance—included chemical products, fabricated metal products, motor vehicles, rubber products, pharmaceuticals, and food products. It is noteworthy that the share of support for first establishment is higher among less prominent manufacturing subsectors such as elec-

FIGURE 3.21 MULTINATIONAL FIRMS THAT WERE ASSISTED, BY SECTOR AND SUBSECTOR, 2000–2017



(continued on next page)

tronic equipment, apparel products, textile products, and leather manufacturing (figure 3.21, third and fourth panels).

FIGURE 3.21 MULTINATIONAL FIRMS THAT WERE ASSISTED, BY SECTOR AND SUBSECTOR, 2000–2017 (continued)

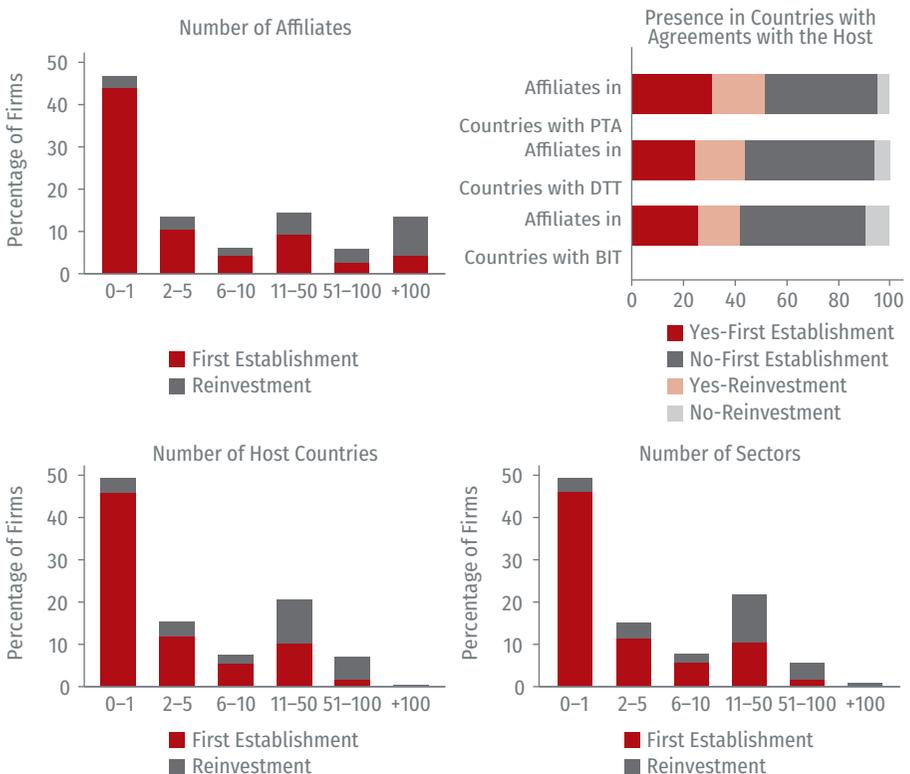
Source: Author's calculations based on data from WorldBase, the national IPAs of Argentina, Brazil, Chile, Colombia, Costa Rica, Ecuador, El Salvador, Honduras, Mexico, Nicaragua, Peru, and Uruguay, Rauch (1999), Antràs et al. (2012), Acemoglu and Restrepo (2019), Dingel and Neiman (2020), OECD, BLS, and UNCTAD.

Note: *Differentiated Products* is a binary indicator that takes the value of 1 if the median affiliate of the multinational firm operates in a sector where most products (or services) are differentiated according to the definition in Rauch (1999), and 0 otherwise. *Above-Median Number of Stages* is a binary indicator that takes the value of 1 if the sector has a number of production stages that is higher than that of the median sector as computed based on data from Antràs et al. (2012), and 0 otherwise. *Above-Median Upstreamness* is a binary indicator that takes the value of 1 if the sector has an average distance from final use that is higher than that of the median sector as computed based on data from Antràs et al. (2012), and 0 otherwise. *Routine Tasks* is a binary indicator that takes the value of 1 if the sector has a share of routine tasks that is higher than that of the median sector as computed based on data from Acemoglu and Restrepo (2019), and 0 otherwise. *Suitable for Telework* is a binary variable that takes the value of 1 if the sector has a share of occupations that can be performed remotely that is higher than that of the median sector as computed based on data from Dingel and Neiman (2020), and 0 otherwise. *Revealed Comparative Advantage (CA) in Investment* is a binary variable that takes the value of 1 for a given host country–sector combination if the ratio of the number of affiliates in the sector in the host country in question to the total number of affiliates in this country exceeds the same ratio for all other countries in the world, and 0 otherwise. *Revealed Comparative Advantage (CA) in Trade* is a binary variable that takes the value of 1 for a given host country–sector combination if the ratio of exports of products in the sector from the home country in question to the total exports of this country exceeds the same ratio for all other countries in the world, and 0 otherwise. *Above-Median CO₂ Emissions* is a binary variable that takes the value of 1 if the CO₂ emissions generated by the sector relative to its level of activity in OECD countries (in 2013) are higher than those of the median sector as computed based on data from OECD, and 0 otherwise. *Above-Median Share of Women* is a binary variable that takes the value of 1 if the share of women in the sector's total number of employees in the United States in 2000 is higher than that of the median sector as computed based on data from the BLS, and 0 otherwise.

Almost 50% of multinational firms that were assisted had either no foreign affiliates (in other words, they were not actually multinationals yet) or one foreign affiliate and, when already operating abroad, did so in one country and one sector. Consistently, most of these instances of assistance were for establishing a first affiliate in the country in question. Around 30% of the firms that the IPAs provided support to had more than 10 overseas affiliates

and were active in more than 10 countries and more than 10 sectors. As expected, these firms accounted for most of the support for reinvestment—70% of all firms that were assisted that were already present in the country had more than 10 affiliates worldwide, 63% were active in more than 10 sectors, and 64% were present in more than 10 countries. Approximately half of the multinationals that received support had affiliates in countries with which the host economies had a PTA and around 40% in countries with which they had DTTs and BITs. Among these multinational firms, the share of support for reinvestment is relatively high (about 40%; figure 3.22).

FIGURE 3.22 MULTINATIONAL FIRMS THAT WERE ASSISTED, BY TYPE OF FIRM, 2000–2017

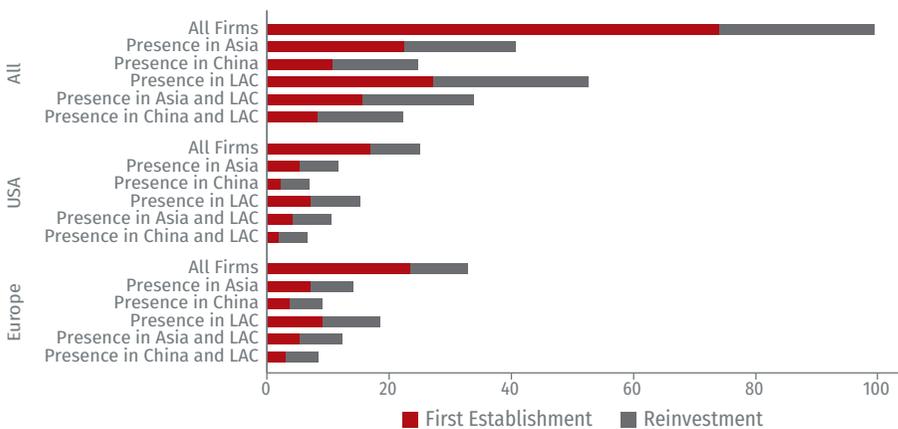


Source: Author's calculations based on data from WorldBase and the national IPAs of Argentina, Brazil, Chile, Colombia, Costa Rica, Ecuador, El Salvador, Honduras, Mexico, Nicaragua, Peru, and Uruguay, Baier and Bergstrand (2017), Kohl et al. (2016), OECD, UNCTAD, World Bank, and WTO.

Approximately 40% of multinational firms that were assisted—both in general and those from the United States and Europe in particular—had foreign affiliates in Asia, and almost 25% had operations in China. In these specific cases, there was a relatively high fraction of instances of support for reinvestment. More precisely, the percentage shares of firms present in Asia and China that received assistance with reinvestment were 45% and 56%, respectively, relative to 15% and 17% for firms that were not present in these two markets. Unsurprisingly, the reinvestment shares were even higher for multinational firms with overseas affiliates in both LAC and Asia and China. For instance, roughly 54% and 62% of the multinational firms from the United States and Europe with affiliates in these locations received support to expand their presence in LAC by establishing additional affiliates there (figure 3.23).

Around 90% of multinational firms that were assisted received support from a single IPA throughout the sample period.⁸² Only 7% of

FIGURE 3.23 MULTINATIONAL FIRMS THAT WERE ASSISTED, BY HOME REGION AND OFFSHORING STRATEGIES, 2000–2017

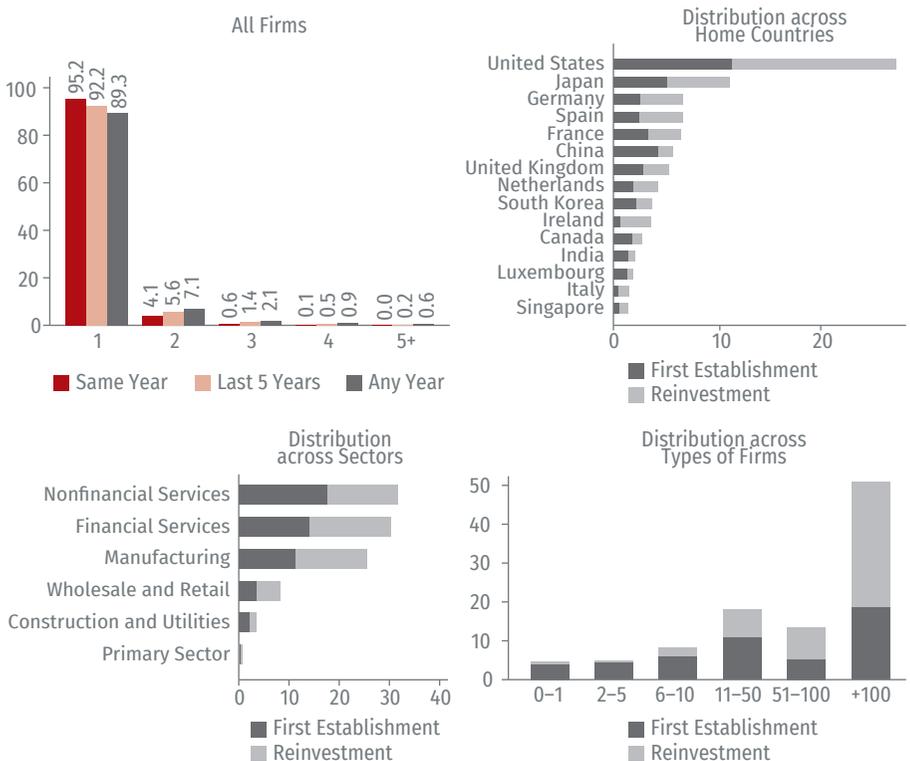


Source: Author’s calculations based on data from WorldBase and the national IPAs of Argentina, Brazil, Chile, Colombia, Costa Rica, Ecuador, El Salvador, Honduras, Mexico, Nicaragua, Peru, and Uruguay.

⁸² This percentage share increases to more than 92% for assistance that took place either within a five-year window or contemporaneously.

these firms received support from two IPAs, 2% of them from three IPAs, and less than 1% of them from four or more IPAs. Among the multinational firms that were assisted by more than one IPA, almost 40% were from the United States and Japan (27% and 11%, respectively)—with more than half of these cases corresponding to reinvestment; 55% operated in the nonfinancial services and manufacturing sectors (30% and 25%, respectively); and roughly 50% had more than 100 affiliates—two-thirds of these for reinvestment (figure 3.24).⁸³

FIGURE 3.24 MULTINATIONAL FIRMS THAT WERE ASSISTED, BY NUMBER OF ASSISTING IPAS, AND DISTRIBUTION OF THOSE ASSISTED BY MORE THAN ONE IPA ACROSS COUNTRIES, SECTORS, AND TYPES OF FIRMS, 2000–2017



Source: Author’s calculations based on data from WorldBase and the national IPAs of Argentina, Brazil, Chile, Colombia, Costa Rica, Ecuador, El Salvador, Honduras, Mexico, Nicaragua, Peru, and Uruguay.

⁸³ Interestingly, while multinational firms in the financial services sector accounted for only 20% of those jointly assisted by the IPAs, they were responsible for 30% of the instances of multiple assistance.

HOW AGENCIES PROMOTE INVESTMENT

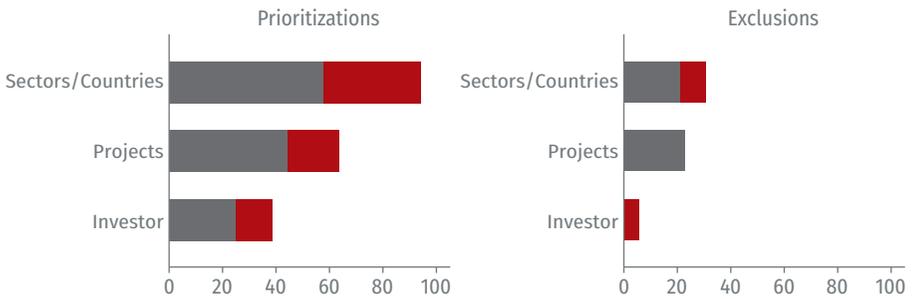
As with many other policy areas, the “whats” are only one part of the question when it comes to investment promotion. Besides differences in mandates, the use of resources to perform their functions, or their specific activities, IPAs also vary as to how they mold their strategic orientation. For example, IPAs may prioritize certain investments over others, coordinate more or less intensely with other agencies and relevant stakeholders, and monitor and evaluate their activities to different extents. These aspects are explored in this section, and their influence on IPAs’ effectiveness will be evaluated formally in chapter 4.

Targeting

Virtually all IPAs target some investments rather than others as they perform their functions. Nearly all LAC and OECD IPAs prioritize certain sectors or source countries, the majority prioritize certain investment projects, and nearly 40% target specific investors (figure 3.25). In addition, more than 20% exclude certain sectors, countries, and projects, with the latter share being predominantly made up of OECD IPAs. Still, the targeting intensity of IPA strategies varies, as is captured by the IPA targeting intensity index. Some IPAs neither prioritize nor exclude sectors/countries, projects, or investors, whereas others prioritize and exclude different combinations of these. **On average, OECD IPAs target more than their LAC counterparts** (figure 3.26).

More functionally specialized IPAs also tend to target more intensively. IPAs that focus their resources and activities on specific investment promotion functions (e.g., investment generation and investment facilitation and retention) tend to serve a narrower set of

In addition, multinational firms with more than 10 foreign affiliates worldwide made up more than 80% of concurrent instances of support. Finally, assistance with reinvestment was also relatively important for multinational firms headquartered in Germany, Ireland, and Spain.

FIGURE 3.25 IPA PRIORITIZATIONS AND EXCLUSIONS, 2017

Source: Author's calculations based on IDB/OECD Survey of Investment Promotion Agencies (2017).

Note: The figures show the percentage share of IPAs that prioritize sectors/countries, projects, and investors (left panel) and that exclude (i.e., do not assist) specific sectors/countries, projects, and investors (right panel). LAC countries are shown in red and non-LAC OECD countries are shown in dark gray.

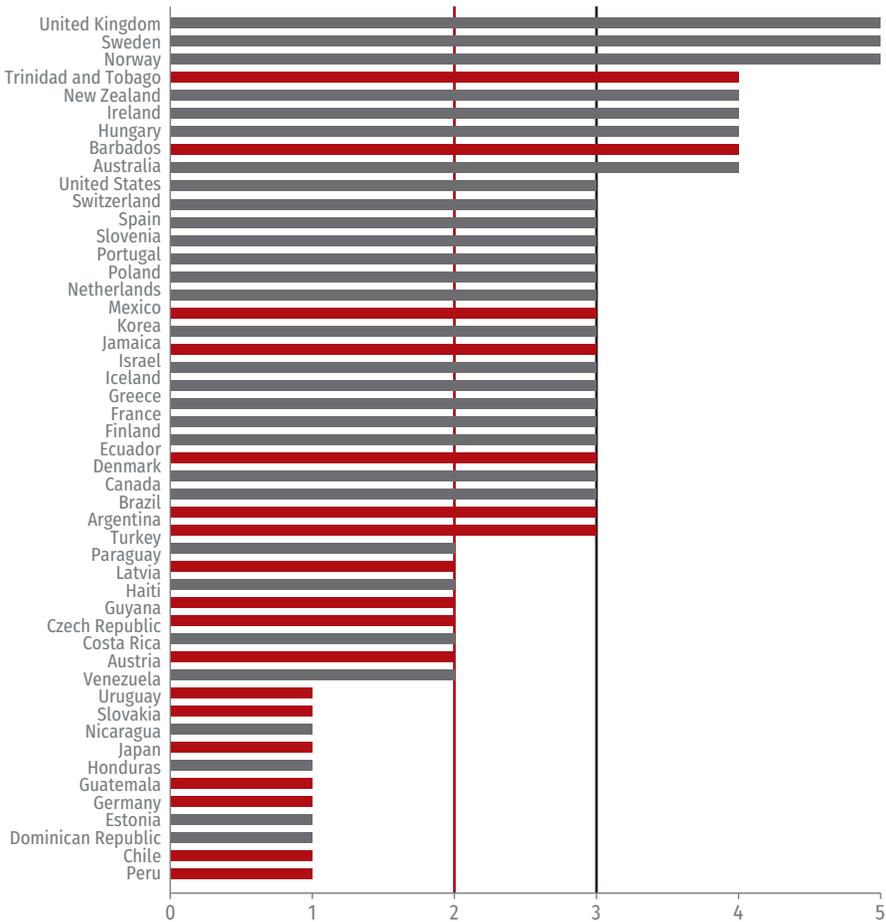
sectors/countries, investors, and projects.⁸⁴ This highlights the fact that IPAs' overall strategic focus and priority selections cut through a number of management decisions that can potentially interact with one another and, as a consequence, impact IPAs' performances.

Countries differ in the number and type of countries that they prioritize (figure 3.27). Some IPAs prioritize 20 or more origin countries (e.g., Brazil, Ecuador, Honduras, Jamaica, Mexico, and Uruguay) while others concentrate their promotional efforts on a few countries (e.g., Chile, Guatemala, and Trinidad and Tobago). The most-targeted economies are OECD and Asian countries, including the United States, Germany, China, the United Kingdom, Japan, and France, which are prioritized by both LAC and OECD IPAs (figure 3.27). In contrast, LAC countries are primarily prioritized by other LAC IPAs. As a particular reflection of their market prioritization strategy, IPAs also decide to locate their foreign offices in different countries.⁸⁵

⁸⁴ More formally, the IPA Specialization Index and the IPA Targeting Intensity Index are positively correlated, even after relevant confounding factors such as the agency's size and degree of institutional independence have been accounted for.

⁸⁵ Macro-level evidence presented in Volpe Martincus and Sztajerowska (2019) indicates that having a foreign office in a given destination can influence IPAs' effectiveness at FDI attraction. More precisely, after controlling for the characteristics of host and home countries, standard bilateral geographical factors (e.g., distance, contiguity, common language) and economic agreements (preferential trade, investment, and

FIGURE 3.26 IPA TARGETING INTENSITY INDEX, 2017



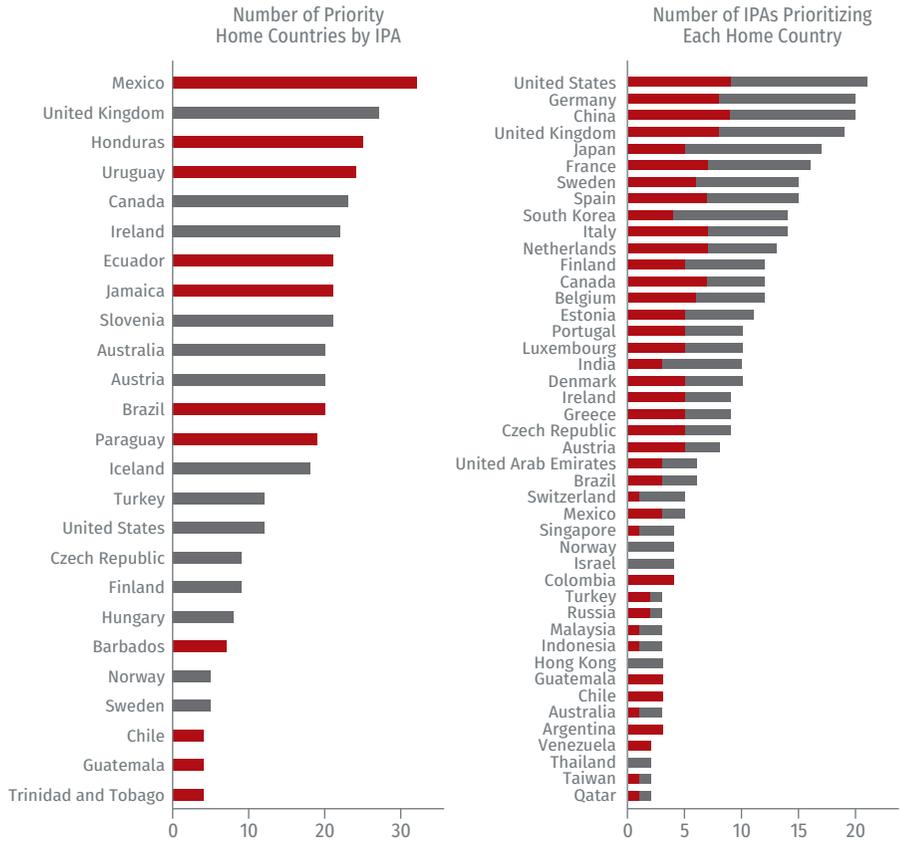
Source: Author’s calculations based on IDB/OECD Survey of Investment Promotion Agencies (2017).

Note: The figure shows the targeting intensity index of each IPA, along with the regional medians. The index ranges from 0 (lowest intensity) to 6 (highest intensity). LAC countries are shown in red and non-LAC OECD countries are shown in dark gray.

IPAs also differ significantly in the breadth and specificity of their list of priority sectors. While some IPAs prioritize many sectors (such as those of Argentina, Guyana, Honduras,

taxation agreements) between the economies, having an office in a country is associated with larger inward FDI stock values and larger number of affiliates of multinational firms from that country. Chapter 4 reports evidence thereon based on micro data.

FIGURE 3.27 IPA PRIORITY HOME COUNTRIES, 2017



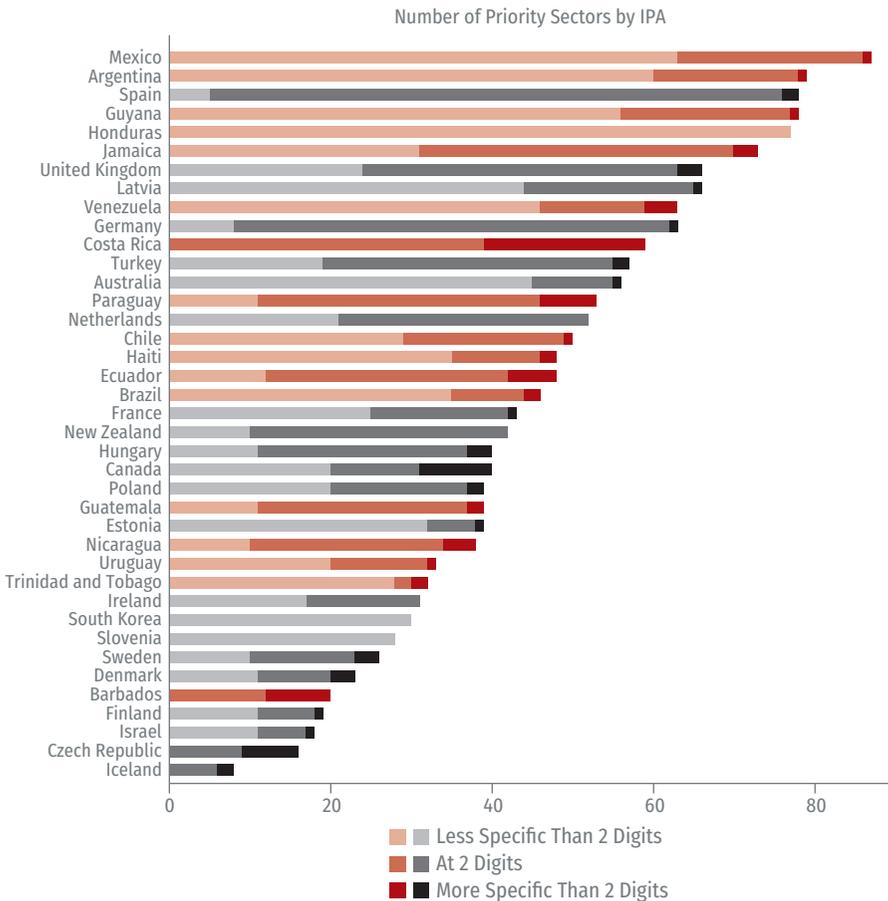
Source: Author's calculations based on IDB/OECD Survey of Investment Promotion Agencies (2017).
 Note: The figure on the left shows the number of home countries prioritized by each IPA that states it prioritizes specific countries, while the figure on the right reports the number of IPAs prioritizing each specific home country. LAC countries are shown in red and non-LAC OECD countries are shown in dark grey.

Jamaica, and Mexico), several OECD IPAs (such as those of the Czech Republic, Denmark, Finland, Iceland, Israel, and Sweden) and that of Barbados target fewer sectors. In addition, some IPAs define their sectoral priorities more precisely. For example, Costa Rica defines all its priority sectors at the 2-digit ISIC level or narrower, while Honduras does so at a more aggregated level. Overall, OECD IPAs more frequently target information and communication technologies (software, computer programming, web portals, data processing, computer consultancy, and

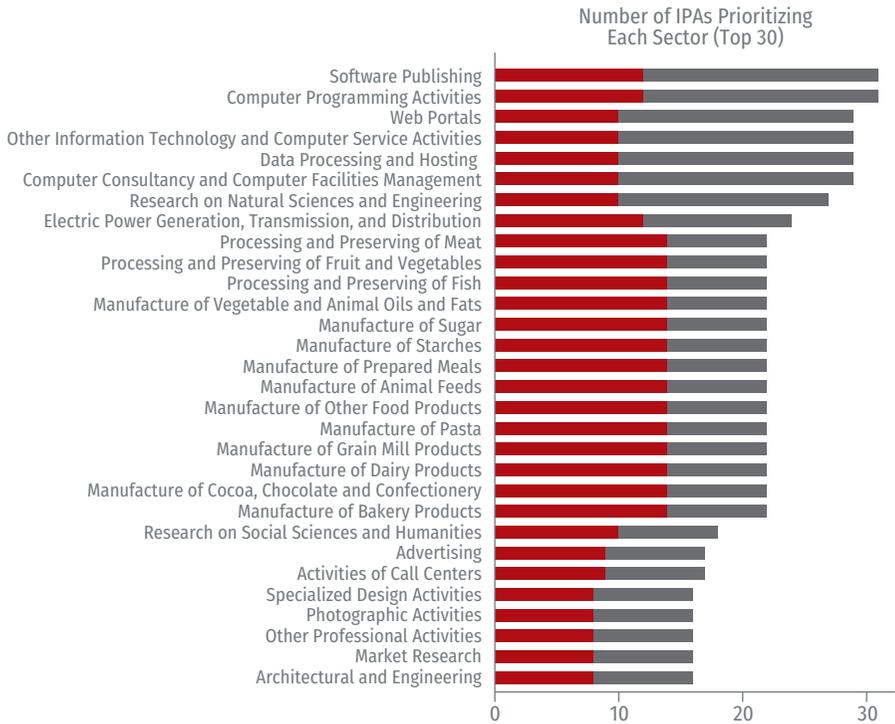
computer facility management activities) and energy and renewable energy; while LAC IPAs do the same for the food processing industries (figure 3.28).

Overall, IPAs make use of multiple inputs when defining and revising their targeting strategies, including views of their own management, internal experts and the board of directors, international investors and external experts, and results of market studies (figure 3.29). In terms of criteria used, most IPAs prioritize countries that are large, fast-growing, and seen as a source of advanced technology and

FIGURE 3.28 IPA PRIORITY SECTORS, 2017



(continued on next page)

FIGURE 3.28 IPA PRIORITY SECTORS, 2017 (continued)

Source: Author's calculations based on IDB/OECD Survey of Investment Promotion Agencies (2017).

Note: The top figure shows the number of 4-digit ISIC sectors prioritized by each IPA that declared to have such priorities, while the bottom figure reports the number of IPAs prioritizing each specific 4-digit ISIC sector. LAC countries are shown in red and non-LAC OECD countries are shown in dark gray.

sectors with the potential to diversify their economies and in which they have comparative advantages (i.e., strong domestic capacities; figure 3.30). For the approval of specific investment projects, IPAs do not generally use predefined criteria (52.1%). However, most **prioritize projects that make a significant impact on innovation, have high potential for generating employment, and belong to priority sectors.** Sustainability is also considered by over half of IPAs.

Multinational firms from priority countries and that operated in priority sectors, especially country–sectors, were significantly more likely to be assisted by IPAs. Firms that were headquartered in priority home countries and were active in priority sectors were

FIGURE 3.29 INPUTS USED BY IPAS TO DECIDE ON THEIR TARGETING STRATEGIES, 2017

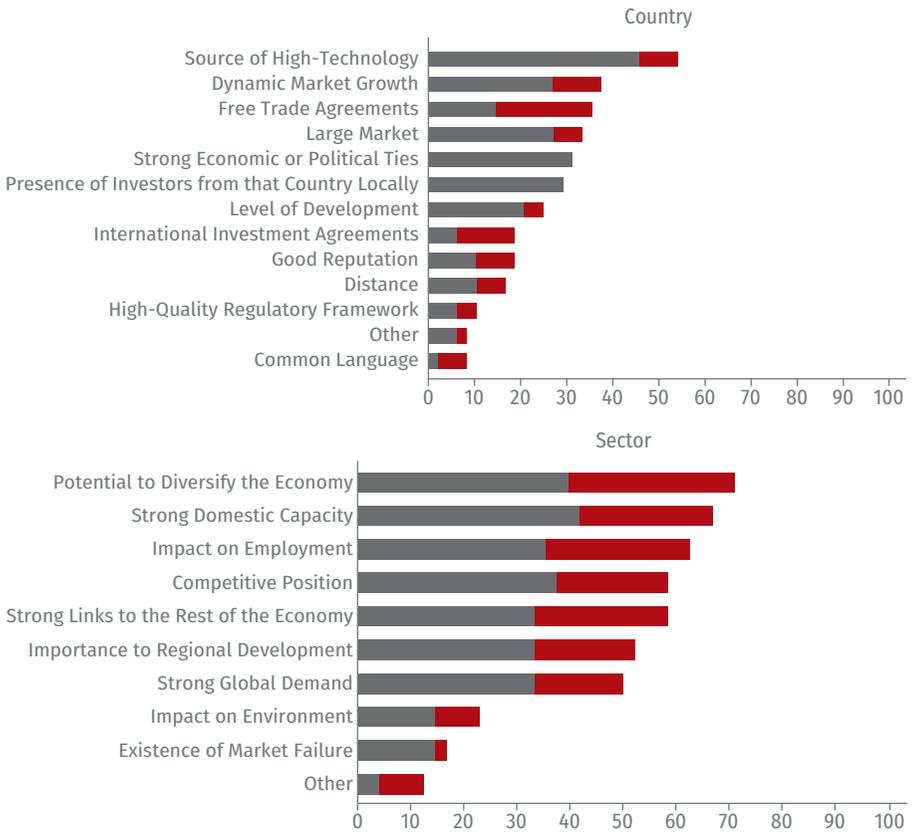


Source: Authors' calculations based on IDB/OECD Survey of Investment Promotion Agencies (2017).
 Note: The figure shows the percentage share of IPAs that use the different inputs to decide and revise the sectors and countries they prioritize. LAC countries are shown in red and non-LAC OECD countries are shown in dark gray.

twice as likely to be supported than their counterparts in nonpriority countries and nonpriority sectors, and more than 2.7 times more likely to be supported when these dimensions were combined. As expected, this was particularly the case for assistance with first establishments (figure 3.31, upper panel).

Interestingly, country, sector, and country–sector prioritization seems to be implemented by targeting the largest firms along these dimensions. More specifically, multinational firms with more than 100 foreign affiliates worldwide from priority countries, in priority sectors, or a combination of the two were several times more likely to be supported than smaller firms. This is particularly

FIGURE 3.30 IPA CRITERIA FOR PRIORITIZING SECTORS AND COUNTRIES, 2017



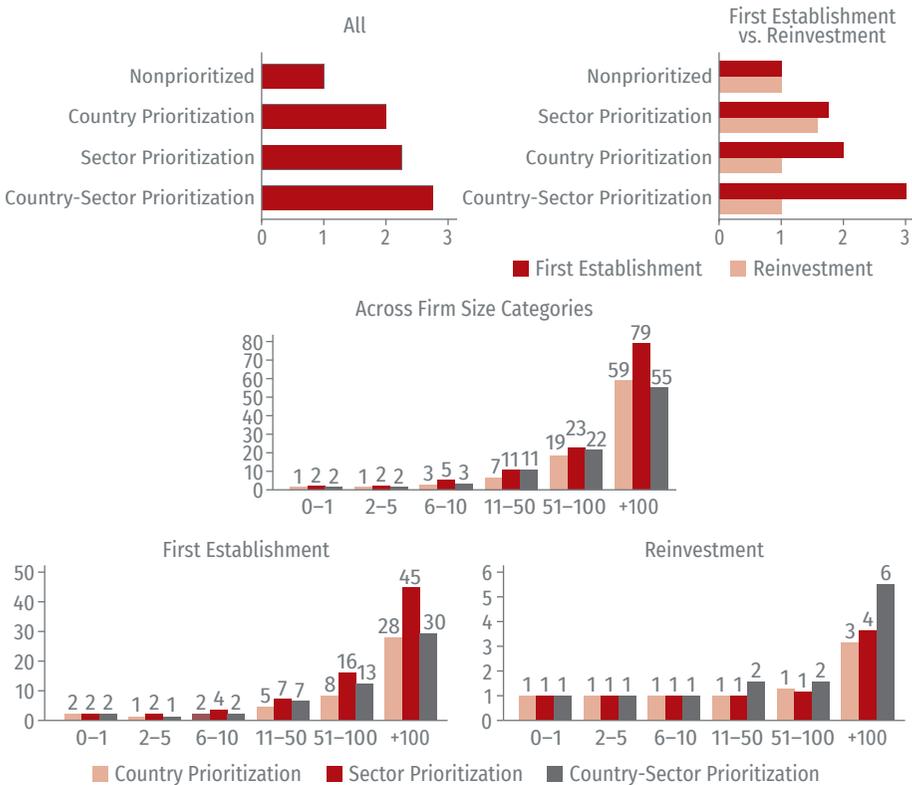
Source: Authors' calculations based on IDB/OECD Survey of Investment Promotion Agencies (2017).
 Note: The figure shows the percentage share of IPAs using each criterion to select priority sectors and countries. LAC countries are shown in red and non-LAC OECD countries are shown in dark gray.

true for sector prioritization in the case of first establishment and country–sector prioritization in the case of reinvestment (figure 3.31, middle and lower panels).

Cooperation and Coordination

IPAs often cooperate and coordinate with a relatively large number of entities. The actual number of entities they interact with ranges from very few (e.g., Japan, Finland, and Estonia) to more

FIGURE 3.31 PRIORITIZATION AND ASSISTANCE TO MULTINATIONAL FIRMS, 2000–2017

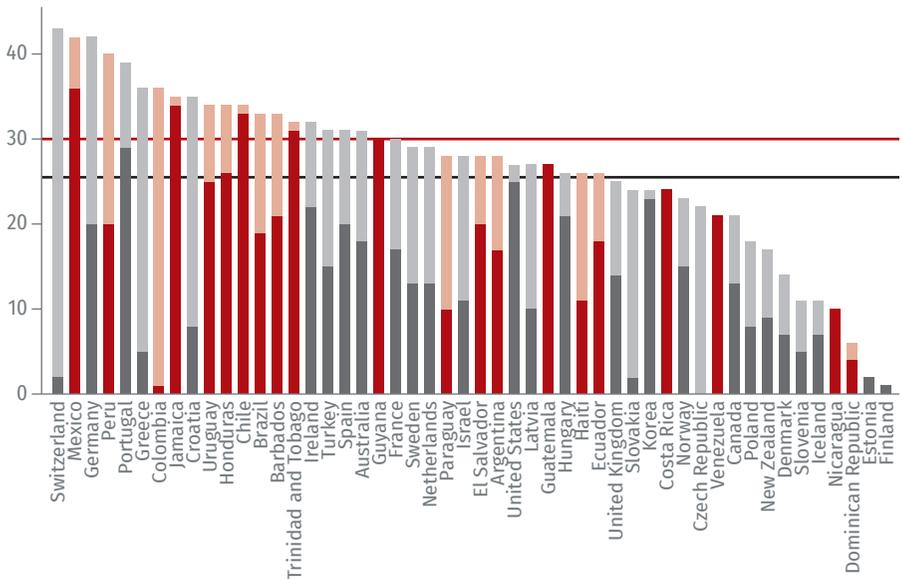


Source: Author’s calculations based on data from WorldBase and the national IPAs of Argentina, Brazil, Chile, Colombia, Costa Rica, Ecuador, El Salvador, Honduras, Mexico, Nicaragua, Peru, and Uruguay.

Note: Each bar shows the probability of multinational firms in each category being assisted by IPAs. The probability of multinational firms operating in a nonpriority sector and from a nonpriority country being assisted by IPAs is indexed to 1. Country prioritization takes the value of 1 if the multinational parent firm is headquartered in a priority country, and 0 otherwise. Sector prioritization takes the value of 1 if the multinational parent firm operates in a priority sector, and 0 otherwise. Country-sector prioritization takes the value of 1 if the multinational parent firm is headquartered in a priority country and operates in a priority sector, and 0 otherwise.

than 40 (e.g., Germany, Mexico, and Switzerland).⁸⁶ However, more than three-quarters of the surveyed IPAs collaborate with more than 20 public, private, and civil society organizations to promote investment, and this number is similar for both LAC

⁸⁶ These collaborations can take different forms. They can be based on formal mechanisms such as periodic, pre-established meetings and joint action plans or informal mechanisms such as aperiodic gatherings to exchange information and coordinate initiatives.

FIGURE 3.32 IPA INTERACTION INTENSITY INDEX, 2017

Source: Author's calculations based on IDB/OECD Survey of Investment Promotion Agencies (2017).

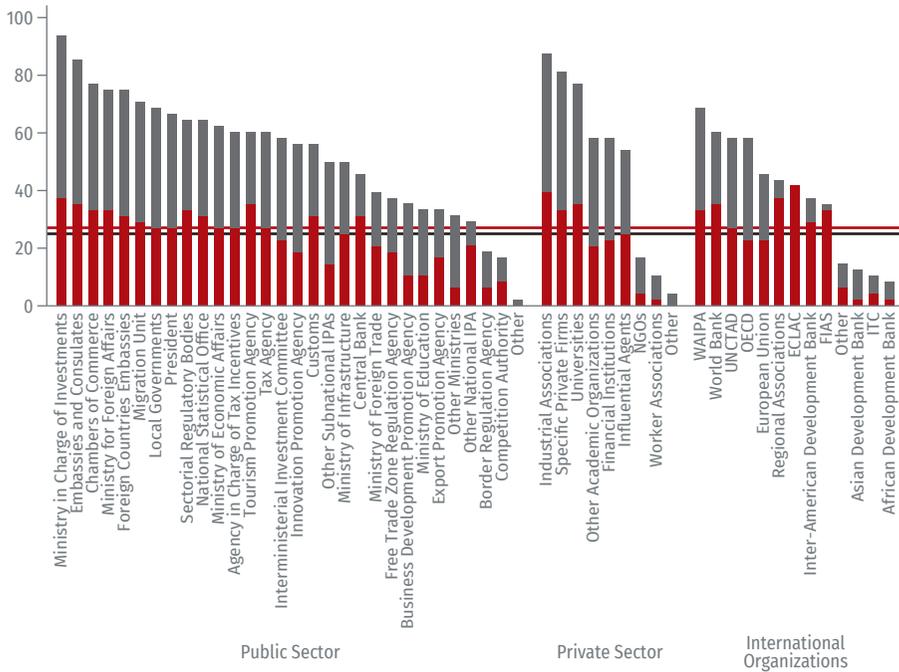
Note: The figure shows the interaction intensity index that captures the total number of entities with which IPAs interact (i.e., cooperate and coordinate), distinguishing between those that are strategic partners (darker tones) and those that are not (lighter tone). The horizontal lines correspond to the regional medians. LAC countries are shown in red and non-LAC OECD countries are shown in gray.

and OECD IPAs. A variable share of these organizations are considered strategic partners by IPAs in accomplishing their mission (figure 3.32). Interestingly, IPAs with more targeting-intensive strategies collaborate with a broader range of organizations.⁸⁷ This likely reflects the fact that defining and revising priorities (and exclusions) requires first reaching consensus with a larger set of stakeholders and then coordinating and collaborating with these entities to implement the resulting targeting strategy.⁸⁸

Specifically, IPAs collaborate with different government bodies, the private sector, civil society, academic institutions, and international

⁸⁷ This relationship holds both unconditionally and after countries' size and level of development are accounted for.

⁸⁸ No systematic relationship seems to exist between IPAs' budget or budget source and the number of entities IPAs collaborate with.

FIGURE 3.33 INTENSITY OF INTERACTION WITH IPAS, BY ENTITY, 2017

Source: Author's calculations based on IDB/OECD Survey of Investment Promotion Agencies (2017).

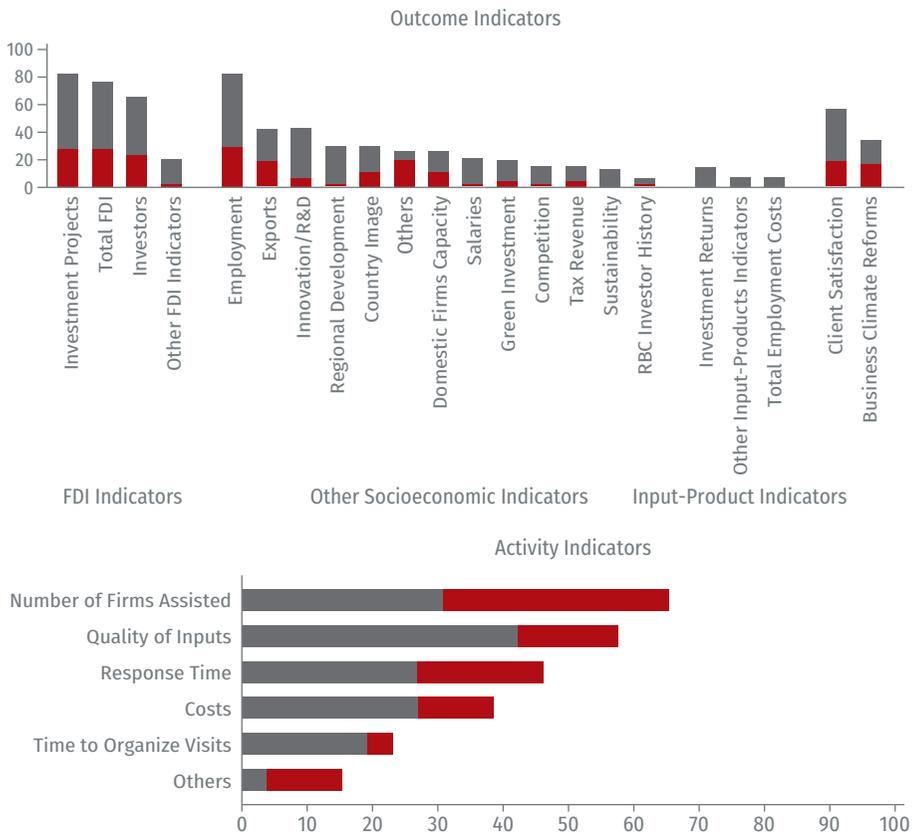
Note: The figure shows the percentage share of IPAs interacting with each entity by group, along with the regional medians. LAC countries are shown in red and non-LAC OECD countries are shown in dark gray.

organizations to carry out their activities. The most common partners include the ministry responsible for investment policy, embassies and consulates both of the IPAs' country abroad and of other countries at home, and the ministry of foreign affairs. Chambers of commerce, industrial associations, and specific private firms are also important partners (figure 3.33). **Depending on their mandates, IPAs also interact with other bodies.** For example, those with a regional development promotion mandate tend to interact with the agencies that are responsible for special economic zones and industrial parks. In addition, IPAs that do not offer fiscal incentives may collaborate more intensely with the agencies that are responsible for granting them. Finally, some IPAs in LAC (e.g., Costa Rica and Chile) and a larger number of OECD IPAs also interact with the ministry of education as part of the delivery of their human capital services.

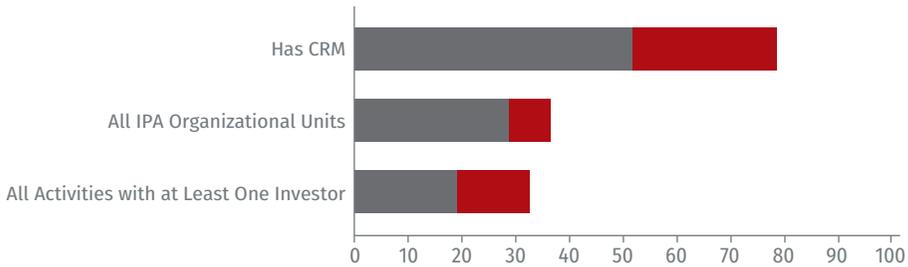
Monitoring and Evaluation

Aggregate and proxy variables are mostly used by IPAs to monitor and communicate outcomes. The total number of investment projects that are realized, total FDI inflows, the total number of investing multinational firms, and the total number of jobs created are the outcome metrics that IPAs use most commonly (figure 3.34, top panel). However, while tracking such metrics is often useful for communication purposes, it is not enough to establish the additionality of IPA interventions.

FIGURE 3.34 OUTCOME AND ACTIVITY INDICATORS USED BY IPAS, 2017



Source: Author's calculations based on IDB/OECD Survey of Investment Promotion Agencies (2017).
 Note: The figure shows the percentage share of IPAs using each outcome indicator (top panel) and activity indicator (bottom panel). LAC countries are shown in red and non-LAC OECD countries are shown in dark gray.

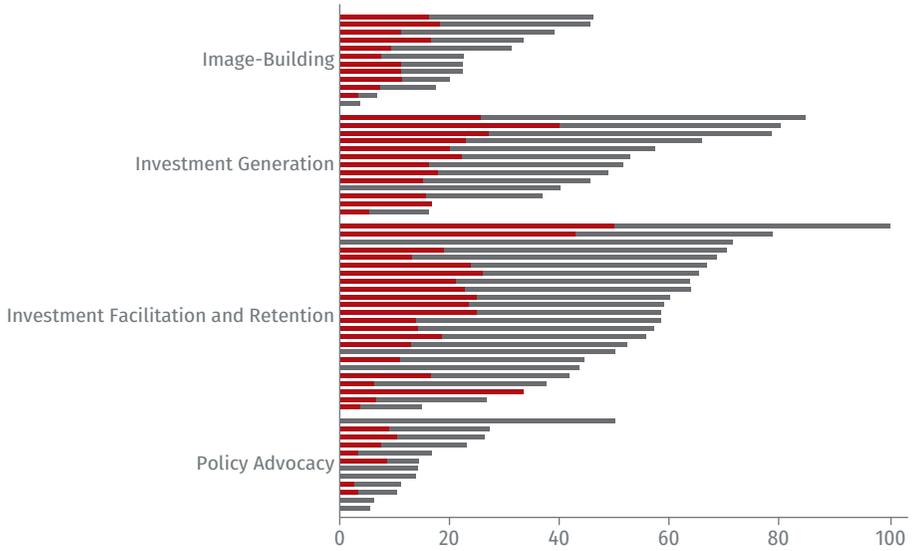
FIGURE 3.35 THE USE AND COVERAGE OF IPAS' CRM SYSTEMS, 2017

Source: Author's calculations based on IDB/OECD Survey of Investment Promotion Agencies (2017).

Note: The figure shows the percentage share of IPAs that use CRMs and the extent of their coverage. LAC countries are shown in red and non-LAC OECD countries are shown in dark gray.

IPAs also differ in the way they monitor and keep track of their activities. About a half have a dedicated evaluation unit, but the resource endowments, level of sophistication, and specific activities carried out by such units vary widely, however. Regardless of the type of institutional arrangement in place, most IPAs (around 80%) have a customer relationship management (CRM) system (figure 3.35). This continuously evolving system enables IPAs to record detailed data and monitor their activities with the firms they assist. CRMs are therefore the operational heart of the agency, allowing staff to store and exchange information and management to monitor activities and the allocation of resources, among other things. CRMs also provide key inputs for impact evaluations such as those presented in chapter 4. One key activity indicator that is tracked in CRMs is information on which firms were assisted by the IPA and when (figure 3.34, bottom panel). Some IPAs also systematically record data on the type of service provided, which also allows the relative effectiveness of different activities to be evaluated, and the costs associated with each. Still, the coverage of different IPA units and activities in CRMs varies across IPAs (figure 3.35) and tends to be lower for image-building and policy advocacy functions (figure 3.36). As such, CRMs and their coverage may have an incidence on IPAs' ability to monitor, evaluate, and adapt IPA activities.

FIGURE 3.36 INVESTMENT PROMOTION ACTIVITIES TRACKED IN IPAS' CRM SYSTEMS, 2017

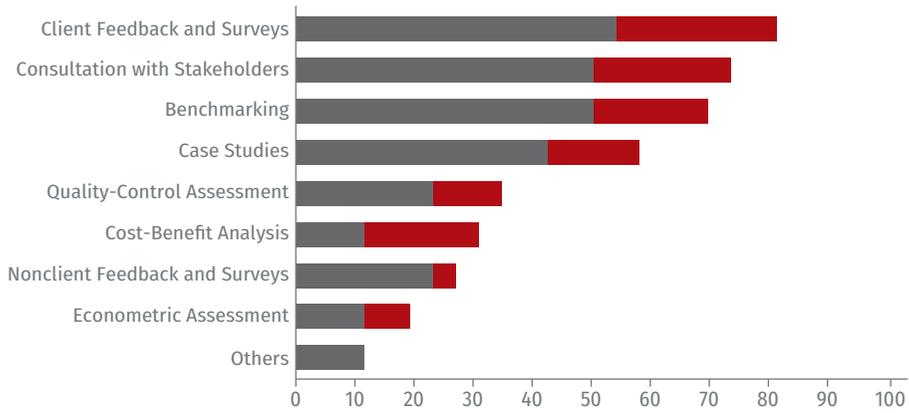


Source: Author's calculations based on IDB/OECD Survey of Investment Promotion Agencies (2017).

Note: The figure shows the percentage share of IPAs that track each specific investment promotion activity in their CRMs. LAC countries are shown in red and non-LAC OECD countries are shown in dark gray.

IPAs assess the effectiveness of their interventions through a variety of approaches. Most use client satisfaction surveys, consultation with relevant stakeholders, benchmarking exercises, and case studies to gauge their performance levels. Assessments based on quality control and cost-benefit analyses are rarer, with the latter being relatively more predominant among LAC IPAs. Most strikingly, before the publication of this report, very few agencies reported conducting econometric evaluations of their interventions (figure 3.37). IPAs' different evaluation approaches and capacities are summarized in the Evaluation Index. Overall, OECD IPAs perform significantly better at monitoring and evaluation than their LAC counterparts (figure 3.38).

While certainly valuable, these monitoring and evaluation activities do not allow attribution to be established—that is, whether

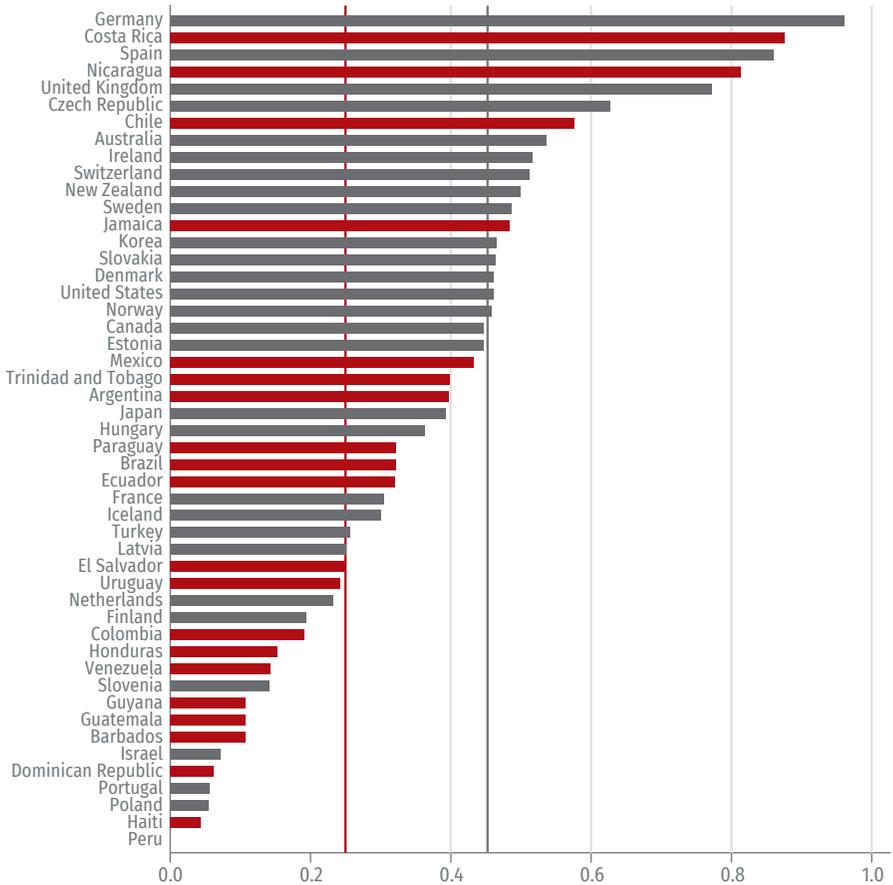
FIGURE 3.37 EVALUATION APPROACHES USED BY IPAS, 2017

Source: Author's calculations based on IDB/OECD Survey of Investment Promotion Agencies (2017).

Note: The figure shows the percentage share of IPAs using each evaluation approach. LAC countries are shown in red and non-LAC OECD countries are shown in dark gray.

and to what extent observed outcomes such as the opening of a first or subsequent affiliate by multinational firms can be traced back to IPAs' actions. Doing so requires rigorous impact evaluations, such as those presented in chapter 4. These econometric assessments provide new insights into the overall value that IPAs add, the specific characteristics and type of services that influence IPAs' impact, and which countries, sectors, and firm types are associated with the highest returns on assistance.

FIGURE 3.38 IPA EVALUATION INDEX, 2017



Source: Author's calculations based on IDB/OECD Survey of Investment Promotion Agencies (2017).

Note: The figure presents the evaluation index for each IPA for which it could be computed, based on reported data on relevant variables, along with regional medians. The evaluation index is a simple average of a binary indicator capturing the existence of an evaluation unit, a binary indicator capturing the use of econometric approaches, the share of other evaluation methods, and the share of investment promotion activities covered by the IPA's CRM.

APPENDIX A3.1: IPA INDICES

By their very nature, summary indices are approximative and may not necessarily reflect the full extent of multidimensional differences across the entities being compared. Nevertheless, such indices are a useful departure point for cross-country comparisons and can facilitate an understanding of the role played by relevant underlying factors in shaping entities' effectiveness at performing their functions. This appendix briefly explains the indices capturing different specific characteristics and strategies of IPAs along with the overall benchmarking index that was developed in the IDB/OECD institutional mapping of IPAs (Volpe Martincus and Sztajerowska, 2019).

Reform Index (RI): This captures the total number of major reforms undertaken by an IPA in 2007–2017. The index is a count variable that ranges from 0 (minimum) to 5 (maximum).

Overall Size Index (OSI): This combines three dimensions of the size of an IPA into a single, comprehensive measure to consistently identify the largest and smallest IPAs. The dimensions in question are the budgetary resources they have at their disposal, the number of employees they have to carry out their activities, and the geographical spread of their presence abroad through their overseas offices. Formally, the OSI is defined as follows:

$$OSI = (1/3) \left(\frac{Budget}{Budget^{Max}} + \frac{Personnel}{Personnel^{Max}} + \frac{Offices}{Offices^{Max}} \right) * 100 \quad (A3.1.1)$$

where *Max* refers to the maximum value taken by the variable in question (budget, number of employees, and number of overseas offices) across IPAs. The index thus ranges from close to 0 (smallest size) to 100 (maximum size).

Institutional Independence Index (III): This captures differences across IPAs along several important institutional dimensions:

legal status, reporting schemes, budget sources, the composition and responsibilities of the board of directors, and contractual freedom. Specifically, IPAs that score higher on the III are those that are private, rely less on public funding, have a board with nonpublic-sector representation that can appoint managers and approve strategy, and have more room to set their wage policies. Formally, the III is defined as follows:

$$III = (1/7)(LS + Budget^{NP} + Board^{NP} + R + SA + ARM + WF) \quad (A3.1.2)$$

where LS is a binary indicator that takes the value of 1 if the IPA is a private entity, and 0 otherwise; $Budget^{NP}$ is the share of nonpublic funding sources in the IPA's budget; $Board^{NP}$ is the share of nonpublic members in the IPA's board; R is a binary indicator that takes the value of 1 if the IPA reports to the board, and 0 otherwise; SA is a binary indicator that takes the value of 1 if the IPA's strategy is approved by itself (particularly through the board), and 0 otherwise; ARM is a binary indicator that takes the value of 1 if the manager is appointed and removed by the IPA (particularly by the board), and 0 otherwise; and WF is a binary indicator that takes the value of 1 if the IPA can pay wages that are higher than those of the public sector (in at least a category), and 0 otherwise. The index thus varies from 0 (least independence) to 1 (maximum independence).

Specialization Indices (SIs): The *overall functional specialization index* (SI^{OF}) captures the degree to which an IPA concentrates its resources and focuses its activities on investment promotion, particularly on the different investment promotion functions (image-building, investment generation, investment facilitation and retention, and policy advocacy). This index takes the maximum value of 1 for an agency that allocates its entire budget entirely to investment promotion rather than to other mandates, allocates all of its investment promotion budget to one of its investment promotion functions, and performs all of its activities around that function as well. Formally, the SI^{OF} is defined as follows:

$$SI^{OF} = \left(\frac{Budget_{IP}}{Budget_{Total}} \right) \sum_F \left(\frac{Budget_F \cdot N_F^A}{Budget_{IP} \cdot \sum_F N_F^A} \right)^2 \quad (A3.1.3)$$

where IP denotes investment promotion, F stands for investment promotion function, and N^A represents the number of specific investment promotion activities.

The *core function specialization index* (SI^{CF}), in turn, measures the degree to which an IPA concentrates its activities in investment promotion, particularly on the investment promotion functions found to be core for most IPAs (investment generation and investment facilitation and retention). The index would take the maximum value of 1 for an agency that allocates its total budget entirely to investment promotion rather than to other mandates, allocates its investment promotion budget to the investment generation and facilitation and retention functions, and performs only one activity in those core functions. Formally, the SI^{CF} is defined as follows:

$$SI^{CF} = \left(\frac{Budget_{IP}}{Budget_{Total}} \right) \left(\frac{Budget_{IG} + Budget_{IF}}{Budget_{IP}} \right) \left(\frac{1}{N_{IG}^A + N_{IF}^A} \right) \quad (A3.1.4)$$

where IG corresponds to investment generation and IF to investment facilitation and retention. Scores for the SI range from 0 (least specialization) to 1 (maximum specialization).

Targeting Intensity Index (TII): This captures the number of dimensions that IPAs prioritize or exclude. The index is a count variable that ranges from 0, when the IPA neither prioritizes nor excludes sectors/countries, projects, or investors, to 6, when the IPAs prioritizes and excludes sectors/countries, projects, and investors, and can take any value in between, through the function on how far the agency prioritizes or excludes each dimension.

Institutional Interaction Index (INI): This measures the extent of IPA collaborations with different types of stakeholders that are sep-

arate from the IPA or the ministry that oversees investment promotion. The index is a count variable that ranges from 0 (when the IPA reports that it does not collaborate with any public, private, or other type of institution) to 42 (the maximum number of bodies with which IPAs report that they interact). For the list of specific types of entities included in the index, see Volpe Martincus and Sztajerowska (2019).

Evaluation Index (EI): This combines different aspects required for the effective monitoring and evaluation of IPAs, such as dedicated resources, comprehensive and accurate data on the specific activities and the respective beneficiaries, and sound empirical approaches to establish whether and how these activities contribute to the desired outcomes. Formally, the *EI* is defined as follows:

$$EI = (1/4) \left(EU + ECONOMETRIC + \frac{EM}{EM^{Max}} + \frac{NA^{CRM}}{NA^{Total}} \right) \quad (A3.1.5)$$

where *EU* is a binary indicator that takes the value of 1 if the IPA has a dedicated evaluation unit, and 0 otherwise; *ECONOMETRIC* is a binary indicator that takes the value of 1 if the IPA uses econometric methods for evaluation purposes, and 0 otherwise; *EM* is the number of noneconometric evaluation methods used by the IPA; *EM^{Max}* is the maximum number of noneconometric evaluation methods that could be used by the IPA (as identified in the survey); *NA^{CRM}* is the number of investment promotion activities covered by the IPA's CRM; and *NA^{Total}* is the number of investment promotion activities carried out by the IPA. The index thus ranges from 0 (least sophisticated monitoring and evaluation approach) to 1 (most sophisticated monitoring and evaluation approach).

Overall Benchmarking Index (OBI): This is based on an existing statistical measure of divergence between groups in terms of multiple characteristics, the Mahalanobis distance.⁸⁹ In this case,

⁸⁹ Mahalanobis (1936) proposed this measure to gauge "likeness" across groups across several dimensions. Since then, it has played a fundamental role in statistics and data analysis when multiple measurements

these characteristics are the specific dimensions captured by the indices defined above— the *RI*, *OSI*, *III*, *SIs*, *TII*, *INI*, and *EI*. As such, the measure allows all the agencies included to be compared to an average IPA (see box A3.1 and Volpe Martincus and Sztajerowska, 2019).

The Mahalanobis distance captures the deviation, or distance, of a given observation on a number of relevant characteristics from the data center, and hence allows similarities and differences pertaining to several dimensions to be identified. The mathematical definition is given by the following formula:

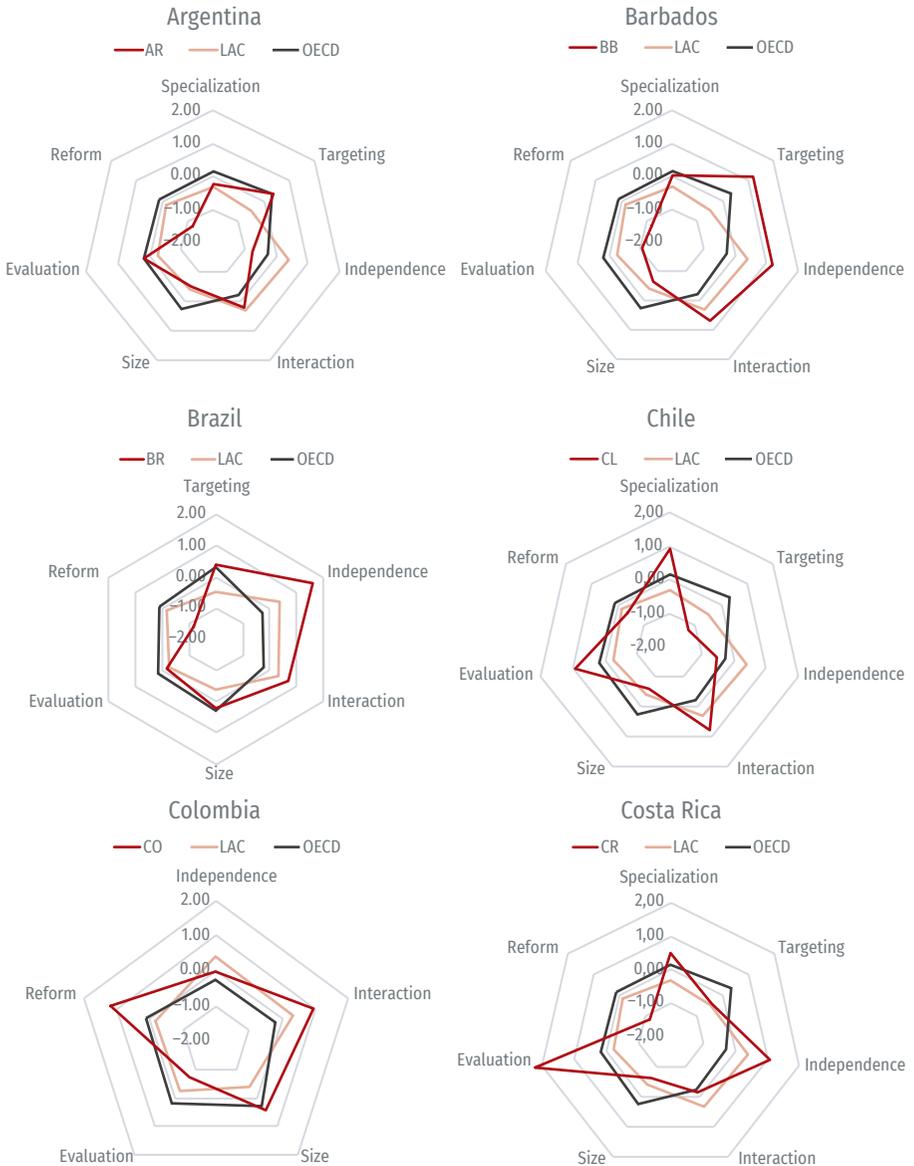
$$\Delta^2 = (x - \bar{x})S^{-1}(x - \bar{x}) \quad (\text{A3.1.6})$$

where x is a vector consisting of the multivariate measurement for an observation (the various indices), \bar{x} is the mean of the sample; and S is the variance–covariance matrix of the sample. A higher score implies a greater distance from the average and hence a higher degree of dissimilarity from the average IPA in the sample. Using this measure provides an elegant summary of differences across individual agencies without judging the relative merits of any of the approaches.

are involved. It has become an important piece in statisticians' repertoires and been applied in many fields where classification, numerical taxonomy, and statistical pattern recognition problems are encountered (McLachlan, 1999).

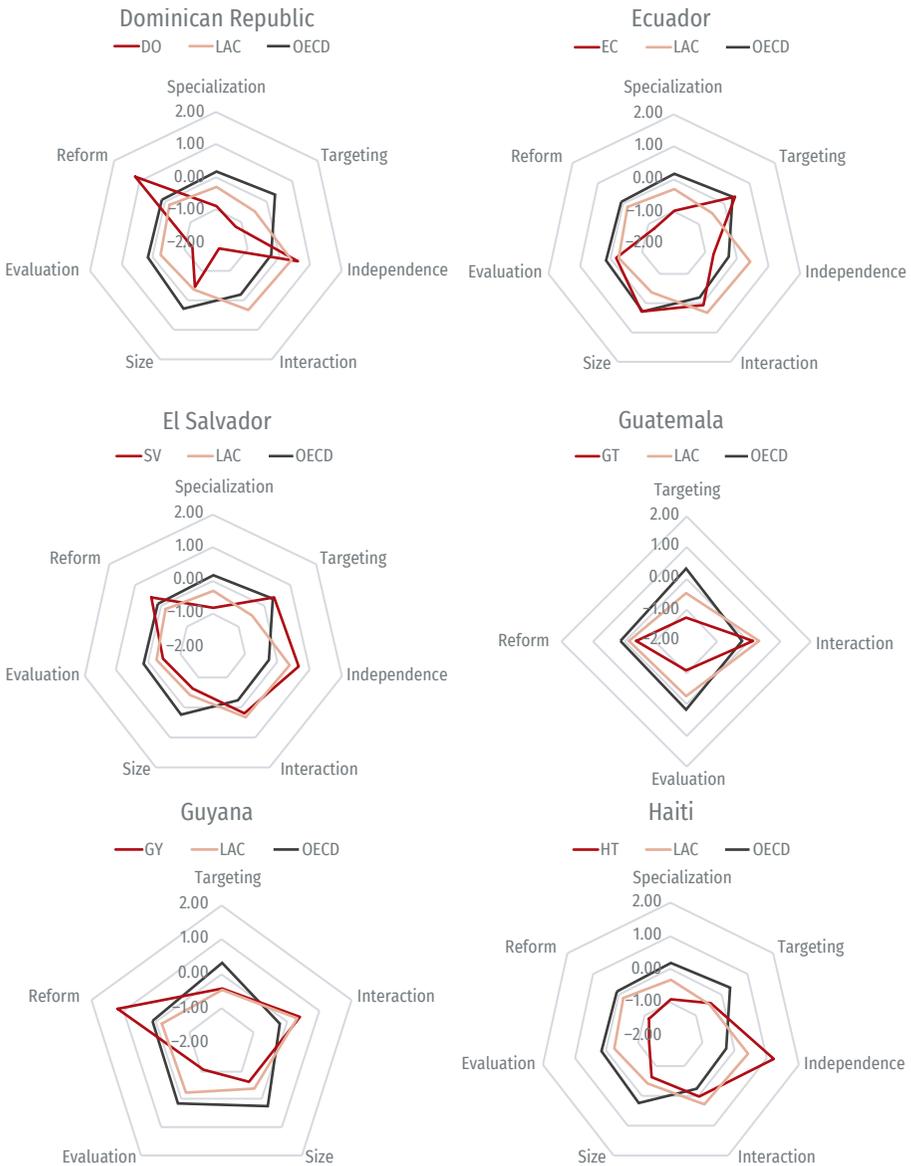
APPENDIX A3.2: IPAS' INDIVIDUAL SCORECARDS

FIGURE A3.2.1: IPAS' INDIVIDUAL SCORECARDS



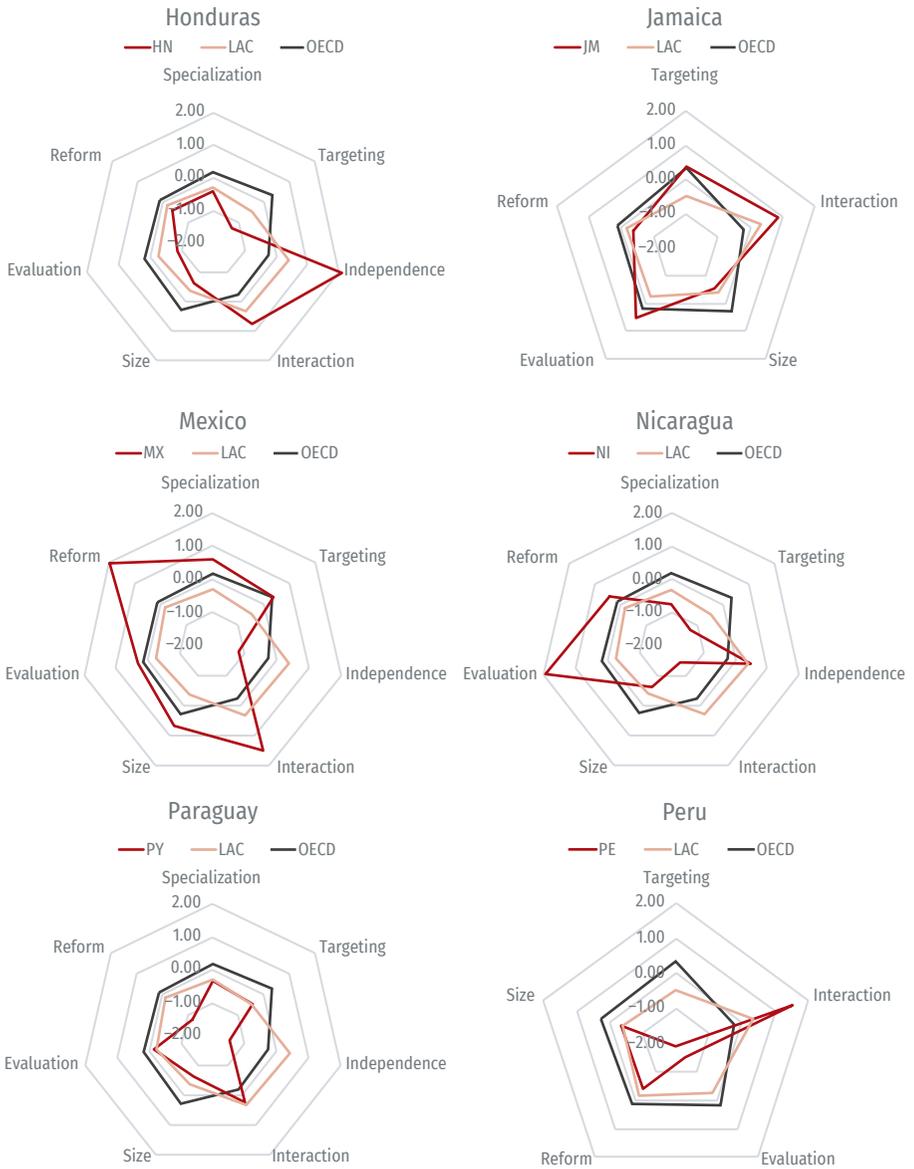
(continued on next page)

FIGURE A3.2.1 IPAS' INDIVIDUAL SCORECARDS (continued)



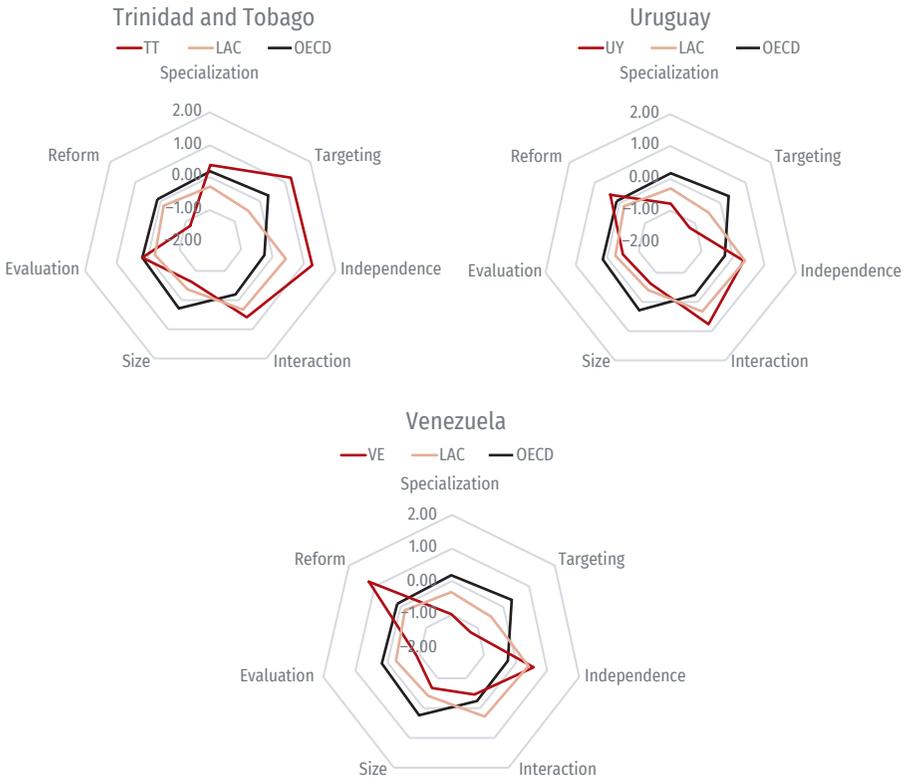
(continued on next page)

FIGURE A3.2.1 IPAS' INDIVIDUAL SCORECARDS (continued)



(continued on next page)

FIGURE A3.2.1 IPAS' INDIVIDUAL SCORECARDS (continued)



Source: Author's calculations based on IDB-OECD Survey of Investment Promotion Agencies (2017).
 Note: The figure shows radar graphs that compare each IPA with the LAC and OECD average along relevant dimensions captured by the indices defined above. LAC countries are shown in red and non-LAC OECD countries are shown in dark gray.

APPENDIX A3.3: IPA ASSISTANCE DATA

TABLE A3.3.1

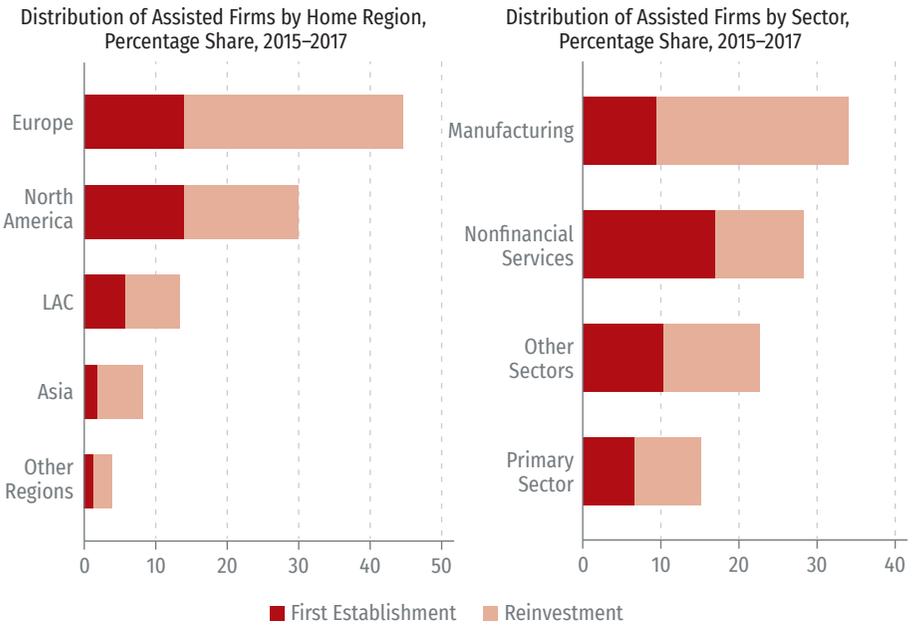
Country	Period	Assisted Firms' Coverage	Individual Services
Argentina	2015–2017	All Firms	No
Brazil	2009–2017	All Firms	No
Chile	2016–2017	All Firms	Yes
Colombia	2009–2017	All Firms	Yes
Costa Rica	2000–2016	All Firms	Yes
Ecuador	2014–2017	All Firms	Yes
El Salvador	2010–2017	All Firms	No
Honduras	2011–2017	All Firms	Yes
Jamaica	2012–2017	Only Established Firms	No
Mexico	2008–2017	All Firms	Yes
Nicaragua	2013–2017	All Firms	No
Paraguay	2014–2017	Only Established Firms	No
Peru	2012–2017	All Firms	No
Trinidad and Tobago	2012–2017	Only Established Firms	No
Uruguay	2000–2016	All Firms	No

Source: Author's calculations based on data from national IPAs.

APPENDIX A3.4: IPA ASSISTANCE PATTERNS⁹⁰

A3.4.ARG Argentina

FIGURE A3.4.ARG.1 DISTRIBUTION OF ASSISTED FIRMS BY HOME REGION AND SECTOR

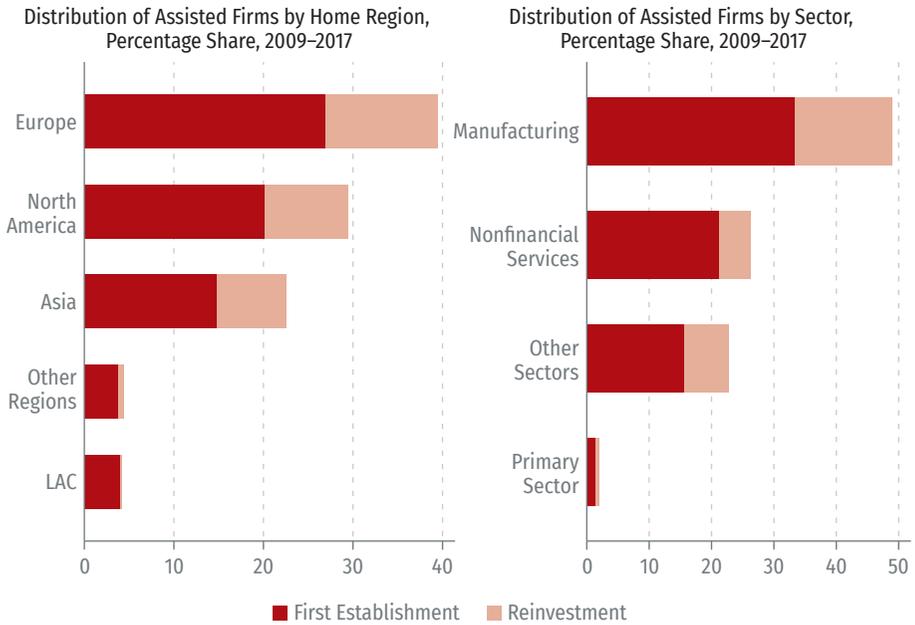


Source: Author's calculations based on data from Argentina's national IPA.

⁹⁰ The appendix presents detailed characterizations of assistance patterns in countries for which either complete or partial firm-level data on IPA assistance are available. Only the top 15 home countries and subsectors are reported.

A3.4.BRA Brazil

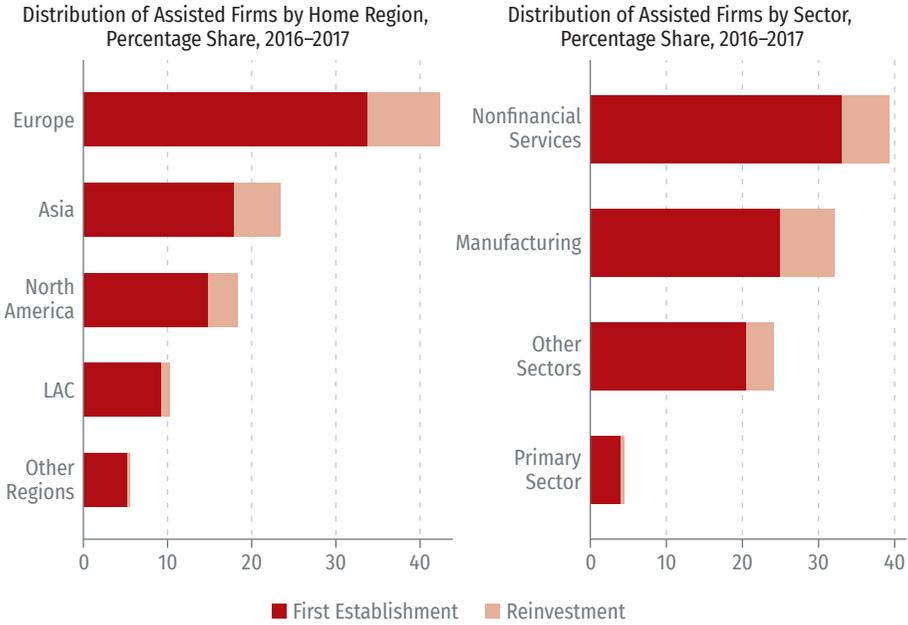
FIGURE A3.4.BRA.1 DISTRIBUTION OF ASSISTED FIRMS BY HOME REGION AND SECTOR



Source: Author's calculations based on data from Brazil's national IPA.

A3.4.CHI Chile

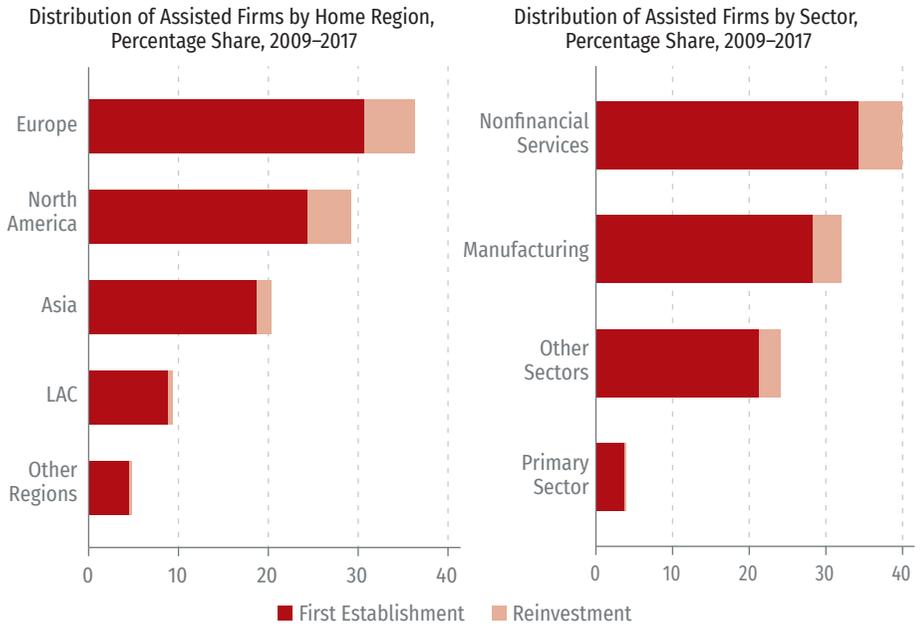
FIGURE A3.4.CHI.1 DISTRIBUTION OF ASSISTED FIRMS BY HOME REGION AND SECTOR



Source: Author's calculations based on data from Chile's national IPA.

A3.4.COL Colombia

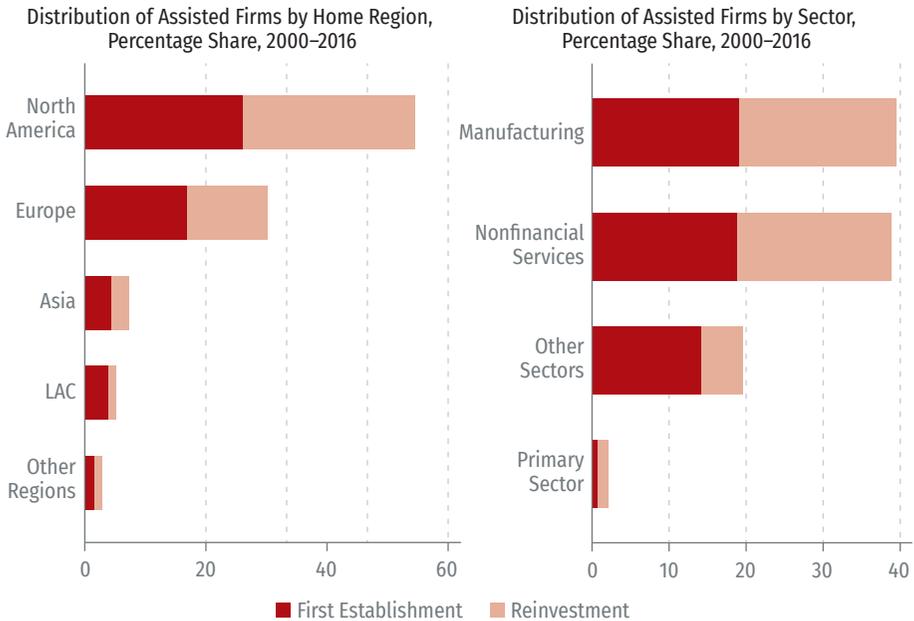
FIGURE A3.4.COL.1 DISTRIBUTION OF ASSISTED FIRMS BY HOME REGION AND SECTOR



Source: Author's calculations based on data from Colombia's national IPA.

A3.4.CRI Costa Rica

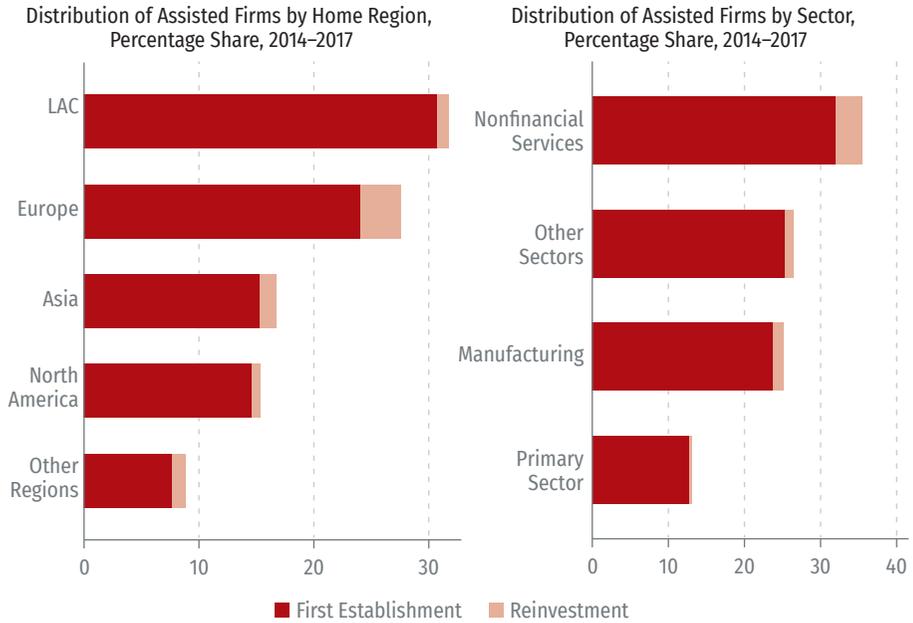
FIGURE A3.4.CRI.1 DISTRIBUTION OF ASSISTED FIRMS BY HOME REGION AND SECTOR



Source: Author's calculations based on data from Costa Rica's national IPA.

A3.4.ECU Ecuador

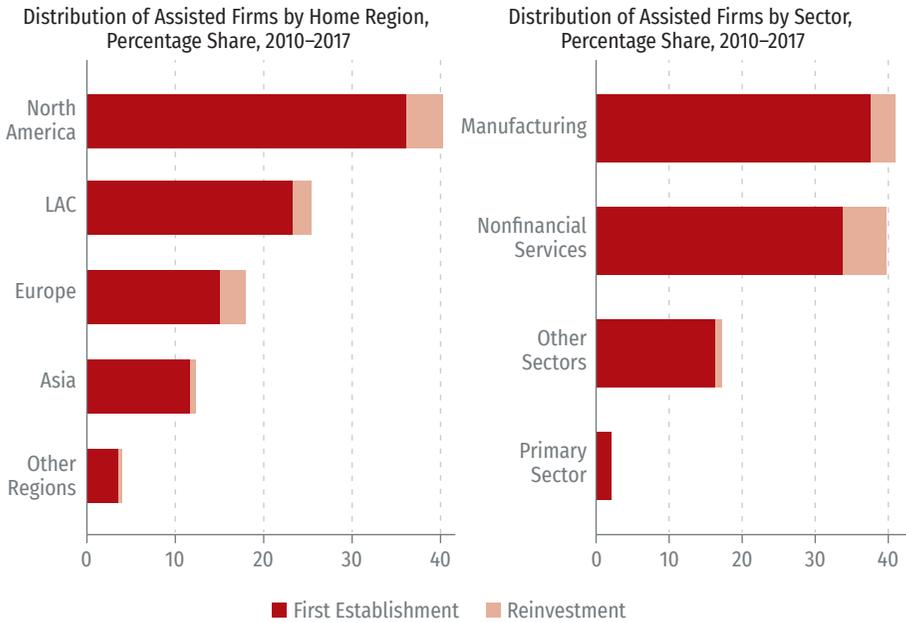
FIGURE A3.4.ECU.1 DISTRIBUTION OF ASSISTED FIRMS BY HOME REGION AND SECTOR



Source: Author's calculations based on data from Ecuador's national IPA.

A3.4.SLV El Salvador

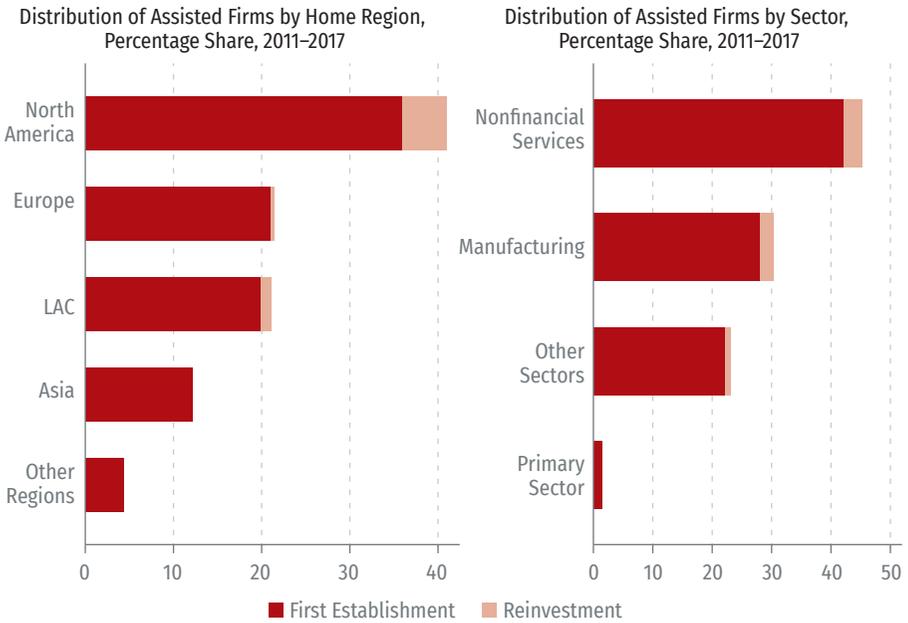
FIGURE A3.4.SLV.1 DISTRIBUTION OF ASSISTED FIRMS BY HOME REGION AND SECTOR



Source: Author's calculations based on data from El Salvador's national IPA.

A3.4.HND Honduras

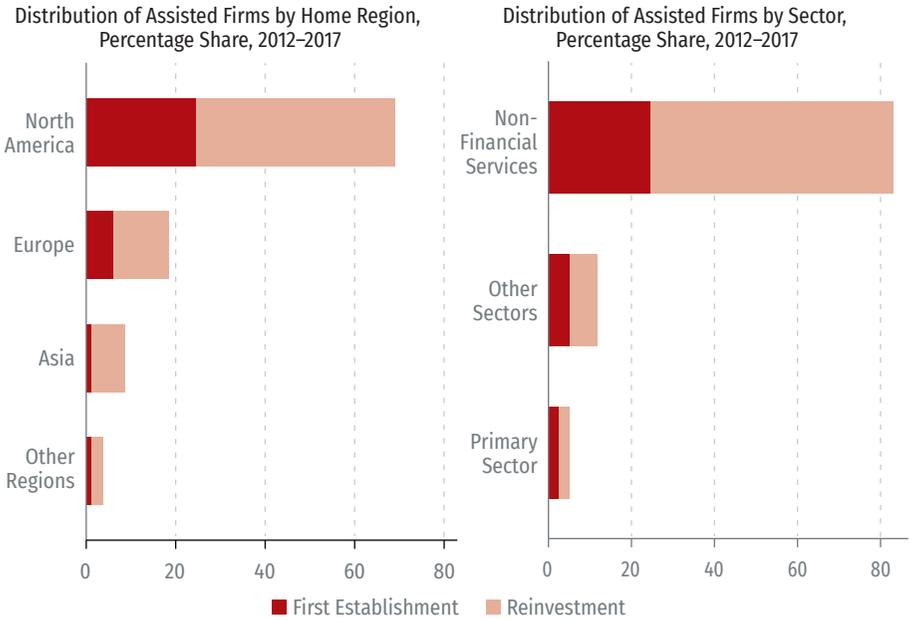
FIGURE A3.4.HND.1 DISTRIBUTION OF ASSISTED FIRMS BY HOME REGION AND SECTOR



Source: Author's calculations based on data from Honduras's national IPA.

A3.4.JAM Jamaica⁹¹

FIGURE A3.4.JAM.1 DISTRIBUTION OF ASSISTED FIRMS BY HOME REGION AND SECTOR

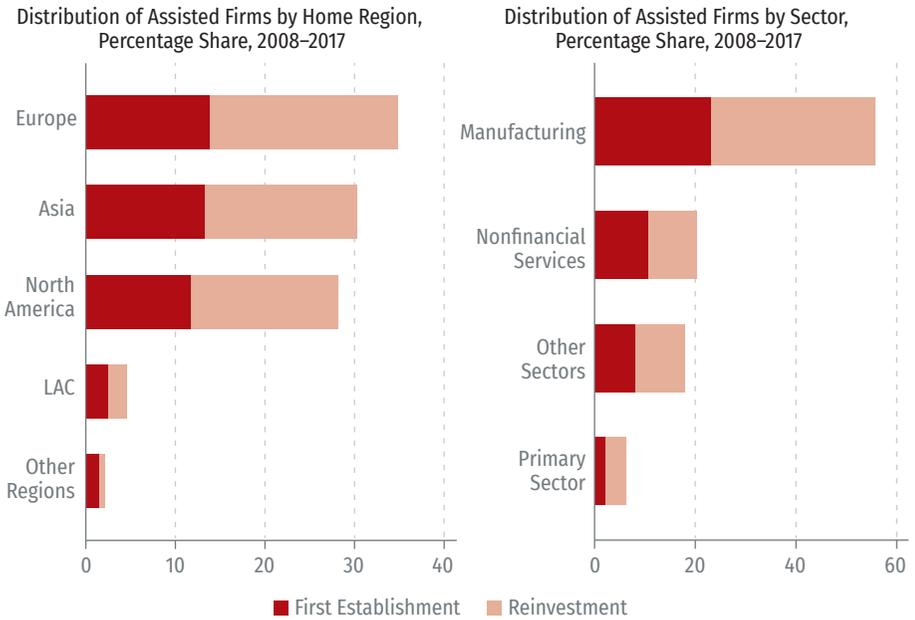


Source: Author's calculations based on data from Jamaica's national IPA.

⁹¹ Assistance data is restricted to multinational firms that established an affiliate in the country.

A3.4.MEX Mexico

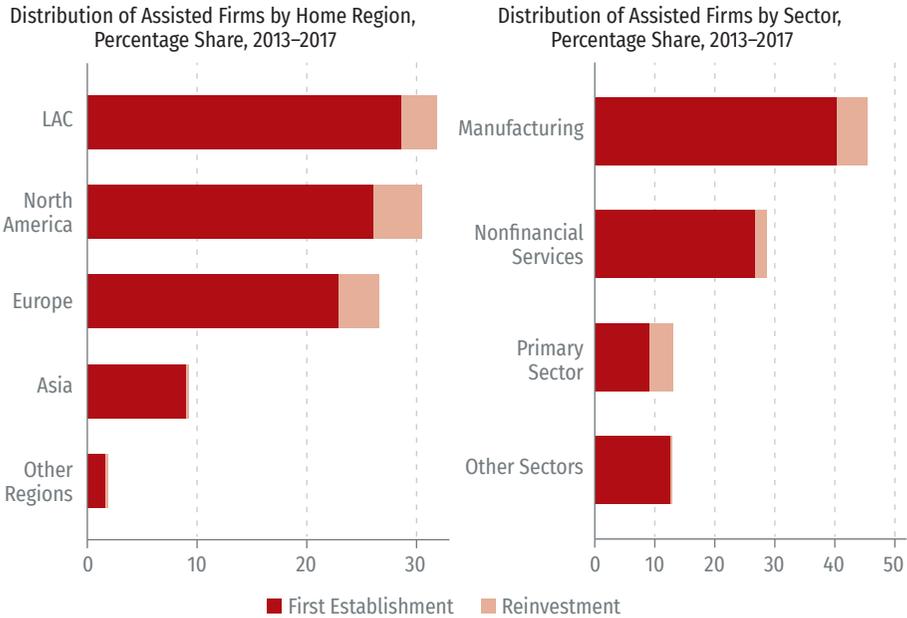
FIGURE A3.4.MEX.1 DISTRIBUTION OF ASSISTED FIRMS BY HOME REGION AND SECTOR



Source: Author's calculations based on data from Mexico's national IPA.

A3.4.NIC Nicaragua

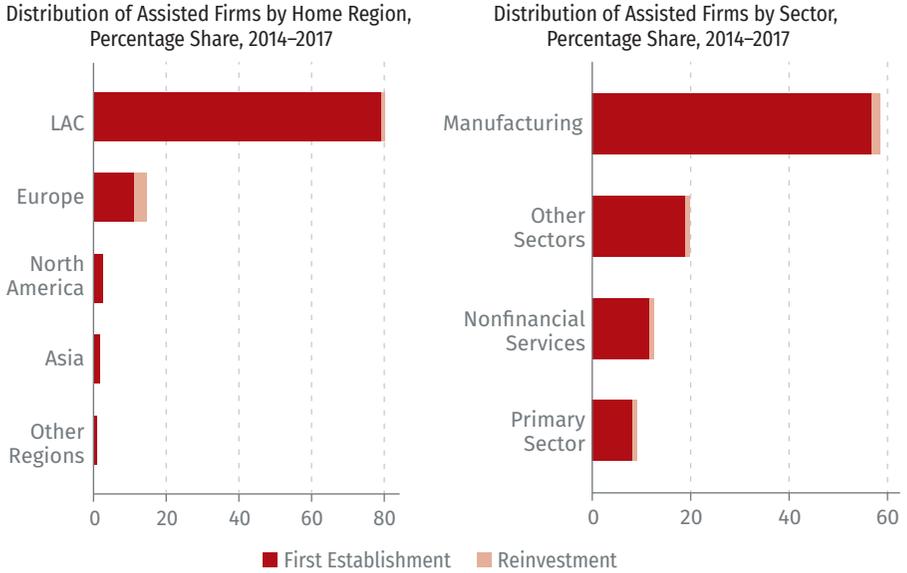
FIGURE A3.4.NIC.1 DISTRIBUTION OF ASSISTED FIRMS BY HOME REGION AND SECTOR



Source: Author's calculations based on data from Nicaragua's national IPA.

A3.4.PRY Paraguay⁹²

FIGURE A3.4.PRY.1 DISTRIBUTION OF ASSISTED FIRMS BY HOME REGION AND SECTOR

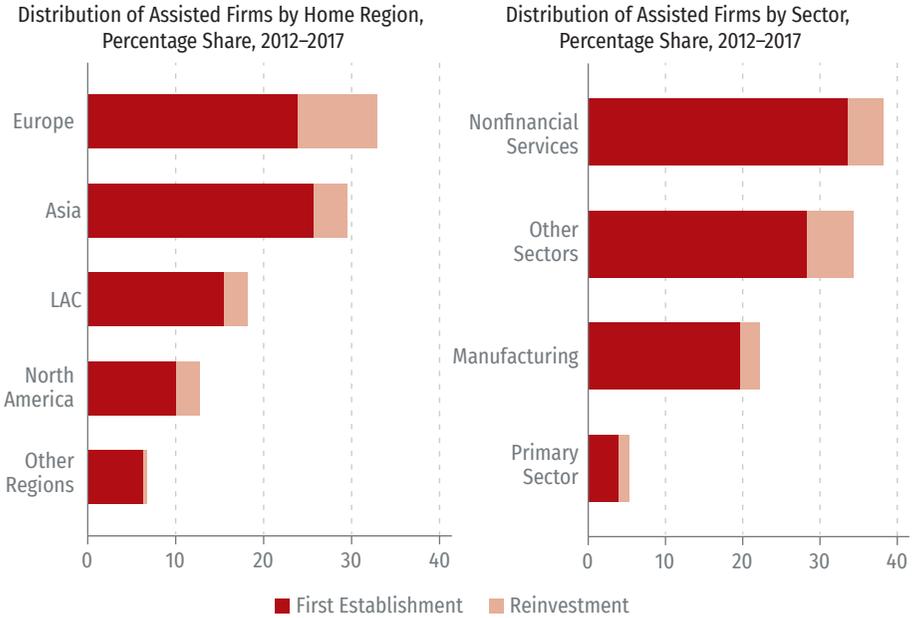


Source: Author's calculations based on data from Paraguay's national IPA.

⁹² Assistance data is restricted to multinational firms that established an affiliate in the country.

A3.4.PER Peru

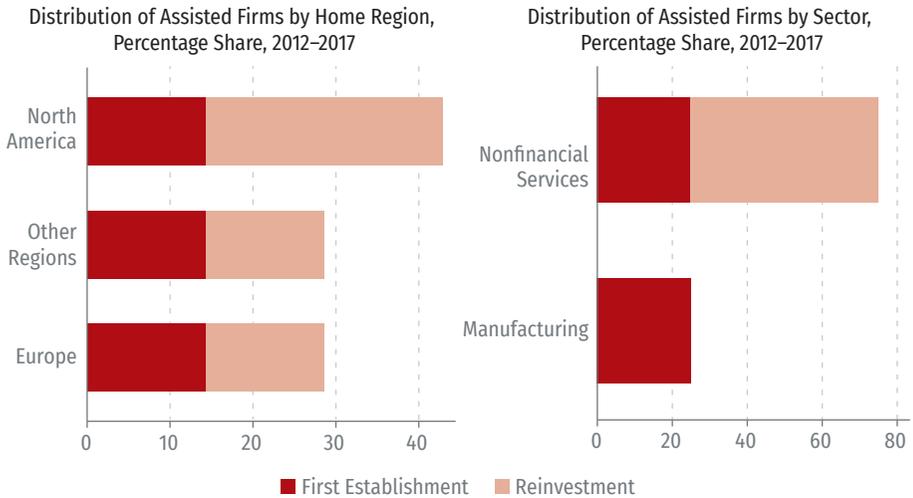
FIGURE A3.4.PER.1 DISTRIBUTION OF ASSISTED FIRMS BY HOME REGION AND SECTOR



Source: Author's calculations based on data from Peru's national IPA.

A3.4.TTO Trinidad and Tobago⁹³

FIGURE A3.4.TTO.1 DISTRIBUTION OF ASSISTED FIRMS BY HOME REGION AND SECTOR

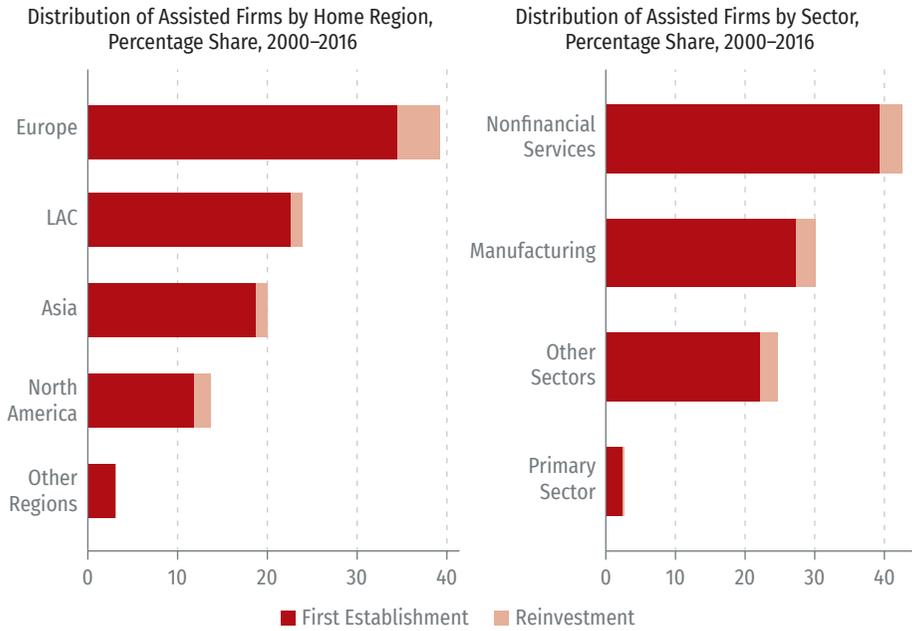


Source: Author's calculations based on data from Trinidad and Tobago's national IPA.

⁹³ Assistance data is restricted to multinational firms that established an affiliate in the country.

A3.4.URY Uruguay

FIGURE A3.4.URY.1 DISTRIBUTION OF ASSISTED FIRMS BY HOME REGION AND SECTOR



Source: Author's calculations based on data from Uruguay's national IPA.

INVESTMENT PROMOTION: HOW IT WORKS, WHAT WORKS, AND WHEN IT WORKS

THE EFFECTIVENESS OF INVESTMENT PROMOTION: THE STANDARD MEASUREMENT APPROACH

A vital question—which applies to all major public policies that operate at the economic agent level—is whether investment promotion actually makes a difference in terms of the economic outcomes it is intended to improve. As discussed in chapter 3, these outcomes include the primary variables that are directly affected by the interventions in question: the value of FDI, the number of investing multinational firms, the number of investment projects, as well as the number of jobs and, to a lesser extent, exports and other economic variables that relate to the level of activity of established multinational firms, such as sales.

To answer this question, IPAs resort to different measurement strategies with varying degrees of sophistication in terms of the precision and quality of the underlying data and the alleged attribution of the outcomes in question to their interventions. In the most basic variants, the IPAs (or their countries' governments) simply use aggregate or sector-specific FDI inflows as a country-wide performance measure, regardless of the number of multinational firms that have been assisted, the value of the investments of these firms, or the degree of the IPA's involvement. All

investment increases are therefore implicitly presented as being due to the work of IPAs. Using a more refined approach to measurement, some IPAs report the number of established multinational firms they have provided support to and the value of these firms' investments (and employment). The data on firm numbers generally comes from IPAs' own CRMs, whereas data on the value of investments and employment can come from two sources. The first of these are multinational firms' self-reported figures, gathered through surveys of these firms, which are subject to several potential biases in the form of self-selection and overestimation in the responses. The second is administrative data obtained by combining assistance records and the databases of other public organizations (e.g., statistical offices, central banks, tax agencies, social security authorities, etc.), which is not subject to the same biases as self-reported firm data.

Some IPAs use so-called “assistance-establishment conversion rates.” According to this metric, on average, almost 10% of the multinational firms that are assisted establish a first affiliate in the respective LAC country, whereas slightly more than 10% open additional affiliates therein.⁹⁴ In the case of support to firms that are new to the countries, the conversion rate is higher for those operating in the primary and manufacturing sectors; those headquartered in Asia, North America, and Europe; and those that are relatively small (with up to 10 overseas affiliates worldwide). In the case of support to firms that are expanding their presence in countries, the conversion rate is higher for those that are active in financial services, manufacturing, construction and utilities, and wholesale and retail; whose parent firms are located in Asia and Europe; and which are relatively large (with more than 50 affiliates worldwide; figure 4.1, left panels).

⁹⁴ IPAs even tend to use restricted versions of “conversion rates,” in which the denominator is the number of multinational firms with which they have had multiple interactions and are deemed to have an estimated probability of establishing an affiliate that is over a minimum threshold, instead of the total number of multinational firms that were assisted, the metric used here. These restricted conversion rates yield larger values.

An alternative but related perspective is provided by the share of all established multinational firms that have been assisted. This share is, on average, 10%. In the specific case of support to enter a country for the first time, it reaches higher levels for firms in the manufacturing, primary, and construction and utilities sectors; those whose headquarters are in Asia, North America, and the region itself; and those that are relatively large (with more than 50 foreign affiliates worldwide). The average ratio between instances of assistance and establishment is lower (roughly 6%) for subsequent investments. This ratio is higher for firms in manufacturing, those from Asia, and large firms (with more than 100 overseas affiliates worldwide; figure 4.1, right panels).

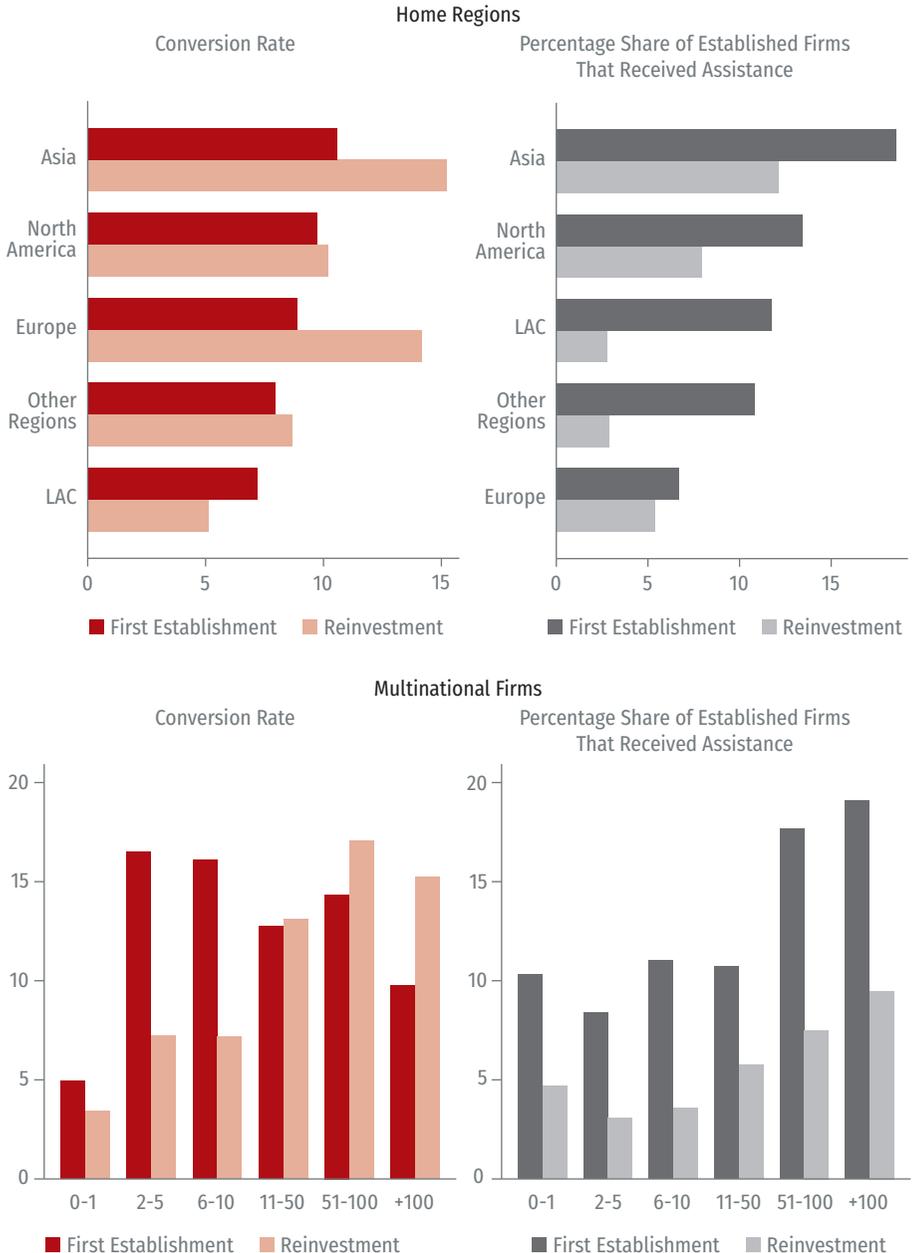
Although these indicators are undoubtedly helpful as a reference, they have major shortcomings as a measure of the value-added of IPAs' services to multinational firms and thus of their true contribution to the outcomes of interest. The overall evolution and patterns of aggregate variables such as total FDI inflows are determined by a myriad of factors, of which investment promotion support is just one. Consequently, the raw, unconditional values of such variables are not an appropriate measure of IPAs' impact. Narrowly defined variables such as the total number of multinational firms that were assisted and established an affiliate in the country, the value associated with these investments, or conversion rates are more closely linked with support from IPAs but do not address the crucial issue of attribution. The conversion rate approach only considers multinational firms that were assisted, thereby disregarding firms that open affiliates without IPA support. In turn, the share of established firms that received assistance only takes into account the "success stories"—multinational firms that did establish a foreign affiliate—and ignores the "failures"—multinational firms that were assisted but neither established nor expanded operations in the country. These indicators tacitly assume that the multinational firms in question would not have made these decisions in the absence of such support from IPAs. This assumption is undoubtedly a stretch since, as seen above,

FIGURE 4.1 CONVERSION RATES AND SHARE OF MULTINATIONAL FIRMS ASSISTED BY IPAS



(continued on next page)

FIGURE 4.1 CONVERSION RATES AND SHARE OF MULTINATIONAL FIRMS ASSISTED BY IPAS (continued)



Source: Author's calculations based on data from WorldBase and national IPAs.

firms can and do invest in given countries without having received any public assistance.

THE CAUSAL EFFECTS OF INVESTMENT PROMOTION: THE IMPACT EVALUATION APPROACH

Impact evaluations allow these shortcomings to be tackled by adequately attributing changes in individual outcomes to investment promotion actions. Hence, they can also be used to design and guide investment policies based on sound evidence. When properly executed, impact evaluations provide rigorous causal estimates of the effects of investment promotion and specific promotion programs on multinational firms' investment decisions by comparing the outcomes of situations in which firms received IPA support with carefully constructed counterfactuals of the absence of such support. By so doing, impact evaluations determine whether and how far IPAs help achieve the goals they set and/or bring about unintended consequences. Hence, these econometric assessments generate invaluable inputs for steering policy decisions in a context of limited resources (e.g., they can be used to expand programs that are cost-effective and downscale or even eliminate those with nonexistent or negative effects). They can also improve the design of specific programs by producing insights into why certain actions are effective or not and increase transparency and accountability to relevant stakeholders.

While the justifications for this approach might be crystal clear and hard to disagree with, no real single impact evaluation of investment promotion existed until very recently. The reasons for this are primarily related to data availability. First, these evaluations require data on the location of all multinational firms' foreign affiliates and when these were established, regardless of whether they received IPA support. As discussed in chapter 2, there is no single source of such data. To overcome this limitation, cross-country databases from private providers need to be combined with national databases from the respective countries to ensure appropriate cov-

erage of affiliates in each of these (and abroad). Second, the feasibility of impact evaluations also depends crucially on the availability of consistent, comprehensive data on whether multinational firms have been assisted by IPAs over time, ideally in terms of their specific programs, regardless of whether these firms open a foreign affiliate in the country in question or not. As reviewed in chapter 3, CRM systems (or equivalent registers) that track this assistance are a fairly new introduction, so these data series only became accessible for LAC IPAs in recent years.⁹⁵ Combining these two datasets makes it possible to observe all four possible combinations of policy “treatments” and outcomes: (i) multinational firms that were assisted that locate to the host country, (ii) multinational firms that were assisted that never locate to the host country, (iii) multinational firms that were not assisted that locate to the host country, and (iv) multinational firms that were not assisted that never locate to the host country. The latter constitute the control group and are the basis for the counterfactual.

This chapter provides entirely new empirical evidence on *whether* and *how* investment promotion works, *what* works in investment promotion, and *when* investment promotion works. For the first time, this evidence is based on the results of proper impact evaluations that apply microeconomic methods to firm-level data on both IPA assistance and multinational firms’ location decisions and economic outcomes (such as the number of employees, domestic sales, domestic purchases, and exports, as available). This data covers the four combinations of policy “treatment” statuses and outcomes for 12 Latin American countries: Argentina, Brazil, Chile, Colombia, Costa Rica, Ecuador, El Salvador, Honduras, Mexico, Nicaragua, Peru, and Uruguay, over a number of recent years (see appendix A4.1 and Carballo et al., 2021, for details).

The evaluations consider three main economic outcomes: (i) the establishment of a first affiliate by multinational firms that are

⁹⁵ See also Sztajerowska (2019).

new to the country (first establishment—*cross-country multinational production firms' extensive margin*); (ii) the establishment of subsequent affiliates by multinational firms already present in the country (reinvestment—*within-country multinational production firms' extensive margin*); and (iii) level of activity of established multinational firms as proxied by the number of employees, sales, purchases, investments, and exports (*within-country multinational production firms' intensive margin*). In this regard, it is worth noting that while the effects of investment promotion on economic outcomes (i) and (ii) can be assessed for all the sample countries listed above, in the case of outcome (iii), the assessment will be limited to a subset of those countries and variants of these outcomes due to data availability reasons (appendix A4.1 contains details on the empirical approach and datasets).

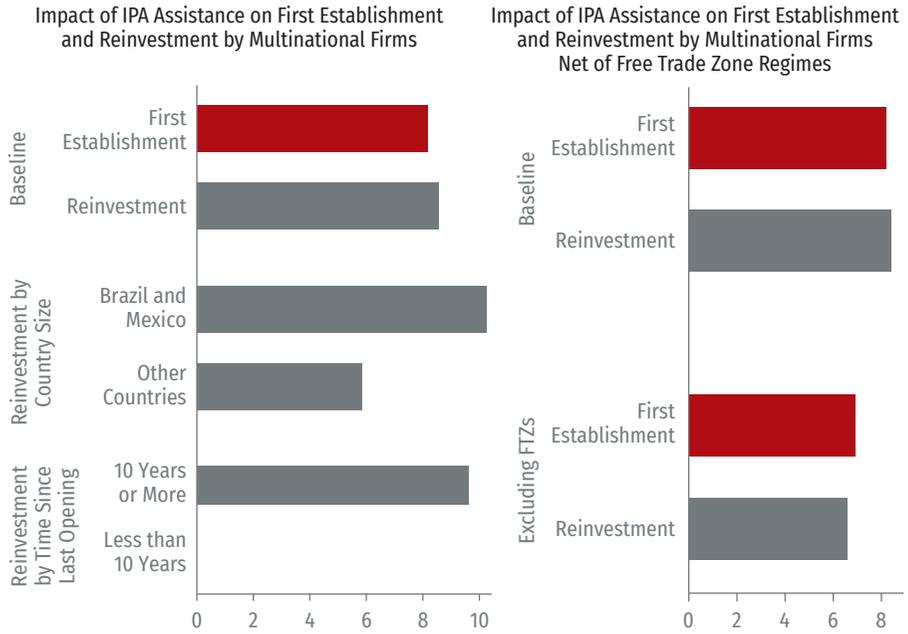
HOW EFFECTIVE IS INVESTMENT PROMOTION?

This section addresses the most important question: is investment promotion effective at attracting new multinational firms to the country or persuading those that are already established to open additional affiliates there?⁹⁶

Investment promotion makes it more likely for multinational firms to establish an affiliate for the first time in the countries in question. On average, IPA assistance increases the probability

⁹⁶ The baseline estimates are obtained using a specification whose dependent variable is a binary indicator that takes the value of 1 if the (ultimate) parent firm operating in a sector from a home country establishes its first affiliate firm in the host country in the year in question, and 0 otherwise (*first establishment*); or a binary indicator that takes the value of 1 if the parent firm operating in a sector from a home country opens an additional affiliate firm in the host country in the year in question, and 0 otherwise (*reinvestment*). The main explanatory variable is a binary indicator that takes the value of 1 if the parent firm was assisted by the country's national IPA in the year in question, and 0 otherwise. The covariates are a series of firm-destination-year variables that control for multinational firms' networks of affiliates along with firm-host country fixed effects and host country-home country-sector-year fixed effects (see appendix A4.1). All results reported hereafter are robust to using more demanding specifications (inclusion of linear trends and double differentiation), alternative samples (the exclusion of firms from the financial sector, firms located in tax havens, firms that experienced ownership changes, firms that operate in free trade zones, and combinations of these exclusions, and different timing structures). These alternative results can be found in the background study for this chapter (see Carballo, Marra de Artiñano, and Volpe Martincus, 2021).

FIGURE 4.2 IMPACT OF IPA ASSISTANCE ON FIRST ESTABLISHMENT AND REINVESTMENT BY MULTINATIONAL FIRMS



Source: Author's calculations based on data from WorldBase and national IPAs.

Note: The host countries included in the estimation that distinguishes the impacts of investment promotion depending on whether multinational firms are located in free trade zones or not are Argentina, Chile, Colombia, Costa Rica, Ecuador, El Salvador, Nicaragua, Mexico, Peru, and Uruguay.

of these firms opening their first affiliates by 8.2 p.p. (figure 4.2, left panel).⁹⁷ This is an economically relevant impact, given that the unconditional likelihood of such an event is very low.⁹⁸ Importantly, while the specific average effects differ across the 12 sample countries, support from the national IPA makes a significant difference in each of these, thus contributing to attracting new multinational firms (see appendix 4.2).

⁹⁷ Throughout this chapter, the x-axis of the figures presents the estimated impact of IPA assistance in percentage terms. In particular, the specific point estimates are shown for estimated effects that are statistically significantly different from zero at the 10% level, while zero (no effect) is reported for estimated effects that are not statistically significantly different from zero.

⁹⁸ The empirical analysis considers a universe of more than 200,000 multinational firms. The number of these firms present in LAC countries is only a small fraction of this total.

Investment promotion also helps multinational firms reinvest and expand their existing presence in the respective countries.

On average, IPA assistance raises the probability of these firms opening subsequent affiliates by 8.6 p.p. (figure 4.2, left panel). Unlike what is observed for first establishment, support from IPAs seems to primarily affect additional openings in the largest countries in the region, such as Mexico and Brazil, where this increase is marked. In fact, the impact is substantially lower for the sample of smaller countries (figure 4.2, left panel, and appendix A4.2). This apparently reflects the fact that investment promotion especially matters for reinvestment in large, regionally heterogeneous economies where previous location- and sector-specific experiences do not necessarily convey all the relevant information for future establishments in other locations or within other sectors.

The estimated effect is only significant when 10 years or more have passed since the multinational firm opened its previous affiliates (figure 4.2, left panel).⁹⁹ This would suggest that information provided by IPAs through their support services remains pertinent to addressing given firms' knowledge needs for some years and can be reused by the multinational firms as inputs for their location decisions. New services provided to recent newcomers do not seem to have an additional effect. However, such information is subject to depreciation and obsolescence as conditions and businesses change over time, especially following major economic and political shocks. Hence, after a certain period, multinational firms that are considering establishing a new affiliate in the country come up against new information gaps, which IPA services are effective at bridging.¹⁰⁰ As expected, the dependence of the size of

⁹⁹ Ten years correspond to the 40th percentile of the distribution of the number of years elapsed between establishments of new foreign affiliates across multinational firms and sample countries. The results are similar when the median (50th percentile—17 years) is used instead as a cutoff point. These results are available from the author upon request.

¹⁰⁰ It should be acknowledged that, on the other hand, years on the ground could help reduce the specific information frictions faced by given firms. The estimation results suggest that this does not appear to specifically apply to matters relating to setting up operations in a country.

the effects on investment timing is more pronounced for larger countries and is primarily driven by these.¹⁰¹

Importantly, the contribution of investment promotion to attracting multinational firms is separate and independent from that of other public policies that pursue similar goals via different means, particularly nonneutral, price-distorting policies. More precisely, when those located in free trade zones and thus receiving tax rebates or subsidies are excluded, the estimated impact of IPA assistance on the probability of multinational firms establishing a first affiliate or subsequent ones in the country remains positive, significant, and economically important.¹⁰² It is, however, smaller in magnitude than the baseline observed in the sample comprising all firms (figure 4.2, right panel).¹⁰³

WHAT WORKS IN INVESTMENT PROMOTION?

This section discusses in detail whether and how the specific IPA characteristics mapped in chapter 3 in terms of *who* they are, *what* they do, and *how* they do it are associated with different degrees of effectiveness.

Overview

This section draws on the summary indices capturing the dimensions that were presented and discussed in chapter 3: reform, size, independence, specialization, targeting, interaction, and evaluation. Specifically, IPAs are classified based on whether their specific scores for these indices are above the median (the six IPAs with the highest scores) or up to the median (the six IPAs with the lowest scores) to explore whether differences along these dimensions are associated

¹⁰¹ These specific estimates are available from the author upon request.

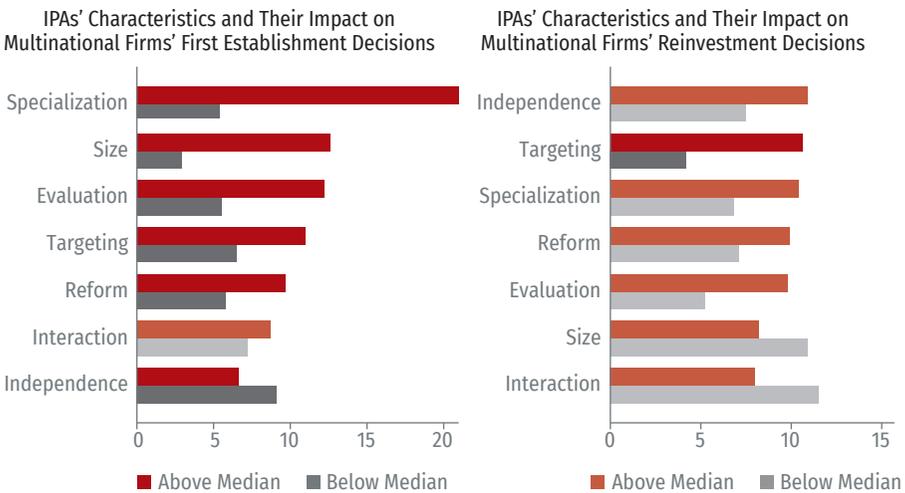
¹⁰² The specification used to obtain these estimates includes host country–home country–sector–year fixed effects and accordingly control for other relevant policies such as economic integration agreements, preferential tariffs, tax rates, and sector-specific programs in given countries over time.

¹⁰³ This would indicate that this additional support helps encourage first establishments and reinvestment by foreign multinational firms.

with differences in whether and how these IPAs' actions affect foreign firms' decision to establish and reinvest in the countries (figure 4.3).¹⁰⁴

IPAs that are larger, perform more comprehensive evaluations of their activities, target more intensively, make changes to internal organization, and, in particular, are more specialized exert a greater influence on multinational firms' deciding to establish a first affiliate in the country (figure 4.3., first panel). Specifically, in terms of institutional configuration, the inclusion of new functional areas and appropriate internal reorganization in response to changing and emerging business needs among clients seem to contribute to improving IPAs' performances (figure 4.3, second panel).¹⁰⁵ In turn,

FIGURE 4.3 IMPACT OF IPA ASSISTANCE ON FIRST ESTABLISHMENT AND REINVESTMENT BY MULTINATIONAL FIRMS, BY IPAS' OVERALL CHARACTERISTICS

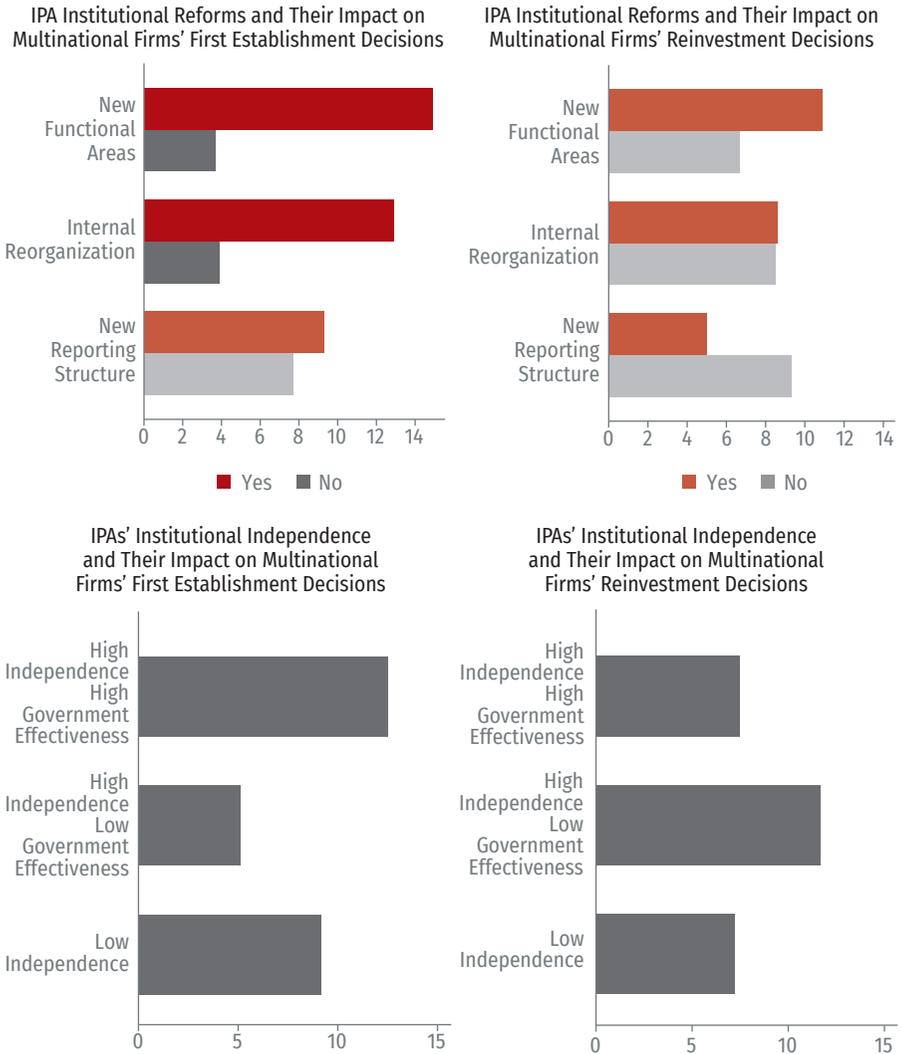


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¹⁰⁴ In this regard, it is important to note that while group-specific estimates may differ visually in virtually all cases, not all of these are statistically significantly different from each other in each of the dimensions in question. The figures below distinguish these cases using different tones when two categories are involved—darker for significant differences and lighter for nonsignificant differences—and so does the discussion thereon.

¹⁰⁵ Collaboration with a wider range of entities and adoption of new reporting schemes also seem associated with greater effects but the difference is not statistically significant.

FIGURE 4.3 IMPACT OF IPA ASSISTANCE ON FIRST ESTABLISHMENT AND REINVESTMENT BY MULTINATIONAL FIRMS, BY IPAS' OVERALL CHARACTERISTICS (continued)



Source: Author's calculations based on data from WorldBase and national IPAs.

IPAs' degree of institutional independence makes less of a difference and only does so when governments are highly effective. In short, to attract more new multinational firms, a flexible, independent IPA and a well-functioning government are required (figure 4.3, third panel).

Unlike what is observed for first establishment, only the intensity of targeting makes a difference for reinvestment. IPAs whose strategies are more targeted have larger effects on the local expansion of multinational firms through the creation of new affiliates. Overall, other attributes do not appear to significantly affect the relative effectiveness of IPAs' efforts in favoring these subsequent establishments in countries, with the marginal exception of the degree of institutional independence in a context characterized by low government effectiveness (figure 4.3, right panels).¹⁰⁶ While the total number of other entities with which IPAs interact does not seem to matter for reinvestment, as shall be seen below, coordination and cooperation with specific institutional actors have a decisive effect on the impact of IPA assistance services.

Who IPAs Are and How This Affects Their Impacts

Overview

Most of the factors defining who IPAs are affect their impact on multinational firms' arrival in their respective countries. These include IPAs' legal status, reporting schemes, positions in the investment promotion institutional ecosystem, available financial resources, number and profile of employees, and network of domestic and overseas offices. **In contrast, a narrower set of these factors are relevant to their influence on multinational firms' reinvestment decisions.** Total budget, the total number of employees and how are these remunerated, and the overall size of IPAs' networks of both domestic and overseas offices are not associated with better outcomes like they are for first establishment.

Specific Institutional Factors

IPAs that are the single public entities responsible for investment promotion at the national level, report to a ministry, and coexist

¹⁰⁶ The same applies to the creation of new functional areas like reform modality.

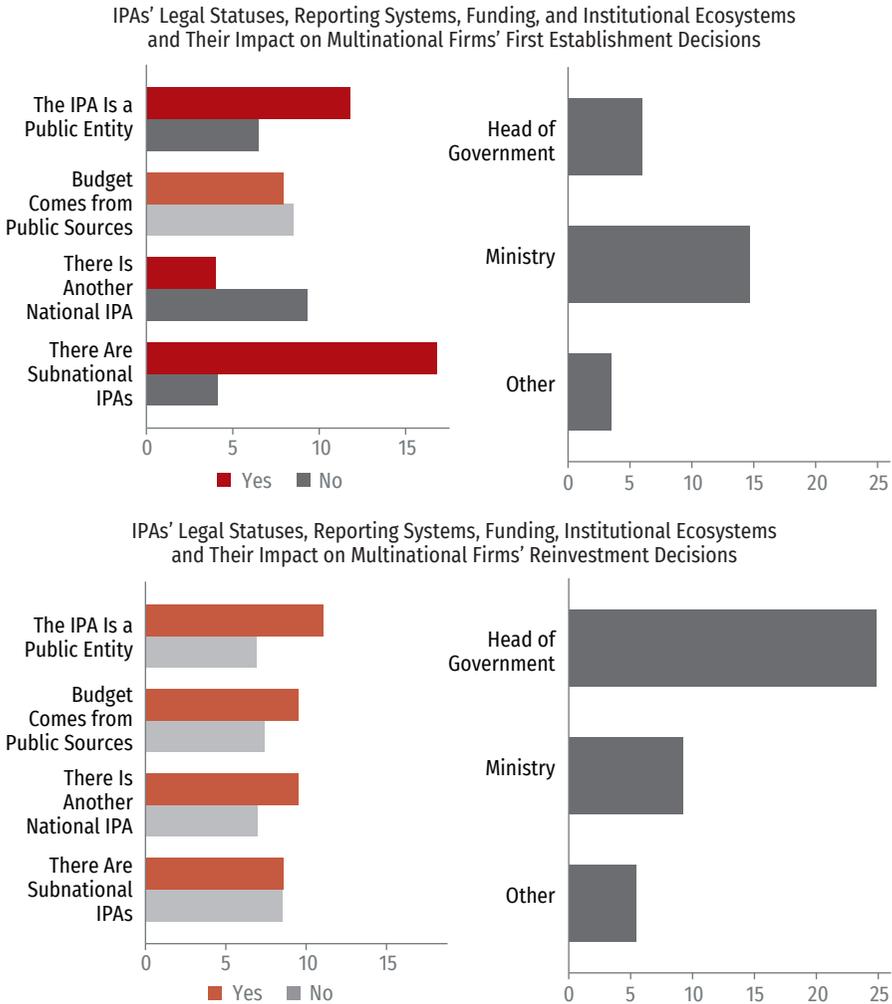
with subnational counterparts that make parallel efforts in this area seem to have a greater effect on the establishment of new multinational firms. IPAs that are legally constituted as public organizations and whose activities are overseen by ministries tend to be more effective in attracting foreign firms, regardless of the source of their funding. This is also the case when subnational IPAs coexist with the national IPA, which points to the complementarity of promotional efforts at different jurisdictional levels. **In turn, institutional fragmentation in the form of a multiplicity of agencies with overlapping investment promotion functions in the same geographical area reduces the effectiveness of IPA support.** This can be traced back to multiple, mutually reinforcing reasons. For instance, fragmentation can be associated with resource dispersion and entities having suboptimal sizes, a lack of coordination between programs, and even wasteful competition between them. Importantly, the coexistence of several agencies can imply a more complex, harder-to-navigate institutional environment and can potentially create a less positive first impression for firms that are new to the country relative to competing locations (figure 4.4., upper panel).¹⁰⁷

Interestingly, only IPAs' reporting systems appear to make a difference in terms of how their assistance influences multinational firms' reinvestment decisions. IPAs that directly report to the head of government seem to have better outcomes. Unlike with first establishment, legal status, budget financing, and horizontal and vertical fragmentation do not have clear performance implications (figure 4.4., upper panel).¹⁰⁸

¹⁰⁷ These patterns remain the same when combining different attributes of the agencies. Thus, for instance, when IPAs are classified into four groups based on whether or not there are other national and/or subnational agencies, estimates reveal that the largest impacts correspond to IPAs operating in countries where they are the sole national-level agency but where there are also subnational agencies. Conversely, the lowest effects are observed for countries in which there are no subnational agencies that share the national jurisdiction with at least one more IPA. The findings are similar for other combinations including public entities and reporting to a ministry, public entities, and the (lack of) presence of another national-level IPA, and public entities and the presence of subnational IPAs. These specific estimates are available from the author upon request.

¹⁰⁸ IPAs that are public entities, whose funds originate to a larger extent from public sources, and that coexist with other national agencies would tend to have greater impacts on reinvestment, but the differences are not statistically significant.

FIGURE 4.4 IMPACT OF IPA ASSISTANCE ON FIRST ESTABLISHMENT AND REINVESTMENT BY MULTINATIONAL FIRMS, BY IPAS' LEGAL STATUS, REPORTING SYSTEM, FUNDING, AND INSTITUTIONAL ECOSYSTEM



Source: Author's calculations based on data from WorldBase and national IPAs.

IPAs that have more financial means, particularly for investment promotion, tend to exert more of an influence on multinational firms' deciding to enter their territories. More specifically, support from IPAs with larger budgets (both overall budgets and those spe-

cifically targeting investment promotion) makes it more likely for foreign firms to open a first affiliate in the respective countries than support from less well-endowed counterparts. This holds both when considering the absolute investment promotion budget and when normalizing this budget by country size as proxied by GDP (and population). This is the case because the support in question could consist of more or higher-quality services (figure 4.5, upper panel).

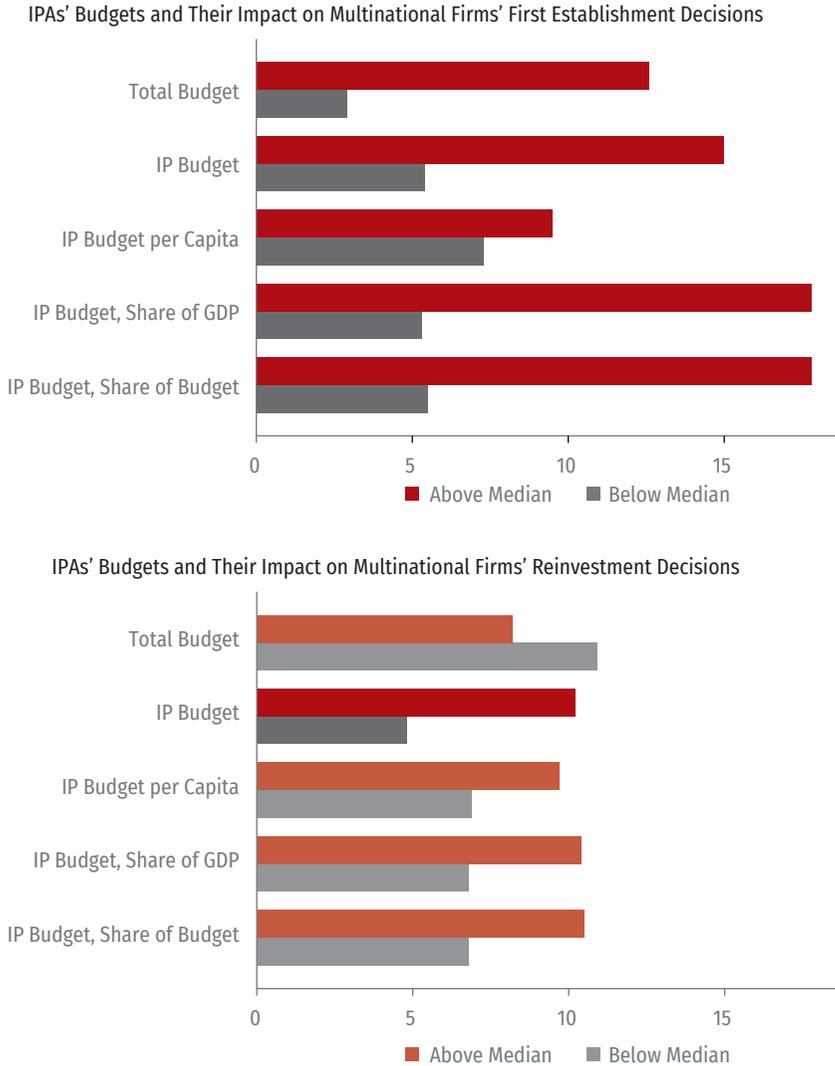
The absolute size of the investment promotion budget also affects the impact IPAs have on reinvestment, but to a lesser extent than for new establishments. IPAs' total budgets, in turn, do not appear to be crucial. This may indicate that assistance from IPAs through programs other than those related to investment promotion (e.g., innovation promotion, general support services, etc.) can play a more important role in inducing new firms to locate to the country (figure 4.5, lower panel).

IPAs with more, better-qualified, and better-remunerated personnel tend to be more effective at attracting new multinational firms. More employees, particularly those with graduate and post-graduate university degrees, and employees who are also paid wages above the relevant public-sector benchmark are associated with IPAs having a greater impact on foreign firms deciding to establish a first affiliate in the countries in question (figure 4.6., upper panel).

Staff numbers and relative remuneration make less of a difference for reinvestment. Having employees with university degrees also seems to be more conducive to the establishment of additional affiliates, but the size of the workforce either as a whole or staff working in investment promotion, and how well this is remunerated appear to be less important (figure 4.6, lower panel).¹⁰⁹

¹⁰⁹ IPAs with more employees with prior experience in the private sector tend to perform better, but the difference is not statistically significant. When these attributes are combined, estimates suggest that IPAs in which both the share of employees with university-level education and the share with prior private-sector experience is above median have the largest impacts. This holds for both first establishment and reinvestment. These specific estimates are available from the author upon request.

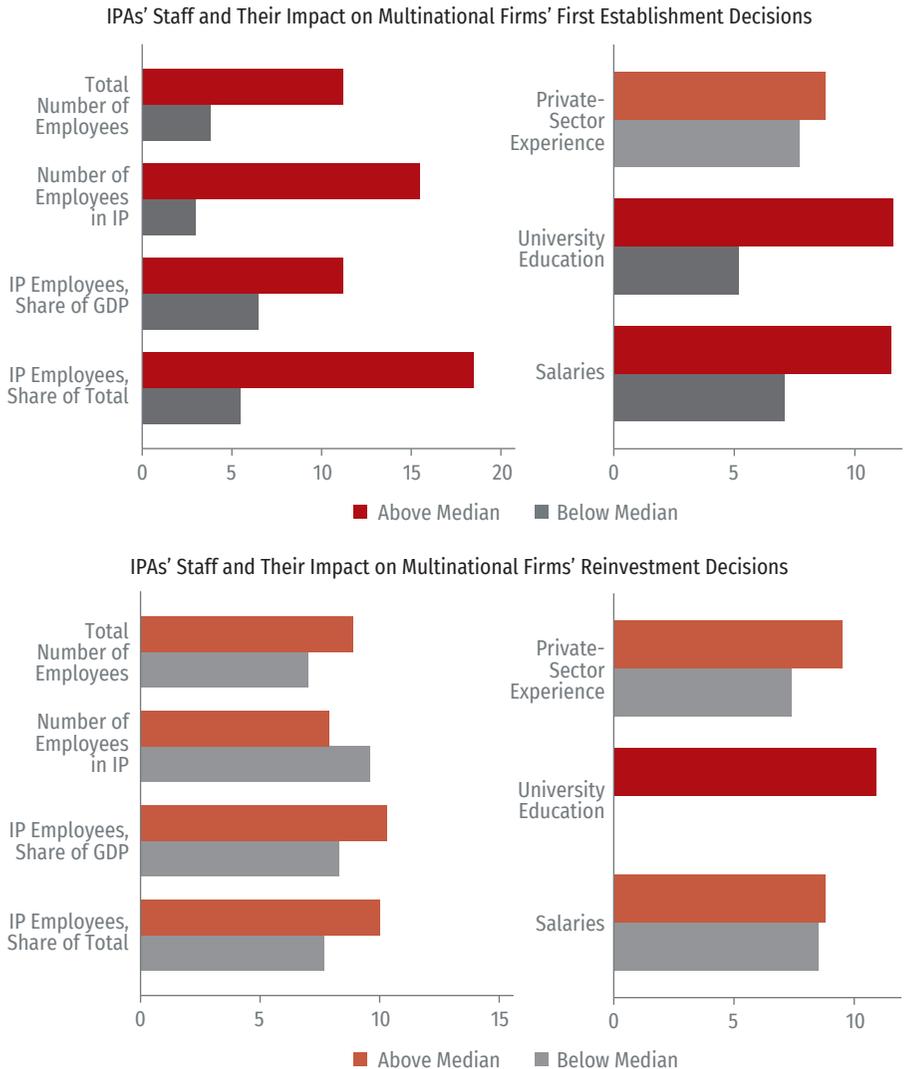
FIGURE 4.5 IMPACT OF IPA ASSISTANCE ON FIRST ESTABLISHMENT AND REINVESTMENT BY MULTINATIONAL FIRMS, BY IPA BUDGET



Source: Author's calculations based on data from WorldBase and national IPAs.

Having a larger network of offices appears to play a more critical role in the effect of IPA assistance on first establishment than on reinvestment. IPAs with domestic offices other than headquarters and several overseas offices have significantly larger impacts on the probability of multinational firms opening an affiliate in the respec-

FIGURE 4.6 IMPACT OF IPA ASSISTANCE ON FIRST ESTABLISHMENT AND REINVESTMENT BY MULTINATIONAL FIRMS, BY IPA STAFF

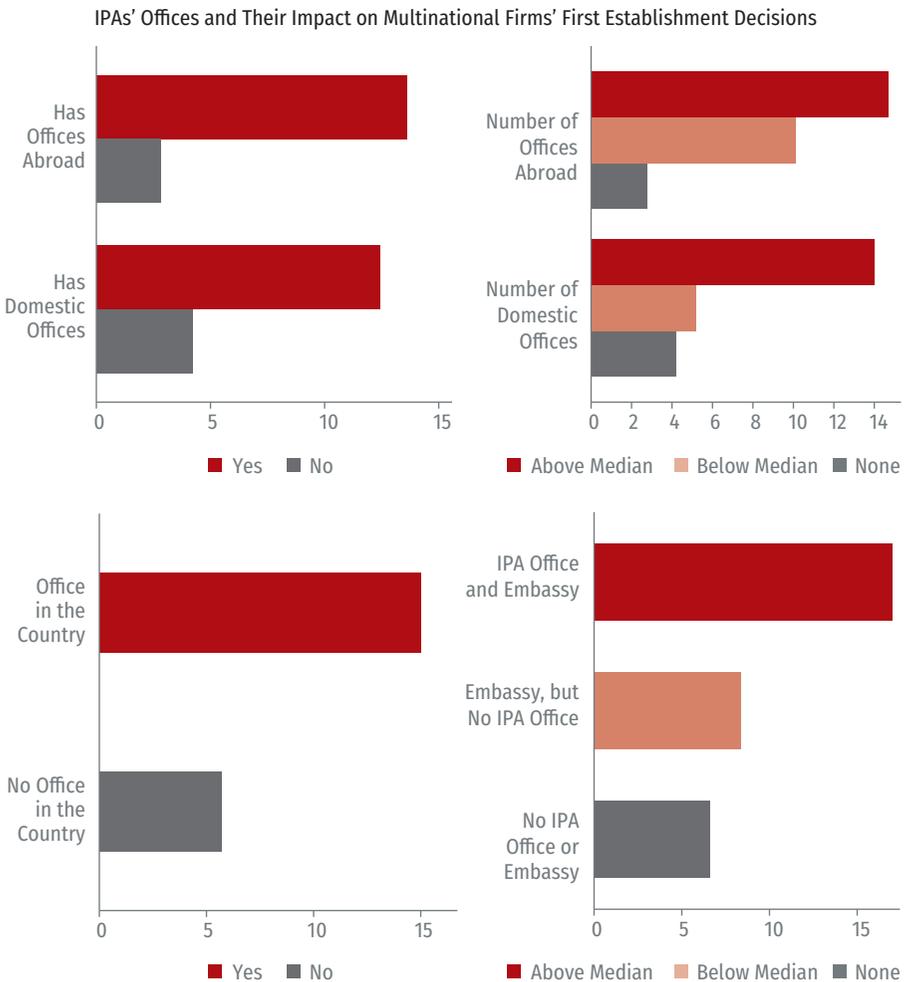


Source: Author's calculations based on data from WorldBase and national IPAs.

tive countries than their counterparts when these only have a single central office (figure 4.7, first panel). This is not the case for reinvestment, as both IPAs with and without additional offices have similar effects on foreign firms' decisions to establish new affiliates in those economies in which they are already operating (figure 4.7, third

panel). Having said that, a presence in specific home countries leads to better results along multinational production firms’ cross-country and within-country extensive margins—that is, getting firms to enter and expand through additional affiliates in host economies, respectively. This is particularly the case when there is also an embassy. However, these high-level diplomatic representations have a sub-

FIGURE 4.7 IMPACT OF IPA ASSISTANCE ON FIRST ESTABLISHMENT AND REINVESTMENT BY MULTINATIONAL FIRMS, BY IPAS’ NETWORKS OF OFFICES

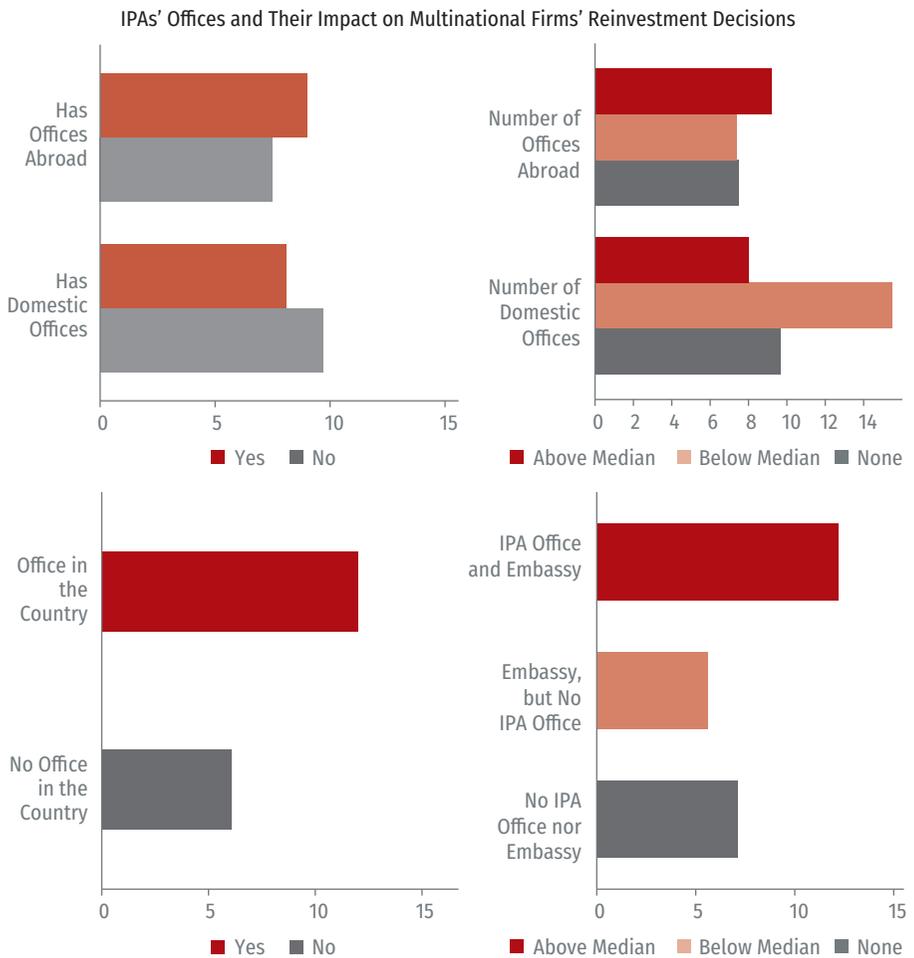


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stantially smaller impact on both new and subsequent establishments in the absence of a specialized office that is explicitly tasked with investment promotion (figure 4.7, second and fourth panels).

The geography of the network of foreign offices matters for both first establishment and reinvestment, in contrast to the situation

FIGURE 4.7 IMPACT OF IPA ASSISTANCE ON FIRST ESTABLISHMENT AND REINVESTMENT BY MULTINATIONAL FIRMS, BY IPAS' NETWORKS OF OFFICES *continued*



Source: Author's calculations based on data from WorldBase and national IPAs.

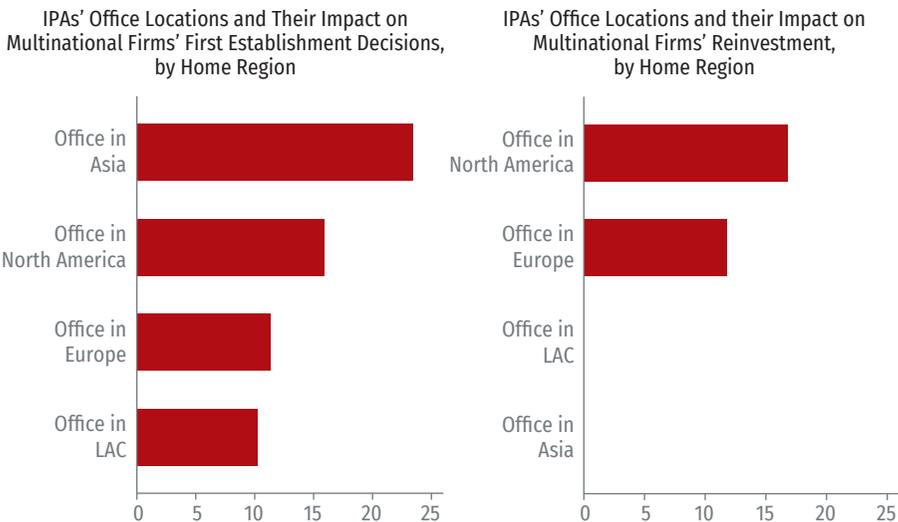
with its size. In particular, a direct presence in Asia and North America translates into a more effective attraction of new multinational firms from these regions relative to a presence of this sort in Europe and other LAC countries (figure 4.8, left panel). As for the establishment of additional affiliates of firms that are already active in their economies, offices in North America and Europe tend to generate better outcomes (figure 4.8, right panel).

What IPAs Do and How This Affects Their Impacts

Overview

What IPAs do also has a decisive effect on their impact on multinational firms' first establishments. In particular, the total number of IPA mandates and the particular sets of these, their relative specialization in the different investment promotion functions (image-building, investment generation, investment facilitation, and policy advocacy), and the specific services through which they

FIGURE 4.8 IMPACT OF IPA ASSISTANCE ON FIRST ESTABLISHMENT AND REINVESTMENT BY MULTINATIONAL FIRMS, BY LOCATION OF IPA OFFICES



Source: Author's calculations based on data from WorldBase and national IPAs.

assist multinational firms (information provision and other activities such as support with administrative procedures or identifying and connecting with suppliers) are all factors that account for the relative effectiveness of their interventions. **Virtually none of the dimensions that capture what IPAs actually do have major implications for their effects on reinvestment by already established multinational firms.** This is particularly the case with the individual mandates, the relative functional specialization, and the nature of the various kinds of investment promotion support, which are not clearly associated with differential effects. Still, cross-mandate patterns generally differ from those observed for assistance to foreign firms that are new to the country. Specifically, export promotion and trade facilitation seem to be marginally associated with stronger impacts on reinvestment.

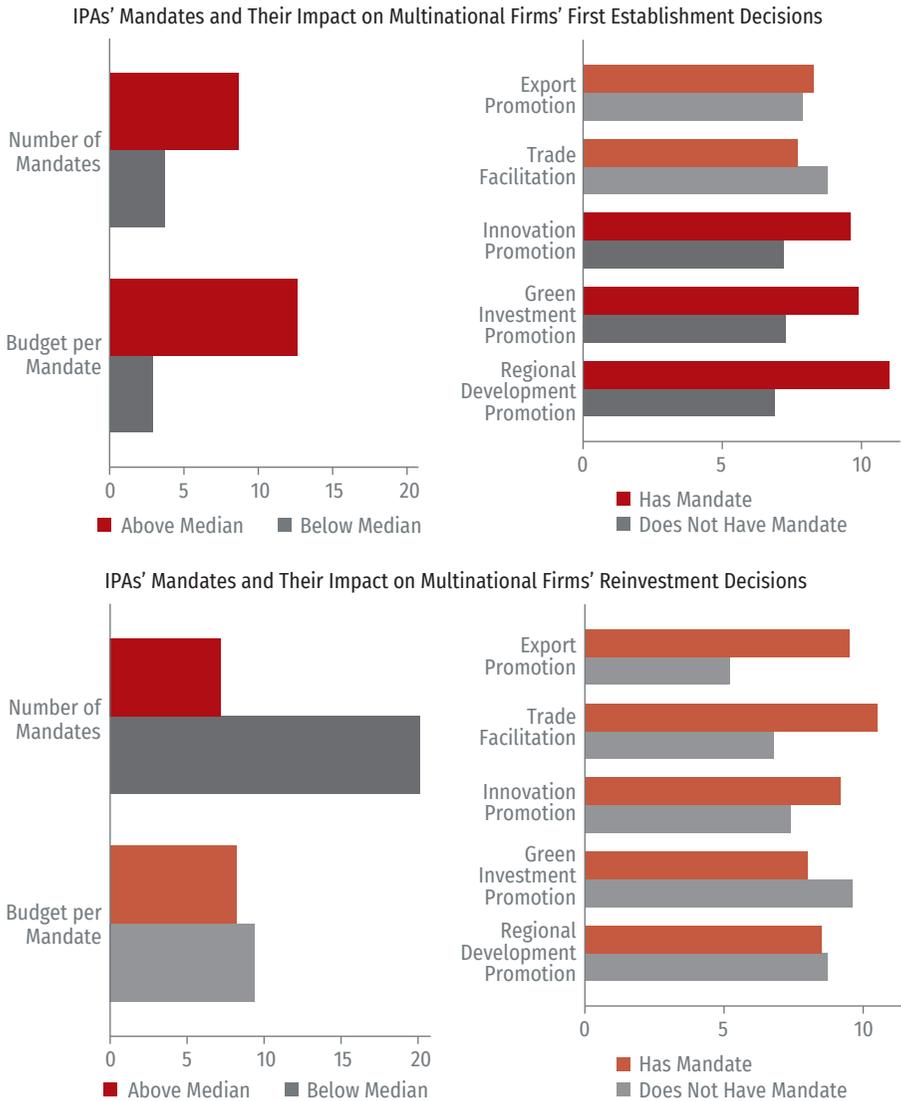
Specific Mandates, Functions, and Activities

IPAs with more, better-funded mandates that are also responsible for innovation promotion, green investment promotion, or regional development show higher effectiveness in attracting new multinational firms. This also holds for IPAs tasked with regional development in combination with either innovation promotion or green investment promotion.¹¹⁰ In contrast, being tasked with export promotion and trade facilitation does not seem to make a difference to how IPAs affect these firms' decisions to enter the countries in question (figure 4.9, upper panel). **Unlike the case with first establishments, a narrower set of mandates appears to work better in terms of inducing reinvestment.** Moreover, having or not specific additional mandates does not translate into significant differential impacts of IPAs' support on this outcome (figure 4.9, lower panel).¹¹¹

¹¹⁰ These results are available from the author upon request.

¹¹¹ Support from IPAs that have a mandate to promote and facilitate trade tend to have a greater effect on foreign firms opening new affiliates than support from IPAs without these mandates does. Addressing trade-related information and administrative costs could play an important role in enabling the expansion of these firms in the economies they are already operating in. However, the differences are not statistically significant.

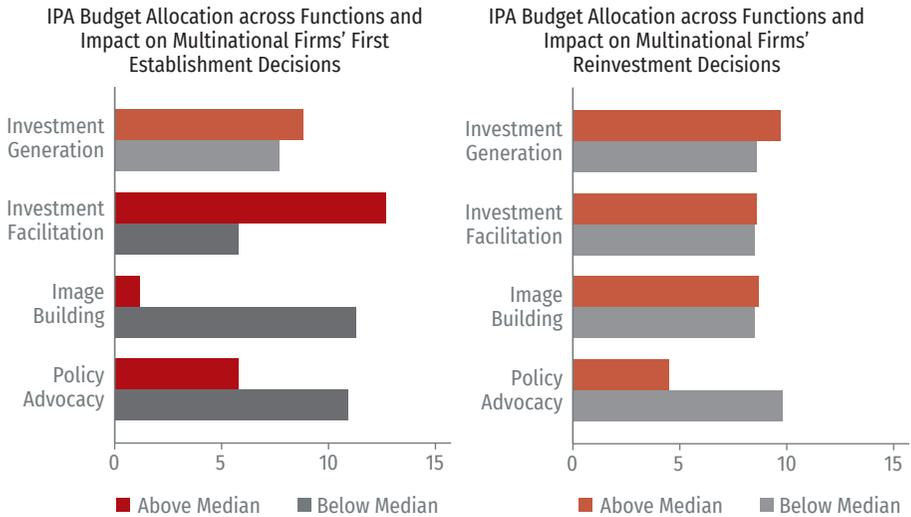
FIGURE 4.9 IMPACT OF IPA ASSISTANCE ON FIRST ESTABLISHMENT AND REINVESTMENT BY MULTINATIONAL FIRMS, BY IPA MANDATES



Source: Author's calculations based on data from WorldBase and national IPAs.

More specialization in the core investment promotion functions appears to work best to attract new multinational firms. More precisely, IPAs that allocate larger shares of their investment promotion budgets (and staff) to investment generation and, especially,

FIGURE 4.10 IMPACT OF IPA ASSISTANCE ON FIRST ESTABLISHMENT AND REINVESTMENT BY MULTINATIONAL FIRMS, BY IPA BUDGET ALLOCATION ACROSS FUNCTIONS



Source: Author's calculations based on data from WorldBase and national IPAs.

investment facilitation have a greater impact on the likelihood of foreign firms establishing an affiliate in their respective countries.¹¹² The opposite holds for image-building and policy advocacy. This is not surprising as these functions primarily consist of generic country (or country–sector) marketing and activities seeking to address issues faced by already established firms (figure 4.10, left panel).

In general, the specific investment promotion functions that IPAs specialize in do not seem to result in significant differences in effects on multinational firms' reinvestment decisions. IPAs that devote proportionally more financial (and human) resources to investment generation, investment facilitation, and image-building seem to be as successful on this front as their counterparts that do

¹¹² While specializing specifically in investment generation does not appear to make a significant difference, allocating more financial (and human) resources to both investment generation and investment facilitation results in substantially better performance. The respective estimates are available from the author upon request.

not do so. Strikingly, placing more weight on policy advocacy in IPAs' investment promotion budgets does not translate into established foreign firms setting up more new affiliates (figure 4.10, right panel). This could reflect the fact that this function is performed in close collaboration with several other—mostly public—entities whose active involvement is indispensable when addressing the issues identified by the firms and providing them with the public inputs they require to carry out their activities.

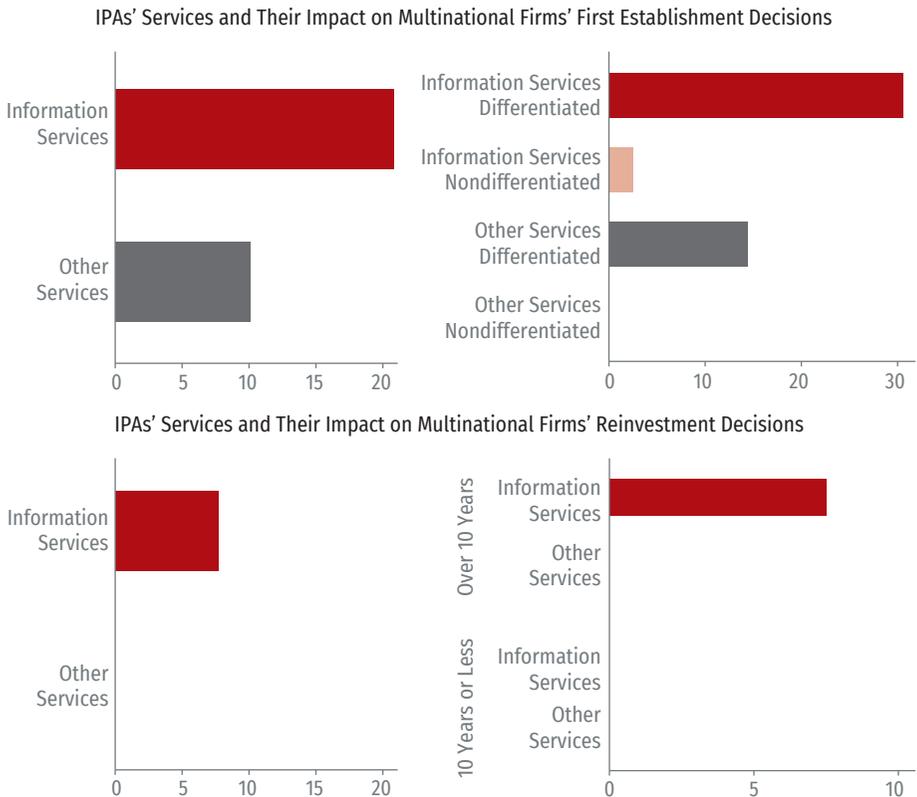
Specifically, IPA information services make a difference when it comes to multinational firms' decisions around both first establishments and reinvestment. Provision of relevant timely information on the specific business conditions for the sector (and even the firm) in the country in question—which is a key IPA activity—affects the probability of foreign firms establishing a first affiliate twice as much as other IPA services do (figure 4.11, upper panel). This is especially the case for sectors producing differentiated goods and services. In addition, assistance with information appears to be the only area that matters for firms seeking to expand their presence in the country through new affiliates, particularly when 10 or more years have passed since these firms created their last local affiliate (figure 4.11, lower panel).¹¹³

More precisely, a set of individual investment generation and facilitation activities through which these information services are provided tends to be associated with IPA assistance having a greater impact on both first establishment and reinvestment.¹¹⁴ These activities include assistance with finding financing alternatives, matching programs, intelligence gathering, and producing market studies. Other activities that IPAs carry out in performing these core investment promotion functions have more nuanced

¹¹³ Service-specific data (information services and other services) are only available for Chile, Colombia, Costa Rica, Ecuador, Honduras and Mexico (see table A3.3.1 in appendix A3.3).

¹¹⁴ It is worth mentioning that estimates reported in figure 4.11 are based on service-specific, firm-level data for individual IPAs, whereas those referred to in this paragraph and presented in figure 4.12 below only rely on differences across IPAs.

FIGURE 4.11 IMPACT OF IPAS' SPECIFIC ASSISTANCE SERVICES ON FIRST ESTABLISHMENT AND REINVESTMENT BY MULTINATIONAL FIRMS

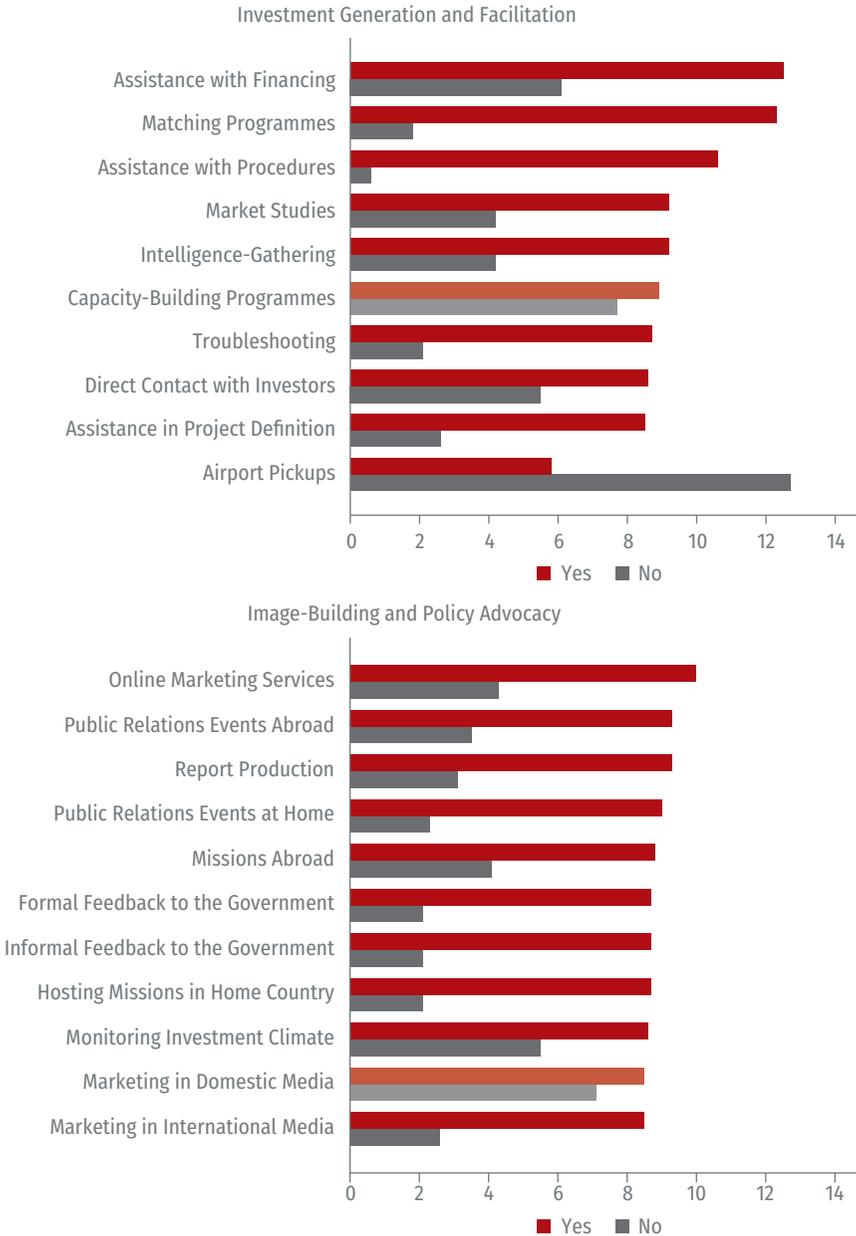


Source: Author's calculations based on data from WorldBase and national IPAs and Rauch (1999).

or nondifferential effects. For instance, assistance with procedures appears to matter more for how effective IPAs are at attracting new multinational firms than for inducing those already present in their countries to open new affiliates, whereas airport pickups do not seem to be more conducive to either outcome. Some image-building and policy advocacy activities also seem to make a difference to both inducing firms to enter and expand in the country. This is particularly the case with public relations events at home and abroad, incoming and outgoing missions, and formal and informal feedback to the government (figure 4.12, first to fourth panels).

FIGURE 4.12 IMPACT OF IPA ASSISTANCE ON FIRST ESTABLISHMENT AND REINVESTMENT BY MULTINATIONAL FIRMS, BY IPAS' SPECIFIC ACTIVITIES

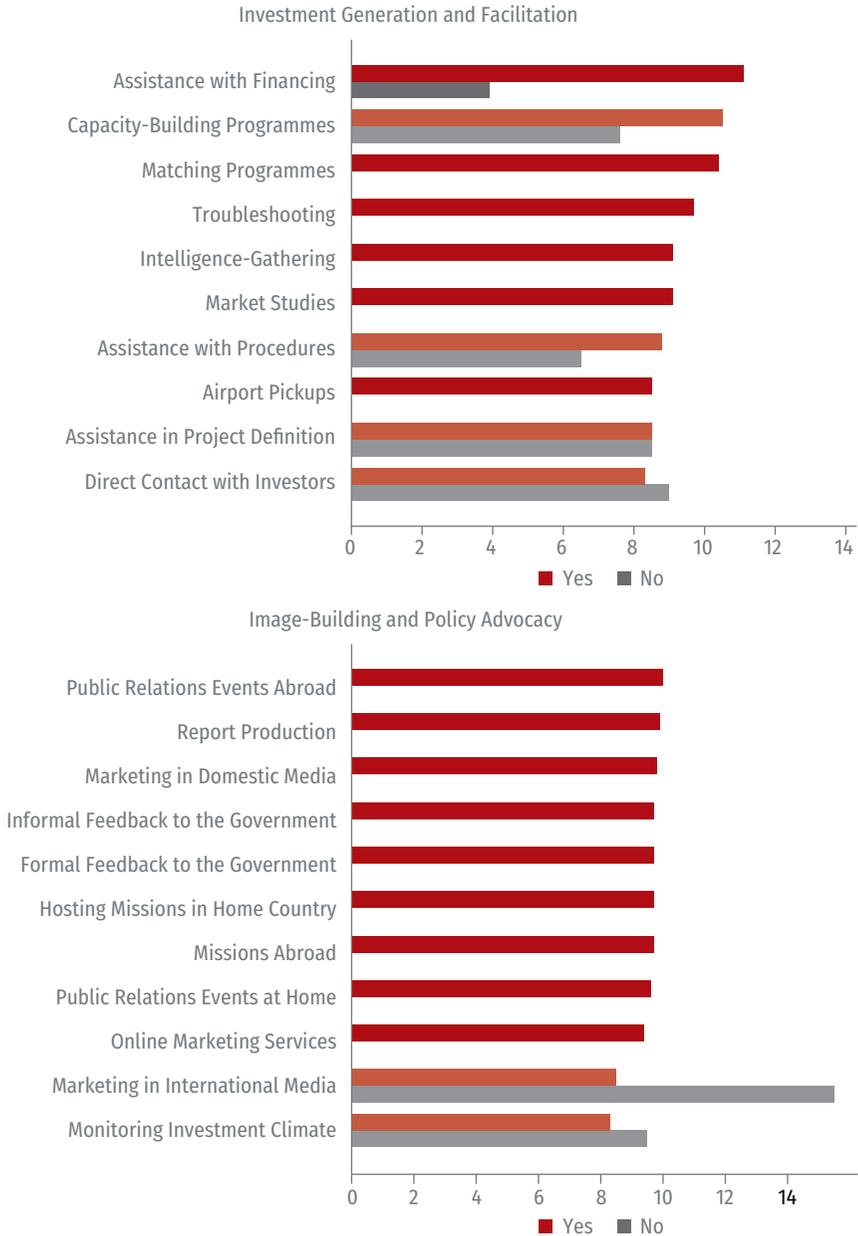
Specific IPA Activities and Their Impact on Multinational Firms' First Establishment Decisions



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FIGURE 4.12 IMPACT OF IPA ASSISTANCE ON FIRST ESTABLISHMENT AND REINVESTMENT BY MULTINATIONAL FIRMS, BY IPAS' SPECIFIC ACTIVITIES (continued)

Specific IPA Activities and Their Impact on Multinational Firms' Reinvestment Decisions



Source: Author's calculations based on data from WorldBase and national IPAs.

How IPAs Operate and How This Affects Their Impacts

Overview

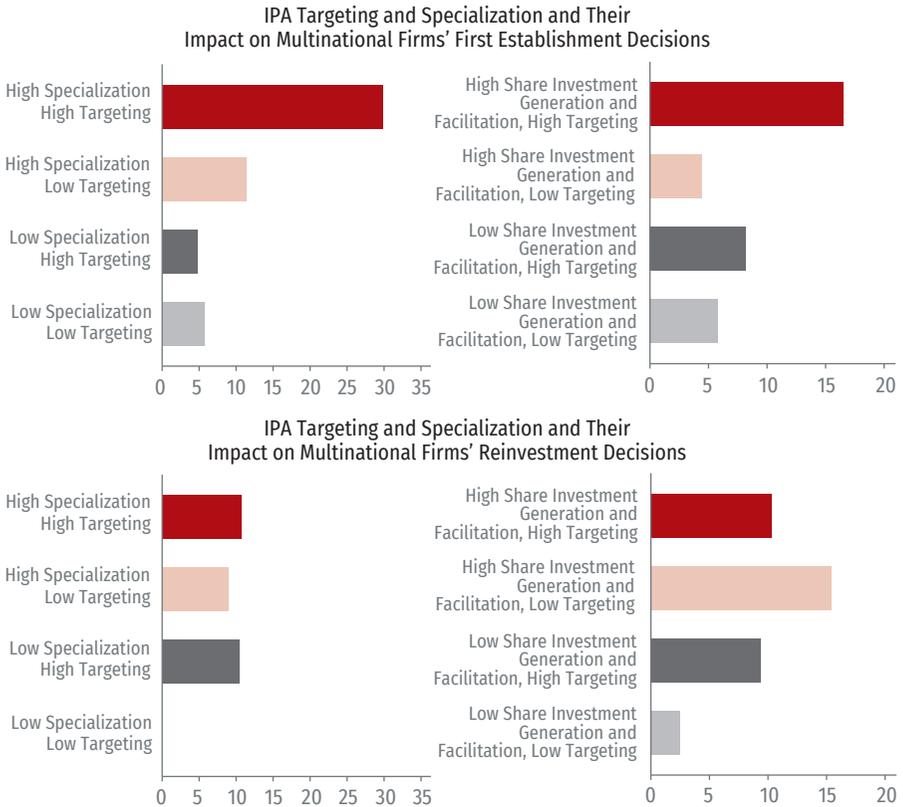
How IPAs perform their functions and carry out their activities also shapes how much they affect multinational firms' location behavior along the country extensive margin. More specifically, the size of IPA assistance impacts on the establishment of first affiliates is determined by IPA targeting strategies (in combination with their functional specialization and the spatial distribution of their overseas offices) and the broadness of their institutional interactions and the specific organizational stakeholders they collaborate with. The way IPAs operate also affects their influence on multinational firms' decisions to expand in countries that they are already present in. This applies particularly to the targeting intensity of their promotional efforts and the set of individual entities they cooperate with.

Targeting

IPAs that are highly specialized and whose promotional strategies are highly targeted—in terms of both the prioritization and exclusion dimensions—are the most effective at attracting new multinational firms, significantly more so than alternative approaches. This is especially true for IPAs that assign relatively more resources to investment generation and investment facilitation. Having said that, it is worth stressing that assistance from IPAs consistently has positive and significant effects on first establishment across the whole spectrum of specialization and targeting (figure 4.13, upper panel).

While there are generally no significant differences across overall specialization levels and targeting intensity degrees in terms of how IPA support impacts multinational firms' reinvestment decisions, devoting proportionally more financial means to investment generation and investment facilitation seems to gen-

FIGURE 4.13 IMPACT OF IPA ASSISTANCE ON FIRST ESTABLISHMENT AND REINVESTMENT BY MULTINATIONAL FIRMS, BY IPA TARGETING AND SPECIALIZATION



Source: Author's calculations based on data from WorldBase and national IPAs.

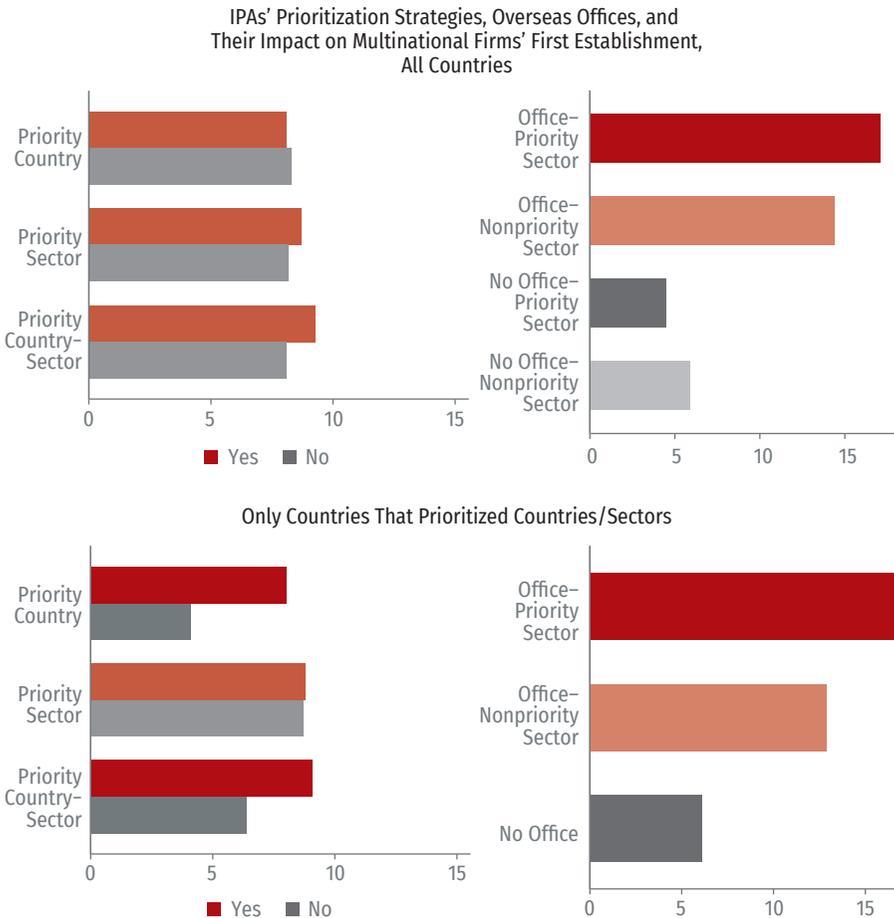
erate better results. Furthermore, in this case, assistance from IPAs that combine relatively low specialization with unfocused promotional efforts has no positive impacts (figure 4.13, lower panel).

While prioritization does not seem to make a difference across all IPAs, specific country- and country–sector-prioritizations do have differential impacts for first establishment across IPAs that specifically declare they have such priorities. This likely reflects the fact that even IPAs that do not formally prioritize countries, sectors, or combinations of these do actually prioritize

them when it comes to attracting new multinationals to their territories. In contrast, sector- and especially country-sector prioritizations are associated with stronger effects on reinvestment (figure 4.14, left panels).

Sector prioritization generates the best results when combined with actual country prioritization through an onsite presence in

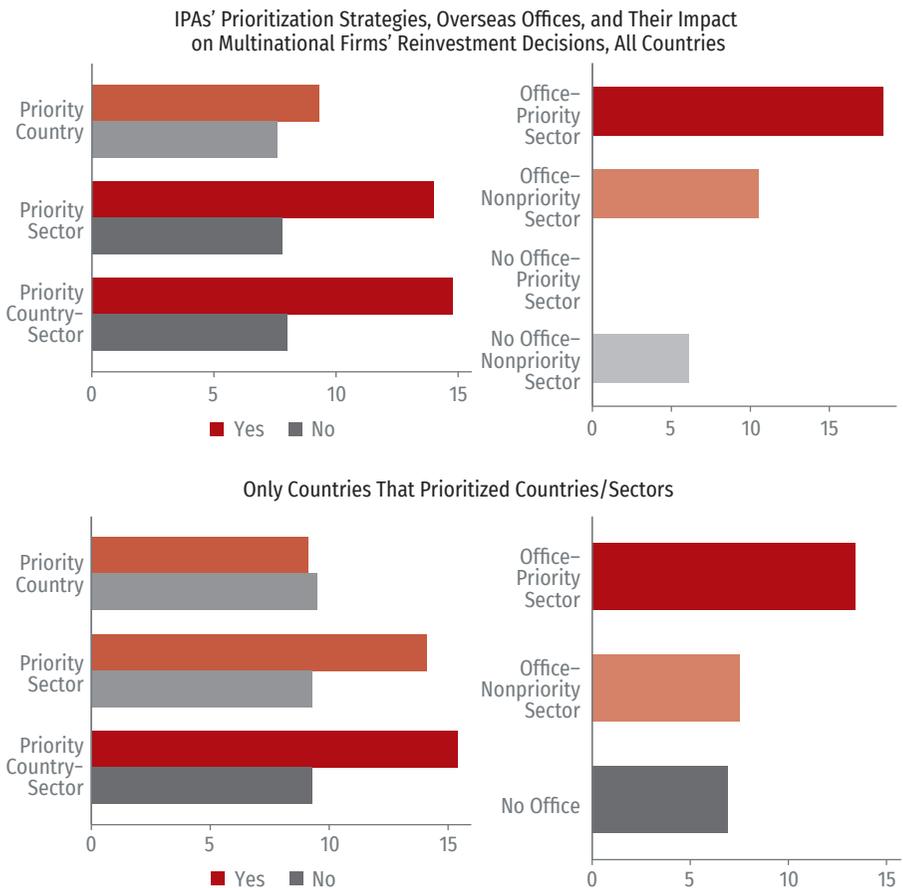
FIGURE 4.14 IMPACT OF IPA ASSISTANCE ON FIRST ESTABLISHMENT AND REINVESTMENT BY MULTINATIONAL FIRMS, BY IPAS' PRIORITIZATION STRATEGIES AND OVERSEAS OFFICES



(continued on next page)

the firms' home economies. The effect of IPA assistance on the probability of multinational firms establishing a first affiliate or additional ones is greatest for country–sector pairs in which the IPA has an overseas office in the country in question and the IPA assists proportionately more firms in the sector in question or provides special services to them. When either of these conditions are not met and especially when no office exists in the home economy, the impacts are clearly smaller (figure 4.14, right panels).

FIGURE 4.14 IMPACT OF IPA ASSISTANCE ON FIRST ESTABLISHMENT AND REINVESTMENT BY MULTINATIONAL FIRMS, BY IPAS' PRIORITIZATION STRATEGIES AND OVERSEAS OFFICES (continued)



Source: Author's calculations based on data from WorldBase and national IPAs.

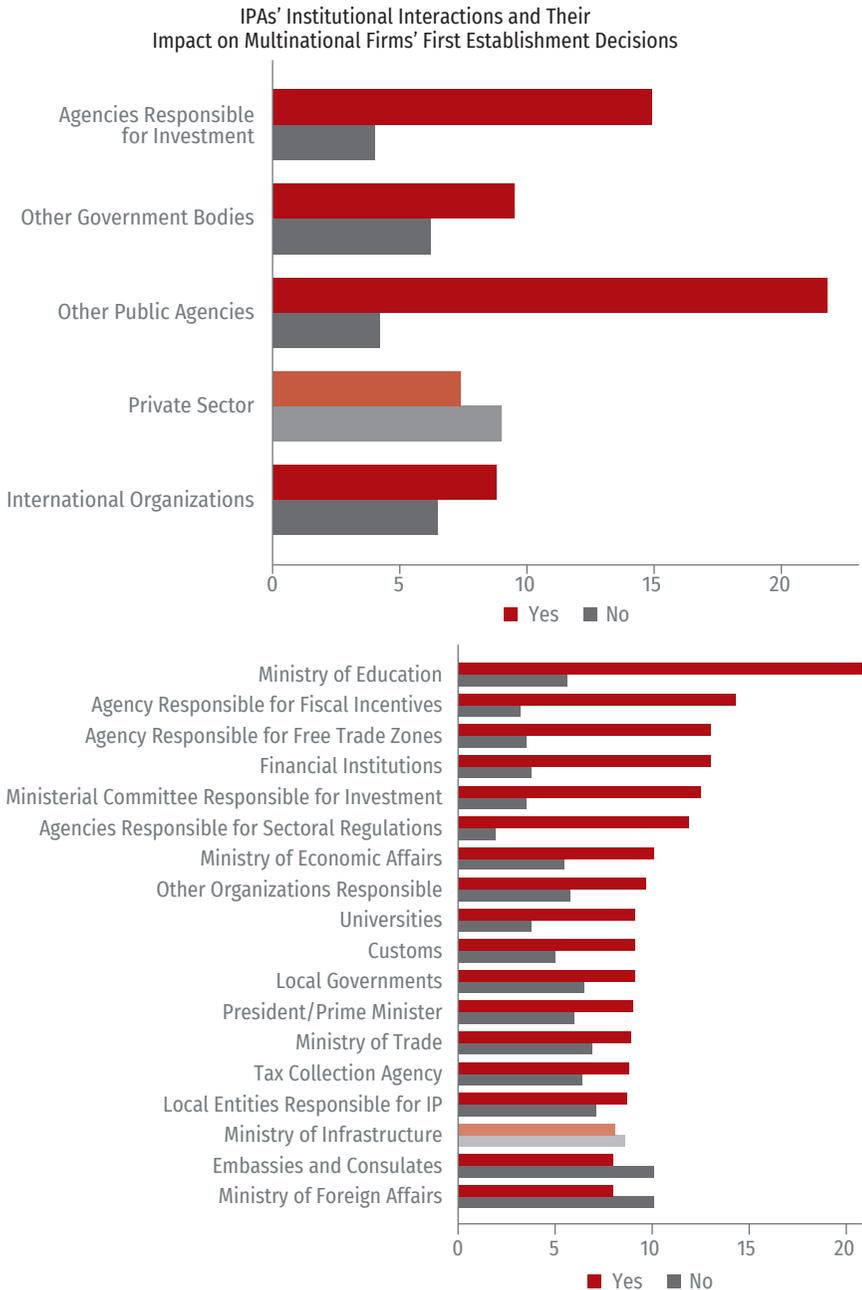
Coordination and Cooperation

IPAs that coordinate and cooperate closely with public agencies responsible for investment, other government bodies, and especially other public agencies perform substantially better than their peers that operate more independently from these entities when it comes to inducing multinational firms to choose the country as one of their locations.¹¹⁵ Key partners include the ministry of education; the agencies responsible for fiscal incentives, free trade zones, and sectoral regulations; financial institutions; ministerial committees responsible for investment; and the ministry of economic affairs. In contrast, differences in effectiveness are, on average, less pronounced across IPAs that collaborate more or less actively with private-sector organizations and international organizations (figure 4.15, first and second panels).

Unlike with first establishment, the extent of collaboration with specific groups of institutional actors seems to matter less when it comes to IPAs' impact on multinational firms' reinvestment decisions, except for international organizations. Nevertheless, working with a number of individual entities does appear to make a difference in this sense. These entities are the agencies responsible for free trade zones; the ministry of economic affairs; the ministerial committees responsible for investment; the agencies responsible for fiscal incentives and sectoral regulations; and the ministry of education, as is the case for first establishment. However, it is noteworthy that in the case of reinvestment this collaboration also extends to the offices of presidents or prime ministers, the ministry of infrastructure, and tax and customs agencies (figure 4.15, third and fourth panels).

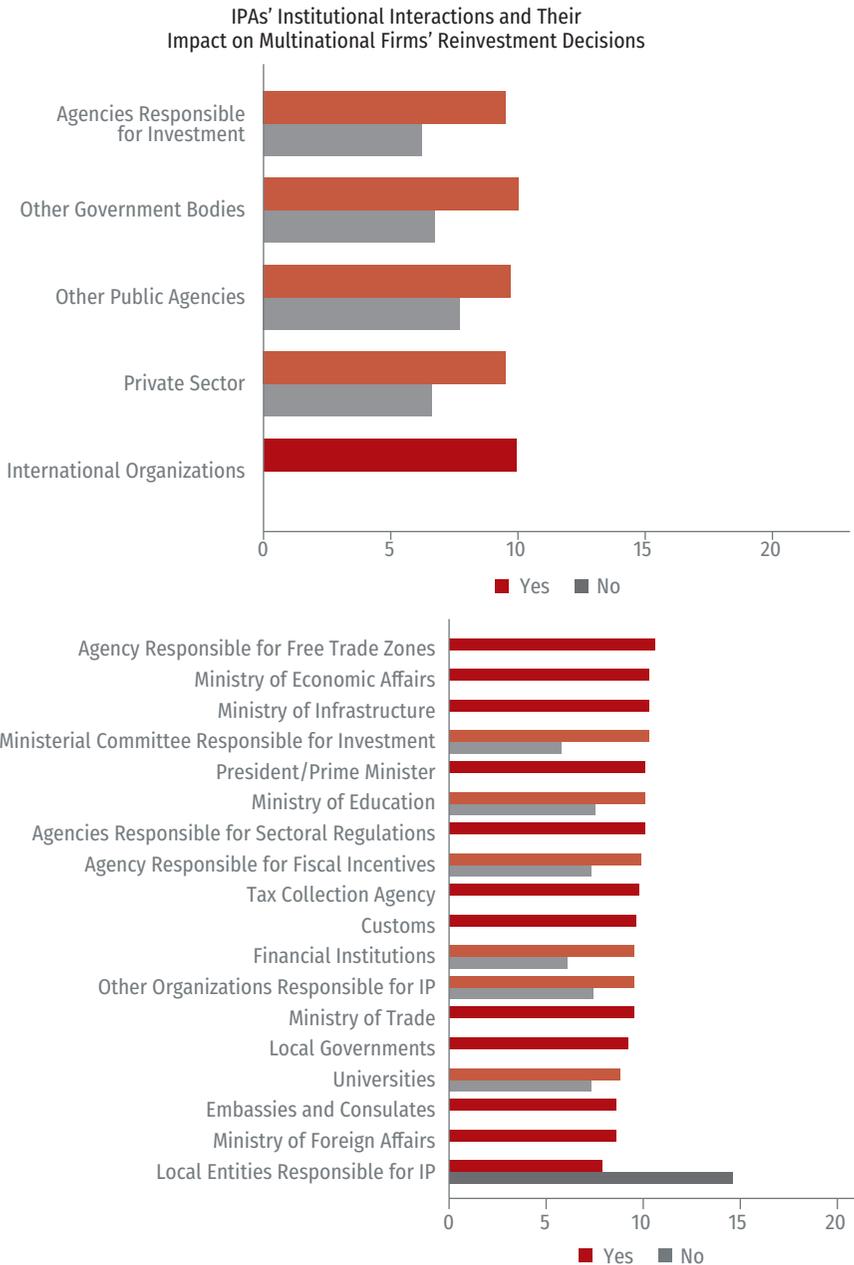
¹¹⁵ Other public agencies include the tax agency, customs agency, immigration agency, border regulatory agencies, and central bank, among others. Other government bodies include the president/prime minister's office, ministry of foreign trade, ministry of foreign affairs, embassies and consulates, ministry of education, and ministry of infrastructure, among others (see Box 4.4 in Volpe Martincus and Sztajerowska, 2019).

FIGURE 4.15 IMPACT OF IPA ASSISTANCE ON FIRST ESTABLISHMENT AND REINVESTMENT BY MULTINATIONAL FIRMS, BY IPAS' INSTITUTIONAL INTERACTIONS



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FIGURE 4.15 IMPACT OF IPA ASSISTANCE ON FIRST ESTABLISHMENT AND REINVESTMENT BY MULTINATIONAL FIRMS, BY IPAS' INSTITUTIONAL INTERACTIONS (continued)

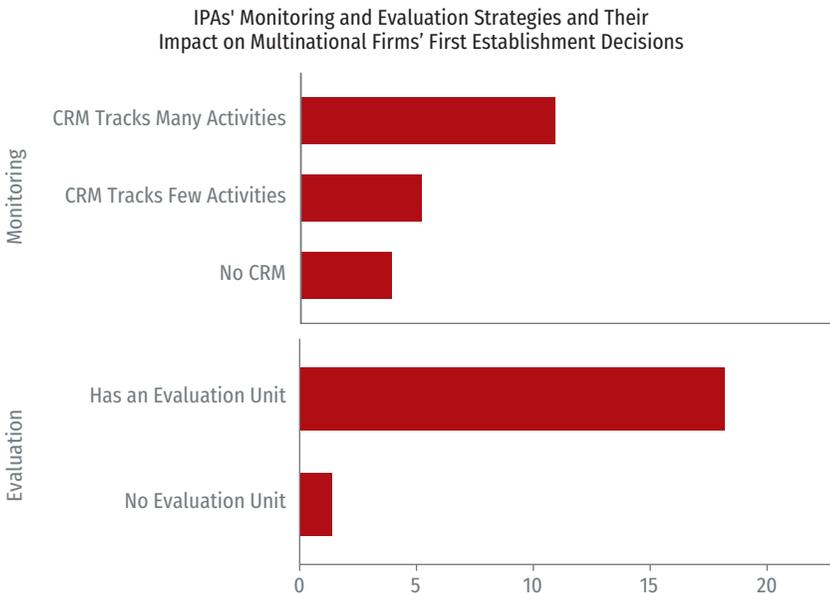


Source: Author's calculations based on data from WorldBase and national IPAs.

Monitoring and Evaluation

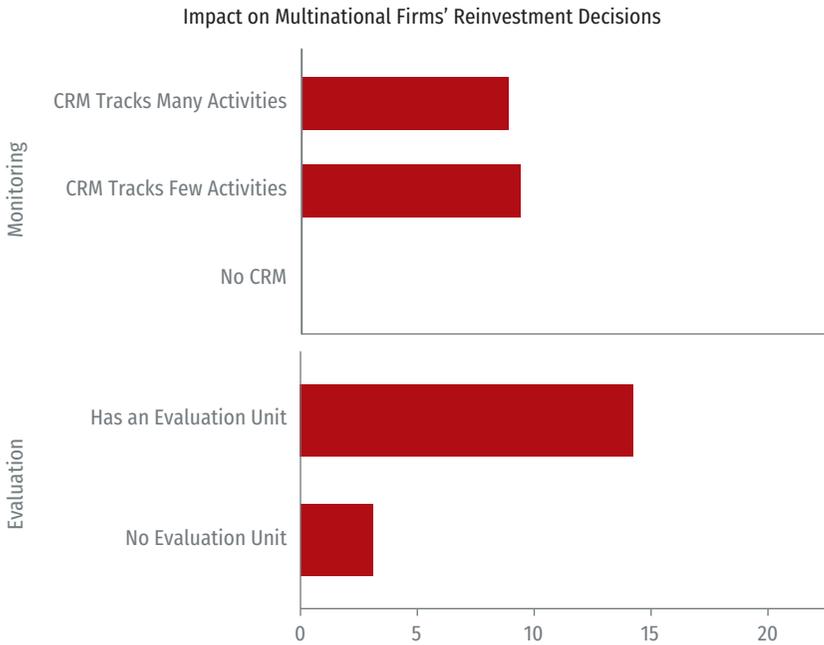
IPAs that have more-developed monitoring frameworks and that have institutionalized evaluation practices through the creation of a dedicated unit responsible for the respective tasks are more effective at enabling both the arrival of new multinational firms and the expansion of those already present in the country. Specifically, having a CRM that allows IPAs to systematically track most or all of the investment promotion activities that they perform is associated with double the impact on first establishment than not having a CRM or having a more basic one. Furthermore, IPAs without CRMs show no ability to significantly affect reinvestment. As for evaluation, the effect on both margins is at least four times larger for IPAs with an evaluation unit than for counterparts without one (figure 4.16, upper and lower panels).

FIGURE 4.16 IMPACT OF IPA ASSISTANCE ON FIRST ESTABLISHMENT AND REINVESTMENT BY MULTINATIONAL FIRMS, BY IPAS' MONITORING AND EVALUATION STRATEGIES



(continued on next page)

FIGURE 4.16 IMPACT OF IPA ASSISTANCE ON FIRST ESTABLISHMENT AND REINVESTMENT BY MULTINATIONAL FIRMS, BY IPAS' MONITORING AND EVALUATION STRATEGIES (continued)



Source: Author's calculations based on data from WorldBase and national IPAs.

WHEN DOES INVESTMENT PROMOTION WORK?

Overview

This section discusses whether and how the specific characteristics of home countries, sectors, and firms are associated with different degrees of IPA effectiveness. The impact of investment promotion assistance on multinational firms opening both their first and subsequent affiliates varies depending on the characteristics of their home countries, the attributes of the sectors in which they operate, and the size and geography of the network of their foreign affiliates. Generally speaking, the effects are greatest when information barriers are most severe, which is consistent with this assistance reducing these barriers.

Which Countries

IPA support has the largest positive effect on multinational firms' decisions to establish a first affiliate or additional ones when these are headquartered in countries where there is less familiarity with the respective host economies or from which it is harder to gather relevant information thereon, especially when these economies are targeted by IPAs. These are countries whose languages or colonizers (if any) are different from the host economies in question and that hence have different historical political and social heritages and receive relatively few migrants from these economies. This primarily applies to countries in Asia, North America, and Europe. Consistently, the impacts are substantially smaller in the case of first establishment and are insignificant for reinvestment for multinational firms from other LAC countries.

Moreover, the size of the impact of IPA services varies with the level of export and import familiarity between the host and home economies for first establishment—that is, the impact is greater for less trade-familiar countries—but not significantly so for reinvestment. Furthermore, there are no clear patterns across distance ranges.

More specifically, investment promotion has a positive effect on fostering the arrival of new multinational firms and the expansion of these through setting up additional affiliates by reducing information frictions across countries that seems to be more pronounced when these countries are subjected to targeted efforts. In other words, prioritization makes a difference when information asymmetries can be expected to be especially severe. This is particularly the case when the migration linkages with these countries are relatively weak, and especially when the home countries are far away.¹¹⁶

¹¹⁶In the case of reinvestment, though, effects are stronger on multinational firms from priority home countries that have trade familiarity with the host economy.

Furthermore, the impact of IPA support on multinational firms' entry is significantly larger when the host and home countries are connected through a PTA, a DTT, and their combination, including also with BITs.¹¹⁷ Instead, in the case of reinvestment, this seems to be true when both a PTA and a BIT are in place.

Interestingly, whereas it does not seem to affect first establishments, assistance from other countries' IPAs appears to have a negative effect on the likelihood of a multinational firm already present in the country establishing an additional affiliate there (figure 4.17).¹¹⁸

Which Sectors

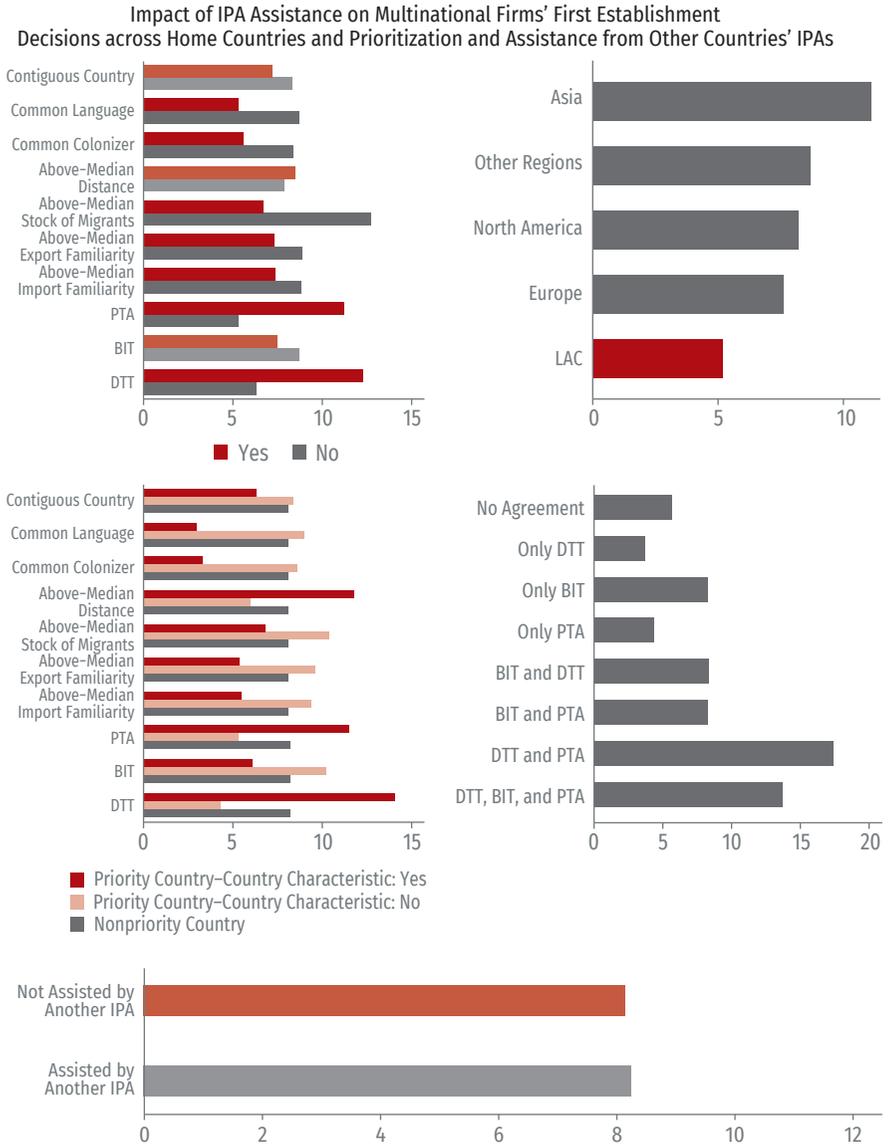
The effect of investment promotion assistance on both first establishment and reinvestment is strongest for multinational firms that are active in sectors producing differentiated goods and services. These are arguably those that face acuter information problems as they need to assess more factors in terms of conditions for setting up operations and continuing and expanding these. Moreover, while support from IPAs seems to particularly induce the location of multinational firms whose activities involve more production stages, physical tasks, machinery control, and monitoring process, it does not seem to have a differential effect on the arrival of foreign firms or increases in their presence in sectors with different degrees of upstreamness; different propensity to automation (share of routine tasks); different suitability for telework; or different intensity in tasks that imply data analysis, are complex, and concern communication.¹¹⁹ Last but certainly not least, investment promotion favors the entry of multinationals firms in sectors that generate relatively less CO₂ emissions and appear to be neutral in terms of gender—that is, multinational firms in female-dominated

¹¹⁷ This is even more the case when the home countries are prioritized.

¹¹⁸ This would reflect greater competition among countries in the region when it comes to multinational firms' expansion there.

¹¹⁹ The impact of IPAs' support does not appear to have a clear correlation with sectors' intensity in research and development. These estimates are available from the author upon request.

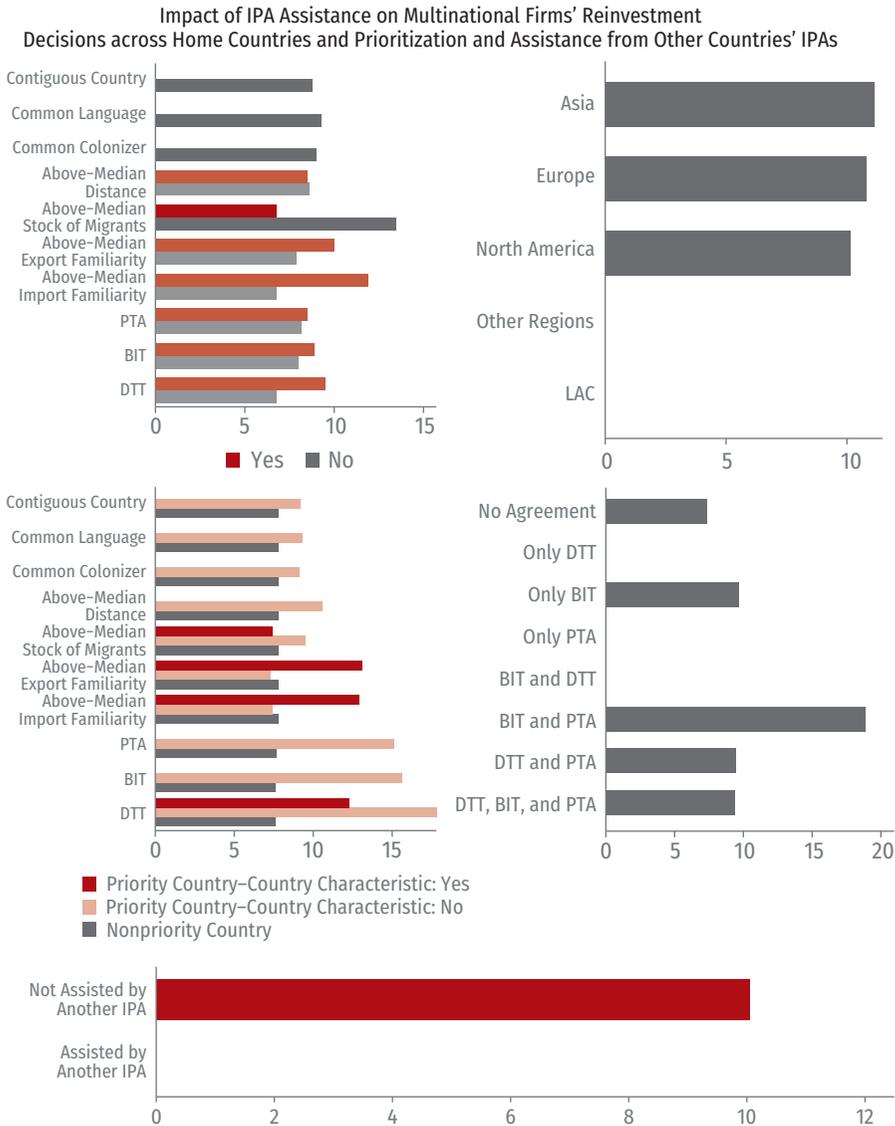
FIGURE 4.17 IMPACT OF IPA ASSISTANCE ON FIRST ESTABLISHMENT AND REINVESTMENT BY MULTINATIONAL FIRMS, BY HOME REGIONS AND COUNTRIES



(continued on next page)

and male-dominated sectors are equally likely to open a foreign affiliate after being assisted by an IPA (figures 4.18 and 4.19).

FIGURE 4.17 IMPACT OF IPA ASSISTANCE ON FIRST ESTABLISHMENT AND REINVESTMENT BY MULTINATIONAL FIRMS, BY HOME REGIONS AND COUNTRIES (continued)



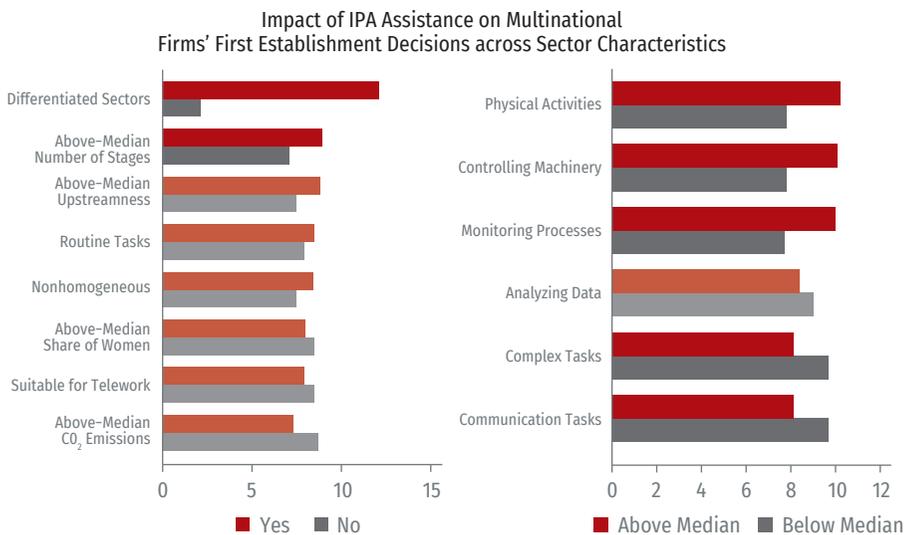
Source: Author's calculations based on data from WorldBase; the national IPAs; CEPII; Baier and Bergstrand (2017); Kohl et al. (2016); IMO; OECD; UNCTAD; World Bank; and WTO.

Note: Above-Median Export/Import Familiarity is a binary indicator that takes the value of 1 if the share of host-country exports to/imports from the home country is larger than the share of exports to/imports from the set of all other countries in the world except the host country itself towards the home country (as measured in 2000), and 0 otherwise. Above-Median Stock of Migrants is a binary indicator that takes the value of 1 if the number of migrants per capita from the home country living in the host country is higher than that of the median country (as measured in 2000), and 0 otherwise.

In particular, the positive effect of investment promotion is large for new-to-country and established foreign firms operating in the manufacturing and nonfinancial services sectors and specific sub-sectors thereof, such as machinery and administrative and business support among the former and motor vehicles and transportation services among the latter. Interestingly, in the case of first establishment, the impact is also strong for multinational firms in the primary sector, especially the animal and crop production subsector, which is where most LAC countries have a comparative advantage.

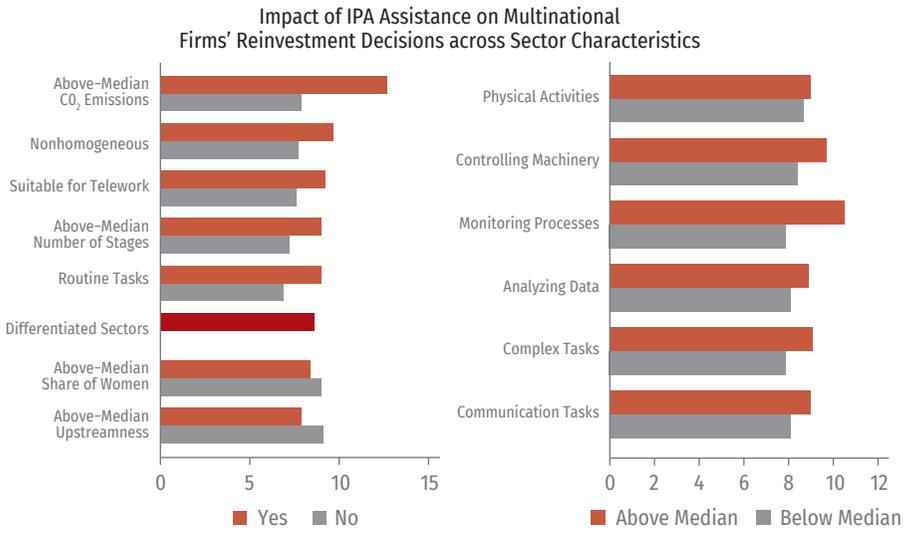
IPAs are more effective at attracting new multinational firms in sectors in which their countries have a comparative advantage, as measured in terms of either trade or investment. The impact of their support on these investment margins is even larger when these sectors produce differentiated goods and services and are prioritized. In contrast, the effects of IPA assistance on the location decisions of foreign firms that are active in priority sectors in which the country does not have a com-

FIGURE 4.18 IMPACT OF IPA ASSISTANCE ON FIRST ESTABLISHMENT AND REINVESTMENT BY MULTINATIONAL FIRMS, BY SECTOR CHARACTERISTICS



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FIGURE 4.18 IMPACT OF IPA ASSISTANCE ON FIRST ESTABLISHMENT AND REINVESTMENT BY MULTINATIONAL FIRMS, BY SECTOR CHARACTERISTICS (continued)

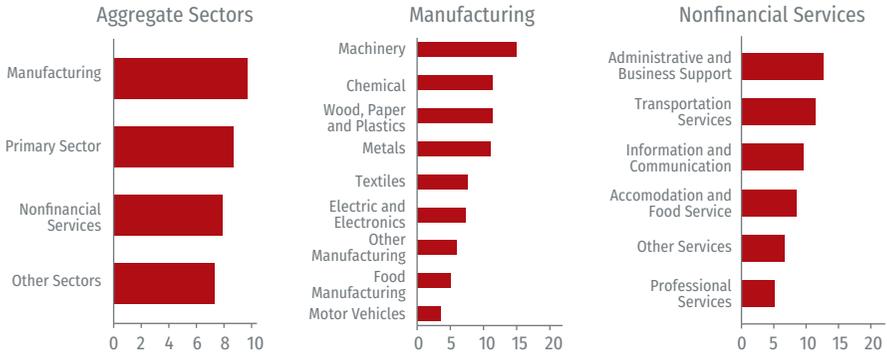


Source: Author's calculations based on data from WorldBase, national IPAs, and sources indicated below. Note: *Differentiated Sectors* is a binary indicator that takes the value of 1 if the median foreign affiliate of the multinational firm operates in a sector where most products (or services) are differentiated according to the definition in Rauch (1999), and 0 otherwise. *Above-Median Number of Stages* is a binary indicator that takes the value of 1 if the sector's number of production stages is higher than that of the median sector as computed based on data from Antràs et al. (2012), and 0 otherwise. *Above-Median Upstreamness* is a binary indicator that takes the value of 1 if the sector has an average distance from final use that is higher than that of the median sector as computed based on data from Antràs et al. (2012), and 0 otherwise. *Routine Tasks* is a binary indicator that takes the value of 1 if the sector has a share of routine tasks that is higher than that of the median sector as computed based on data from Acemoglu and Restrepo (2019), and 0 otherwise. *Suitable for Telework* is a binary variable that takes the value of 1 if the sector has a share of occupations that can be performed remotely that is higher than that of the median sector as computed based on data from Dingel and Neiman (2020), and 0 otherwise. *Sectoral Tasks* is a binary indicator that takes the value of 1 if the sector has a higher share of certain activities (physical activities, controlling machinery, monitoring processes, analyzing data, complex tasks, and communication tasks) than that of the median sector according to Oldenski (2012) and data from the BLS and O-NET, and 0 otherwise. *Above-Median CO₂ Emissions* is a binary variable that takes the value of 1 if the CO₂ emissions generated by the sector relative to its level of activity in OECD countries (in 2013) are higher than those of the median sector as computed based on data from OECD, and 0 otherwise. *Above-Median Share of Women* is a binary variable that takes the value of 1 if the share of women in the sector's total number of employees in the United States (in 2000) is higher than that of the median sector, as computed based on data from the BLS, and 0 otherwise.

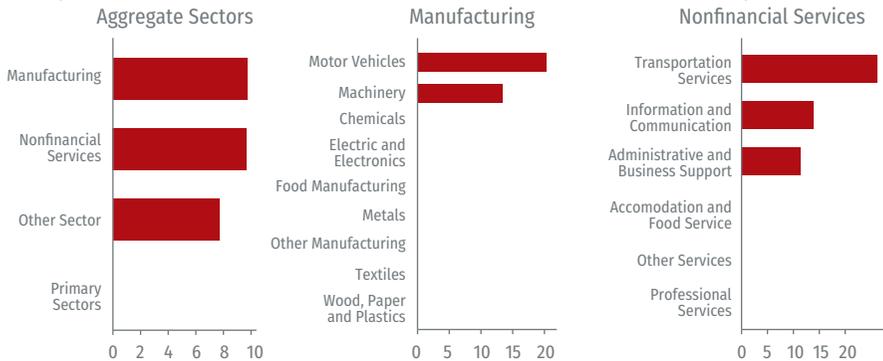
parative advantage are similar to those observed for their counterparts in nonpriority sectors. Similarly, investment promotion does not generally bring about different responses when it comes to multinational firms that are already established in their countries opening new affiliates. One exception in this regard are priority sectors in which the host countries have a comparative advantage in trade (figure 4.20).

FIGURE 4.19 IMPACT OF IPA ASSISTANCE ON FIRST ESTABLISHMENT AND REINVESTMENT BY MULTINATIONAL FIRMS, BY SPECIFIC SECTORS AND SUBSECTORS

Impact of IPA Assistance on Multinational Firms' First Establishment Decisions across Specific Sectors



Impact of IPA Assistance on Multinational Firms' Reinvestment Decisions across Specific Sectors



Source: Author's calculations based on data from WorldBase and national IPAs.

Note: "Other Sectors" include financial services, retail, and utilities.

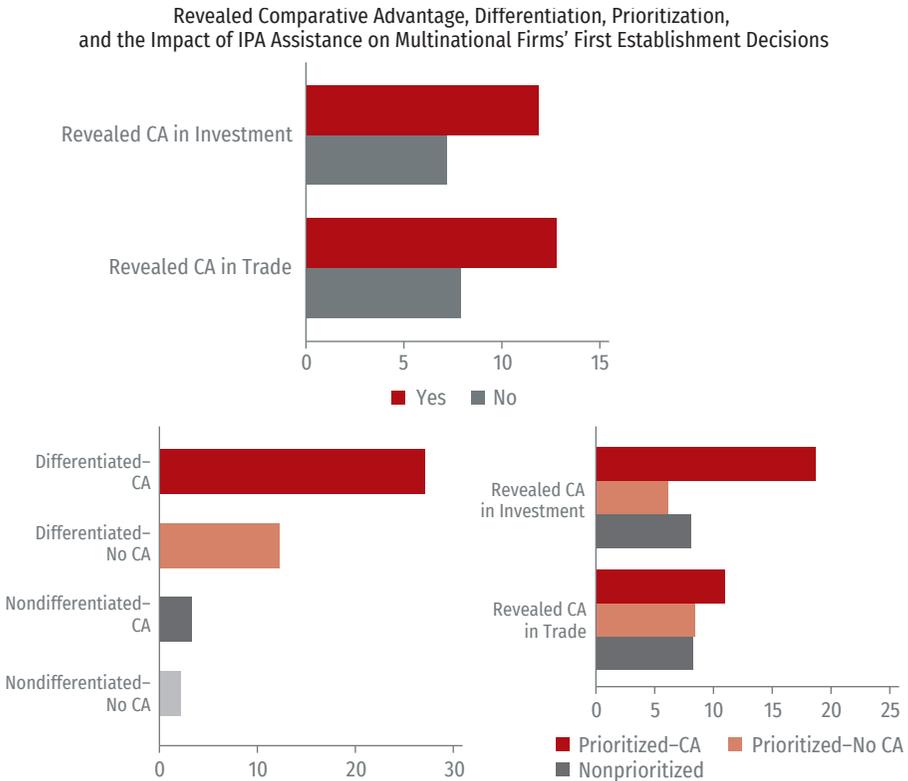
Which Firms

The effectiveness of investment promotion seems to follow an inverted U shape over the distribution of multinational firm size: it works best to attract medium-sized multinational firms but is less effective for the smallest and especially the largest firms. IPA activities result in the largest increase in the probability of establishing a first affiliate in the country in question for multinational firms with 2–10 affiliates worldwide, that are present in 2–10 countries, and that operate in 2–5 different sectors. This increase is particularly

pronounced for those with 6–10 foreign affiliates that are active in 2–5 sectors within priority country–sector combinations. The increase is small for multinational firms with no affiliates or just one within one sector in one country and does not occur for the largest firms whose affiliate networks spread over 100 sectors and 100 countries.

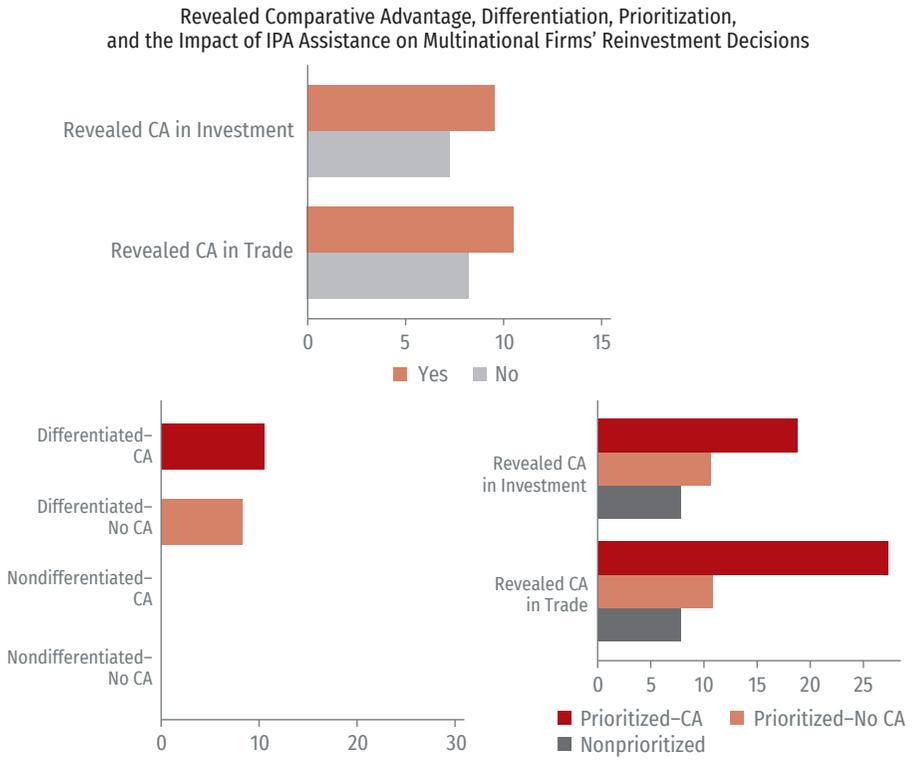
Support for reinvestment, in turn, tends to have a greater impact on larger, more diversified multinational firms. IPA assistance helps significantly raise the likelihood of firms enlarging their existing network of affiliates in the country, especially when they have more than 50 affiliates worldwide—primarily within priority

FIGURE 4.20 IMPACT OF IPA ASSISTANCE ON FIRST ESTABLISHMENT AND REINVESTMENT BY MULTINATIONAL FIRMS, BY COMPARATIVE ADVANTAGE AND DIFFERENTIATION



(continued on next page)

FIGURE 4.20 IMPACT OF IPA ASSISTANCE ON FIRST ESTABLISHMENT AND REINVESTMENT BY MULTINATIONAL FIRMS, BY COMPARATIVE ADVANTAGE AND DIFFERENTIATION (continued)



Source: Author's calculations based on data from WorldBase, national IPAs, UNCTAD, and Rauch (1999).
 Note: Revealed Comparative Advantage in Investment is a binary variable that takes the value of 1 for a given host country–sector combination if the ratio of the number of affiliates in the sector in a host country to the total number of affiliates in the country is higher than this ratio for all other countries in the world, and 0 otherwise. Revealed Comparative Advantage in Trade is a binary variable that takes the value of 1 for a given host country–sector combination if the ratio of exports of products in the sector from the home country to this country's total exports is higher than this ratio for all other countries in the world, and 0 otherwise.

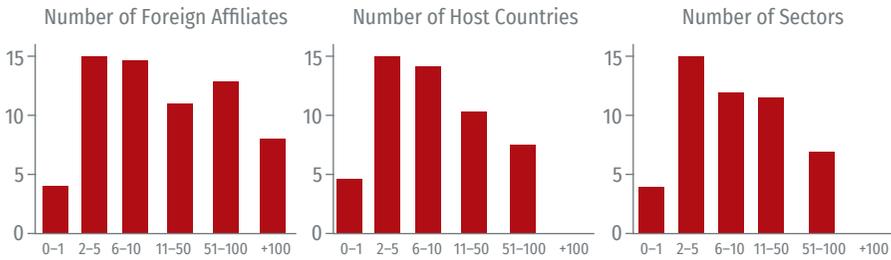
country–sector pairs—and are active in 6–10 (and more than 50) sectors through these affiliates.¹²⁰ Again, investment promotion does not appear to generally affect location decisions by mega multinational firms that operate in more than 100 sectors and 100 countries worldwide (figure 4.21, first and second panels).

¹²⁰ It is noteworthy that the estimated impact of prioritization is generally larger for the groups of firms for which the overall estimated impact is largest. This could reflect the fact that prioritization is typically associated with higher assistance intensity.

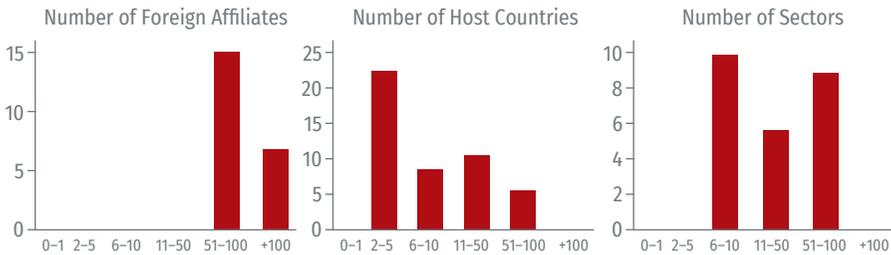
The impact of investment promotion on multinational firms' establishment decisions hinges upon how their affiliates are distributed across trading partners, and particularly on whether the host country has economic integration agreements with these partners. IPAs are more effective at attracting multinational firms that have

FIGURE 4.21 IMPACT OF IPA ASSISTANCE ON FIRST ESTABLISHMENT AND REINVESTMENT BY MULTINATIONAL FIRMS, BY FIRM SIZE

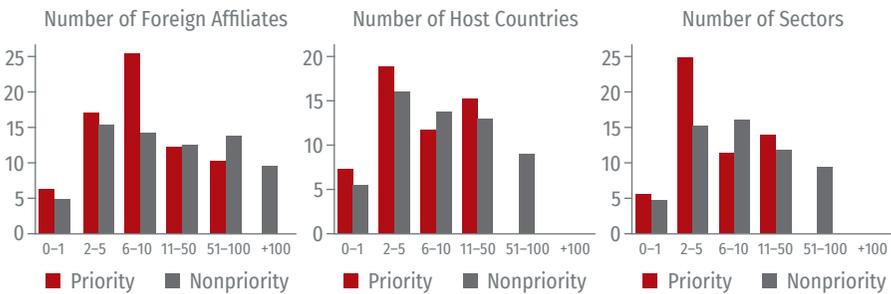
Impact of IPA Assistance on Multinational Firms' First Establishment Decisions across Size Categories



Impact of IPA Assistance on Multinational Firms' Reinvestment Decisions across Size Categories

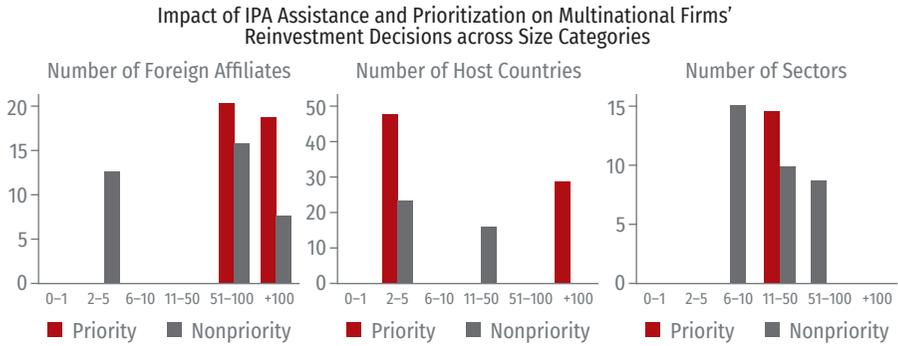


Impact of IPA Assistance and Prioritization on Multinational Firms' First Establishment Decisions across Size Categories



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FIGURE 4.21 IMPACT OF IPA ASSISTANCE ON FIRST ESTABLISHMENT AND REINVESTMENT BY MULTINATIONAL FIRMS, BY FIRM SIZE (continued)



Source: Author's calculations based on data from WorldBase and national IPAs.

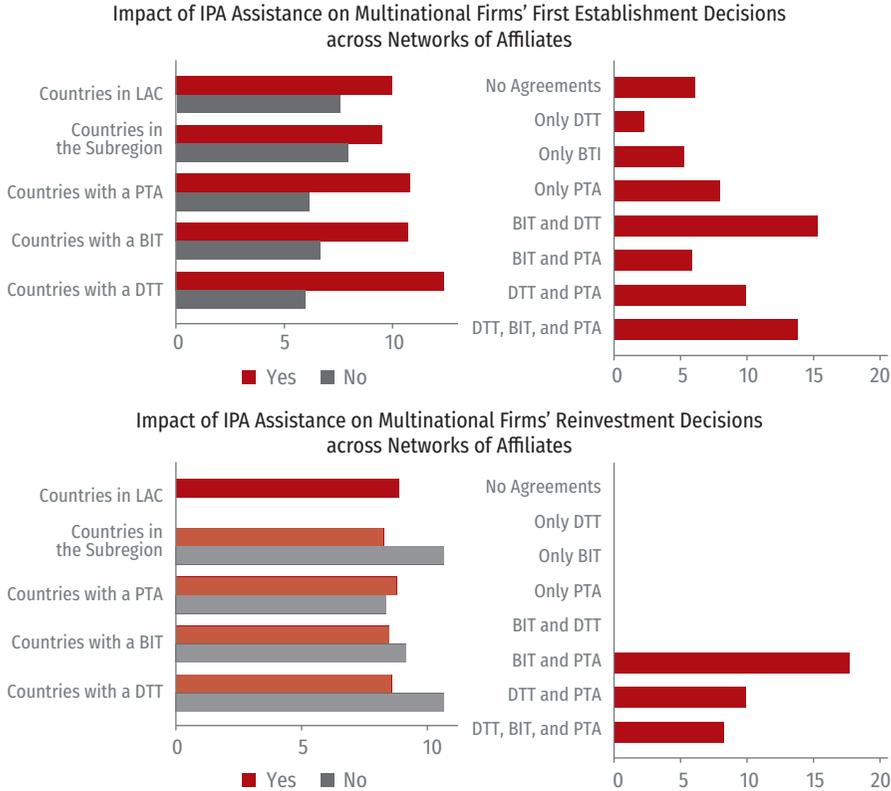
affiliates in the country's region and subregion, especially countries that are connected to the host through PTAs, BITs, and DTTs.¹²¹ This is even more the case when these agreements are combined, particularly for the combination of a BIT and a DTT and when all three types of agreement are in place (figure 4.22, upper panel).

Again, the evidence is less clear-cut for reinvestment. The fact that multinational firms have affiliates in countries with which the host has a PTA, BIT, or DTT does not seem to be associated with differential effects. However, the effects of IPA support on reinvestment are stronger when more agreements are in place between the IPA countries and those where these foreign firms have affiliates. This is particularly the case for the following combinations, all of which involving PTAs: BIT-PTA, DTT-PTA, and BIT-DTT-PTA (figure 4.22, lower panel).

IPAs can play an important role in helping their countries take advantage of potential reconfigurations of global value chains, particularly changes in offshoring strategies and nearshoring, primarily along firms' extensive margin of cross-country

¹²¹ These estimated effects refer to where multinational firms have foreign affiliates and not to where these are headquartered (as examined in section 4.5.2.).

FIGURE 4.22 IMPACT OF IPA ASSISTANCE ON FIRST ESTABLISHMENT AND REINVESTMENT BY MULTINATIONAL FIRMS, BY FIRMS' NETWORKS OF FOREIGN AFFILIATES

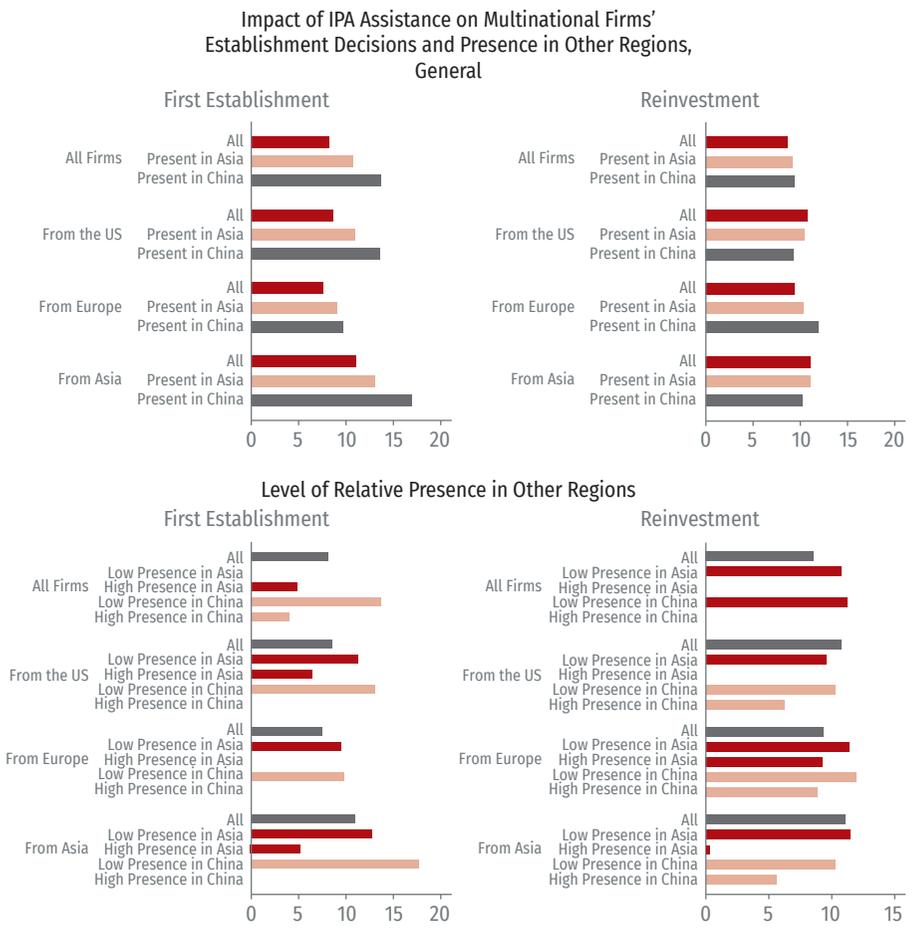


Source: Author's calculations based on data from WorldBase, national IPAs, Baier and Bergstrand (2017), Kohl et al. (2016) OECD, World Bank, and WTO.

multinational production. Their promotion activities have relatively stronger effects on the decisions of multinational firms that are already operating in Asia, especially China, to establish a first affiliate in their territories. This holds for firms from the United States, Europe, and Asian countries other than China. More specifically, it is the case when these firms are present in Asia/China but their share of affiliates there is not high and in sectors in which the level of Asian/Chinese exports is not high. Hence, investment promotion may be especially effective in allowing countries to benefit from a possible reshaping of global value chains when multinational firms are present in Asia/China but do not have deep roots there.

In addition, the impacts are greater for multinational firms in sectors producing goods and services that are differentiated when these firms are in China, the number of stages is relatively low, and activities tend to be downstream and nonroutine (figure 4.23, left panel).¹²² Nevertheless, no significant differences were detected

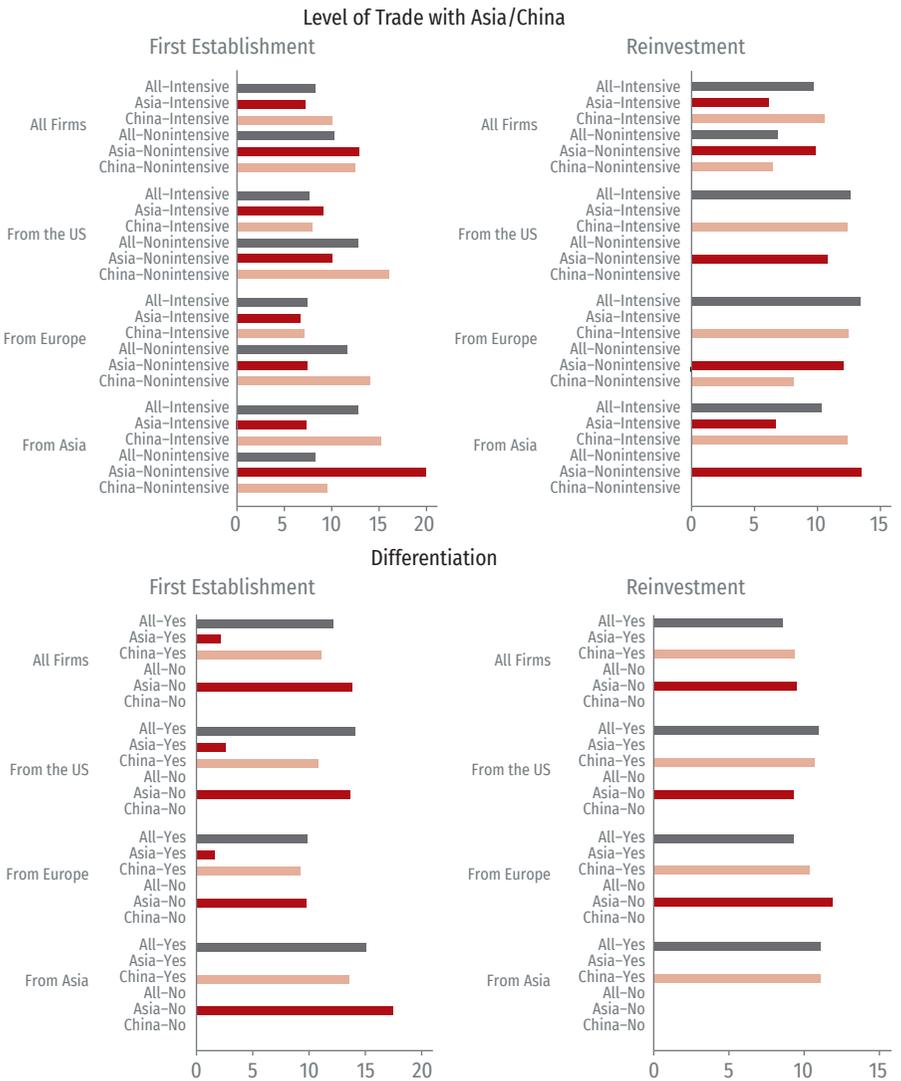
FIGURE 4.23 IMPACT OF IPA ASSISTANCE ON FIRST ESTABLISHMENT AND REINVESTMENT BY MULTINATIONAL FIRMS, BY FIRMS' OFFSHORING STRATEGIES AND SECTOR CHARACTERISTICS



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¹²² Needless to say, these are only a few possible dimensions in which investment promotion can help countries benefit from a potential reconfiguration of global value chains. The focus on these dimensions has been primarily determined by data availability reasons.

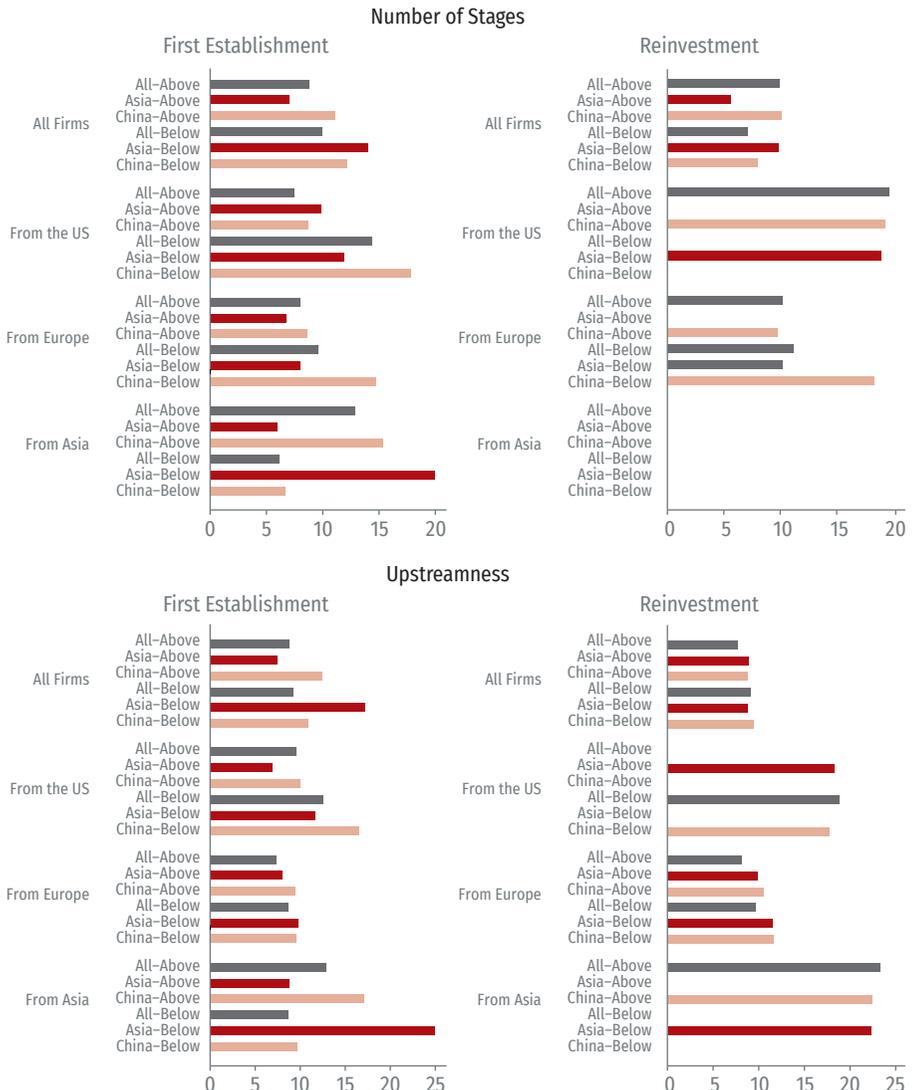
FIGURE 4.23 IMPACT OF IPA ASSISTANCE ON FIRST ESTABLISHMENT AND REINVESTMENT BY MULTINATIONAL FIRMS, BY FIRMS' OFFSHORING STRATEGIES AND SECTOR CHARACTERISTICS (continued)



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across firms with and without a presence in Asia or China in terms of how IPA assistance affects their reinvestment decisions, except when it comes to firms with foreign affiliates in China that operate in differentiated sectors (figure 4.23, fourth panel, right).

FIGURE 4.23 IMPACT OF IPA ASSISTANCE ON FIRST ESTABLISHMENT AND REINVESTMENT BY MULTINATIONAL FIRMS, BY FIRMS' OFFSHORING STRATEGIES AND SECTOR CHARACTERISTICS (continued)

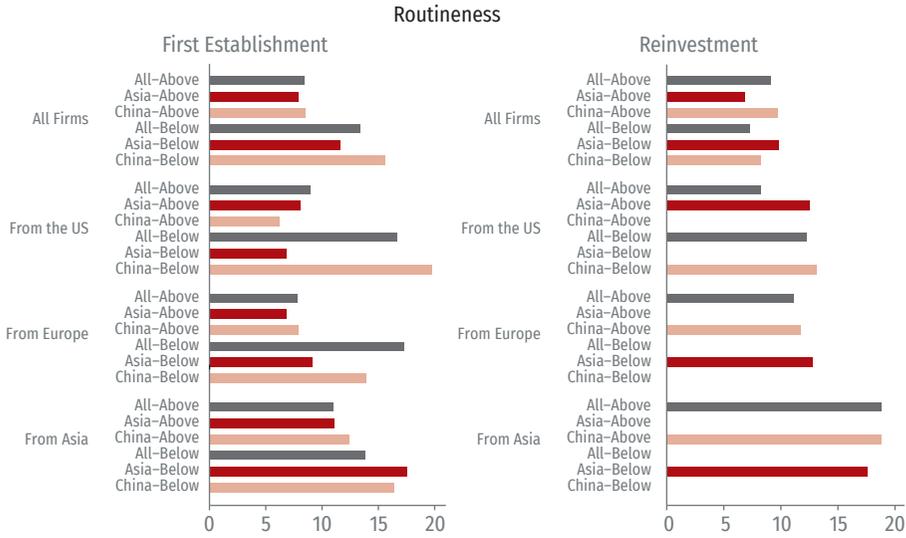


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HOW INVESTMENT PROMOTION AFFECTS MULTINATIONAL FIRMS' ACTIVITIES

Investment promotion affects not only the cross- and within-country extensive margin but also the within-country intensive margin of

FIGURE 4.23 IMPACT OF IPA ASSISTANCE ON FIRST ESTABLISHMENT AND REINVESTMENT BY MULTINATIONAL FIRMS, BY FIRMS' OFFSHORING STRATEGIES AND SECTOR CHARACTERISTICS (continued)



Source: Author's calculations based on data from WorldBase, national IPAs, OECD, WITS, and World Bank. Notes: *High Presence in China/Asia* is a binary indicator that takes the value of 1 if more than 50% of the foreign affiliates of the multinational firm are established in China/Area, and 0 otherwise. *Intensive Level of Trade with China/Asia* is a binary indicator that takes the value of 1 if the multinational firm operates in a sector in which the ratio of imports from China/Asia to total imports is higher than the corresponding ratio for all other countries, and 0 otherwise. *Differentiated Products* is a binary indicator that takes the value of 1 if the median foreign affiliate of the multinational firm operates in a sector where most products (or services) are differentiated according to the definition in Rauch (1999), and 0 otherwise. *Above-Median Number of Stages* is a binary indicator that takes the value of 1 if the sector has a number of production stages that is higher than that of the median sector as computed based on data from Antràs et al. (2012), and 0 otherwise. *Above-Median Upstreamness* is a binary indicator that takes the value of 1 if the sector has an average distance from final use that is higher than that of the median sector as computed based on data from Antràs et al. (2012), and 0 otherwise. *Routine Tasks* is a binary indicator that takes the value of 1 if the sector has a share of routine tasks that is higher than that of the median sector as computed based on data from Acemoglu and Restrepo (2019), and 0 otherwise.

multinational production. IPA assistance is associated with an average increase of more than 2% in the number of employees of foreign affiliates operating in their countries. This positive effect on employment is larger for smaller firms from home countries that share a common language or have colonial or migration ties with host countries and those that operate in sectors in which host countries have a comparative advantage, produce differentiated goods and services, and whose tasks are less suitable for telework and are not routine.¹²³

¹²³ The estimated employment effects across different kinds of countries do not seem to be aligned with the severity of information barriers. This could reflect sectoral specialization across these countries (e.g., a

IPA support is also linked to an average rise of almost 6% in foreign affiliates' total domestic purchases. This can primarily be traced back to a larger number of buyers and is larger for smaller multinational firms that are headquartered in home countries with relatively weak historical, cultural, or migration connections with the respective host countries, are active in sectors in which host countries have a comparative advantage, and that produce differentiated goods and services.

In addition, on average, IPA services increase foreign affiliates' total export values by 6%. This improved export performance is the result of an expansion along the destination intensive margin and the product and buyer extensive margins. Specifically, the export response is stronger for larger multinational firms whose home countries have strong migration ties with the respective host countries and belong to sectors whose activities are suitable for telework. Finally, in contrast, investment promotion does not seem to have significant effects on foreign affiliates' total domestic sales (figure 4.24).

THE INVESTMENT PROMOTION BALANCE: IS IT COST-EFFECTIVE?

The empirical evidence clearly suggests that investment promotion works and makes a difference. The direct benefits can be quantified based on FDI and the number of employees per foreign affiliate established in the respective countries.¹²⁴ As shown in chapter 3, these benefits come at a cost: countries spend resources to promote investment. These costs must thus be considered alongside the benefits to establish whether these interventions are cost-effective. Costs can be generally proxied based on recent annual budgets averaged across IPAs.¹²⁵

higher proportion of foreign affiliates from “closer countries” operating in sectors that produce differentiated goods and services).

¹²⁴ The FDI and employment data for established affiliates of multinational firms that were assisted that was used to compute the cost-benefit ratios was from the following countries: Argentina, Brazil, Chile, Colombia, El Salvador, Jamaica, Nicaragua, Peru, and Trinidad and Tobago. The average (median) FDI and number of employees per affiliate are US\$40 million (US\$5 million) and 400 (90), respectively.

¹²⁵ See chapter 3 and Volpe Martincus and Sztajerowska (2019).

FIGURE 4.24 IMPACT OF IPA ASSISTANCE ON MULTINATIONAL FIRMS' ACTIVITIES IN HOST COUNTRIES, BY OUTCOMES AND COUNTRY AND SECTOR CHARACTERISTICS



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The available evidence suggests that investment promotion has been a cost-effective policy for countries in LAC, even when indirect gains for the local economy (e.g., spillovers) are not factored in. Taking into account these benefits and costs along with the annual number of instances of assistance specific to each type of location decision and the average estimated impact on the probability of a multinational firm establishing a first foreign affiliate or subsequent ones in LAC countries, the resulting cost-benefit ratios reveal that

FIGURE 4.24 IMPACT OF IPA ASSISTANCE ON MULTINATIONAL FIRMS' ACTIVITIES IN HOST COUNTRIES, BY OUTCOMES AND COUNTRY AND SECTOR CHARACTERISTICS (continued)



Source: Author's calculations based on data from WorldBase and national IPAs, tax agencies, customs agencies, financial regulation and supervision agencies, business associations, Antràs et al. (2012), Acemoglu and Restrepo (2019), Dingel and Neiman (2020), Rauch (1999), CEPII and OECD.

Note: The following countries were included in the estimations, the results of which are reported in the figure—Total Exports: Argentina, Colombia, Costa Rica, Ecuador, Peru, and Uruguay; Total (Domestic) Purchases: Ecuador and Uruguay; Number of Employees: Colombia, Peru, and Uruguay; and Total (Domestic) Sales: Ecuador and Uruguay.

each US\$1 spent on investment promotion generated US\$41 of additional FDI in the case of first establishments and US\$15 of additional FDI for that of reinvestments (subsequent establishments), for a total of US\$56 of additional FDI. Moreover, each US\$10,000 assigned to investment promotion was associated with the creation of 4 addi-

tional jobs in the case of first establishments and 1.5 additional jobs in that of reinvestment, for a total of 5.5 additional jobs.¹²⁶

These ratios consider all investments for which relevant data is available and accordingly encompass very large projects.¹²⁷ When the top 1% of projects in terms of FDI and employment are removed, figures decrease but nonetheless continue to point to substantial net gains: each US\$1 spent on investment promotion resulted in US\$29 of additional FDI in the case of first establishments and US\$10.4 of additional FDI in that of reinvestment, for a total of US\$39.4 of additional FDI. In terms of employment, the relationship was US\$10,000 of investment promotion for 3.3 additional jobs in the case of first establishments and 1.2 additional jobs in that of reinvestments, for a total of 4.5 additional jobs. **Further, when the top 10% of projects by size are excluded, the benefit-cost ratio is US\$15 of additional FDI per each US\$1 allocated to investment promotion. It is important to keep in mind, though, that as with other similar measures, cost-benefit measures are subject to multiple assumptions and caveats and should accordingly be viewed with caution.**

¹²⁶ Needless to say, these ratios can be expected to differ across sectors. For instance, the financial means mentioned above may be associated with more job creation in service sectors that are intensive in human capital.

¹²⁷ The largest projects involve investments above US\$500 million and employment above 2,500.

APPENDIX A4.1: DATA AND EMPIRICAL APPROACH

Empirical Approach

To assess the effects of investment promotion assistance on multinational firms' decisions to establish an affiliate in sample countries, it is crucial to account for other relevant observed and unobserved factors that may affect both location decisions and the use of investment promotion services. These include multinational firms' sizes, countries' changing comparative advantages, and time-varying, country-pair, and sector-specific trade policies. To do so, the following baseline general linear probability model is used:¹²⁸

$$I(E)_{f_{hcs,t}} = \alpha I(IPA)_{f_{hcs,t}} + \sum \beta^i X^i_{f_{hcs,t-1}} + \lambda_{f_{hcs,t}} + \varrho_{f_{hcs,t}} + \theta_{hcs,t} + \varepsilon_{f_{hcs,t}} \quad (1)$$

where $I(E)_{f_{hcs,t}}$ is a binary indicator for either the first establishment or expansion of a multinational firm in a country—more precisely, for first establishment, the binary indicator takes the value of 1 if (ultimate) parent firm f operating in sector s from home country h establishes its first affiliate in host country c in year t , and 0 otherwise, whereas for reinvestment it takes the value of 1 if parent firm f operating in sector s from home country h opens an additional affiliate in host country c in year t , and 0 otherwise. These dependent variables correspond to the cross-country firms' and within-country firms' extensive margins of multinational production, respectively. The former accounts for the largest share of variation in bilateral multinational production flows and for most of multinational firms' growth (Ramondo, Rodríguez-Clare, and Tintelnot, 2015; and Garetto, Oldenski, and Ramondo, 2019). Furthermore, the extensive margin appears to be significantly

¹²⁸ While certainly not free from issues (e.g., predicted probabilities could be outside of the range of the dependent variable), the linear probability model (LPM) is used to include high-dimensional fixed effects to account for relevant sources of unobserved heterogeneity across firms and across country-pairs and sectors over time, while avoiding the incidental parameter problem that nonlinear estimators would be subject to. Still, estimates of a basic variant of the estimating equation based on bias-corrected fixed effects probit and logit and conditional logit models are fully consistent with the baseline reported in this document.

more responsive to changes in standard gravity forces capturing bilateral trade costs, including those related to information barriers such as common language (Ramondo, Rodríguez-Clare, and Tintelnot, 2015).

$I(IPA)_{fhsst}$ is a binary indicator that takes the value of 1 if parent firm f operating in sector s from home country h was assisted by country c 's national investment promotion agency in year t , and 0 otherwise. The coefficient on $I(IPA)$, α , is accordingly the parameter of interest. If $\alpha > 0$ ($\alpha = 0$), then investment promotion support has a positive (no) impact on the probability of a multinational firm establishing or increasing its number of affiliates in the country. It is worth noting that estimates are identical if indicators of noncontemporaneous IPA support are included as additional covariates.

$X_{fhsst-1}^i$ is a series of firm-destination-year variables indexed by i that control for multinational firms' network of affiliates, including their presence in countries that have a common language, have a common border, are in the same subregion of Latin America, or have a PTA, BTA, or DTT with host country c . These covariates are lagged one period to mitigate endogeneity concerns.

λ_{fhsst} , ϱ_{fhes} , and θ_{hcs} are sets of firm-home country-sector-year fixed effects, firm-home country-sector-host country fixed effects, and home country-sector-host country-year fixed effects, respectively. These fixed effects control for time-invariant firm-host country-specific factors such as systematic differences in firms' propensity to locate in different countries as determined by the interplay between their business models and countries' comparative advantages; time-varying firm-level characteristics and performance measures such as size (e.g., total revenue, total number of affiliates, total number of countries in which the parent firm is present, and total number of sectors in which the parent firm operates across affiliates) and productivity; and time-varying, sector-specific variables such as relative market size, changing comparative advan-

tages in given sectors (e.g., relative skilled labor endowments), sector-specific policies and differences in business cycles, the number of affiliates from the home country operating in the host country; the share of those firms that were assisted by the IPA; sectoral and actual country IPA prioritization; potential host country-specific information spillovers across parent firms in given sectors and home countries; exchange rates; trade-related procedures (port handling and customs processing times); transportation costs and tariffs (Alfaro and Chen, 2018); the existence of PTAs, BITs, DTTs, and differential tax rates between home and destination countries. ε is the error term.

Equation (1) assumes that the effect of investment promotion on multinational firms' location decisions is homogeneous across home countries, sectors, and firms' size categories. However, there are reasons to believe that this effect may differ along these dimensions. In particular, impacts may be larger when higher information barriers are involved. This could be the case, for instance, for more distant, more dissimilar, and thus less familiar home countries (Huang, 2007), in sectors with a higher degree of differentiation or lower degree of contractability (Antràs and Yeaple, 2013), or for relatively small firms. Hence, this equation can be generalized to explore the existence of heterogeneous effects across those groups as follows:

$$I(E)_{fhst} = \sum \phi^k \alpha^k I(IPA)_{fhst} + \sum \beta^i X^i_{fhst-1} + \lambda_{fhst} + \varrho_{fhcs} + \theta_{hst} + \varepsilon_{fhst} \quad (2)$$

where k indexes the groups of firms, home countries, or sectors; and \mathcal{U} is the corresponding group indicator.

Equation (1) can also be adapted to estimate the impact of investment promotion in each country. In this case, the baseline specification is as follows (see Carballo et al., 2020):

$$I(E)_{fhst} = \alpha I(IPA)_{fhst} + \sum \beta^i X^i_{fhst-1} + \varrho_{fhs} + \theta_{hst} + \varepsilon_{fhst} \quad (3)$$

Estimates of this equation and variants thereof which are equivalent to equation (2) are reported for each of the 12 countries in appendix 4.2.

Finally, when estimating the impact of investment promotion assistance on the within-country firms' intensive margin of multinational production, the following specification is used:

$$Z_{fct} = \alpha I(IPA)_{fct} + \sum \beta^i X_{fct-1}^i + \varrho_{fc} + \theta_{ct} + \mu_{fct} \quad (4)$$

where Z is an indicator of the level of activities such as sales, number of employees, wages, purchases, and exports.

In all cases, standard errors will be clustered by firm for inference purposes, thus allowing for an unrestricted covariance structure over time within firms, which may differ across them.

Data

Table A4.1 lists the data used to estimate the equations introduced above.

TABLE A4.1

Country	Multinational Firms and Affiliates		IPA Assistance to Firms		Firms'	
	Affiliates	Firms	Sales	Employees	Exports	
Argentina	2015–2017	2015–2017	n/a	n/a	2015–2017	
Brazil	2009–2017	2009–2017	n/a	n/a	n/a	
Chile	2016–2017	2016–2017	n/a	n/a	2009–2017	
Colombia	2009–2017	2009–2017	2009–2017	2009–2017	2009–2017	
Costa Rica	2000–2016	2000–2016	n/a	n/a	2007–2017	
Ecuador	2014–2017	2014–2017	2014–2017	n/a	2014–2017	
El Salvador	2010–2017	2010–2017	n/a	n/a	2010–2017	
Honduras	2011–2017	2011–2017	n/a	n/a	n/a	
Mexico	2008–2017	2008–2017	n/a	n/a	n/a	
Nicaragua	2010–2017	2010–2017	n/a	n/a	n/a	
Peru	2012–2017	2012–2017	n/a	2009–2017	2000–2017	
Uruguay	2000–2016	2000–2016	2008–2017	2008–2017	2008–2017	

Source: Data from WorldBase, national IPAs, national export promotion agencies (EPAs), national tax agencies, national customs agencies, and national financial regulation and supervision agencies.

APPENDIX A4.2: COUNTRY-SPECIFIC IMPACT EVALUATIONS

This appendix presents the results of the impact evaluations for individual countries for which the required data were available (see table A4.1). It is worth stressing that **individual estimated impacts are not strictly comparable and thus should not be compared across countries** due to a myriad of factors, including the differences in host economies, particularly the overall level and diversification of the multinational production taking place in the respective territories, the national IPA trajectory (along with the sample period of the assistance data), the budget and personnel available to national IPAs, the institutional context, and the concomitant public policies, among several other factors.

A4.2.ARG Argentina

Investment promotion has been effective: support from the IPA has resulted in an average increase of 25 p.p. in the probability of a multinational firm establishing its first affiliate in the country (figure A4.2.ARG.1).

FIGURE A4.2.ARG.1 IMPACT OF IPA ASSISTANCE ON MULTINATIONAL FIRMS' FIRST ESTABLISHMENT AND REINVESTMENT DECISIONS



Source: Author's calculations based on data from WorldBase and Argentina's national IPA.

Note: Foreign affiliates located in free trade zones are excluded from the estimations labeled "Excluding FTZ."

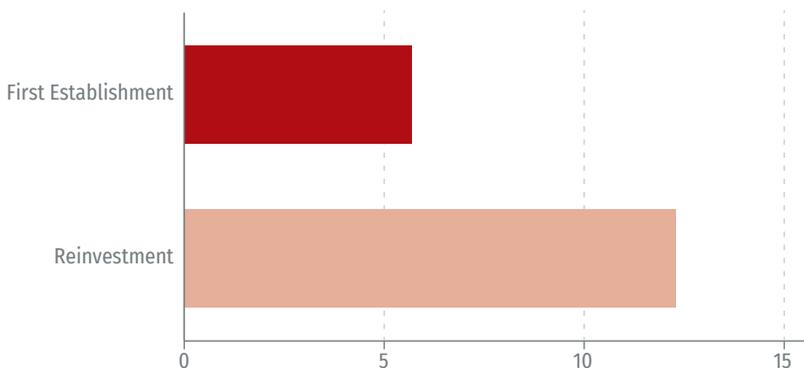
This positive effect is independent of the free trade zone regime and is concentrated among firms from LAC and Europe (for which the effect is larger than the average) and North America (slightly smaller than average); firms that operate in the manufacturing sector (almost double the average effect); firms with up to 50 foreign affiliates worldwide, that are present in up to 50 host countries, and are active in up to 10 sectors.

Assistance from the IPA has also favored reinvestment by firms from Asia, those operating in the manufacturing sector, those with broad, diversified networks of affiliates, and those that specifically already had a presence in Asia, particularly China.

A4.2.BRA Brazil

Investment promotion has been effective: support from the IPA has resulted in an average increase of 6 p.p. in the probability of a multinational firm establishing its first affiliate in the country (figure A4.2.BRA.1).¹²⁹

FIGURE A4.2.BRA.1 IMPACT OF IPA ASSISTANCE ON MULTINATIONAL FIRMS' FIRST ESTABLISHMENT AND REINVESTMENT DECISIONS



Source: Author's calculations based on data from WorldBase and Brazil's national IPA.

¹²⁹ Unfortunately, data on free trade zones was not available. As a consequence, it was not possible to estimate the effects of IPA assistance independent from these.

This is particularly the case for firms from LAC (more than double than the average effect), from Asia and Europe (similar to the average effect), and North America (half the average effect); firms that operate in the nonfinancial services and other services sectors (similar to the average effect) and the manufacturing sector (smaller than the average effect); firms with up to 50 foreign affiliates worldwide, that are present in up to 50 host countries, and active in up to 50 sectors.

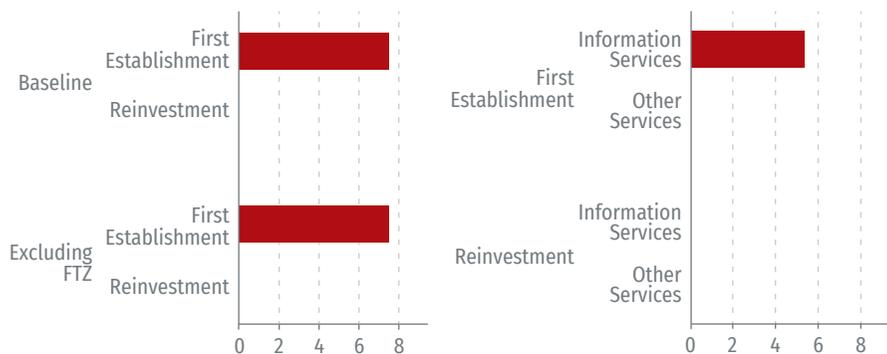
Investment promotion has also favored reinvestment: IPA assistance is associated with an average increase of 12 p.p. in the probability of a multinational firm opening subsequent affiliates in the country. This applies especially to firms from Asia and Europe (more than double the average effect) and North America (smaller than the average effect); firms that are active in the nonfinancial services sector (larger than the average effect) and the manufacturing sector (similar to the average effect); and firms that have broad, diversified networks of affiliates (between 2–50 foreign affiliates, host countries, and sectors), and that specifically are not present in China.

A4.2.CHI Chile

Investment promotion has been effective: support from the IPA has resulted in an average increase of 7 p.p. in the probability of a multinational firm establishing its first affiliate in the country (figure A4.2.CHI.1).

This positive effect is independent of the free trade zone regime and is primarily associated with the provision of information services. It is concentrated among firms from Europe (larger than the average effect) and North America (similar to the average effect), firms that operate in other service sectors (larger than the average effect), those in the nonfinancial services sector (similar to the average effect), firms with 2–10 foreign affiliates worldwide that are active in a similar number of host countries and sectors and that specifically have an existing presence in Asia, particularly China.

FIGURE A4.2.CHI.1 IMPACT OF IPA ASSISTANCE ON MULTINATIONAL FIRMS' FIRST ESTABLISHMENT AND REINVESTMENT DECISIONS



Source: Author's calculations based on data from WorldBase and Chile's national IPA, and ZOFRI.

Note: Foreign affiliates located in regions with free trade zones are excluded from the estimations labeled "Excluding FTZ."

Assistance from the IPA has also favored reinvestment by firms from North America and those with broad, diversified networks of affiliates (more than 50 foreign affiliates).

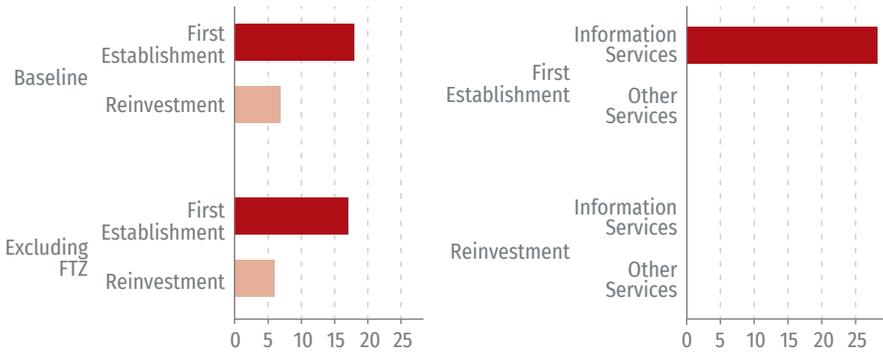
A4.2.COL Colombia

Investment promotion has been effective: support from the IPA has resulted in an average increase of 18 p.p. in the probability of a multinational firm establishing its first affiliate in the country (figure A4.2.COL.1).

This positive effect is independent of the free trade zone regime, is primarily associated with the provision of information services, and is observed for firms from all regions (being slightly smaller than the average effect for Asia), all sectors (being slightly smaller than the average effect for the manufacturing sector), across their size categories (being smaller than the average for the smallest multinational firms), and location patterns.

Investment promotion has also favored reinvestment: IPA assistance is associated with an average increase of 6 p.p. in the probability of a

FIGURE A4.2.COL.1 IMPACT OF IPA ASSISTANCE ON MULTINATIONAL FIRMS' FIRST ESTABLISHMENT AND REINVESTMENT DECISIONS



Source: Author's calculations based on data from WorldBase and Colombia's national IPA.

Note: Foreign affiliates located in free trade zones are excluded from the estimations labeled "Excluding FTZ."

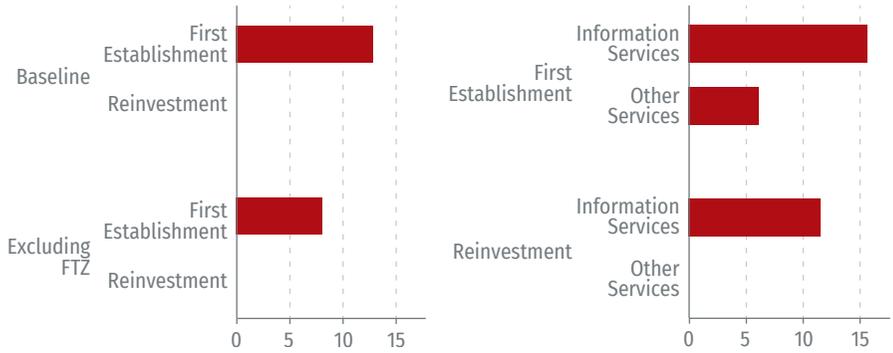
multinational firm opening subsequent affiliates in the country. This especially applies to firms that operate in the primary sector (larger than the average effect); and firms with more than 50 foreign affiliates, those that are active in 11–50 host countries and sectors, and that specifically have a previous presence in Asia, particularly China.

A4.2.CRI Costa Rica

Investment promotion has been effective: support from the IPA has resulted in an average increase of 12 p.p. in the probability of a multinational firm establishing its first affiliate in the country (figure A4.2.CRI.1).

This positive effect is independent of the free trade zone regime, is primarily associated with the provision of information services, and is observed for firms from all regions except LAC (being larger than the average effect for North America), all sectors except the primary sector (being larger than the average effect for the non-financial services sector), across virtually all size categories (being larger than the average for multinational firms with more than 50 foreign affiliates), and for firms that specifically have a previous presence in Asia, particularly China.

FIGURE A4.2.CRI.1 IMPACT OF IPA ASSISTANCE ON MULTINATIONAL FIRMS' FIRST ESTABLISHMENT AND REINVESTMENT DECISIONS



Source: Author's calculations based on data from WorldBase and Costa Rica's national IPA.

Note: Foreign affiliates located in free trade zones are excluded from the estimations labeled "Excluding FTZ."

A4.2.ECU Ecuador

Investment promotion has been effective: support from the IPA has resulted in an average increase of almost 2 p.p. in the probability of a multinational firm establishing its first affiliate in the country.

FIGURE A4.2.ECU.1 IMPACT OF IPA ASSISTANCE ON MULTINATIONAL FIRMS' FIRST ESTABLISHMENT AND REINVESTMENT DECISIONS



Source: Author's calculations based on data from WorldBase and Ecuador's national IPA and Ministry of Production, Foreign Trade, Investment, and Fisheries.

Note: Foreign affiliates located in regions with free trade zones are excluded from the estimations labeled "Excluding FTZ."

This positive effect is independent of the free trade zone regime and is primarily associated with the provision of information services. It is concentrated among firms from LAC (more than double the average effect), firms that operate in the primary sector (more than double the average effect) and the nonfinancial services sector, and relatively small firms (those with up to two foreign affiliates worldwide, that are present in up to two host countries, and active in up to two sectors).

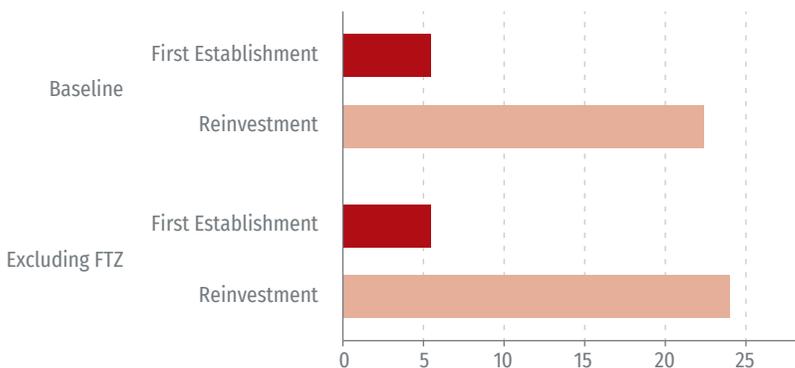
A4.2.SLV El Salvador

Investment promotion has been effective: support from the IPA has resulted in an average increase of 5 p.p. in the probability of a multinational firm establishing its first affiliate in the country.

This positive impact is independent of the free trade zone regime and is observed for firms from all regions; firms that operate in all sectors except the primary sector; firms with up to 50 foreign affiliates worldwide, that are present in up to 50 host countries, and active in up to 50 sectors; and firms without a previous presence in China.

Investment promotion has also favored reinvestment: IPA assistance is associated with an average increase of 22 p.p. in the probability of

FIGURE A4.2.SLV.1 IMPACT OF IPA ASSISTANCE ON MULTINATIONAL FIRMS' FIRST ESTABLISHMENT AND REINVESTMENT DECISIONS



Source: Author's calculations based on data from WorldBase and El Salvador's national IPA.
 Note: Foreign affiliates located in free trade zones are excluded from the estimations labeled "Excluding FTZ."

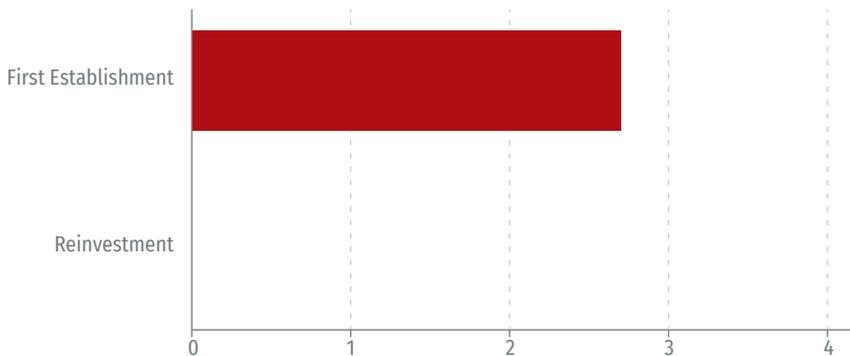
a multinational firm opening subsequent affiliates in the country. This applies especially to firms from North America (larger than the average effect) and Europe; firms that operate in other services and nonfinancial services sectors; firms with 11–50 foreign affiliates worldwide and that are active in a similar number of host countries and sectors; and firms with a previous presence in China.

A4.2.HND Honduras

Investment promotion has been effective: support from the IPA has resulted in an average increase of almost 3 p.p. in the probability of a multinational firm establishing its first affiliate in the country.¹³⁰

This positive effect is concentrated among firms from LAC (more than double the average effect) and Europe (similar to the average effect); firms that operate in the manufacturing sector (slightly larger than the average effect); and small firms (those with one foreign affiliate worldwide, that are present in one host country, and active in one sector).

FIGURE A4.2.HND.1 IMPACT OF IPA ASSISTANCE ON MULTINATIONAL FIRMS' FIRST ESTABLISHMENT AND REINVESTMENT DECISIONS



Source: Author's calculations based on data from WorldBase and Honduras's national IPA.

¹³⁰ Unfortunately, data on free trade zones was not available. As a consequence, it was not possible to estimate the effects of IPA assistance independent from these.

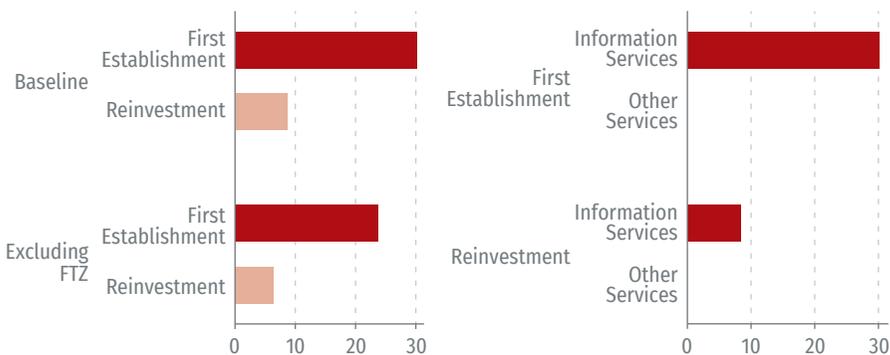
A4.2.MEX Mexico

Investment promotion has been effective: support from the IPA has resulted in an average increase of 30 p.p. in the probability of a multinational firm establishing its first affiliate in the country.

This positive effect is independent of the free trade zone regime and is primarily associated with the provision of information services. Moreover, the impact is observed for firms from all regions (being larger than the average effect for Asia and smaller than the average effect for the remaining regions) and all sectors but the primary sector (being larger than the average effect for the manufacturing sector). Furthermore, investment promotion has attracted firms across the entire size spectrum (being larger than the average for firms with 2–50 foreign affiliates that are active in 2–50 host countries and sectors) and that specifically have a previous presence in Asia, particularly China.

Investment promotion has also favored reinvestment: IPA assistance is associated with an average increase of almost 5 p.p. in the prob-

FIGURE A4.2.MEX.1 IMPACT OF IPA ASSISTANCE ON MULTINATIONAL FIRMS' FIRST ESTABLISHMENT AND REINVESTMENT DECISIONS



Source: Author's calculations based on data from WorldBase and Mexico's national IPA and Secretary of the Economy.

Note: Foreign affiliates located in free trade zones are excluded from the estimations labeled "Excluding FTZ."

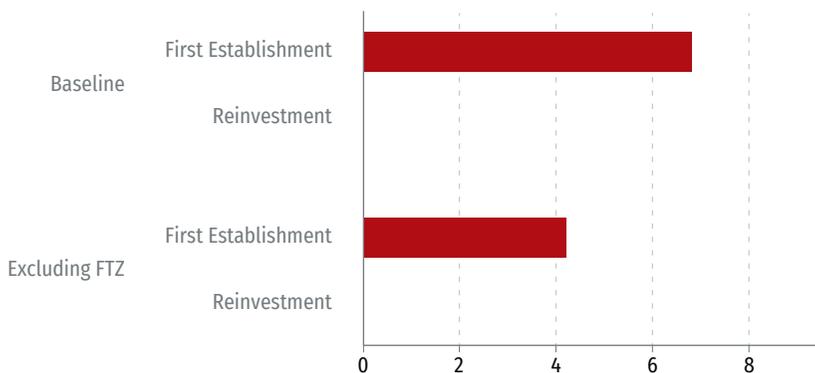
ability of a multinational firm opening subsequent affiliates in the country. This applies especially to firms from North America and Asia (more than double than the average effect); firms that operate in other services and manufacturing sectors (larger than the average effect); and firms with more than 10 foreign affiliates worldwide that are active in a similar number of host countries and sectors.

A4.2.NIC Nicaragua

Investment promotion has been effective: support from the IPA has resulted in an average increase of 7 p.p. in the probability of a multinational firm establishing its first affiliate in the country.

This positive effect is independent of the free trade zone regime and is observed for firms from LAC (larger than the average effect) and Europe and North America (similar to the average effect); firms that operate in all sectors but especially in the primary sector (more than triple the average effect); firms that are relatively small (those with up to 10 foreign affiliates worldwide that are active in a similar number of host countries and sectors); and firms that have no previous presence in China.

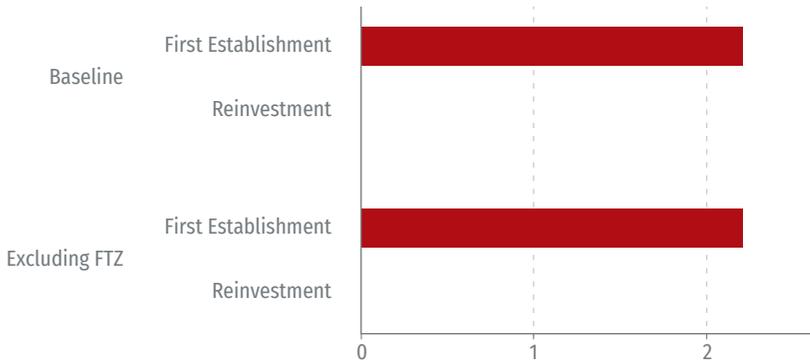
FIGURE A4.2.NIC.1 IMPACT OF IPA ASSISTANCE ON MULTINATIONAL FIRMS' FIRST ESTABLISHMENT AND REINVESTMENT DECISIONS



Source: Author's calculations based on data from WorldBase and Nicaragua's national IPA.

Note: Foreign affiliates located in free trade zones are excluded from the estimations labeled "Excluding FTZ."

FIGURE A4.2.PER.1 IMPACT OF IPA ASSISTANCE ON MULTINATIONAL FIRMS' FIRST ESTABLISHMENT AND REINVESTMENT DECISIONS



Source: Author's calculations based on data from WorldBase, Peru's national IPA, and Ministry of Foreign Trade and Tourism.

Note: Foreign affiliates located in regions with free trade zones are excluded from the estimations labeled "Excluding FTZ."

A4.2.PER Peru

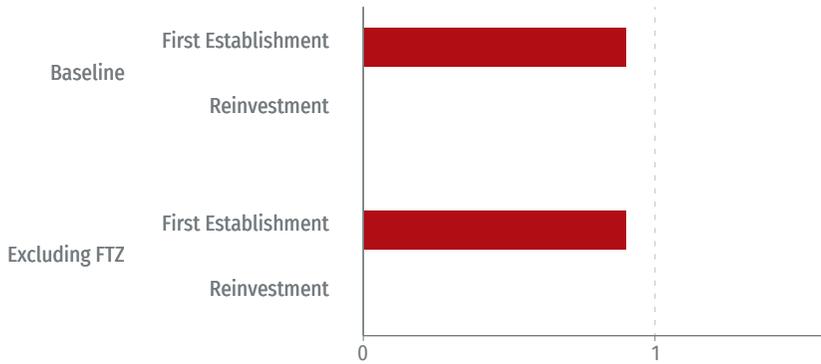
Investment promotion has been effective: support from the IPA has resulted in an average increase of 2 p.p. in the probability of a multinational firm establishing its first affiliate in the country.

This positive effect is concentrated among firms from LAC (more than double the average effect) and Asia (similar to the average effect); firms that operate in the nonfinancial services sector (larger than the average effect); small firms (those with up to 10 foreign affiliates worldwide that are active in a similar number of host countries and sectors); and firms that have no previous presence in Asia or China. Assistance from the IPA has also favored reinvestment in the manufacturing sector.

A4.2.URU Uruguay

Investment promotion has been effective: support from the IPA has resulted in an average increase of 1 p.p. in the probability of a multinational firm establishing its first affiliate in the country.

FIGURE A4.2.URU.1 IMPACT OF IPA ASSISTANCE ON MULTINATIONAL FIRMS' FIRST ESTABLISHMENT AND REINVESTMENT DECISIONS



Source: Author's calculations based on data from WorldBase and Uruguay's national IPA.

Note: Foreign affiliates located in free trade zones are excluded from the estimations labeled "Excluding FTZ."

This positive effect is independent of the free trade zone regime and is concentrated among firms from North America; firms that operate in the services sector; firms with up to 10 foreign affiliates worldwide, that are present in up to 10 host countries, and active in up to 10 sectors; and firms without a previous presence in Asia, particularly China.

WHERE TO GO AND HOW TO GET THERE: THE FUTURE OF INVESTMENT PROMOTION

SEVERAL ONGOING DEVELOPMENTS, INCLUDING THE DIGITAL TRANSFORMATION, INCREASES IN TRADE BARRIERS ASSOCIATED WITH TRADE POLICY TENSIONS, AND THE CONSEQUENCES OF THE HEALTH AND ECONOMIC CRISES ARE RECONFIGURING TRADE AND INVESTMENT FLOWS, PARTICULARLY GLOBAL VALUE CHAINS. These circumstances could create major opportunities for LAC that could contribute significantly to economic recovery and subsequent sustainable growth. Thus, for instance, countries could benefit from multinational firms deciding to relocate their affiliates or switch suppliers away from other regions. For countries to be able to take advantage of such opportunities, they need to meet several conditions. First, they need to have their fundamentals right: stable macroeconomic conditions, a favorable business climate, and appropriate levels of human capital. Second, appropriate tariff and nontariff policies and effective trade and investment facilitation initiatives need to be in place. Finally, their investment (and trade) promotion agencies must be in a position to cope with the challenges posed by the increased uncertainty generated by such developments. This requires access to timely, accurate information to guide their interventions and speed up their reactions.

Impact evaluations provide crucial inputs of this sort. However, despite how widespread investment promotion policies are, besides some valuable insights from a few preexisting aggregate studies,

little was known on whether these policies affect multinational firms' location decisions and, if so, how they do so and how far. This report has aimed to fill precisely this gap by presenting evidence on the effects of investment promotion and the associated channels and mechanisms, based on actual impact evaluations that make use of time-specific, firm-level data on both location decisions and IPA support status over a long period for 12 Latin American countries.

This evidence reveals that investment promotion assistance has had significant positive effects on the probability of multinational firms establishing an affiliate for the first time in the respective countries. It also suggests that support from IPAs has had positive impacts on the probability of multinational firms expanding their presence in these countries when a few years have elapsed since the last establishment was created and changing circumstances require new information. Likewise, assistance from IPAs has also positively impacted firms' activity levels, as proxied by employment, domestic purchases, and exports.

These positive effects vary according to IPA characteristics and strategies, the kind of assistance they provide to firms (the effects are greatest when the assistance consists of specific information services), and firms' home countries, sectors, and sizes, in a way that is consistent with reducing information frictions. Support thus has generally had greater impacts on the location behavior of multinational firms from home countries with relatively weaker ties with the host country, in sectors producing differentiated goods and services, and for medium-sized firms. These findings, together with those stemming from country-specific evaluations, provide valuable insights that can be used to guide the design of IPAs' strategies, programs, and services, and the allocation of financial and human resources across them.

While these findings are encouraging, looking ahead, IPAs face the challenge of remaining relevant and further increasing their effectiveness within the new global environment. This requires

acting simultaneously and in a coordinated manner in several areas, primarily relating to how these agencies promote investment. The main areas and lines of action are listed and discussed below.

1. **Mainstream sustainability and gender equality in IPAs' promotion approaches and metrics**, in line with their stated objectives.

- **The issue:** IPAs can provide effective support to help countries make progress on sustainability and gender equality. The evidence suggests that foreign affiliates from home countries with a more gender-equal culture tend to employ proportionally more women and appoint female managers and that there are associated spillovers to domestic counterparts, as female labor shares increase in the same industry or city.¹³¹ Similarly, multinational firms—especially those with relevant certifications from well-known third parties such as ISO 14001—could help spread environmentally responsible practices to local firms operating in the same sector by demonstration and to their suppliers and customers through their commercial relationships.¹³²
- **What to do:** *Well-defined activity and outcome indicators based on relevant underlying micro- or at least sector-level statistics on gender and emissions and pollution, for instance, should become standard components of IPA dashboards.*

2. **Respond to the growing imperative to go digital**, as some agencies have been doing since the onset of the Covid-19 crisis.¹³³

- **The issue:** The digital transformation is having a fundamental effect on how firms conduct their business and interact with governments.

¹³¹ See Tang and Zhang (2021).

¹³² Multinational firms' activities can affect the environment through multiple channels, which could be associated with positive or negative effects. For instance, multinational firms can decide to establish affiliates in countries with less stringent regulations, which could result in increased levels of local pollution. They can also bring new technologies and cleaner methods of production with them from advanced countries that displace less efficient local firms (see Cole et al., 2017, for a review).

¹³³ Granados and Arias Urones (2020) and OECD (2020).

- **What to do:** *IPAs need to leverage more and better information and communication technologies (ICTs) to perform their administrative and operational functions. Drawing on the increased availability of specialized digital tools to expand and improve their portfolio of (digital) services would enable IPAs to provide more agile, effective assistance for their clients.*¹³⁴
 - *These tools should be fully and consistently integrated into IPA information systems to allow for better monitoring and measurement and should ideally interoperate fully with those of other relevant entities.*
3. **Improve promotion strategies to increase their effectiveness in a more uncertain context by making them evidence-based.**
- **The issue:** An obvious operational question is which firms IPAs should proactively target and approach to attract them to their countries. This is a highly dimensional problem along two margins. According to *WorldBase*, there are more than 200,000 multinational firms (firms with at least one affiliate in a foreign country). These firms differ in terms of attributes and performance measures that are relevant to their location and investment decisions, including revenue, number of employees, the number and geography of their networks of affiliates worldwide, assets, and liabilities. The scale of this problem is typically reduced in two ways: first, by applying country and sector prioritization strategies, which are mainly based on inputs from internal experts and consultations with international investors and experts; and second, by selecting specific firms to target, which relies on the expertise of the officials responsible for the respective sectors or countries. While existing macro evidence indicates that these approaches are associated with positive average effects when implemented by sector and country specialists, the

¹³⁴The IDB is currently working on systematizing the available digital tools and mapping their use by national and regional IPAs worldwide.

results are likely to be suboptimal.¹³⁵ The reason is that this approach only relies on a fraction of the wealth of micro-data on multinational firms available to them, which, in addition, are used in an unsystematic manner.¹³⁶

- **What to do:** *IPAs should take advantage of new technologies and microdata to better inform and guide their promotional efforts.*¹³⁷ *This would involve the systematic use of available trade and multinational production microdata through the consistent application of novel statistical strategies to predict the probability of multinational firms establishing a first affiliate or subsequent ones in the country in question.*
 - *This approach will provide IPAs with a unified framework for prioritizing firms, particularly in terms of sectors and countries, and lends itself to experimental evaluations of its effectiveness.*
4. **Institutionalize monitoring and evaluation practices and carry out deeper, systematic, more comprehensive impact assessments** that take both direct and indirect effects on the economy into account.
- **The issue:** Systematic, comprehensive impact assessments are essential if we are to convincingly establish the extent to which IPAs are reaching their overall goals and specific objectives, such as those relating to sustainability and gender equality. They are also vital to understanding the direct effects of IPA activities on FDI and multinational production and the indirect effects on the domestic economy. For instance, results from recent studies for countries in the region that use this kind of data reveal that domestic firms that link up with multinational firms by becoming their suppliers experience an increase in sales,

¹³⁵ The reference study in the macro literature is Harding and Javorcik (2011).

¹³⁶ Specialists can only look at a very limited number of firms along a very limited number of dimensions and they rarely do so in a consistent way as compared to each other and over time. Furthermore, while the specialist expertise on which IPAs' targeting strategies rely is an invaluable asset, it tends to get lost when officials switch positions or leave the organization, thus restricting institutional memory and learning.

¹³⁷ As discussed in chapter 2, these firm-level databases include Bureau van Dijk's Orbis, Dun & Bradstreet's WorldBase, Standard and Poor's Capital IQ, and the Financial Times' fDi Markets, among others.

number of employees, and productivity, and are more likely to become direct exporters.¹³⁸

- **What to do:** *IPAs should monitor and undertake periodic evaluations of the direct and indirect effects of their activities and should explicitly include dimensions associated with specific objectives such as sustainability and gender equality.*
- *This requires them to generate better data of their own and access and integrate better third-party data, including key micro-level metrics on wider socioeconomic outcomes. More precisely, IPAs need to enhance their CRM recording capabilities to capture more granular information on the services they provide to multinational firms and the implied costs of doing so; promote the creation of and effective use of consistent, unified nationwide registers of multinational firms and these firms' activities; and accurately track buying and selling relationships between firms and individuals' labor histories across firms over time, using data that is usually available at tax, customs, and social security agencies, statistical offices, and central banks.*

5. Intensify interinstitutional collaboration and strengthen program coordination with other relevant policy areas in designing and implementing IPA services to explicitly factor in the interdependence between multinational firms' activities and policies.

- **The issue:** Exports, FDI, and multinational production are by nature highly integrated and complementary. This is particularly true of global value chains.
- As discussed above, these economic activities can be negatively affected by frictions and market failures in different areas. More specifically, given the interplay of these factors, the policy mix may end up being as good and effective as its worst, least effective component.¹³⁹ To give a

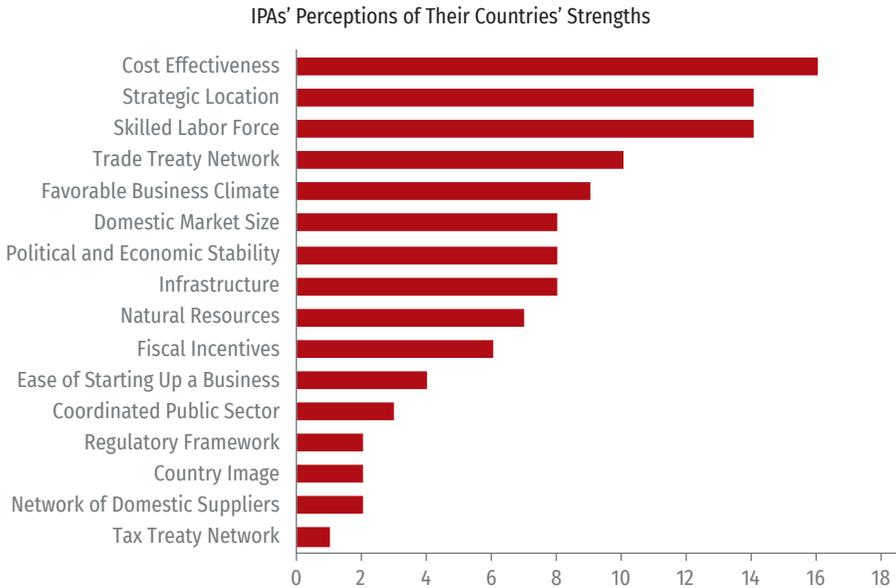
¹³⁸ Alfaro-Ureña, Manelici, and Vasquez (2021); Carballo, Marra de Artiñano, and Volpe Martincus (2019); and Carballo et al. (2021).

¹³⁹ Policies can therefore work under the logic of a Leontief production function.

more concrete example, building a new highway may be worthless in terms of additional trade and investment if the time it saves is subsequently lost dealing with cumbersome customs procedures or port operations.

- As a result, the effectiveness of investment promotion policies will be strongly conditioned by other policies. One example of this is the extent to which local trade regulations and procedures facilitate trade and investment. Thus, for given IPA services, the likelihood of successfully attracting affiliates of multinational firms and participating in global value chains could be expected to be lower if crossing borders is difficult and takes a long time. The reason is that this can severely disturb firms' production processes and their ability to supply markets on time, potentially generating costs that are far larger than the benefits associated with the location in question.
- Looking beyond policies for trade costs, firms often receive assistance in several domains that interact with investment promotion and can also influence broader outcomes. This is the case with linkage programs: an econometric evaluation of Costa Rica's Linkages for Exports (*Encadenamientos para la Exportación*, formerly *Costa Rica Provee*) reveals that the program has had a positive impact on real wages, employment, and exports among participating firms.¹⁴⁰
- Relevant policy programs therefore need to be consistent and integrate efforts and functions as much as possible to maximize their impacts and avoid suboptimal outcomes.
- **What to do:** *Properly coordinating investment promotion with policies that address trade costs is critical. This is especially the case with investment facilitation—which is, notably, a policy area that has not been sufficiently studied, since*

¹⁴⁰ These effects go beyond the year in which firms join the program, which could suggest that firms that receive assistance continue to derive benefits from the knowledge acquired through their commercial relationships with multinational firms (Monge-González and Rodríguez-Álvarez, 2013). Interestingly, the magnitude of the impact increases with the intensity of assistance, as proxied by the number of times firms participate in the program (Monge-González et al., 2012).

FIGURE 5.1

Source: Author's calculations based on data from the IDB/OECD Survey to Investment Promotion Agencies (2017). Note: Three points are given to the first factor mentioned by IPAs, two points are given to the second factor, and one point to the third.

there are virtually no national comprehensive maps of procedures that are readily available (as there are for trade procedures) nor are there consequently evaluations of initiatives to streamline and digitize these procedures. The same applies to other investment attraction policies and policies such as trade facilitation. In fact, most IPAs do not identify tax treaty networks and regulatory frameworks as being strengths of their countries: these are areas in which there is a need for improvements that could boost the effectiveness of their interventions (figure 5.1).

- *Investment promotion interacts with policies that provide support for firms in other areas, particularly innovation promotion and linkages programs, and thus should be coordinated with these.¹⁴¹ The existence of positive spillovers*

¹⁴¹ Blyde, Volpe Martincus, and Molina (2014) review several linkage programs in Latin America and other regions.

from multinational firms that are attracted to the country may thus hinge upon the existence of a sufficiently large set of domestic firms that are technologically capable of absorbing the associated knowledge transfers—a factor that LAC IPAs do not perceive as an asset (figure 5.1). Crucially, it can also depend on the removal of information obstacles that impede the emergence of production linkages between these firms and their local counterparts. This is precisely what linkage programs do.

6. When applying the above recommendations, balance consistency over time, flexibility, and adaptability with changing contextual, policy, and business conditions.

- **The issue:** The business environment changes over time—sometimes rapidly, as the pandemic has shown—and so do multinational firms’ assistance needs and the conditions under which the benefits that they bring the local economy can be maximized.
- **What to do:** *IPAs should therefore combine longer-term plans and consistent annual lines of action, including by introducing mechanisms that allow for agile adjustments and contingency schemes.*
- *As seen above, specific periodic evaluations—along with cost considerations—are crucial to defining and redefining these plans and lines of action and establishing the most appropriate organizational arrangements, coordination mechanisms, and the mix and sequencing of the respective services.*
- *Other important inputs for IPAs to adapt dynamically to the evolving circumstances include the continuous monitoring of good, innovative, emerging practices around the world (benchmarking) to identify those that could be applied with proper adjustments to the local circumstances, and rigorously designed surveys of relevant stakeholders such as multinational firms, private-sector associations, academia, and civil society.*

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Attracting foreign direct investment is a crucial component of national development strategies. It is also a powerful tool for fostering the development of micro, small, and medium-sized enterprises by linking them to technology and know-how. To successfully attract investment, countries must not only be open for business, but also welcome and walk investors through the process of establishing partnerships. This timely report underscores the role of investment promotion agencies in closing critical information gaps and thereby attracting much needed foreign resources to sustain the post-Covid recovery and long-term growth in Latin America and the Caribbean. It dissects the who, the what, and the how of investment promotion agencies to show they cost-effectively put the region on multinational firms' radars. Its recommendations, along with targeted measures to encourage linkages with small businesses, should help policymakers harness investment for sustainable and inclusive growth.

Pamela Coke-Hamilton

Executive Director, International Trade Center

Investment promotion is one of the most underappreciated policy interventions, so I really welcome the IDB's report on this critical topic. As the report confirms, pure investment promotion—which focuses on lowering information barriers and does not involve fiscal and monetary incentives—can go a long way in attracting FDI inflows. It is effective, relatively inexpensive, and has few downsides if you get it wrong. And if you get it right, increased FDI inflows can bring good jobs, boost exports, and stimulate innovation. This report is a must-read for policymakers in Latin America, the Caribbean, and beyond.

Beata Javorcik

Chief Economist, EBRD, and Professor of Economics, Oxford University

The true significance of investment promotion has finally been revealed. Specialized services brought to foreign investors by investment promotion agencies (IPAs) in Latin America increase the probability of multinational firms opening their first affiliate in the region. This book really does make the invisible visible: it provides an in-depth analysis of the institutional organization and operational practices of IPAs and the implications that these have in terms of the effectiveness of their interventions. These findings are invaluable inputs that will improve the quality of governments' and stakeholders' decision-making on investment promotion policies.

Jorge Sequeira

Managing Director, CINDE, Costa Rica's Investment Promotion Agency

The support we received from the country's IPA was very positive. The various services that the agency provided helped us establish the affiliate and streamline our operations from the start. The assistance from the Finishing School program enabled us to start providing our business partners with services on time and created a valuable collaborative process that continued throughout the different stages of setting up our global services operations in the country.

Mike Mies

Managing Director, BASF Services Americas, Uruguay

