

Chapter 4

Using Investment Policies to Stimulate Global Value Chain Participation

Key findings

- In the past decades, there have been many cases in which governments have played key roles in promoting global value chain (GVC) participation. Sound macroeconomic policy, infrastructure building, an enabling regulatory environment, and human capital development constitute a set of necessary minimum conditions for any country to be considered an attractive investment destination and to participate in GVCs.
- In some cases, governments have played a more direct role in solving specific sectors' market failures caused by externalities, imperfect information, and coordination problems, in what some describe as "soft" or "light-handed" industrial policies.
- To attract and link multinational corporations (MNCs), investment policies may help reduce regulatory or procedural burdens for foreign investors, provide public goods within special economic zones, or use investment incentives to tilt MNCs' decisions to locate to a new country. In other cases, investment promotion agencies can showcase a country's comparative advantages and help facilitate entry.
- Policy makers can also help domestic firms internationalize and integrate into GVCs by supporting their engagement with MNCs through investment, partnerships, or trade. Successful support programs tend to combine information provision (to increase exposure), matchmaking (to overcome coordination failures), and temporary subsidies (to compensate for expected social benefits from these interactions).
- There is no "blueprint" for strengthening GVC participation. Reforms should be implemented as coherent packages rather than as individual, one-off policies that are likely to have only a marginal effect. A successful reform package requires a sustained, coordinated, and long-term approach based on the design of incentive mechanisms that are tailored to the specific needs of countries, revealed and latent comparative advantages of firms, and value chains in question.
- The best approaches help to improve firm performance without "picking winners." Through GVCs, firms in developing countries enter foreign markets at lower costs, benefit from specialization in niche tasks, and gain access to larger markets for their output. Such specialization is often the result of a country's long-term involvement in a specific sector that takes advantage of and builds on the country's unique combination of factor endowments and firm capacity.

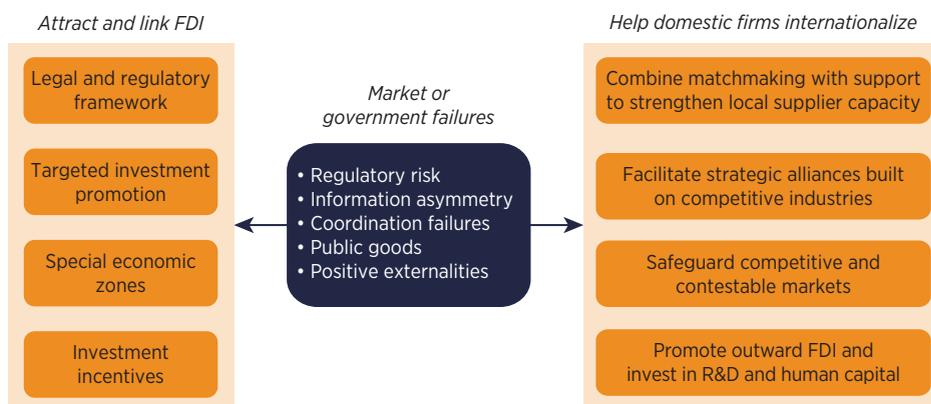
How investment policies can help global value chain participation

In the past five decades, governments, in many cases, have played key roles in promoting global value chain (GVC) participation. Governments shape key elements of GVC through their macroeconomic policies, trade agreements, infrastructure building, and human capital development. In some cases, governments have played a more direct role, in what some describe as “soft” or “light-handed” industrial policies (Harrison and Rodríguez-Clare 2010; Taglioni and Winkler 2016). These descriptors refer to government policy making at the micro level, aimed at solving market failures caused by externalities, imperfect information, and coordination problems. These policies could act either as catalysts, as shown in the East Asian “miracle” countries (Birdsall et al. 1993; Wade 1990), or as inhibitors, as in Latin America’s experience with import substitution (Gerber 2007).

Policies that help attract foreign direct investment (FDI) and that link multinational corporations (MNCs) to domestic firms can do much to stimulate GVC participation and upgrading. As shown in previous chapters, FDI is a key driver in developing countries’ GVC participation. MNCs can help countries reshape their comparative advantages and enter new GVCs or move up in existing GVCs (Freund and Moran 2017; Freund and Pierola 2015). Their productivity can also spill over to domestic firms, and they can help such firms internationalize (as described in chapter 3).¹

To attract FDI, policy makers seek to improve and showcase their country’s comparative advantages to MNCs. As illustrated in chapter 2, MNCs may offshore their production to exploit differences in factor costs across countries. Geographic proximity to major markets, availability of cheap labor, local industry agglomeration, supportive business environments, good infrastructure, and open trade and investment policies are all common determinants of where MNCs choose to expand their FDI and trade.

FIGURE 4.1 Investment policy instruments to integrate countries into global value chains



Source: World Bank elaborations of the literature.

Note: FDI = foreign direct investment; R&D = research and development.

Investment policies aim to solve specific market or government failures aligned with these determinants (figure 4.1). To bring in FDI, policy makers may focus on regulatory reforms to reduce restrictions or procedural burdens for investors. They also may aim to provide public goods (such as high-quality infrastructure) to MNCs within a special economic zone (SEZ). In other cases, foreign investors may simply be made aware of a country's endowments by the country's investment promotion agencies (IPAs). A government can also use investment incentives to entice MNCs to resettle in a country by reducing the MNCs' tax burdens.

Government policies can also help domestic firms internationalize and upgrade by learning from their engagement with foreign firms. As shown in chapter 3, increased exposure to foreign firms (such as MNCs) can raise domestic firms' productivity and help them obtain the production capabilities and foreign market knowledge needed to compete internationally. Governments are willing to invest their resources to stimulate such positive externalities. However, domestic firms' efforts to internationalize may be held back by low exposure to MNCs and global markets and by the firms' own limited production capacity (figure 4.1). Integrated support programs combining information provision (to increase exposure), matchmaking (to overcome coordination failures), and temporary subsidies (to compensate MNCs for the expected social benefits of these interactions) are tailored to promote learning from international firms by encouraging interaction.

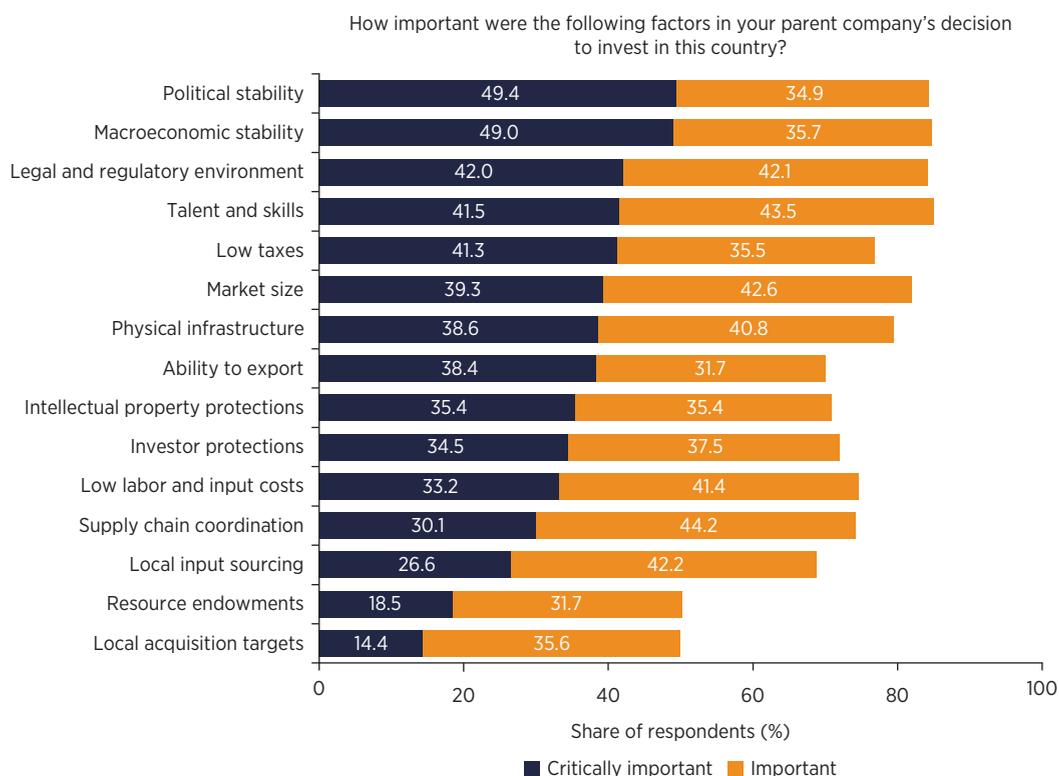
Foreign direct investment policy and promotion

Necessary conditions

To attract FDI, governments need to meet a set of necessary minimum conditions. The 2019 World Bank Global Investment Competitiveness (GIC) Survey of the locational decision-making factors of 2,500 MNCs shows that political stability, macroeconomic stability, an enabling legal and regulatory environment, and local talent and skills are the top four considerations in foreign investors' decision-making processes (figure 4.2). Physical infrastructure and the ability to export also rank highly. Basic technical capabilities for the GVC segments in the FDI host country are also important and are reflected in the availability of talent and skills, supply chain coordination, and local input sourcing from capable suppliers. Without these necessary conditions, a country is unlikely to participate in GVCs. In all five qualitative case studies included in part II of this report (chapters 6 to 10), the factors mentioned were present and were deemed crucial for MNCs to include the studied countries in their long lists of potential locations. A large body of literature and survey results confirms that governments need to address these minimum conditions to be considered attractive investment destinations and to attract opportunities for local firms to enter GVCs (see Crescenzi, Harman, and Arnold [2019] for an overview of this literature).

Meeting the necessary macroeconomic, infrastructure, and endowment conditions is often not sufficient to attract FDI. Depending on the type of GVC and the specific GVC segment a government seeks to enter, the government may discover that it needs to use more specific policy instruments to attract and leverage the intended FDI (Moran 2014).

FIGURE 4.2 Factors that are critically important or important to multinational corporations' locational decisions



Source: World Bank 2020.

Among the various FDI policy instruments, four are most commonly used:

1. An enabling legal and regulatory framework for FDI
2. Targeted investment promotion
3. Special economic zones
4. Investment incentives

An enabling legal and regulatory environment for foreign direct investment

Creating a transparent and predictable regulatory environment is crucial to attracting FDI and entering into GVCs. A large body of research suggests that the quality of a country's legal and regulatory environment is positively associated with its inward FDI (see, for example, Akame, Ekwelle, and Njei 2016; Buchanan, Le, and Rishi 2012; Gani 2007; Globerman and Shapiro 2002; Stein and Daude 2007; Vogiatzoglou 2016; Wei 2000; Wernick, Haar, and Singh 2009). Evidence from investor surveys reinforces that a supportive business climate is among the top priorities for foreign investors (figure 4.2).

The 2019 GIC Survey, which focused on investors' decisions to enter a set of 10 middle-income countries,² finds similar results: the countries' legal and regulatory

environments ranked as the investors' third priority, after political and macroeconomic stability (Kusek, Saurav, and Kuo 2020). Notably, most large firms—those with more than 250 employees—rank the legal and regulatory environment as their top investment consideration, whereas smaller firms consider it only their fourth most important criterion. These differences may be driven by investment restrictions that apply only to larger firms or by the greater regulatory scrutiny that large firms tend to experience (Kusek, Saurav, and Kuo 2020). Larger firms also play disproportionately important roles in GVCs and contribute more to employment growth in their host countries.

Foreign investors are affected by a wide range of laws and regulations. Which types of laws are most important to them depends on the country context as well as on the investors' motivations. For example, MNCs that primarily seek access to natural resources, such as those in extractive industries, care mainly about access to land and to those resources, whereas market-seeking FDI tends to prioritize the size and purchasing power of the domestic market. Efficiency-seeking FDI, which includes most noncommodity GVC investment, focuses on factors that affect production and trade costs (World Bank 2020). Creating a legal and regulatory framework that attracts FDI and enables GVC entry thus ultimately requires a country- and sector-specific analysis of impediments to investor entry and operation.³

Entry barriers can inhibit FDI, and removing them is pivotal to GVC integration. Most of the literature confirms that statutory entry barriers to FDI, such as prohibitions on FDI in certain sectors, foreign equity ceilings, screening mechanisms, and restrictions on foreign managerial personnel or board members, can significantly inhibit FDI. Other legal entry barriers include minimum investment requirements, performance requirements, restrictions on land ownership, reciprocity requirements, restrictions on capital transfers, and any other form of discrimination between different types of foreign investors or between foreign and domestic investors.

A study by the Organisation for Economic Co-operation and Development (OECD) covering 60 advanced and developing countries over the period 1997–2016 shows that liberalizing FDI restrictions by about 10 percent, as measured by the OECD FDI Regulatory Restrictiveness Index,⁴ could increase inward FDI stocks by an average of 2.1 percent (Mistura and Roulet 2019). The study also shows that this effect is greater for FDI in service sectors but that even manufacturing sectors—which are typically open to FDI—are negatively affected by countries' overall restrictiveness. Other studies confirm these findings, including in developing countries. De la Medina Soto and Ghossein (2013) find a positive correlation between average openness to foreign equity investment across sectors and per capita FDI inflows across 103 economies. Arnold et al. (2016) find that the liberalization of India's service sectors in the 1990s significantly increased the country's inflow of services FDI. And, notably, export-oriented FDI is particularly affected by entry barriers because there is no strong pull factor drawing foreign investors into any particular country (Kusek and Silva 2018). If foreign investors are restricted or deterred from entering a host country in the first place, few of the policy instruments discussed in this chapter can be applied.

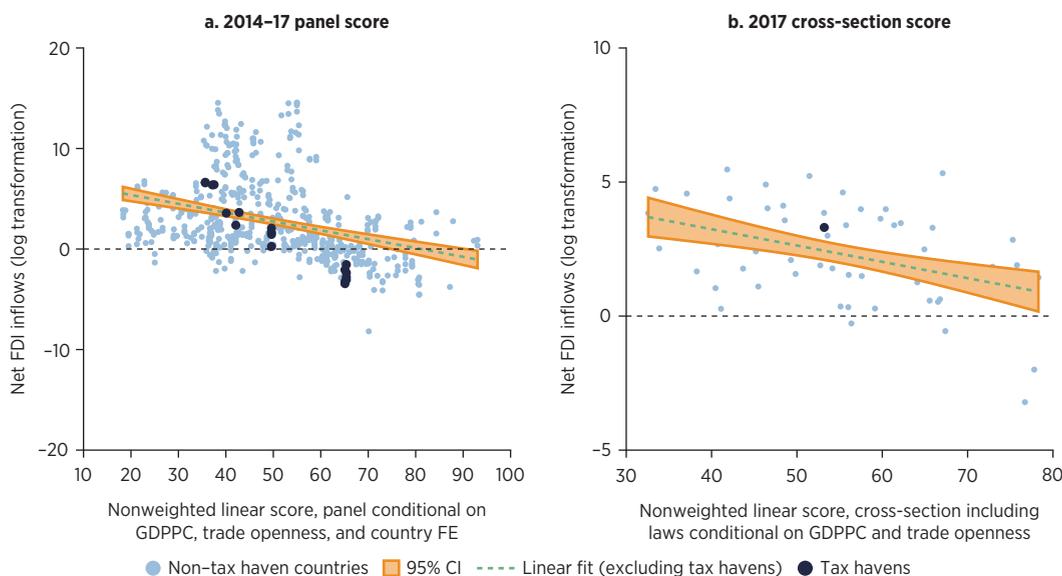
Once the sectors seeking FDI have been liberalized on a nondiscriminatory basis, the next steps include streamlining business establishment procedures, such as the processes to obtain licensing, work permits, and visas. In the context of GVC integration, the World Bank Doing Business Index's "trading across borders" indicator, which

measures the number of documents, the cost, and the time necessary to export from and import into a country, is particularly relevant. Governments also need to focus on de facto barriers to entry, such as lack of transparency and regulatory uncertainty, that arise from weak governance.

Investment approval or screening procedures should also be minimized and, where present, be nondiscriminatory. Such approval and screening mechanisms have gained prominence in recent years, following a general global trend toward increased protectionism in investment and trade policies. Some countries have also increased their scrutiny of foreign takeovers of strategic assets and technology companies (UNIDO 2018). Screening processes, especially when applied in discriminatory ways, are a significant deterrent to FDI. This effect is especially strong for service sectors and for efficiency-seeking investment, which is more mobile than other types of FDI and can choose host countries with simpler and more favorable business environments (Mistura and Roulet 2019). Although, in principle, governments use screening mechanisms as legitimate tools for pursuing economic objectives, deficiencies in the design of these mechanisms may impose significant burdens on investors without advancing the intended objectives. Even if the mechanisms are well designed, poor or discretionary administration of them may increase costs and uncertainty for investors without achieving the desired benefits.

Countries should limit approval or screening mechanisms to only the handful of sectors that can genuinely be considered “strategic” or “sensitive.” These concepts (strategic, sensitive, and so on) should be defined in ways that are clear and differentiated but not too broad or all-encompassing. The screening processes should be made transparent and efficient, including by using objective criteria to screen projects, providing a recourse mechanism for investors whose applications are denied, and establishing negative lists and standard operating procedures for the agencies conducting the screenings or reviews. In addition, a risk-based approach to screening can allow the government to identify and focus its efforts on high-risk investment projects. Risks could be categorized according to the sensitivity of sectors or industries or, more generally, in accordance with health and safety, environment, and public security risks (or other criteria, according to public policy considerations).

Furthermore, governments should minimize regulatory risk to enhance investor confidence. Regulatory risk, a type of political risk,⁵ is a government failure that arises when investors are subject to uncertainty because of government conduct. It may take the form of a lack of transparency, sudden changes in laws or regulations, breaches of contract, or expropriation, among others (Hebous, Kher, and Tran 2020). Regulatory risk is decreased when a country’s legal system reduces the potential for unexpected losses caused by uncertainty and arbitrary government conduct and thus increases investor confidence. Hebous, Kher, and Tran (2020) use a new global data set of more than 14,000 parent companies investing in nearly 28,000 new and expanding FDI projects across 168 host countries and find that lowering regulatory risk increases FDI flows (figure 4.3). In fact, the study suggests that the effect of reducing regulatory risk on FDI is even greater than the effect of increasing trade openness. A 1-percentage-point reduction in regulatory risk boosts the likelihood of an investor entering or expanding its operations in a host country by as much as 2 percentage points. In contrast, a 1-percentage-point increase in the host country’s ratio of trade to gross domestic product (GDP) boosts the likelihood of entry by no more than 0.6 of a percentage point.

FIGURE 4.3 Regulatory risk and foreign direct investment inflows

Source: Hebous, Kher, and Tran 2020.

Note: CI = confidence interval; FDI = foreign direct investment; FE = fixed effects; GDPPC = gross domestic product per capita.

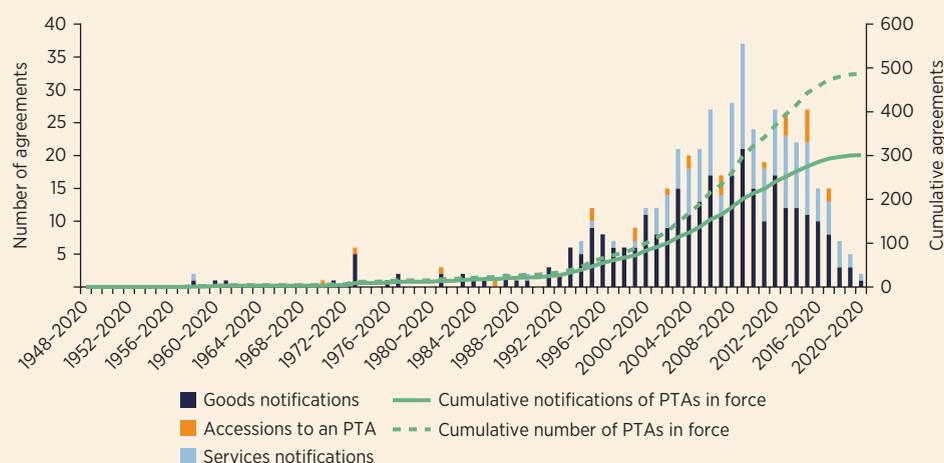
Just as important, reducing regulatory risk is critical to retaining existing investors. Results from the *Global Investment Competitiveness Report 2019/2020* show the high frequency with which investors face these types of risks as well as investors' reactions to them (Hebous, Kher, and Tran 2020). The most common types of political risk caused about one in four investors to withdraw an existing investment or cancel a planned investment. In more severe cases, the negative effects on FDI were even stronger (Kusek and Silva 2018). Retaining investment is particularly important in the context of GVC upgrading through MNC-supplier linkages and spillovers. The longer FDI projects remain in a country, the more they tend to evolve and expand, increasing the possibilities for linkages and diversification into other connected sectors.

Investor confidence can be strengthened by improving a country's legal framework for investor protection, including by adopting international investment agreements (IIAs). Under such "investor protection guarantees," governments offer protections against adverse government conduct, including legal provisions against direct and indirect expropriation and guarantees of the investors' ability to transfer funds into and out of the country in convertible currency in a timely manner.⁶ Such guarantees can be included in a country's domestic legal framework, such as in an investment code, or in IIAs, which include bilateral investment treaties (BITs) and investment chapters in preferential trade agreements (PTAs). Although empirical evidence about the relationship between IIAs and FDI flows is inconclusive (see box 4.1), survey data indicate the importance of investor protection guarantees as well as IIAs to foreign investors, particularly export-oriented ones (Kusek and Silva 2018). Honduras's experience entering the textile and apparel GVC further shows the importance of signing PTAs and BITs to attract FDI (see chapter 7 of this report).

BOX 4.1 The role of international agreements in attracting foreign direct investment

International trade and investment agreements have become increasingly prevalent around the world (figure B4.1.1 and table B4.1.1). These agreements shape trade and investment relations among member and nonmember economies. For example, the European Union's Single Market has been crucial to the high degree of integration in Eastern Europe (Brenton, Di Mauro, and Lücke 1999). Similarly, the North American Free Trade Agreement has encouraged trade and foreign direct investment (FDI) flows between the United States, Canada, and Mexico (MacDermott 2007).

FIGURE B4.1.1 Number of preferential trade agreements, 1948–2020



Source: World Bank calculations using World Trade Organization data.

Note: PTA = preferential trade agreement.

The relationship between international agreements, global value chains (GVCs), and FDI is affected by many factors; and there is no clear correlation between a region's number of trade and investment agreements and its regional value chain participation (see table B4.1.1). For example, the Middle East and North Africa region has the second-highest average number of bilateral investment treaties (BITs) per country, but its regional FDI stock is smaller than that of Europe and Central Asia, East Asia and Pacific, or Latin America and the Caribbean.

Agreements on trade and investment are generally associated with increases in trade and FDI flows, yet the findings depend on the scope of the provisions and on the context. In principle, BITs increase FDI by substituting for improved investment climate or democratic institutions (Arias, Hollyer, and Rosendorff 2017; Bhandari and Yang 2019). The effect of the BITs is strongest when FDI relies on strong contracts between firms and states (Danzman 2016).

Osnago, Rocha, and Ruta (2018) find that signing deeper preferential trade agreements (which go beyond traditional market access issues and include disciplines such as investment, competition policy, and harmonization of product regulations) can further increase the flows of vertical FDI between countries. BITs with stronger international dispute settlement provisions also prove to be associated with higher FDI flows (Frenkel and Walter 2018).

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BOX 4.1 The role of international agreements in attracting foreign direct investment (continued)

TABLE B4.1.1 International investment treaties and value chain and foreign direct investment network values, by region

Region	BITs		TIPs		Regional value chain network (2019, US\$, billion)	Regional FDI network (2017, US\$, billion)
	Total	In force	Total	In force		
EAP	20	17	10	9	34.8	80.2
ECA	48	43	38	30	46.8	107.1
LAC	14	11	11	9	1.0	8
MENA	46	33	12	9	0.4	3.8
NA	26	25	30	23	n.a.	n.a.
SA	16	13	5	4	n.a.	n.a.
SSA	15	7	8	6	0.1	1.4

Source: World Bank calculations based on United Nations Conference on Trade and Development data.

Note: Because of the small number of countries in NA and SA, no values are estimated for the regional value chain or FDI networks. See chapter 1 for more details on the regional global value chain and FDI networks. BIT = bilateral investment treaty; EAP = East Asia and Pacific; ECA = Europe and Central Asia; FDI = foreign direct investment; LAC = Latin America and the Caribbean; MENA = Middle East and North Africa; NA = North America; n.a. = not applicable; SA = South Asia; SSA = Sub-Saharan Africa; TIP = treaty with investment provisions.

The effectiveness of BITs in encouraging bilateral FDI flows increases with the difference in GDP and GDP per capita between the source and host countries. BITs only have strong, significant positive effects where no FDI relationship was present or where an existing FDI relationship was disintegrating (Falvey and Foster-McGregor 2018). BITs mitigate the higher uncertainty and transaction costs associated with investing in far-away, unfamiliar markets (Gomez-Mera and Varela 2017).

Finally, the effect of international agreements on GVC participation and FDI flows also varies across sectors. Deep trade agreements seem to be particularly relevant for GVC integration in high-value-added industries, which are usually services industries characterized by nontangible activities (Laget et al. 2018). Colen, Persyn, and Guariso (2016) further find that BITs are most successful in attracting FDI in sectors with higher sunk costs, including utilities, real estate, banking, and mining.

Note: More detail on provisions that could make BITs more effective in attracting FDI can be found in Berger et al. (2013); Buthe and Milner (2014); Danzman (2016); Frenkel and Walter (2018); Lukoianova (2018); and Osnago, Rocha, and Ruta (2018).

Governments should also provide foreign investors with effective mechanisms for recourse if grievances or disputes arise. As a starting point, governments should strengthen their domestic judicial systems, such as by creating specialized commercial courts, stipulating time periods for judicial processes, and implementing case management systems (Hebous, Kher, and Tran 2020). In addition, access should be given to a wide range of dispute settlement mechanisms, including state-to-state as well as investor-to-state arbitration (UNCTAD 2019a). To retain and expand investment, governments should also introduce early-warning and tracking mechanisms to identify and resolve investor issues arising from government conduct. Enhanced legal

frameworks for investor protection can greatly mitigate regulatory risk, but these laws and regulations are often insufficiently implemented, making countries' overall investment climates unpredictable and unstable. After ensuring the predictability of government behavior by offering investment protections and guarantees, governments can minimize regulatory risk at the source by addressing grievances early and effectively (World Bank Group 2019).

Last, investor confidence can be boosted by providing transparency regarding the content of laws and regulations as well as the process of making them. Improving transparency and reducing regulators' room for discretionary behavior can make a country's business environment more predictable and less risky for investors. Governments in developing countries can strengthen transparency by consulting systematically with the private sector and with other stakeholders. They can also provide accessible regulatory information, create business-to-government feedback loops to verify the effective implementation of regulations, and introduce rules-based indicators to prevent opportunities for discretionary behavior (Hebous, Kher, and Tran 2020).

Targeted promotion of inward foreign direct investment

Proactive efforts to attract and facilitate foreign investment can help overcome problems of imperfect information and information asymmetries among potential investors. Capital markets, especially those involving cross-border elements, often exhibit market failures in the form of transaction costs, imperfect information, and information asymmetries (Greenwald and Stiglitz 1986; Williamson 1975; Williamson 1986). Foreign investors often have large informational disadvantages relative to domestic investors (Mariotti and Piscitello 1995), resulting in mismatches between investors' location choices and host countries' comparative advantages. IPAs can use targeted information provision, outreach campaigns, and preestablishment support services to help foreign firms overcome information asymmetries and to demonstrate their countries' competitiveness in specific sectors. Information asymmetries are especially pronounced for firms that invest in previously nonexistent sectors (the so-called first-mover firms) (Moran 2014), so investment promotion programs are particularly relevant when IPAs are establishing a country's first linkage with a specific GVC (Crescenzi, Harman, and Arnold 2019).

Empirical evidence shows the positive effects IPAs can have on attracting FDI (Heilbron and Kronfol 2020). Several studies indicate that IPAs increase FDI inflows to their home economies (Cho 2003; Crescenzi, Di Cataldo, and Giua 2019; Morrisset and Andrews-Johnson 2004; Pietersen and Bezuidenhout 2015), and some estimate the magnitude of this increase to be as large as 30–45 percent (Morrisset and Andrews-Johnson 2004, based on a global survey of IPAs across 58 countries in 2001). The quality of an IPA is pivotal to attracting more FDI (figure 4.4). Harding and Javorcik (2011) use a global survey of 124 countries together with US FDI data and find that investment promotion led to 155 percent higher FDI inflows and 58 percent greater employment in targeted sectors compared with nontargeted sectors. Studies find that IPAs are most effective in developing countries subject to high information asymmetries, challenging regulatory environments, and greater cultural

that drew a cluster of follower firms that proved instrumental to subsequent GVC upgrading.⁷

Although more countries are now establishing IPAs, many of these IPAs are struggling to reach their full potential. Heilbron and Kronfol (2020) find that, although IPAs are expanding their annual budgets, staffing, and number of offices abroad, many of their operational characteristics remain the same. This finding suggests that these IPAs are not sufficiently responsive to emerging global trends and technologies. Also, troublingly, most IPAs either stagnated or deteriorated from 2006 to 2012 in their ability to respond to investor inquiries. Common challenges that prevent IPAs from performing better are inadequate institutional coordination, an overly wide range of mandates, uneven service coverage, and inadequate sector prioritization and focus (Heilbron and Kronfol 2020).

When setting up a new IPA or seeking to improve an existing one, a government should ensure that the agency is clearly focused on its target segments. To be most effective given limited resources, IPAs should focus their proactive promotion efforts and high-level service offerings on a few segments in which their country is competitive (Heilbron and Aranda-Larrey 2020; Heilbron and Kronfol 2020). In particular, many countries' IPAs are targeting entire sectors,⁸ but GVC mapping (see the relevant section later in this chapter) would allow these agencies to target specific GVC segments in which their countries have revealed comparative advantages. In Malaysia, for example, the government adopted an "ecosystem approach" in 2012 under which it continuously mapped and analyzed the ecosystem of the Malaysian electrical and electronics industry. On the basis of these analyses, the agency focused on promoting specific high-value activities that were in line with Malaysia's comparative advantage, such as integrated circuit design (see chapter 8 of this report).

IPAs should also have sufficient high-level political support, institutional and financial autonomy, and capable staff to carry out their missions. High-level political support is essential to successful investment promotion because it gives IPAs the mandate and ability to better coordinate across ministries and stakeholders, to mobilize them to ensure that essential public goods are provided, and to address critical constraints. For example, Malaysia's case highlights how high-level political support was essential to establishing the infrastructure necessary to attract global lead firms (see chapter 8 of this report). In addition, IPAs need to have sufficient institutional and financial autonomy to implement their strategic plans and avoid political interference. They also need to be able to employ an appropriate staff, including employees with a mix of public and private sector experience and who have sufficient language skills and international experience to interact effectively with potential investors (Heilbron and Kronfol 2020).

Finally, IPAs should concentrate on investment promotion services rather than taking on regulatory responsibilities. IPAs should focus on four types of services that are particularly important: marketing, information, assistance, and advocacy. Adding other functions could impair the IPA's core function. As a general rule, IPAs should not engage in small and medium enterprise development, administration of incentives, screening or approval of investment projects, issuance of noninvestment licenses or permits, or management of state land or assets. Outward FDI and export promotion should in most cases also be handled by a separate unit (Heilbron and Whyte 2019).

Special economic zones

SEZs aim to overcome barriers to investment existing in a country's wider economy. SEZs are demarcated geographic areas with special regulatory regimes—most often customs and fiscal rules, but in some cases rules around foreign ownership or access to land—that are distinct from the rest of an economy. They often feature dedicated support services to ensure that investors face minimal disruption to their supply chains (World Bank 2020). Developing countries most commonly establish SEZs to link into labor-intensive manufacturing GVCs to kick-start industrialization (FIAS 2008). In transition economies, industry-specialized and innovation-driven zones (such as science parks) are most common; in developed countries, the majority of these zones are pure free-trade zones focused on facilitating trade logistics (UNCTAD 2019b).

A commonly used place-based policy tool, SEZs generally provide three types of benefits compared with what firms normally receive in areas outside the zones. These benefits include (a) infrastructure (such as serviced land, factory shells, and utilities), (b) tax incentives (including access to imported inputs free of tariffs and duties and reduced or eliminated corporate income and value added taxes), and (c) regulatory simplification (such as streamlined regulatory procedures, investor aftercare, and efficient customs administration). Because in many developing countries public infrastructure is undersupplied by the private sector and highly expensive to construct, these countries' governments may create public goods by directly investing in a specific location's infrastructure or by stimulating infrastructure investments there by foreign or domestic firms. Additionally, SEZ-specific regulatory simplification may address government failures, such as cumbersome or discretionary regulatory burdens that investors would face outside of these zones. These benefits may reduce the costs to produce and trade and thereby stimulate positive externalities for the host economy. However, the effectiveness of the various types of SEZ-specific benefits varies. Infrastructure provision and regulatory simplification tend to be the most important factors in making SEZs effective, whereas the effects of tax incentives are mixed (see box 4.2). In addition, SEZs can be used as "testing grounds" for new economic policies and approaches, as they are in China and other East Asian economies (Zeng 2011).⁹

The global record on SEZs has been mixed. In some parts of the world, the SEZ model has delivered spectacularly, playing a catalytic role in growth and structural transformation (World Bank 2020). China; the Republic of Korea; Malaysia; Taiwan, China; and Singapore, among other Asian economies, managed to use SEZs as platforms for developing export-oriented manufacturing (Jeong and Zeng 2016; see also chapter 8 of this report). In the Middle East and North Africa, countries such as the Arab Republic of Egypt, Morocco, and the United Arab Emirates have used SEZs to catalyze the diversification of their exports. And a number of Latin American countries, including the Dominican Republic, El Salvador, and Honduras, have used free zones ("maquiladoras") to take advantage of preferential access to US markets and establish large-scale manufacturing sectors (see chapter 7 of this report).

However, SEZ programs in other regions did not yield the expected results. In some countries, such as India, Namibia, and Nigeria, SEZs either have failed to attract investors or have attracted investors that took advantage of the associated tax breaks without delivering substantial employment or export gains (World Bank 2020). Especially

BOX 4.2 Provisions of special economic zones and their effectiveness

- *Infrastructure and utilities.* Special economic zones (SEZs) may help address production challenges in a country by providing land and access to reliable and cheap utilities, such as water and electricity. Other facilities provided in SEZs may include prefabricated factory units and warehouses. Infrastructure and utility provision are found to be strongly correlated with increased foreign direct investment (FDI) and exports (Dollar, Hallward-Driemeier, and Mengistae 2004; Portugal-Perez and Wilson 2010) and with employment (Aggarwal 2005). They were also the most important determinant of effectiveness for a sample of SEZs across six African countries (Farole 2011a). Additionally, SEZs allow governments to improve their returns to infrastructure and utility provision by concentrating their investment in small, targeted areas (UNIDO 2009).
- *Regulatory simplification and investor aftercare.* Firms operating in SEZs may be given preferential regulatory services and better investment aftercare. These benefits, such as one-stop centers that enable firms to spend less time registering or obtaining permits, reduce the cost of doing business. One-stop centers may also have important indirect effects: firms can raise any specific problems there, access information about other (not SEZ-specific) government benefits, and obtain more timely access to information on new laws and regulations. However, not all one-stop centers are associated with better SEZ outcomes. Ineffective implementation sometimes prevents these centers from speeding up business registration or simplifying regulatory compliance (Farole 2011a). SEZs may further ease border regulations through trade facilitation schemes. Such interventions lower customs clearance times and reduce trade costs. There are strong empirical links between transportation and trade facilitation and export outcomes (Djankov, Freund, and Pham 2006; Dollar, Hallward-Driemeier, and Mengistae 2004; Freund and Rocha 2010; Portugal-Perez and Wilson 2010).
- *Tax incentives.* SEZs can attract new firms through designated tax incentives (such as tax holidays and rate reductions). The literature finds mixed results for these efforts. Although investors often lobby governments for additional tax incentives, providing such support might not translate into the governments' desired outcomes. A range of empirical studies on tax incentives suggests that they have little impact on attracting FDI (Bobonis and Shatz 2007; Wei 2000). Similarly, Farole (2011a) finds that the use of corporate tax holidays had no significant effect on the ability of African SEZs to attract FDI, improve exports, or increase employment. On the contrary, tax holidays may exacerbate economic distortions and lead to lower welfare as a result of the revenue lost (Kline and Moretti 2014). Successful SEZs (in China, Mauritius, and Vietnam, for instance) are increasingly removing such fiscal incentives and integrating their zones' tax regimes with those of their national economies (Farole 2011a; Zeng 2015).

Source: Adapted from Steenbergen and Javorcik 2017.

in Sub-Saharan Africa, few SEZs have had a transformative impact; their exports and employment generation lag behind those of zones on other continents (Farole 2011b). Although this effect may partly be caused by the broader structural economic challenges in Africa, including higher transportation and labor costs, Farole (2011b) shows that African SEZs often fail to provide sufficiently favorable business environments. A study of 13 African SEZs by Zeng (2020) shows that the market's demand factor and zone-level governance are also critical to a zone's success. Even for zones in the same country that face the same legal and business environment, the zones with stronger business orientation and higher implementation capacity tend to perform better.

Policy makers should design SEZs in such a way as to remove binding investment constraints and strengthen the sectors in which a country has comparative advantages. SEZs are no end in themselves, but they may be useful if multiple investment constraints apply within a country and alternative investment promotion is difficult to implement, as is often the case in low-income countries (UNCTAD 2019b). SEZs should therefore be designed in close consultation with investors and other relevant stakeholders and tailored to address specific constraints on investment. In that sense, they may act as shortcuts to policy reforms or infrastructure investments that would otherwise take many years to achieve (World Bank 2020).

SEZs can also play an important role in prioritizing infrastructure investments that can help reduce the production and trading costs of existing domestic industries, which will help them grow and establish the economies of scale needed to compete regionally (Farole 2011a). However, SEZs are too often used to strengthen sectors in which a country has no comparative advantage. For example, a number of resource-intensive countries (such as Ghana, Kuwait, and Nigeria) failed to develop manufacturing-oriented SEZs because they did not have the competitively priced labor or efficient infrastructure needed to support such activities (World Bank 2020). Governments should also refrain from using SEZs as explicit regional development programs; rather, they should let market mechanisms decide the zones' locations. In Honduras, for example, the government's attempt to designate specific areas as SEZs backfired, and FDI came only when its geographic restrictions were lifted (see chapter 7 of this report). There must always be commercial rationales for SEZs.

Special attention should be given to linking SEZs to the rest of their countries' economies and to helping firms establish innovation clusters. SEZs are often criticized for their typical focus on low-value-added activities and exports and their enclave-like nature (FIAS 2008). Countries that have successfully used SEZs to spur industrial development and upgrading have focused on establishing the conditions to foster ongoing exchange and technology transfer between the domestic economy and foreign investors located in the SEZs (Farole 2011b). These conditions include investments by domestic firms in the zones, forward and backward linkages, and movement of labor. This aspect of SEZ management also requires broader policy programs, especially enterprise and skills development policies, that foster domestic productive capacity (see the next section on domestic firm internationalization policies for details). Trade restrictions with non-SEZ firms (including those arising from customs regulations) should also be eliminated (Farole 2011b). And, just as important, SEZs should focus on creating clusters of firms participating in particular GVCs, which can help those firms innovate over time. The Malaysia case study in this report (chapter 8) shows the power that SEZs can have when they do so. In contrast, the Honduras case study (chapter 7) shows how, without continuous adaption, SEZs may limit a country to engaging in one narrow segment of a GVC.

To further allow the host country's whole economy to benefit, good practices from successful SEZs should be replicated in the rest of the economy to maximize positive spillovers. A review of the World Bank's lending portfolio in SEZs revealed that, in the absence of wider reforms, benefits arising from SEZs tend to remain within the zones themselves, with little spilling over to the wider economy (World Bank Group 2017).

Investment incentives

Governments use investment incentives to attract foreign firms and encourage specific behavior. Many governments offer tax concessions intended to steer investment into preferred sectors or specific regions or to enhance the investment's development effects (James 2014). However, tax incentives come at the expense of forgone revenue and should be seen as a type of government subsidy or a form of state-directed "investment" in a company's future. Tax incentives are justified only if they generate positive externalities that compensate for their present social costs (Harrison and Rodríguez-Clare 2010; Margalioth 2003; Wade 1990).

Tax incentives are often used to meet two types of objectives (figure 4.5):

1. *Locational incentives* hope to generate positive externalities by attracting MNCs that will provide new GVC opportunities and raise domestic firms' productivity and sector competitiveness. Because FDI is highly mobile across countries, attracting MNCs may require offering reduced tax rates or other incentives. This is a classic case in which incentives can lead to net social benefits (Margalioth 2003).
2. *Behavioral incentives* aim to generate positive externalities by stimulating specific firm behavior (such as innovation) that will yield high social benefits. Temporary support can help improve firms' long-term productivity. For such interventions to enhance welfare, they must pass two tests: the supported firms should eventually be able to survive international competition without the incentives, and the expected future benefits should compensate for the present subsidy costs. In practice, it is extremely hard to identify firms that would exhibit such spillovers if supported, let alone to identify the incentives that would pass a cost-benefit assessment (Harrison and Rodríguez-Clare 2010).

Developing countries are increasingly using tax incentives as part of their industrialization strategies. Andersen, Kett, and von Uexkull (2018) find that, for the period

FIGURE 4.5 Locational and behavioral incentives have different aims and expected benefits

Objectives	Attract new investment	Grow strategic sectors	Create jobs	Promote R&D and innovation	Promote exports
Objective type	Locational objectives (Attract new firms)		Behavioral objectives (Shift firm behavior)		
Incentive aim	Raise firms' expected profitability • Effect on tax risks (transparency) • Effect on profits		Lower user cost of specific behavior • Effect on input cost • Effect on output cost		
Incentive success	New firms locate in the country or region as a result of incentives		Firms use inputs more or produce more output as a result of incentives		
Incentive failure	Firms receiving incentives would have located there anyway		Firms receiving incentives do not change behavior or would have changed their behavior anyway		

Source: Kronfol and Steenbergen 2020.

Note: R&D = research and development.

2009–15, 46 percent of developing countries either reduced their corporate income tax rates or introduced new tax incentives. Incentives are particularly common in the construction, information technology and electronics, and machinery and equipment sectors. Among developing countries, tax holidays are the most widely used instruments (used in 77 percent of cases) and are often conditioned on a firm's locating in a SEZ or another specially designated area. Tax allowances are less common, offered by only 16 percent of developing countries.

Overall, there is a trend toward lower corporate taxation of foreign firms, emphasizing the risk of tax competition and a "race to the bottom." Indeed, Kronfol and Steenbergen (2020) find a strong, negative relationship between the generosity of countries' corporate tax incentives and corporate tax revenue as a share of GDP. A likely reason for this finding is that tax incentives often go not only to new firms in priority sectors but also to existing firms, eroding the country's corporate tax base. Strategies existing firms can use to take advantage of these tax incentives include round-tripping (creating an artificial new firm to qualify for the incentives) and transfer pricing (shifting intercompany assets to lower-tax locations) (Zolt 2013).

Evidence on the effectiveness of locational incentives to attract FDI is mixed. Although studies find a negative correlation between high corporate tax rates and FDI entry (see Bellak, Leibrecht, and Damijan 2009; Bénassy-Quéré, Fontagné, and Lahrèche-Révil 2005; Büttner et al. 2008; Desai, Foley, and Hines 2006), evidence on the impact of tax incentives is limited, and several studies find that they have little to no effect at the aggregate level (see Allen et al. 2001; James 2014; Klemm and Vasin Parys 2012; Van Parys 2012; Van Parys and James 2010). Data from the 2019 GIC survey confirms that other variables, such as political stability, regulatory quality, and market size, are generally considered more important by investors than tax rates and incentives. Incentives are both the most prevalent and the most valued in sectors dominated by export-oriented manufacturing (Andersen, Kett, and von Uexkull 2018; Kusek and Silva 2018).¹⁰ However, when investor motivation is based on less mobile factors (such as natural resources or domestic markets), incentives are often redundant (Andersen, Kett, and von Uexkull 2018).

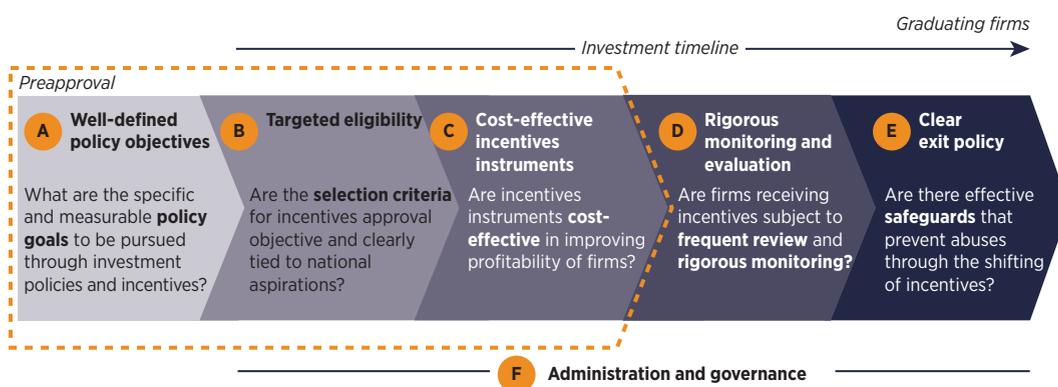
The effectiveness of locational incentives also depends strongly on country-level characteristics. Tax incentives are more effective in countries with better infrastructure, reasonable transportation costs, and a policy framework favoring investment (Bellak, Leibrecht, and Damijan 2009; Kinda 2014). In fact, tax incentives have been shown to be eight times more effective in attracting FDI in countries with good investment climates than in those with worse climates (James 2014). Other country-level factors, such as political stability, regulatory quality, and market opportunities, are more critical to investors' initial location considerations than are tax rates and incentives (UNIDO 2011; World Bank Group 2019). In general, a low tax burden cannot compensate for a weak or unattractive FDI environment (Göndör and Nistor 2012). However, for suitable locations, incentives can play a role in the final stage of the site selection process, in which investors decide between shortlisted locations and often waver between similar options (Freund and Moran 2017; World Bank 2018). Several of the case studies in part II of this report (chapters 6 to 11) illustrate this point (particularly those on Honduras, Malaysia, and Mauritius). Locational incentives helped attract foreign investors to these countries, but they could only do so because the countries had strong foundations for investment in place.

Behavioral incentives may be used to induce investors to pursue various types of behaviors, including research and development (R&D), innovation, and workforce training. The literature shows a positive association between tax incentives and R&D intensity (Busom, Corchuelo, and Martínez-Ros 2012). Tax credits seem to have the most impact on larger firms without financing constraints, whereas direct grants are most effective at influencing small and medium enterprises and firms with no previous R&D experience (Correa, Andres, and Borja-Vega 2013; Correa and Guceru 2013). As for incentives related to workforce training, a mix of tax incentives and grants targeted to specific groups of enterprises or employees appears to be more appropriate than a single incentive for a large number of companies (Müller and Behringer 2012). Malaysia's experience shows how R&D grants and workforce training incentives can help stimulate firms to undertake higher-value-added activities in a country (see chapter 8 of this report).

Different approaches to tax incentives may be warranted in different countries, depending on their investment climates. In countries with poor investment climates, it may be best to streamline tax incentives to protect the countries' tax bases. Tax revenues can instead be directed toward helping reduce firms' costs of doing business (such as through public investment in infrastructure and utilities). In countries with better investment climates, tax incentives should be targeted toward high-potential investors who are likely to both be influenced by these instruments and contribute to the countries' economic development objectives. Determining the appropriate targets for these incentives requires an understanding of their costs and benefits.¹¹

To strengthen a country's investment incentive regime, it is important to consider the design, transparency, and administration of the incentives. Figure 4.6 presents a framework for strengthening investment regimes that is based on six steps and criteria. The specific and measurable policy goals to be pursued through the incentives should serve as the starting point. Next, countries should reflect on the targets of the incentives and ensure that the selection criteria are objective and tied to the policy goals. Third, countries should consider which instruments (such as tax credits, investment allowances, or R&D grants) are most conducive to achieving the policy goals. To ensure that the regime is as cost-effective as possible, firms receiving incentives should be subject to regular review and rigorous monitoring, and effective safeguards should be put in place to provide sunset clauses for any ongoing incentives.

FIGURE 4.6 Framework for strengthening a country's investment incentive regime



Source: World Bank, forthcoming.

Finally, countries must ensure effective administration and maintain a transparent, rules-based legal and governing system to underpin these incentives.

Domestic firm internationalization policy

Domestic firm internationalization policy is another critical means for stimulating GVC participation and ensuring that the benefits of GVCs are extended to local firms (see chapter 3). Governments can further strengthen the role that domestic firms play within GVCs and assist them in upgrading to higher-value-added activities using the following four policy instruments:

1. Combining matchmaking with support to strengthen local supplier capacity
2. Facilitating strategic alliances built on competitive industries
3. Safeguarding competitive and contestable markets
4. Removing restrictions on outward FDI and investing in R&D and human capital

Combining matchmaking with support to strengthen local supplier capacity

Firms' potential to establish linkages is typically restricted by two types of market failures: information asymmetries and coordination failures. Information asymmetries may arise because newly established MNCs face high search and screening costs because they lack sufficient information on local suppliers and their capabilities. And, on the supply side, local firms often struggle to understand what opportunities are available, who to contact in pursuit of them, and what requirements and standards need to be met to qualify as a supplier for MNCs. The second type of market failure, coordination failures, may restrict the quality of domestic suppliers. MNCs operate in competitive global markets, requiring their inputs and suppliers to meet quality, cost, and timeliness criteria. Local firms often do not meet these minimum requirements, but they are reluctant to bear the costs of upgrading their production capabilities (such as in management, skills, or technology) without a supplier contract.

MNCs and supplier firms dedicate much effort to establishing their supply dynamics, which can be transformational for both those firms and their host countries. MNCs often assign "talent scouts" to search for potential suppliers and apply detailed screening procedures to identify the most suitable domestic firms (World Bank 2018). They need to engage in these costly procedures in part because the market does not provide sufficient information for them to identify the right domestic firms to source from (Jordaan, Douw, and Qiang 2020). Large fixed costs are also associated with switching suppliers, including the support, training, and certification that new suppliers will need before they can produce inputs that meet global standards (see chapter 3 of this report). However, when such linkages happen, they can do much to facilitate GVC participation (see chapter 6 of this report).

To promote linkages between MNCs and domestic firms, host governments have implemented a variety of policies. The effectiveness of these policies often depends largely on the governments' ability to address information asymmetries and coordination failures.

Local content requirements are generally ineffective and counterproductive at stimulating supply linkages. Historically, countries have aimed to boost the development of local firms through laws and regulations that required that a certain percentage of goods used by MNCs operating in the country be purchased from domestic firms. Such policies were generally unsuccessful, in part because they were difficult and costly to enforce: firms could easily circumvent such measures through creative accounting practices or deceptive statistics (Sutton 2014).¹² In addition, these policies do not address either of the constraints on local sourcing (information asymmetries or coordination failures). Instead, they force producers to use higher-cost and lower-quality domestic inputs, creating market inefficiencies that may reduce the overall productivity and competitiveness of the country's export sector (Spray 2017). Thus, counterproductively, these policies can discourage foreign investment in the host country and raise costs for local consumers (Johnson 2013). A study of the Russian Federation's heavy vehicles sector confirms the distortive effects and costs that such policies can have for both producers and consumers (Deringer et al. 2018).

Information campaigns are an important, low-cost intervention that can help spread knowledge between MNCs and local suppliers. To deal with the problems caused by asymmetric information on suppliers, databases containing production and financial information about domestic firms could reduce the information constraints and search costs faced by MNCs when identifying and matching with local suppliers. In addition, governments could create qualification or certification programs to help preselect the domestic firms that are most likely to operate effectively as suppliers (Moran 2014). These selection criteria may serve as important signals about domestic firms to MNCs (Jordaan, Douw, and Qiang 2020).

Governments can further support local suppliers' upgrading by aligning public and private standards. Firms often incur multiple burdensome certification procedures or design numerous production processes for the same product to comply with conflicting standards. Simplifying and publishing national production standards, aligning them with international quality standards and the general requirements of MNCs, and producing guidelines that illustrate how to meet these standards can go a long way toward creating clarity for local suppliers (Cusolito, Safadi, and Taglioni 2016).

Supplier development programs (SDPs) that combine matchmaking with proactive support to help local suppliers upgrade can be transformative, though costly. These programs address information asymmetries by arranging special matchmaking events at which local suppliers and MNCs can explore possible partnerships. These programs can then work together with the MNCs to develop appropriate training and capacity-building programs so that the local suppliers can produce the necessary inputs at the required quality standards in return for supply contracts (Steenbergen and Sutton 2017). These programs can be highly transformational for suppliers. For example, in Costa Rica, such a program significantly raised firm sales and productivity (Alfaro-Ureña, Manelici, and Vasquez 2019). In Chile, a program combining matchmaking services with subsidized credit was found to significantly increase sales, employment, and the sustainability of participating small and medium enterprises (Arraiz, Henriquez, and Stucchi 2013). A Czech SDP was found to increase sales for about one-third of all participating firms, and it helped one-fifth of the firms initiate exports or obtain contracts for higher-value-added content (Mariscal and Taglioni 2017). However, SDPs are often very expensive, and they require significant capacity to design and implement. They are thus often relatively small, which can limit their

BOX 4.3 Lessons learned from five supplier development programs

A study of five supplier development programs (SDPs) confirms the importance of facilitating linkages, strengthening the supply capacity of local companies, and using targeted incentives to encourage skills upgrading. Heher (2020) reviews five historical SDPs that have all been deemed successful: those of the Czech Republic, Ireland, Malaysia, Singapore, and Thailand. Although these programs differed in their approaches and country contexts, they all showed that developing supply linkages requires a long-term view, with both policy commitment to addressing specific market failures and, at the same time, the flexibility to adapt to new opportunities and challenges along the way.

These five cases confirm the importance of focusing such programs on changing the demand side rather than imposing local content on unwilling multinational corporations (MNCs). Changing the demand side requires a thorough and realistic understanding of MNCs' business needs and requirements. Thus, it is advisable to integrate MNCs into the governance structure of SDPs or to have the international private sector either closely advise or even run certain linking initiatives (as was done in the Czech Republic's and Malaysia's programs, respectively). Because trust and information gaps are often problems for these initiatives, at least initially, involving MNCs in them as partners from the beginning is crucial. Countries that passed laws requiring investors to use local goods or services in host-country operations often undermined their own long-term competitiveness. These requirements tended to increase the cost or lower the quality of production in those countries, deterring exactly the investors that the governments wanted to attract: those who would bring capital, technology, and jobs to the host countries.

Strengthening the supply capacity of local companies is, in most cases, the key challenge to developing foreign direct investment (FDI) linkages. Thus, improving those firms' competitiveness and productivity should be at the core of the programs. Because market failures play out at the firm level, increasing productivity is the ultimate goal of most SDPs (Cusolito and Maloney 2018). A firm's potential to increase its productivity should be a key criterion in selecting domestic firms to participate. Thus, it is necessary to appreciate that supplier capacity development, in contrast to more broad-based small and medium enterprise development, should focus on firms that are close to meeting MNCs' supplier criteria or capable of becoming long-term partners of MNCs (such as for design or research and development [R&D] activities). Although the five programs examined in Heher (2020) differed in the levels of targeting and support they gave, most of them either started out providing tailored support or adapted to focus on meeting specific MNC production criteria. In Ireland, Malaysia, and Thailand, skills upgrading was particularly important (in areas ranging from technical skills in production processes to management competencies).

Many of these programs applied targeted incentives for skills upgrading and supplier engagement. Broad tax incentives impose a significant fiscal cost, and emerging evidence supports targeted approaches over broad incentives. For example, incentives focused on training and skills, R&D, high-tech and higher-value-added production, and local sourcing have been successfully applied in Malaysia and Singapore to strengthen the technology and skills acquisition of local firms (OECD 2018).

SDPs touch upon multiple important thematic areas and require a committed and coordinated institutional landscape. The various examples given in Heher (2020) show different institutional setups, but what they have in common are relatively well-funded mandates (which are based on widely communicated policy agendas) and high-level political buy-in. Although several institutions had roles to play in promoting linkages between these countries' local firms and MNCs, these programs always involved national focal points for both foreign and domestic firms. It was also key that these programs could coordinate policies and interventions through an entity that guided the policy agenda, such as a ministry of industry. Such an entity can bring together several thematic areas, including cluster policies, industrial ecosystem development, and standards, and promote access to financial services and education policies that focus on technical and managerial skills.

Source: World Bank adaptation of Heher 2020.

Note: More details on using incentives to establish supply linkages can be found in Sabha, Liu, and Douw (2020).

transformative potential (Farole and Winkler 2014). Box 4.3 provides more lessons from a study of five SDPs (Heher 2020).

Facilitating strategic alliances built on competitive industries

Several potential market and government failures warrant policy makers' attention when supporting strategic alliances. The first challenge may come from positive externalities. MNCs may be reluctant to engage in new alliances (such as joint ventures) for fear of leaking trade secrets to domestic firms (Jiang et al. 2018). As with MNC-supplier linkages, these alliances can be prone to information asymmetries, in which firms may not know each other's capacities, or to coordination failures, in which firms are reluctant to invest in the short term to realize a future partnership (UNCTAD 2011). Certain well-intentioned policies meant to stimulate alliances, such as joint venture requirements, may actually increase the cost of investment in a country and scare off potential investors, thus limiting the opportunities for domestic firms to collaborate with MNCs (UNCTAD 2011).

The most promising alliance-promoting approaches often build on the strengths of an existing, high-performing industry and use a facilitative process to stimulate strategic alliances between local firms and MNCs. Governments can promote strategic alliances by facilitating the process of forming them (such as by providing all necessary information to establish them, temporary support for them, and light-touch regulation to address any underlying market failures). However, the decisions to form such alliances still ultimately depend on two firms possessing fundamentally complementary interests. For that reason, these approaches tend to be most effective when used to stimulate existing, high-performing industries to improve their performance and link them more closely with higher-value GVCs. Governments could then use a combination of facilitation and incentives to encourage partnerships via contracts or equity stakes and to generate positive knowledge spillovers for local firms and industries. (One such program, which took place in Mauritius's tourism industry, is described in chapter 9 of this report.)

Joint venture requirements often have counterproductive results and lead to fewer opportunities for strategic alliances. Some developing countries have established policies that require MNCs, in exchange for market access, to transfer knowledge or technology into the country by forming joint ventures with domestic firms. Under such *quid pro quo* policies, MNCs often face restrictions by which foreign ownership of any local firm is capped at less than 50 percent (Jiang et al. 2018). The most well-known example of such a policy comes from China, which adopted such restrictions in several strategic industries¹³ with the aim of helping domestic producers learn from their foreign partners and eventually grow into worthy competitors in the international market (Bai et al. 2019). Evidence shows that these policies did lead to technology transfers, both to the joint venture and to the Chinese partner firm, and helped raise the average quality of the industries (Bai et al. 2019; Jiang et al. 2018). However, it was only because of China's very large domestic market, which most developing countries do not have, that MNCs were willing to put up with these restrictions so they could enter China's priority sectors. Indeed, many investors considered the technology transfer requirement a critical barrier that dissuaded them from investing in China.¹⁴

Jiang et al. (2018) also find that technology spillovers were largest in sectors that were more open, and positive technology externalities were dampened in industries with many prohibitions on types of foreign investment. The 2020 pledge by the Chinese government to remove its foreign ownership restrictions and specific requirements for some sectors is thus expected to have profound impacts on these industries. Liberalizing these sectors could give MNCs stronger incentives to bring their most advanced technology to the Chinese market by allowing them to better guard it (Bai et al. 2019). Hence, even countries that have the bargaining power necessary to impose investment or performance requirements are still likely to find them counterproductive, leading to reduced FDI inflows, fewer opportunities for strategic alliances, and, ultimately, less knowledge transferred between firms.

A clear and stable legal and regulatory framework would also help promote alliances, in part because it would offer an important locational determinant for FDI. Commercial and contract laws are particularly important because many alliances between MNCs and local firms are essentially contract based. Among other things, business parties need to know what domestic rules govern their alliances, the extent to which the country's regulations constrain contractual discretion, whether the parties can choose the law of a third country or international arbitration to apply to their contracts, what the consequences would be of a breach of contract, what procedures would apply in the event of a dispute, and how a judicial decision or arbitration award could be enforced (UNCTAD 2011).

Specific laws that govern particular types of alliances (such as franchising or licensing) are equally important. Laws concerning intellectual property are particularly important for equity-based alliances, including joint ventures (UNCTAD 2011). However, identifying the relevant laws and regulations can be complicated, because many countries do not have specific rules for each type of alliance and instead apply general contract laws along with other types of legislation.¹⁵ In such situations, ensuring a transparent and coherent legal framework becomes paramount. Other measures, such as simplifying the administrative steps needed to set up a new business (including a joint venture) or adopting communication campaigns to inform businesses of existing regulations, can further support such alliances (UNCTAD 2011).

IPAs can also support strategic alliances through information and matchmaking campaigns. Similar to how they support MNC-supplier linkages, IPAs can support alliances by providing information and facilitating projects. For example, they can host investment fairs to promote franchising and management contract opportunities. Broader matchmaking programs (comparable to supplier development programs) have also been used by IPAs to stimulate joint ventures (UNCTAD 2011). In some cases, an IPA may suggest a strategic alliance with a local partner as a way to help an MNC access scarce resources or overcome existing bureaucratic hurdles. In these cases, IPAs serve a joint role by facilitating FDI while working to maximize domestic spillovers (de Caldas Lima 2008).

In many cases, legal reforms and IPA support are combined with more proactive measures that help prepare local firms for strategic alliances. These measures include a range of policies and activities, such as entrepreneurship policies, skills policies, technological training, and measures to ease financial access. The overall form this assistance takes depends on the type of alliance. UNCTAD (2011) finds that local entrepreneurship programs are often linked to franchising, project negotiations are

used to support management contracts, and skills development and technological training, along with fiscal and financial subsidies, are most used to promote joint ventures. Examples of such programs abound. For example, the government of Malaysia has introduced franchising-specific legislation and used various agencies to launch information campaigns and offer financial support to local firms that set up franchises of MNCs.¹⁶ Similarly, the governments of Brazil and the Philippines use a combination of skills and language training and tax incentives to assist any joint ventures between local firms and MNCs to galvanize their call center industries. To best ensure that such capacity-building strategies are successful, local firms must be made aware of them and focus on the MNCs they aim to partner with (UNCTAD 2011).

Safeguarding competitive and contestable markets

In many cases, the entry of FDI into a country increases the contestability of national markets and improves competition. However, FDI can also increase market concentration. As described in chapter 2, MNCs apply a range of strategies to increase their market power in GVCs. They may indulge in anticompetitive behavior, such as abusing their dominant position to prey upon their competitors or suppliers or colluding with other producers of the same product. Although global markets are by definition more contestable than segmented national markets (because producers from around the world can participate in them), MNCs can still acquire a dominant position in selected production processes in a country at the expense of local competitors or supplier firms (for details, see chapter 2.) It may thus be important to monitor a country's MNCs for potentially anticompetitive practices. The relatively large size and productivity of these firms compared with domestic firms makes them more able to engage in predatory pricing (to drive local competitors out of business) or to acquire domestic competitors, in both cases reducing competition and dissuading new entry into the market (UNCTAD 1997).

Both equity and nonequity strategic alliances can result in anticompetitive behavior. One main way in which competition law and FDI interact is when foreign entry is accomplished through a merger, acquisition, or joint venture with significant impact on the host country's market (including the creation or strengthening of a dominant position). Policy makers need to carefully consider the trade-offs between the benefits associated with new FDI, on one hand, and the reduction of economic welfare caused by that FDI's anticompetitive effects, on the other (UNCTAD 1997). In addition, specific contractual provisions in nonequity strategic alliances, such as exclusive dealing obligations, territorial constraints, or resale price maintenance, may also raise competition concerns. All of these provisions enable one party (such as an MNC) to use its market power to the detriment of competitors or local suppliers (UNCTAD 2011).

A strong legal framework and a competent and effective competition enforcement agency are critical to safeguarding competitive and contestable markets. A strong legal framework and competition law become increasingly necessary as FDI is liberalized to ensure that former statutory obstacles to contestability are not replaced by firms' anticompetitive practices (as described in the previous paragraph), thus negating the benefits of liberalization (Goldman, Kissack, and Witterrick 1997; UNCTAD 1997; World Bank and OECD 2017). Such regulations should aim to remove anticompetitive sectoral regulations and to eliminate government interventions that encourage

collusive outcomes (such as price controls) or discriminate among firms (such as state aid). Also necessary is a competent and effective competition enforcement agency with broad powers to investigate firm behavior, including the authority to analyze the competitive effects of the entry and operations of foreign investors. This agency should focus on preventing or dismantling cartel agreements that may affect the cost of or access to key inputs or final products, preventing anticompetitive mergers, strengthening the host country's antitrust framework, and controlling state aid to ensure competitive neutrality (World Bank and OECD 2017).

Policy makers can further help strengthen the bargaining position of domestic firms. MNCs provide essential technology and global market access and therefore often hold stronger bargaining positions (in supplier linkages and strategic alliances) than their local counterparts. Thus, to ensure that MNC–local firm partnerships persist over time, it is important for local partners to build on their strengths and to maintain or increase their relevance within the partnership (see chapter 3). Governments can also help strengthen the bargaining positions of domestic firms to ensure that both contracting parties fairly share the partnership's risk and to prevent the arrangement from confining the local firm to low-value-added activities. They can provide local partners with legal protection by mandating precontractual requirements on the MNC's part.¹⁷ In addition, public agencies can offer advice to local partners on topics such as how to negotiate contracts or how to form equity-based alliances. Agencies can also publish relevant materials such as negotiating guidelines, checklists of issues to be considered in negotiations, codes of conduct, model contracts, or benchmark prices for the relevant products and services. Finally, supporting collective bargaining, including the formation of domestic producers' associations, can help counterbalance MNCs' negotiating power (UNCTAD 2011).

Promoting outward foreign direct investment and investing in research and development and human capital

As explained in chapter 3 of this report, the most productive and capital-rich local firms in an economy may be able to enter GVCs by engaging in outward foreign direct investment (OFDI)—in other words, by becoming MNCs themselves. To help these firms do so, policy makers may need to remove regulatory restrictions, help reduce information asymmetries, and adopt complementary measures to maximize the benefits of this OFDI for the home economy. Examples from Korea, China, and Singapore suggest that an approach combining targeted information provision, local capacity building, market access support, access to finance, and strategic planning assistance can contribute significantly to strengthening firm performance and stimulating domestic firms' roles within global production networks. (See chapter 10 of this report for details on the examples of Korea and China, and see Perea and Stephenson [2018] for details on Singapore's.)

The most common restriction on OFDI is government-operated capital controls on outward investment. Although OFDI offers promising opportunities for both the firms engaging in it and their source countries, many governments still restrict it. According to the International Monetary Fund's Annual Report on Exchange Arrangements and Exchange Restrictions database, 86 out of 192 countries had controls in place on outward direct investment in 2018 (IMF 2019). These controls are most common in developing

countries; 58 percent of such countries still control outward direct investment, whereas only 21 percent of high-income countries do so. Such controls have traditionally been used to achieve macroeconomic objectives (such as financial stability). However, the efficacy of capital controls in achieving such goals has been questioned, and such restrictions may hold back firms' OFDI potential (Perea and Stephenson 2018).

Outward investment promotion agencies, which perform a function for OFDI analogous to what regular IPAs do to promote investment within a country, can use foreign relations (at times, in partnership with overseas embassies) to help local firms develop knowledge connections and access foreign markets. These initiatives help firms because such relationships may spur them to take a more long-term view of FDI, helping to strengthen nascent sectors in the country that may become more strategically important over time (Crescenzi, Di Cataldo, and Giua 2019). An example of this strategy comes from Korea, whose Korea Overseas Company Information System runs several websites with OFDI information and provides consulting services for Korean firms looking to invest abroad (Kim and Rhee 2009). In addition, its Korea Overseas Company Assistance Center helps Korean firms collect information on financing and possible business sites (Nicolas, Thomsen, and Bang 2013).

In some cases, outward investment promotion agencies provide more direct support through financial and fiscal measures aimed to compensate for the positive externalities associated with OFDI and with GVC participation more broadly. China, for example, has recently adopted many such policies. It supports OFDI by providing low lending rates, flexible terms for projects, and fast regulatory approval. It also provides credit support and financial assistance both to large-scale business groups that possess sufficient capital, technology, management skill, and branding for priority OFDI projects and to outward investors who want to build foreign R&D centers on China's behalf (CDB and EXIM 2006; China, MOFCOM 2014). Chinese outward investors are also compensated for several types of political risk (including expropriation, restrictions on the transfer and conversion of funds, damage caused by war, inability to operate because of war, and breach of contractual undertakings) through government-offered insurance (Sauvant and Chen 2013).

Investments in R&D and human capital, and policies to promote them, would make OFDI strategies more effective. Firms need to have a specific strength to engage successfully in OFDI, whether it be a brand, a technology, or a specific managerial or organizational capability (Antràs and Yeaple 2014). Investing in domestic firms' technology, innovation, and human capital is therefore an important way to ensure their upgrading.

Policies to promote in-house R&D collaboration between large local firms and universities were found to help increase the probability of outward investment in India (Thomas and Narayanan 2017). China also accompanied its OFDI strategy with a push toward technological innovation. It adopted more than 170 policies to stimulate innovation using a wide range of instruments: fiscal incentives, grants, loan guarantees, vouchers, equity, public procurement, technology extension services, incubators, accelerators, competitive grants and prizes, science and technology parks, and collaboration and networks. Tax incentives account for about half of the value of China's total support for OFDI (OECD 2017). In addition, lack of access to finance seems to be a main market failure that policy makers should address to stimulate innovation (see chapter 10 of this report).

To complement any R&D spending, governments should invest in human capital, especially in science and technology skills. Competing in knowledge-intensive GVCs requires strengthening the overall technical foundations of the society. Evidence of this effect can be found in dedicated projects in Korea, India, China, and Singapore that helped train the next generation of high-skilled workers and scientists. In China, the number of science and engineering students pursuing bachelor's degrees increased rapidly to almost 1.5 million in 2014, more than the combined number in the United States and eight countries in the European Union.¹⁸ This increase was partially realized by providing students with grants and scholarships to receive education, training, and experiences at Western and Japanese universities and research institutions (see chapter 10 of this report).

Strategy and approaches for global value chain integration

An integrated, sector-based strategy

Successful integration of low-income countries into GVCs requires coherent packages of reforms. The previous sections present a range of investment policies at governments' disposal. Individually, such policies are likely to have only a marginal effect on a country's GVC participation; each one can only partially address existing market or government failures. However, these policies are highly complementary, so a combined approach could be greatly influential in shaping the behavior of both MNCs and domestic firms (Akileswaran, Calabrese, and Said 2018). Such a strategy would require a sustained, coordinated, and long-term approach based on incentive mechanisms tailored to the specific needs of the country, types of firms, and value chains in question (Cusolito, Safadi, and Taglioni 2016).

From an investment perspective, the most effective approach to stimulating and supporting GVC integration is to mix horizontal measures to strengthen the business enabling environment with a targeted vertical method for sector promotion (Felipe 2015). This approach includes providing a strong general environment for investment by lowering the costs faced by any investors, making the investment process easier, and providing the right infrastructure to support it (Rodrik 2004). Though important, such horizontal measures alone are often insufficient to overcome the market failures that hold back private sector investment in a country (Stiglitz and Norman 2015). To complement them, governments that have managed to significantly scale up GVC participation have also played a more direct role through "soft" or "light-handed" industrial policy at the micro level (Harrison and Rodríguez-Clare 2010; Taglioni and Winkler 2016) to address various sectors' particular market failures.

Using this sector-based approach can help those in charge prioritize among the many different policy instruments and stakeholders involved. Because of the variety of challenges faced by sectors (and thus the variety of interventions needed to address them), this approach requires amending a range of policies that cut across many different ministries, including investment policy, trade policy, public infrastructure, and skills training (World Bank 2020). However, policy makers cannot address

all problems at once. Coordination across ministries is difficult, especially given the limits to political capital and institutional capacity often faced by senior policy makers. Setting a few promising value chains as policy anchors makes it easier to communicate priorities and thus to provide a clear sense of direction for the many stakeholders in the effort—in both the public and the private sectors—to rally around. It also helps governments maintain a coherent thread running through their priorities: from the effort's overall vision, to sector-level plans, to subsector plans, to plans for particular value chains, and, finally, to specific flagship regulations, policies, and projects (Akileswaran, Calabrese, and Said 2018).

Although many developing countries approve of sector-based approaches to stimulating economic development, many fall short when they attempt them because of inconsistent and incomplete implementation. Countries often outline the sectors to be developed in many policy and strategy documents. However, these documents often identify different sectors as priorities, with a country's medium-term strategies, national industrial policy, and export promotion policy all differing in their priority sectors. An even starker difference may be found in countries' actual investment regulation and tariff policies, which rarely reflect national strategic considerations and are typically oriented toward purely horizontal purposes or short-term interests (te Velde et al. 2018). These discrepancies generate confusion and hinder coordinated use of scarce government resources, limiting the strategies' overall effectiveness (Akileswaran, Calabrese, and Said 2018).

To illustrate the power of an integrated, sector-based strategy, box 4.4 discusses Rwanda's National Coffee Strategy. This strategy helped transform Rwanda's coffee sector by liberalizing the coffee industry, actively attracting foreign investors to establish the infrastructure necessary to produce and export coffee, and shifting farmers from producing ordinary coffee to producing "fully washed" coffee. As a result, Rwanda's coffee export value increased by almost 500 percent in a little more than a decade.

Global value chain segment mapping to help shape sector-based strategies

A country's GVC strategies should be based on its comparative advantages and its firms' capabilities. The choice of sector is crucial to any sector-based strategy. However, such strategies are not about "picking winners." GVCs make it possible for firms in developing countries to enter foreign markets at lower costs, benefit from specialization in niche tasks, and gain access to larger markets for their output (World Bank 2020). Such specialization is often the result of a country's long-term involvement in a specific sector that takes advantage of and builds on the country's unique combination of factor endowments and firm capacity. Countries tend to upgrade into products that are comparable to the goods they are currently specialized in, and they rarely jump into an entirely new sector (Hidalgo et al. 2007). Because of the evolutionary nature of GVC participation, initial success in one GVC niche can induce rapid growth in adjacent segments (Whittaker et al. 2010). Thus, sector-based strategies should also build on countries' existing revealed comparative advantages.

Firm capacity constraints also matter, including the ability of firms to innovate and adopt new technologies, their management and organization, and their capacity to tap

BOX 4.4 How an integrated, sector-based strategy helped transform Rwanda’s coffee sector

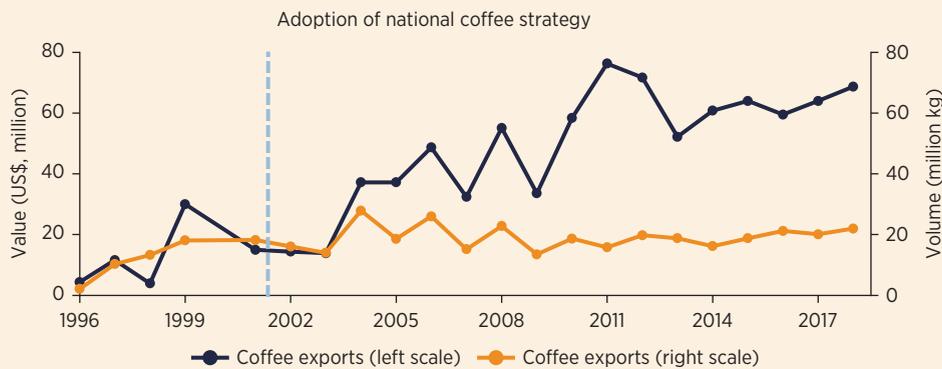
In the late 1990s, Rwanda’s coffee sector was in a dire state. The sector was closely controlled by the government, with a single coffee price on the basis of volume dictated for the entire season. Two export trading companies dominated the industry: one government owned and one privately owned. Together, they accounted for over 65 percent of total coffee exports (Behuria and Goodfellow 2016). Low market competition depressed farm gate prices for coffee cherries. Farmers had no incentive to upgrade to higher-value coffee processing techniques. As investment fell in the coffee industry, existing coffee tree stocks aged, soil fertility declined, and insect and fungal diseases affected crops. By 2000, Rwanda’s coffee production had declined in volume, and 90 percent of Rwanda’s coffee harvest was classified as low-quality, “ordinary” coffee.

To break out of this low quantity–low quality trap, the country adopted a National Coffee Strategy in 2002. A key objective of the strategy was to increase the share of high-quality (“fully washed”) coffee produced. To encourage farmers to upgrade their production processes, the government shifted the basis of coffee bean pricing from volume to quality. The government also sought additional foreign investment for coffee-washing stations through targeted investment promotion and special incentives for the coffee industry. Furthermore, it accelerated the sector’s rate of liberalization, passing additional legislation to provide legal structure and protections for cooperatives in the agriculture sector to encourage domestic investment.

The effect of this strategy on Rwanda’s participation in the coffee global value chain has been significant. The strategy’s focus on quality and higher-value-added products was the main reason why Rwandan coffee exports increased from US\$14.5 million in 2002 to US\$69 million in 2018 (figure B4.4.1).

This strategy helped transform Rwanda’s coffee sector by stimulating production of fully-washed specialty coffee. In its first decade, Rwanda attracted more than US\$70 million in foreign direct investment (FDI) into the sector. Foreign firms invested heavily in washing stations and expanded the value chain for fully washed specialty coffee. During this process, the technical capacity of farmers and operators of coffee-washing stations was upgraded: the number of washing stations increased from 2 in 2002 to more than 250 in 2015 (figure B4.4.2), providing additional opportunities for value addition. In addition, the number of licensed coffee

FIGURE B4.4.1 Rwandan coffee export values and volumes, 1996–2018



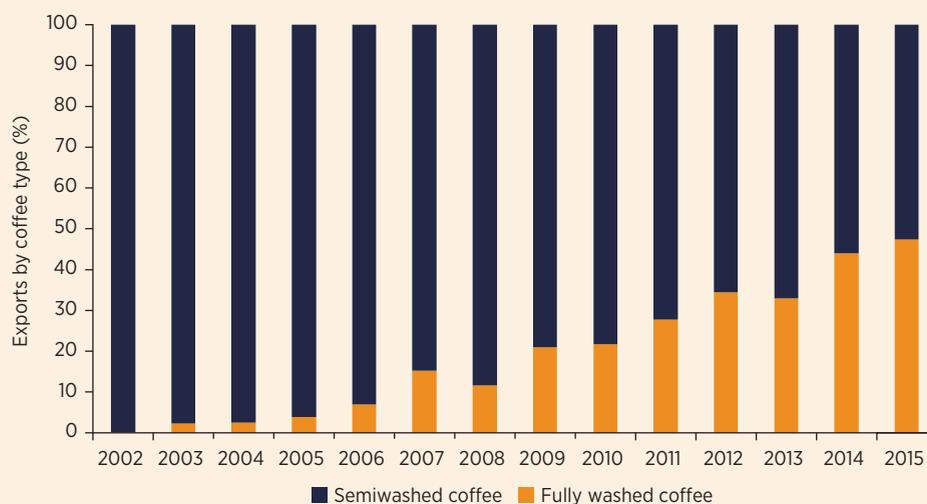
Source: World Bank adaptations of Morjaria and Steenberg 2017 and United Nations Comtrade data.

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BOX 4.4 How an integrated, sector-based strategy helped transform Rwanda's coffee sector *(continued)*

exporters in the country also increased to 86 in 2017 and the market power of the top actors was substantially reduced. This change increased market contestability for coffee cherries, which, along with the rise in quality, raised the average domestic farm gate price from around 50 Rwanda francs per kilogram in 2002 to 250 Rwanda francs per kilogram in 2015. The share of fully washed coffee in the country's coffee exports rose from less than 1 percent in 2002 to 50 percent in 2015 (figure B4.4.3).

FIGURE B4.4.2 Rwandan coffee exports, by coffee type, 2002–15



Source: Morjaria and Steenbergen 2017.

FIGURE B4.4.3 Coffee-washing stations and cherry prices in Rwanda, 2002–15



Source: Morjaria and Steenbergen 2017.

into relevant networks (Bloom and Van Reenen 2010; Cusolito, Safadi, and Taglioni 2016). As noted by Cusolito, Safadi, and Taglioni (2016, 97) “[f]or the [sector] to thrive from the country’s participation in GVCs, appropriate policy frameworks are needed that allow countries and firms to capitalize on their existing productive capacities and create spillover benefits from foreign investment, knowledge, and innovations.”

GVC segment mapping is an important tool to help identify firm-level constraints and guide policy makers in shaping their strategies. Such mapping can be conducted in several ways, relying on various combinations of benchmarking and stakeholder consultations, conceptual maps, and data-driven analysis. A brief overview of these tools is given in box 4.5.

Approaches for leveraging foreign investment to integrate into global value chains

In shaping a sector-based GVC integration strategy, governments can combine and emphasize different investment policy tools. As illustrated earlier in this chapter, particular investment policies aim to solve specific market or government failures related to MNCs’ expansion of FDI within a country or domestic firms’ engagement with foreign firms. Depending on the type of GVC segment and the country’s endowments, business environment, and firm capacity, a government may choose to combine and emphasize various investment policy tools to make its GVC strategy as effective as possible.

This report identifies several successful examples of governments leveraging FDI to motivate GVC participation and upgrading. Its broad review of government responses to strengthen GVC participation makes clear that there is no blueprint for doing so: different countries have adopted different approaches to attracting and leveraging FDI according to their own comparative advantages and target GVCs. However, some successful examples have been identified in which governments used FDI to integrate their countries into GVCs (figure 4.7).¹⁹ Each of these cases demonstrates a different strategic approach in which a government applied a set of interministerial policies to improve the country’s investment climate, link up with global lead firms, and reduce the cost of producing and trading products in a selected GVC sector or segment. These strategic approaches are described briefly in box 4.6; chapters 6 to 11 of this report provide more detail.

The type of approach a country chooses to boost GVC participation is based in part on its income level. As shown in figure 4.7, there is a link between the prevalence of certain strategies and countries’ income levels. This effect may stem from how, from left to right, the sectors become more complex and increasingly demanding of the domestic firms that participate in their GVCs. Sectoral complexity and firm capability are both correlated with income level: the economies of low-income countries tend to be more agricultural or commodity-based; middle-income countries often specialize in manufacturing; and higher-income countries tend to specialize in services (Bloom and Van Reenen 2010; McMillan, Rodrik, and Verduzco-Gallo 2014). This trend can partially explain why different approaches come about in different countries.

A GVC’s characteristics may also help illustrate which approaches would be more or less conducive to stimulating GVC integration.²⁰ Countries use different strategies and approaches to enter into different GVC sectors and archetypes. Some of this variation can be explained by the characteristics of and the cost

BOX 4.5 The importance of global value chain segment mapping in shaping a sector-based strategy

To develop a global value chain (GVC) strategy, it is important to start by diagnosing which stakeholders are involved in the value chain, where they are located, and what specific comparative and competitive advantages they have for engaging in their segments (Crescenzi, Harman, and Arnold 2019; De Backer and Miroudot 2013; Frederick 2016). It also helps to “unpack” a specific sector by considering the business functions along its supply chain, such as research and development (R&D), procurement, production, marketing, and customer service. Countries tend to specialize in specific business functions rather than specific industries, such as assembly operations for China or business services for India (De Backer and Miroudot 2013). At times, this specialization may even entail breaking down a value chain into a set of tasks. These tasks can be outsourced, and their offshoring becomes “trade in tasks” (Grossman and Rossi-Hansberg 2008). Countries may therefore choose to stimulate GVC participation by specializing in a set bundle of tasks, each involving its own specific lead firms, production requirements, and trade needs.

GVC segment mapping combines benchmarking and stakeholder consultation to assess competitiveness and identify binding constraints. Any GVC strategy should be based on a good understanding of a country’s comparative advantages and firm capabilities as well as on existing policy bottlenecks and market failures that constrain firm performance (Crescenzi, Harman, and Arnold 2019). To obtain this understanding, the GVC can be mapped across the life of its product (for example, from R&D through raw material sourcing, production, and delivery to product disposal). Time and cost levels can be recorded and benchmarked against those of global competitors to identify areas in which the sector and its firms are falling behind. In-depth consultations with companies, industry associations, and government ministries can then provide a comprehensive picture of any major bottlenecks that may explain the presence of high time and cost requirements across segments (Hallaert and Munro 2009; WTO 2006). (Issues discussed in these consultations may include physical infrastructure, logistics and customs procedures, barriers to trade, standards and testing for product quality, other supporting services, investment climate issues [such as policy or regulatory impediments or administrative requirements], and the availability and cost of finance and skilled labor [WTO 2006].)

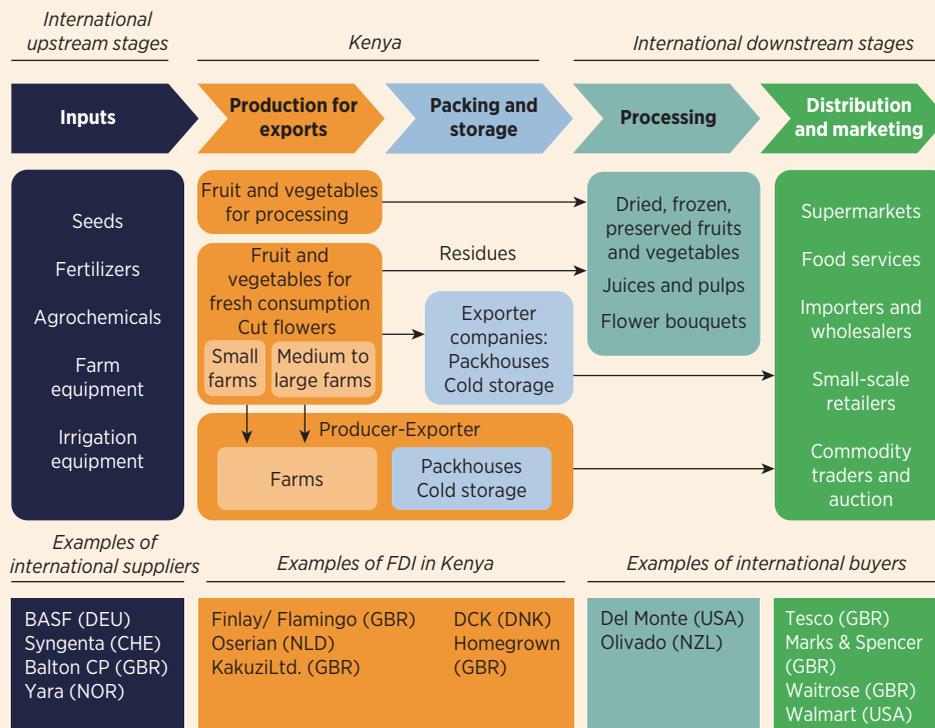
This exercise will help countries understand how they want to engage with a particular GVC, whether by building it up, embedding it deeper into their economies, or reshaping their actions along it (Crescenzi, Harman, and Arnold 2019). On the basis of this analysis, policy makers may decide whether to engage with and strengthen the country’s participation in existing segments along the value chain or encourage firms to focus on new segments (Bailey, Pitelis, and Tomlinson 2018; Crescenzi, Harman, and Arnold 2019). Policy makers should also be aware that value chains can fragment, and thus they should be careful not to leave a country stuck in any narrow segment that provides limited chances for technological upgrading (Venables 1999). This mapping exercise can also contribute to an identification and positioning process that helps a country develop a specific brand by which to position itself as successful and unique from other countries (Konzelmann, Fovargue-Davies, and Wilkinson 2018).

Conceptual GVC maps offer a useful starting point for these exercises. (Many such maps draw on the work of Duke University’s Global Value Chains Center.) These maps can show an entire GVC and identify the roles played by domestic firms within it. For example, figure B4.5.1 provides a conceptual map of Kenya’s role in the horticulture GVC. It gives an overview of the five different stages of production, the roles played by various firms (such as farms, packhouses, processing companies, and supermarkets), and examples of lead firms that play dominant roles within this process domestically and abroad. From this map, policy makers can consider whether any part of the value chain has any major policy bottlenecks and use this information to inform their sector strategy.

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BOX 4.5 The importance of global value chain segment mapping in shaping a sector-based strategy (continued)

FIGURE B4.5.1 Conceptual mapping of Kenya’s involvement in the horticulture global value chain



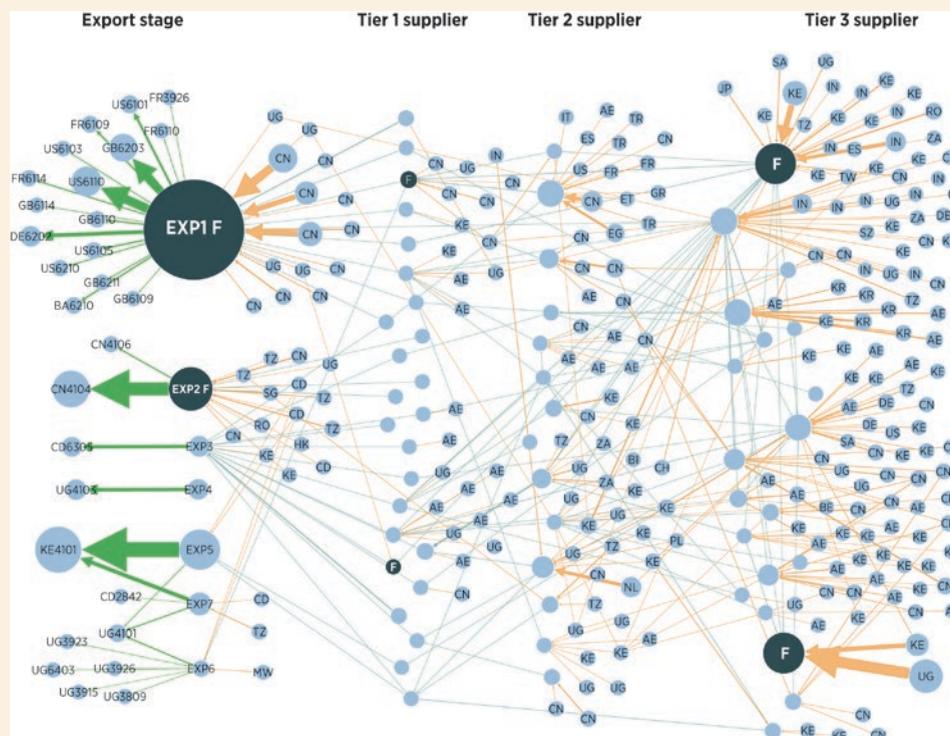
Source: Adapted from Fernandez-Stark, Bamber, and Gereffi 2011 and UNCTAD 2009; see also chapter 6 of this report.
 Note: FDI = foreign direct investment.

To complement these maps, firm- and transaction-level data can be used to map out the domestic part of a GVC (a recent innovation). This process provides details on the domestic firms engaged in exports and maps out the domestic part of their supply chains. For example, figure B4.5.2 shows Rwanda’s garment and leather value chain. From this map, it becomes clear that the industry is dominated by a small number of foreign-owned firms that source dyes, textiles, and machinery from at least three tiers of domestic suppliers while importing chemicals and machines from hundreds of firms around the world. This mapping approach can show which types of firms are engaging in GVCs as exporters and as suppliers (according to their ownership, size, and location). As such, it provides insights into the wide network of GVC actors that may be less easily observable with traditional stakeholder analysis (such as second-tier suppliers). This technique may assist in developing a GVC strategy, and it can also be used to monitor the strategy’s overall progress. One downside of this approach, however, is that no data are available for firms not based within the country, so only the part of the GVC taking place within the country is observable.

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BOX 4.5 The importance of global value chain segment mapping in shaping a sector-based strategy (continued)

FIGURE B4.5.2 Firm-level mapping of Rwanda's textiles, apparel, and leather value chain



Source: World Bank calculations based on firm-to-firm value added tax data; see chapter 11 of this report.

Notes: Exports are denoted with green arrows; orange arrows represent imports. Each node represents a firm.

Foreign-owned firms are dark blue, and domestic firms are light blue. The thickness of the edges between the nodes is proportional to the transaction amount between the two respective firms, and the size of each node represents the node's weighted degree in the network.

drivers for GVCs' production inputs and their implications for market and government failures (see figure 4.8, which provides some examples for illustrative purposes). One GVC segment may have multiple characteristics that would require more than one approach (for example, the characteristics of electronics GVCs lend themselves well to both targeted investment promotion and facilitation of strategic alliances).

Strengthening MNC-supplier linkages can be especially effective at boosting GVCs that are simple and require inputs that can be supplied at arm's length but that also need to meet stringent requirements set by global lead firms. Such GVCs include

BOX 4.6 Strategic approaches used to leverage foreign direct investment to integrate into global value chains

- *Using linkages between multinational corporations (MNCs) and suppliers to help local firms meet global product standards.* In many cases, the fastest way to integrate existing local firms into global value chains (GVCs) is to create pathways into international markets for them. Supplier linkages to foreign firms help local firms meet global product standards by stimulating the three L's: linking (providing local firms with supply channels and necessary information on global standards), learning (supporting them as they train to meet those standards), and labeling (facilitating the process of certifying their ability to meet the standards). Examples of this strategy are found in Rwanda's coffee industry (box 4.4) and Kenya's horticulture industry (see chapter 6 of this report).
- *Investing in special economic zones and using trade and investment agreements to attract export-processing foreign direct investment (FDI).* Another approach to jump-starting GVC participation is to attract export-oriented MNCs into a country. To lower operating and trading costs for such firms, governments can concentrate scarce public funding on building up certain areas (known as SEZs) with higher-quality infrastructure, flexible labor laws, and lower tax rates. To complement these efforts, governments can use bilateral investment treaties and trade agreements to lower investors' risks and trade costs for low-cost, low-margin export processing. Examples of this approach were identified in Honduras's textile and garment industry (see chapter 7 of this report) as well as in many other countries, including in Ethiopia (Oqubay 2015).
- *Using targeted investment promotion, incentives, and facilitation to attract global lead firms.* A government may also target specific global lead firms in a select GVC and assign a proactive investment promotion agency to attract them to the country. The government can also offer these MNCs temporary tax incentives and firm-specific support (such as vocational training, purpose-built infrastructure, and customs support) to entice them to come and to compensate for any temporary disruption to their supply chains caused by the move. Such lead firms are expected to help establish a new GVC cluster in the country that will help upgrade domestic suppliers and attract additional FDI over time. This approach is most commonly associated with the electronics industries in Malaysia (which used it to attract FDI from AMD, Hewlett-Packard, and Intel, among other firms; see chapter 8 of this report) and Costa Rica (which used it to attract Intel) (Freund and Moran 2017).
- *Partnering with foreign firms to help expand and upgrade an existing, viable industry.* Another approach aims to expand and upgrade an existing, viable industry into a higher-value GVC segment. Local firms may seek out partnerships with foreign firms to access their technology, international brands, product development capacity, and managerial techniques. At the same time, MNCs may wish to partner with local firms to gain access to their complementary capacities and knowledge of the domestic market. Facilitating such collaborations (through joint ventures, franchising, or licensing) can help a country's existing industries shift into higher-value tasks and segments within their GVCs. Notable examples of this approach are found in Mauritius's tourism industry (see chapter 9 of this report) as well as in India's recent shift from business processing to financial technology (Fernandez-Stark, Bamber, and Gereffi 2011).
- *Promoting outward FDI and invest in human capital and research and development to help domestic firms develop and compete globally.* A final approach is for large, competitive domestic firms to develop their own global production and sales networks by investing overseas. Governments may support this development by building human capital and helping firms to invest in research and development. Outward FDI can be stimulated by liberalizing outward investment regulation and through proactive promotion using a combination of financial and fiscal measures, information provision, development assistance programs, and international investment agreements. Prominent examples of this approach are found in the Republic of Korea, India, and China related to the digital economy (see chapter 10 of this report).

FIGURE 4.7 Strategic approaches used to leverage foreign direct investment to integrate into global value chains

Strategic approach	Use MNC-supplier linkages to help local firms meet global product standards	Invest in SEZs, and use investment and trade agreements to attract export-processing FDI	Use targeted investment promotion, incentives, and facilitation to attract global lead firms	Partner with foreign firms to help expand and upgrade an existing, viable industry	Promote outward FDI and invest in human capital and R&D capacity to help domestic firms develop and compete globally
Examples	Rwanda (coffee) Kenya (horticulture)	Honduras (textiles) Ethiopia (textiles)	Malaysia (electronics) Costa Rica (electronics)	Mauritius (tourism) India (BPO to fintech)	Korea Rep., India, and China (digital economy)



 Lower-income countries Higher-income countries

Prevalence of use, based on country's income level

Source: World Bank elaborations of the literature.

Note: BPO = business process outsourcing; FDI = foreign direct investment; fintech = financial technology; MNC = multinational corporation; R&D = research and development; SEZ = special economic zone.

FIGURE 4.8 Common approach for leveraging FDI, by GVC characteristic and archetype

GVC characteristics	Examples of GVCs	Common approach for leveraging FDI
GVCs with simpler inputs that can be supplied at arm's length but need to meet stringent global requirements set by lead firms.	Coffee (commodities) and horticulture (regional processing)	Use MNC supply linkages to help local firms meet global product standards
GVCs with many low-margin, distributed suppliers with highly competitive production and trade costs to supply global MNCs.	Textiles (labor-intensive goods)	Invest in SEZs, and use investment or trade agreements to attract export-processing FDI
GVCs dominated by a few global lead firms with expansive supply networks and distinct requirements to avoid supply chain disruptions.	Electronics (knowledge-intensive goods)	Use targeted investment promotion, incentives, and facilitation to attract global lead firms
GVCs that rely on intangible assets (brands, management practices, production techniques, and the like) that can be codified or protected (for example, via licensing).	Tourism (labor-intensive services), Electronics (knowledge-intensive goods)	Leverage foreign firms to help expand and upgrade an existing, viable industry
GVCs that rely on intangible assets (for example, intellectual property) that are highly specialized and difficult to protect from competitors.	Software (knowledge-intensive services)	Promote outward FDI and invest in human capital and R&D to help domestic firms develop and compete globally

Source: World Bank elaborations of the literature and chapters 6 to 11 of this report.

Note: FDI = foreign direct investment; MNC = multinational corporation; R&D = research and development; SEZ = special economic zone.

regional processing (including horticulture, as shown in chapter 6 of this report) and commodities (including Rwanda's coffee sector, discussed in box 4.4).

Investing in SEZs and making investment and trade agreements may be important for GVCs with large numbers of distributed suppliers that earn thin margins and supply a few global MNCs. Such firms often must be able to achieve highly competitive production and trade costs. Their efforts can be supported by investing in infrastructure in a concentrated region (a SEZ) and by reducing investor risks and trade barriers via international investment and trade agreements. Some labor-intensive goods GVCs exemplify these characteristics (such as textiles and apparel, as shown in chapter 7 of this report).

Targeted investment promotion, incentives, and facilitation can be influential in GVCs that are dominated by a few global lead firms with substantial need to avoid supply chain disruptions. MNCs may be drawn into a country via targeted campaigns by IPAs, temporary subsidies (such as tax incentives, vocational training, and the construction of special infrastructure) to compensate for relocation costs, and facilitation to limit any disruption caused by public regulation. Some knowledge-intensive goods GVCs include such powerful lead firms (including electronics, as shown in chapter 8 of this report).

Leveraging foreign firms to help expand and upgrade an existing industry can be particularly useful in GVCs that rely on intangible assets used by MNCs (such as special production techniques, brands, or management practices) that can be codified or protected (such as by licensing agreements). Policy makers can help local firms move into higher-value GVC positions by acquiring such technology through strategic alliances with MNCs. Examples of this strategy are common in knowledge-intensive goods GVCs (such as electronics, as shown in chapter 8 of this report) and labor-intensive services GVCs (such as tourism, as shown in chapter 9 of this report).

Promoting OFDI to help domestic firms develop and compete globally is especially important in GVCs that rely on specialized types of intellectual property at risk of leaking to competitors. MNCs may be less willing to share such technology through partnerships. Instead, domestic firms may have to directly invest in R&D or obtain foreign technology via acquisitions to develop and compete globally. Examples of this strategy are common in knowledge-intensive goods GVCs (such as high-end electronics production) and knowledge-intensive services GVCs (such as software), as shown in the case study on the digital economy (chapter 10 of this report).

This chapter presents a range of policy instruments and strategies to illustrate how policy makers can stimulate GVC participation and upgrading. These successful examples included here and in part II (chapters 6 to 11) of this report can inspire policy makers as they work to identify which set of interministerial policy instruments will best improve the business environment of their target GVC sector or segment, help attract global lead firms, and enhance domestic firms' competitiveness within that sector or segment.

Notes

1. For examples of these effects, see Arnold and Javorcik (2009), Bajgar and Javorcik (2020), Buelens and Tirpak (2017), Djankov and Hoekman (2000), Javorcik (2004), Javorcik and Li (2013), and Newman et al. (2016).
2. The 10 countries were Brazil, China, India, Indonesia, Malaysia, Mexico, Nigeria, Thailand, Turkey, and Vietnam.
3. Such analysis should include laws on property rights, land ownership, trade, taxes, competition, and other topics.
4. For details on the OECD FDI Regulatory Restrictiveness Index, see Kalinova, Palerm, and Thomsen (2010).
5. Political risk encompasses a wide range of issues related to government conduct, from the threat of political violence and geopolitical tensions to the chance of outright expropriation to more subtle forms of pressure, including confiscatory taxation, corruption, or economic constraints such as exchange rate controls. In sum, political risk is the risk that the host government will violate the terms of its implicit contract with an investor to not impede the investor's efforts (Graham, Johnston, and Kingsley 2016).
6. For an overview of investor protection guarantees, see chapter 5 in World Bank (2010).
7. Importantly, attracting these lead firms was possible only because of the countries' strong commitments to macroeconomic stability, skills development, and infrastructure provision. To minimize disruption to MNCs' global production networks, information about investment conditions was backed up by public-private vocational training partnerships and infrastructure reforms (Freund and Moran 2017).
8. IPAs often try to achieve too much. A 2017 World Bank global survey of IPAs found that 84 percent of IPAs listed five or more "priority" sectors for investment promotion (Heilbron and Kronfol 2020).
9. The successful Shenzhen SEZ in China is an example of one such reform-oriented SEZ.
10. Studies supporting this finding include Hebous, Kher, and Tran (2020); James (2014); and Overesch and Wamser (2008).
11. See Kronfol and Steenbergen (2020) for various methods of conducting cost-benefit analysis of incentives.
12. An example of this type of policy and its detrimental effect can be found in Latin America's automotive industry (Sutton 2014).
13. These industries include aircraft, automobiles, finance, higher education, pharmaceuticals, and shipbuilding (Jiang et al. 2018).
14. According to the China Business Climate Survey Report conducted by the American Chamber of Commerce in China (AmCham 2017), 21 percent of the 434 companies surveyed faced pressure to transfer technology upon entering the Chinese market. Such pressure was most often felt in strategically important industries such as aerospace (44 percent) and chemicals (41 percent).
15. Many areas of the law may come into play regarding these alliances, such as intellectual property (for licensing or franchising), competition, consumer protection, employment, and environmental protection.
16. For details on this effort, see its website: <http://www.ifranchisemalaysia.com>.
17. The most common such obligation is for the MNC to provide precontractual disclosure of all relevant information (including business experience, past or pending litigation, financial statements, contract fees, and the firm's existing network of alliances). Some countries have detailed lists of required information (including China, France, Japan, Mexico, and the United States), whereas others rely on general principles (such as the United Kingdom) or case law (such as Germany) (UNCTAD 2011).
18. The eight European Union countries with the highest number of science and engineering bachelor's degrees in 2014 were the United Kingdom, Germany, France, Poland, Italy, Spain, Romania, and the Netherlands.

19. These examples of strategic approaches are meant to be illustrative, and they are by no means the only ways to combine investment policies to stimulate GVC participation.
20. These patterns are drawn from the case studies and findings from internalization theory, imperfect contracting theory, and property rights theory (Benito, Petersen, and Welch 2019; Gereffi, Humphrey, and Sturgeon 2005; UNCTAD 2020) as well as from global sectoral data. See chapters 2 and 3 for more details on how GVC characteristics affect MNC strategies and domestic firm internationalization.

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