

2 Policies for improving FDI impacts on productivity and innovation

This chapter presents a Policy Toolkit to help governments channel foreign direct investment (FDI) into productivity-enhancing activities and promote productivity and innovation spillovers on small and medium-sized enterprises (SMEs). The chapter describes the various transmission channels through which FDI affects productivity and innovation as well as contextual factors determining the magnitude and direction of such impacts. It also provides a thorough overview of policies and institutions at the intersection of investment and other complementary policies that can enhance the impacts of FDI on productivity and innovation.

Main policy principles

1. Provide strategic direction and ensure policy co-ordination and coherence on investment, innovation and SME development

- Ensure that national development strategies and economic plans provide coherent and strategic directions on investment promotion, innovation and SME development objectives, and foster a whole-of-government approach to supporting productivity growth.
- Mainstream investment considerations into industrial, innovation and SME policy strategies (and vice versa), and systematically consider the role that FDI can play in enhancing the productivity and competitiveness of the economy when adopting economic reform programmes.
- Strengthen policy co-ordination at strategic and implementing levels by establishing inter-ministerial councils, task forces and working groups; encouraging collaboration between implementing agencies; setting up effective multi-level governance systems and involving subnational governments in whole-of-government policy-setting processes.
- Periodically assess the impact of FDI and relevant policies on the productivity and innovation of the domestic economy and promote policy dialogue with foreign investors, local SMEs and other actors of the domestic research and innovation ecosystem to enhance the effectiveness of policy interventions.

2. Ensure that domestic and international regulations create a conducive business environment for FDI-driven productivity growth and innovation

- Develop laws and regulations that support FDI-driven productivity growth by ensuring an open, transparent and non-discriminatory regulatory environment for investment in productive and knowledge-intensive activities, fostering competition and a level playing field, and providing strong protection of intellectual property rights (IPRs).
- Simplify overly burdensome regulations that may undermine business capacity and incentives to engage in innovation and technology development while at the same time ensuring that efforts to reduce the regulatory burden on business do not lead to a “race to the bottom” in terms of social and environmental standards.
- Ensure that labour market laws enable domestic firms, in particular SMEs, to retain and attract highly skilled workers through regulatory exemptions, incentives for job training of their employees, and measures to address labour shortages in FDI-intensive sectors.
- Ensure that financial market laws and regulations facilitate access to finance for innovative and technology-intensive activities undertaken by foreign and domestic firms, by addressing financial stability risks, setting conducive framework conditions for the development of equity markets, and increasing the availability of alternative financing instruments.
- Integrate innovation and SME policy considerations into international investment agreements (IIAs) to promote international co-operation and dialogue on technology transfer issues, while at the same time ensuring that IIAs reduce regulatory barriers to knowledge-intensive investment, foster competitive markets and strengthen domestic legal frameworks for intellectual property rights protection.

3. Stimulate knowledge-intensive investment and support the productive capacities and innovation potential of the domestic economy

- Ensure that financial support to stimulate knowledge-intensive investment addresses well-identified market failures (e.g. information asymmetries, risks arising from engaging in

innovation, high fixed costs of technology-intensive activities) and that the conditions and criteria for its granting are clearly defined, transparent and subject to regular reviews.

- Use financial and technical support (e.g. supplier development programmes, skills development policies, technology extension services, financing, capacity building) to strengthen the absorptive capacities of domestic firms, in particular SMEs, and improve their chances of becoming suppliers and partners of foreign investors.
- Promote quality infrastructure (e.g. ICT, transport and logistics, energy) through a national infrastructure plan, public investment in infrastructure development and public-private partnerships to support productive investment that creates linkages with the domestic economy.
- Establish intermediary organisations and specialised facilities (e.g. technology transfer offices, collaborative laboratories, knowledge centres, business incubators, science and technology parks) to support business-to-business and science-to-business collaboration.
- Implement comprehensive cluster development programmes that facilitate business linkages, foster cross-sectoral interactions and take into account place-based capabilities.

4. Facilitate knowledge and technology spillovers from FDI by eliminating information barriers and administrative hurdles

- Implement investment promotion strategies that allow to identify, prioritise and attract productivity-enhancing and knowledge-intensive investment, including through intelligence gathering (e.g. market studies), sector-specific events (e.g. business fairs, country missions), and pro-active investor engagement (e.g. one-to-one meetings, campaigns, enquiry handling).
- Provide comprehensive investment facilitation and aftercare services to foster greater embedding of foreign investors in local economies including by facilitating supplier linkages, strategic partnerships and collaboration with actors of the domestic entrepreneurial and innovation ecosystem.
- Ensure that information pertaining to the host country's innovation ecosystem and the productive capabilities of domestic firms is made readily available, or available upon request, to foreign investors.

2.1. Global productivity slowdown amid rising inequalities

Productivity reflects a country's stage of economic development, and its resulting competitive edge and economic structure. As an economy develops, its structure typically shifts from agriculture, to light manufacturing, to heavier manufacturing, and eventually to high technology manufacturing and services, reflecting increasing levels of productivity and innovation capacity (OECD, 2014^[11]). While productivity varies considerably across sectors, different value chain functions within sectors and the efficiency to conduct such activities involve varying levels of labour intensity and thus productivity levels (Box 2.1. for definitions of productivity and innovation in this policy toolkit).

Productivity and innovation figure prominently in the Sustainable Development Goals (SDGs), particularly in SDG 8 (economic growth) and SDG 9 (industry and innovation). These goals encompass boosting overall competitiveness, reducing regional disparities, and raising productivity and innovation capacity of the typically more constrained small and medium-sized enterprises (SMEs). Enhanced productivity and innovation are closely tied to better-paid and more stable jobs and greater human capital and skills (Chapter 3). Productivity and innovation capacity is also closely tied with the transition towards a low-carbon economy (Chapter 4). Productivity and innovation may thus support progress across a broader set

of sustainability objectives (e.g. employment generation, green transition, skills development), although causality is likely to go in both directions (OECD, 2019^[2]).

Productivity growth has decelerated globally as shown in recent OECD work on ‘The Future of Productivity’ (OECD, 2015^[3]). The main source of the productivity slowdown is not so much a decline in innovation, but rather a drop in the pace at which innovations spread throughout the economy. Productivity growth of the globally most productive and innovative firms has remained robust in recent years but the gap between these highly productive and innovative firms and the rest has widened. For instance, although in some niche markets SMEs are more productive and innovative than large firms (Marchese et al., 2019^[4]), in a number of countries a fat tail of low productivity micro and small firms usually co-exists with large multinational enterprises (MNEs), which are very productive and exposed to international competition.

SMEs are key actors for building more inclusive and sustainable growth, increasing economic resilience and improving social cohesion. Across the OECD, for instance, SMEs account for about 60% of employment and between 50% and 60% of value added and are the main drivers of productivity and innovation in many regions and cities where other global frontier innovators are absent (OECD, 2019^[5]). Smaller firms face long-standing size-related barriers in dealing with stringent business conditions or accessing strategic resources such as finance, skills, knowledge, technology and infrastructure. SMEs are a very heterogeneous population whose performance in terms of productivity, wages paid and international competitiveness, vary considerably across sectors, regions and firms. Enterprise creation in the OECD has picked up over the last decade, especially in services, but newly created jobs are concentrated in low-productivity and low-wage sectors, and have increased over time, even if SMEs outperform large enterprises in the services sector in many countries (OECD, 2019^[2]; 2021^[6]). More lower-productivity jobs have resulted in more lower-paid jobs. SMEs, even the larger ones, typically pay employees around 20% less than large firms and the gap with foreign firms is even larger.

Innovation is key to boost productivity, and digitalisation offers SMEs new opportunities to take part in the next production revolution. Emerging digital technologies, such as big data analytics, artificial intelligence and 3D printing, enable greater product differentiation and mass customisation, better integrated supply chain systems and, overall, new digitally enhanced business models that leverage shorter distance and time to markets (OECD, 2019^[7]). This is likely to benefit smaller and more responsive businesses. Digitalisation also supports open sourcing and open innovation, with large – and foreign – firms contributing to the transformation of business ecosystems through business accelerators and innovation labs that provide start-ups, innovative SMEs and R&D organisations with access to resources and markets. Digitalisation creates a range of innovative financial services for SMEs and eases SME access to skills through better job recruitment sites, outsourcing and online task hiring, or by connecting them with knowledge partners.

Digitalisation can also help SMEs integrate in global value chains (GVCs). Digitalisation has created effective mechanisms to reduce size disadvantages in international trade, such as by reducing the absolute costs associated with transport and border operations. In addition, the fragmentation of production worldwide has provided smaller businesses with significant scope for competing in specialised GVC segments and scaling up activities abroad, while capturing international knowledge spillovers and capitalising on more robust growth in emerging markets. In fact, wage gaps with large foreign firms are smaller for exporting SMEs and for highly productive SMEs, particularly those at the frontier of the digital revolution (OECD, 2021^[8]).

Box 2.1. Defining productivity and innovation

This policy toolkit defines **productivity** in terms of value added per unit of labour (labour productivity), where labour is measured as total hours worked or number of employees (OECD, 2019^[2]). It is important to stress that labour productivity is an incomplete gauge of efficiency. Labour productivity can rise due to increased capital spending (e.g. giving workers more machines), but does not mean all factors of production are being used more efficiently (e.g. using better machines). Labour productivity measures in services come with caveats as measures of output are often in terms of costs of labour and thus value added is difficult to measure (Triplett and Bosworth, 2008^[9]). Total factor productivity or measures of return on capital (e.g. incremental capital-output ratios) would better capture efficiency improvements for capital-intensive industries like mining.

Innovation is defined as the implementation of a new or improved product (good or service) or business process (or combination thereof) that differs significantly from the firm's previous products or business processes and that has been introduced on the market or brought into use by the firm (OECD/Eurostat, 2018^[10]). Innovation activities include all developmental, financial and commercial activities undertaken by a firm that are intended to result in an innovation. Patented intellectual property is sometimes used as an indicator for innovation output, although not all innovations are protected with patents. A broad set of tangible and intangible assets with embedded knowledge – ranging from human and organisational capital, existing technologies to R&D – need to be accumulated and combined to yield innovation outputs (Cirera and Maloney, 2017^[11]). This Policy Toolkit makes predominantly reference to two measures of innovation: process innovation and R&D intensity, or R&D per unit of value added (OECD, 2019^[2]).

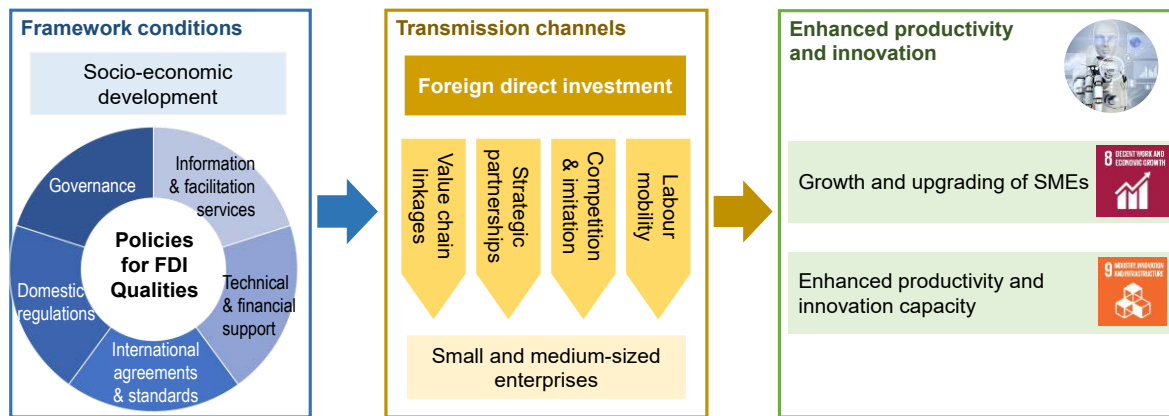
2.2. FDI impacts on productivity and innovation

FDI can contribute to enhanced productivity and innovation through the activities of foreign firms (direct impact) and via knowledge and technology spillovers that arise from market interactions with domestic firms (indirect impact). The impacts of FDI may not materialise automatically, and depend on a number of economic, market and firm-specific factors. These framework conditions underpin the channels through which FDI affects domestic productivity and innovation and shape the magnitude and direction of spillovers in the host economy (Figure 2.1). Examining the performance of transmission channels and their framework conditions can shed light on the trends and complexities of the relationship between FDI and productivity, triggering dialogue and facilitating the identification of policy priorities and possible trade-offs. Annex Table 2.A.1 provides a detailed checklist of questions for governments to self-assess the impacts of FDI on productivity and innovation.

2.2.1. FDI can contribute directly to productivity enhancement

Foreign firms' direct impact relates to their own activities and how they contribute to aggregate and sectoral productivity and innovation (Cadestin et al., 2018^[12]). FDI directly relates to improved productivity and innovation at the industry or aggregate level if foreign firm activity is concentrated in sectors that are typically more productive and innovative. The opposite holds if FDI is concentrated in low-value added, less innovative, sectors. Thus, FDI can shift the sectoral composition towards more or less productive or innovative activities.

Figure 2.1. Conceptual framework: Impacts of FDI on productivity and innovation

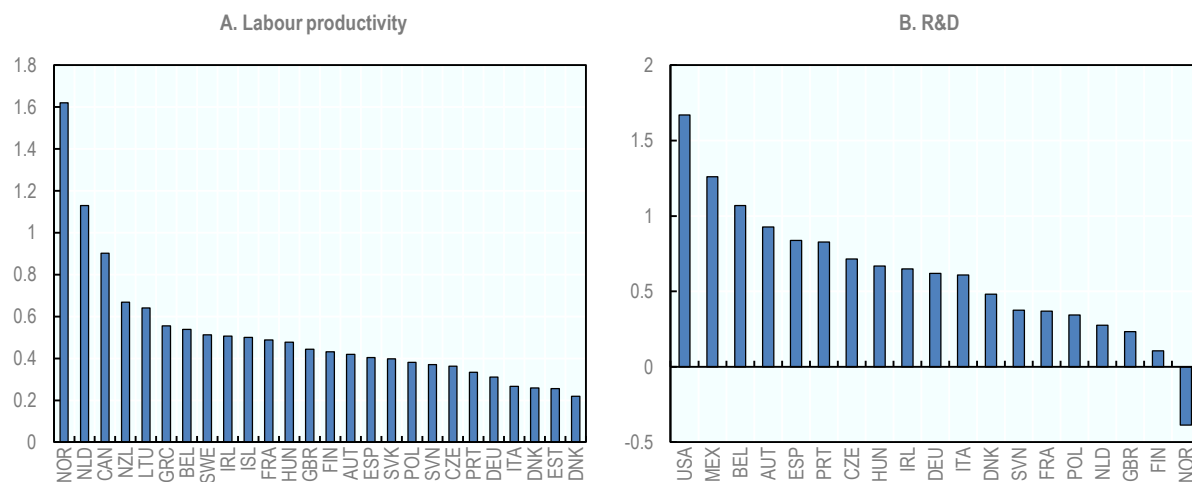


The OECD FDI Qualities Indicators suggest that, in OECD economies, sectors receiving more FDI tend to have higher labour productivity and R&D intensity levels. They also experience higher growth in labour productivity than other sectors (Figure 2.2.). The extent of FDI concentration in highly productive sectors varies across OECD countries, but tends to be greater in those with large natural resources industries (e.g. Norway, the Netherlands, Canada) where highly profitable and capital-intensive mining and extraction activities attract significant foreign MNE activity (OECD, 2019^[2]). In some OECD countries, R&D-intensive manufacturing (e.g. computer equipment and electronics, chemicals, machinery) and services sectors (e.g. logistics, finance, and communications) are also associated with higher FDI activity. In the US, these high-tech and R&D-intensive sectors account for more than 50% of greenfield FDI. Expanding the analysis to developing countries reveals a rather mixed picture; foreign manufacturers do not always operate in sectors with higher average labour productivity or sectors in which process innovation is more common. This is mainly due to the large concentration of FDI in labour-intensive industries, such as food processing and garments, where the intensity of innovation is expected to be lower than in capital-intensive manufacturing.

Besides the fact that foreign investors tend to invest in sectors that are typically more technology intensive, FDI's direct impact on productivity growth is also the result of foreign firms being on average more productive than domestic firms (Figure 2.3). Accordingly, FDI can raise overall productivity even in low value-added sectors if it is more productive than local firms are. The FDI Qualities Indicators show that productivity gaps between foreign and domestic firms exhibit considerable variation across OECD and developing economies, with substantial gaps in some countries and negligible gaps in others (Figure 2.3). A recent study for the United Kingdom shows that foreign firms are around twice as productive as domestic companies are (Batten and Jacobs, 2017^[13]). This is linked to foreign affiliates operating on a larger scale and having stronger access to technology, better managerial skills and more adequate resources for capital investment than domestic firms (Javorcik, 2004^[14]; 2020^[15]). Size also matters, since foreign affiliates are larger than the average domestic enterprise and can therefore harness economies of scale, including through their relationship with the parent company, which are not available to domestic companies (Alfaro and Chen, 2012^[16]; Desai, Foley and Forbes, 2007^[17]).

Figure 2.2. Concentration of FDI based on sectoral productivity and R&D performance

FDI is concentrated in relatively higher performing sectors if score > 0

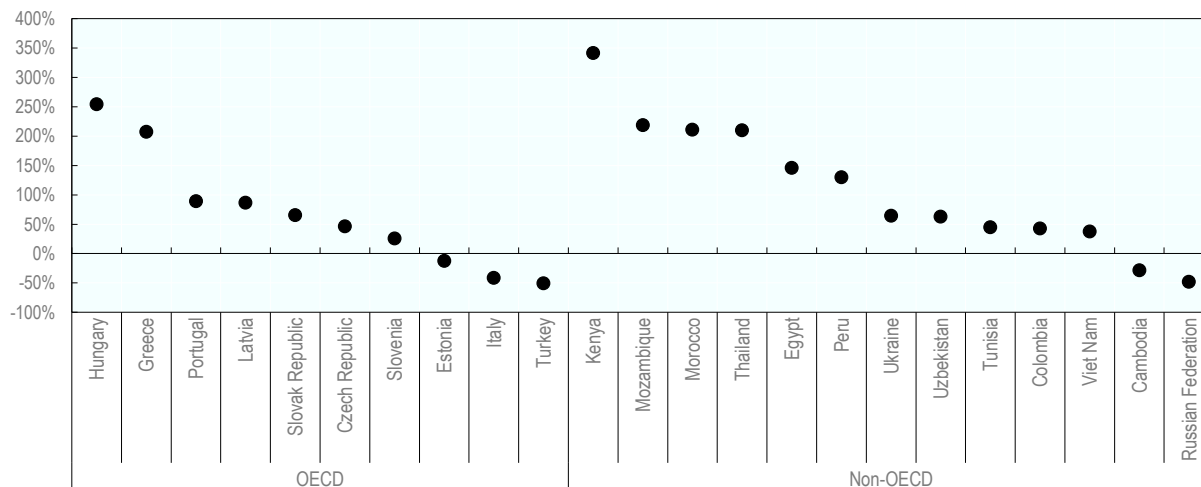


Note: See OECD (2019_[2]) for a description of the methodology and data. Labour productivity = value added per employee; R&D intensity = R&D expenditures per unity of value added; wages = wage per employee.

Source: OECD (2019_[2]), *FDI Qualities Indicators: Measuring the sustainable development impacts of investment*, www.oecd.org/fr/investissement/fdi-qualities-indicators.htm

Figure 2.3. Productivity premium of foreign firms in OECD and non-OECD economies

Average labour productivity premium of foreign relative to domestic firms, in percentage



Note: See methodology in OECD (2019_[2]), ; labour productivity = value added per employee.

Source: OECD (2019_[2]), *FDI Qualities Indicators: Measuring the sustainable development impacts of investment*, www.oecd.org/fr/investissement/fdi-qualities-indicators.htm

2.2.2. FDI can involve productivity and innovation spillovers on host economy firms

Due to foreign firms' performance premium relative to domestic firms, policy makers often expect FDI to generate knowledge and technology spillovers that will result in increased productivity of domestic firms, especially SMEs (Caves, 2007_[18]; Blomstrom and Kokko, 1998_[19]). Domestic firms can benefit from

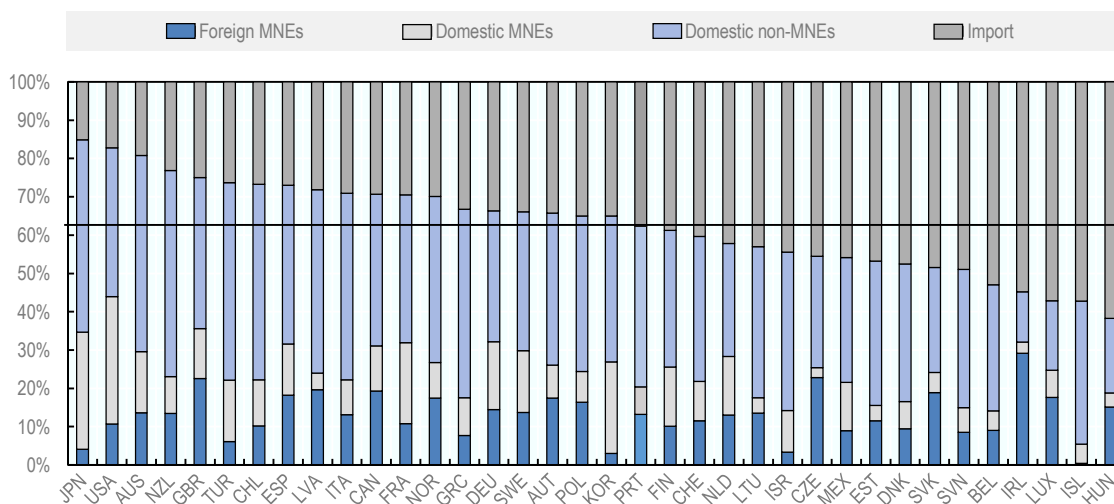
knowledge and technology spillovers through various transmission channels – such as value chain linkages, strategic partnerships, competition and imitation effects, and labour mobility. These channels are themselves enabled through specific contextual factors, notably the characteristics of FDI, capabilities of domestic firms as well as broader policy and non-policy framework conditions (Gorg and Strobl, 2001^[20]; Crespo and Fontoura, 2007^[21]; Smeets, 2008^[22]; OECD, 2022^[23]).

Value chain linkages and strategic partnerships involve knowledge spillovers from foreign MNEs to their suppliers, customers and partners

Value chain relationships include supply chain linkages both upstream and downstream that involve the spillover of knowledge from foreign affiliates of multinational enterprises (MNEs) to domestic suppliers and customers; and strategic partnerships, which involve formal collaborations beyond buyer-supplier relationships, for example in the area of R&D or workforce/managerial skills upgrading.

Backward linkages help domestic companies extend their market for selling (Figure 2.4) and raise the quality and competitiveness of their outputs. They generate knowledge spillovers when MNEs require better-quality inputs from local suppliers and are, therefore, willing to share knowledge and technology with them to encourage their adoption of better practices (OECD, 2022^[23]). A recent study of New Zealand, for example, found that small firms do benefit from economies of scale when they supply foreign MNEs and, thereby catch up technologically with foreign firms (Doan, Maré and Iyer, 2014^[24]). For such technology spillovers to happen, domestic firms require a certain level of absorptive capacity often defined in terms of technological proximity with foreign firms (see next sub-section). FDI spillovers are more commonly found in these vertical supply relationships than in the relationship between foreign MNEs and potential local competitors (horizontal spillovers), as rivalry is more naturally embedded in the latter (Rojec and Knell, 2017^[25]; Javorcik, 2004^[14]; Blalock and Gertler, 2008^[26]) (see section on competition and imitation effects). Finally, having strong linkages with domestic firms can embed foreign affiliates more deeply into the economy, making it less likely that they will move operations elsewhere (OECD, 2022^[23]).

Figure 2.4. Sourcing structure of foreign affiliates, by supplier type/origin, 2016



Source: OECD based on the OECD Analytical AMNE database, 2019, <https://www.oecd.org/sti/ind/analytical-AMNE-database.htm>

Affiliates of foreign MNEs operate in host countries as buyers of intermediate goods and as suppliers to domestic companies (forward linkages). Forward linkages between MNEs and local buyers have a positive impact on local enterprise productivity mostly through the acquisition of better quality inputs, which were not locally available before (Crisciolo and Timmis, 2017^[27]). In addition, many MNEs, especially in

industrial sectors such as machinery, often offer training to their customers on the use of their products as well as information on international quality standards (Jindra, 2006^[28]).

The emergence of GVCs has brought new types of FDI-SME partnerships, especially in high technology and knowledge-intensive industries, which are based on the transfer of technology and the development of cross-border R&D projects. These strategic partnerships can take many forms, including joint ventures, licensing agreements, contract manufacturing, research collaborations as well as R&D and technology alliances (Andrenelli et al., 2019^[29]; OECD, 2008^[30]). Strategic partnerships are the result of a shift towards an open mode of innovation, which, as noted above, has made innovation more accessible to SMEs (OECD, 2019^[5]). Open innovation has increasingly been seen as a way for accelerating internal innovation and expanding the markets for external use of innovation (Chesbrough, 2003^[31]). Large firms have increasingly taken part in the open innovation transformation by developing strategic partnerships with smaller enterprises or by setting up innovation labs and accelerators where start-ups and other small firms can nurture new business ideas and business models. Foreign MNEs, in particular, often seek talent and specialised knowledge in local SME and start-up ecosystems.

A recent study based on firm-level data of OECD and developing economies finds that productivity spillovers from strategic partnerships, such as manufacturing/marketing agreements and joint ventures, depend on firm-level characteristics, such as firm size, (foreign) ownership, internationally recognised certifications and staff training. Larger and foreign-owned firms as well as firms that have internationally recognised certifications and engage in staff training are more likely to improve their productivity when foreign MNEs engage in partnerships. This is consistent with studies showing that knowledge and technology spillovers from foreign MNEs depend on SME absorptive capacities (see below).

The movement of skilled workers from foreign MNEs to domestic firms can bring new knowledge and skills to local economies

Labour mobility can be an important source of knowledge spillovers in the context of FDI, notably through the movement of MNE workers to domestic firms – either through temporary arrangements such as detachments and long-term arrangements such as open-ended contracts – or through the creation by MNE workers of start-ups (i.e. corporate spin-offs).

Existing evidence suggests that firms established by MNE managers are more productive than other local firms are (Görg and Strobl, 2005^[32]). Similarly, evidence from manufacturing in Norway suggests that workers who moved from foreign-owned to domestic firms retain part of their knowledge and contribute 20% more to the productivity of their firm than workers without foreign firm experience (Balsvik, 2011^[33]). Recent OECD research on Ireland shows that over the period 2009-2015 more than one in four employees at foreign-owned companies either moved to a domestic firm or became self-employed. In addition, more than one in three start-up founders had previously worked at a foreign-owned company (OECD, 2020^[34]). Labour mobility within Ireland is also very common among highly skilled researchers who have produced patents. One out of two patent inventors changed employer at least once during the period 2006-2016. As most inventors are based in foreign-owned companies, FDI spillovers related to inventor mobility play an important role in Ireland (OECD, 2020^[34]).

On the other hand, research on Portugal provides a more sceptical perspective on potential productivity spillovers on domestic firms resulting from the mobility of workers from foreign to domestic firms (Martins, 2011^[35]). Domestic firms in Portugal tend to hire 'below-average' workers from foreign firms who take, on average, pay cuts (which is consistent with involuntary mobility). It suggests that worker mobility is unlikely to be a major source of productivity spillovers from foreign to domestic firms. However, movements from domestic to foreign firms translate into considerable pay increases in Portugal but also in other EU Member States (Becker et al., 2020^[36]). This pay increase is consistent with a generally greater 'generosity' in the remuneration practices of foreign firms vis-à-vis their domestic counterparts (see Chapter 3). As foreign firms attract some of the best workers in domestic firms where they experience a wage increase and

acquire new knowledge, productivity spillovers from worker mobility may also (or rather) occur from domestic to foreign firms.

Competition with foreign MNEs and imitation of their business practices provide significant learning and upgrading opportunities for domestic firms

The entry of foreign firms heightens the level of competition on domestic companies, putting pressure on them to become more innovative and productive – not least to retain skilled workers (Becker et al., 2020^[36]). The new standards set by foreign firms – in terms of product design, quality control or speed of delivery – can stimulate technical change, the introduction of new products, and the adoption of new management practices in local companies, all of which are possible sources of productivity growth. Foreign firms can also become a source of emulation for local companies, for example by showing better ways to run a business. Imitation and tacit learning can therefore become a channel to strengthen firm productivity at the local level.

However, if local companies are not quick to adapt, competition from foreign companies may also result in the exit of some domestic firms. Increased competition for talent may also make it more difficult for local companies to recruit skilled workers (Lembcke and Wildnerova, 2020^[37]). These effects are more likely to happen to local companies operating in the same sector or value chain of the foreign company. This is the main reason why horizontal spillovers from FDI are so rare and, when they happen, they mostly involve larger domestic companies (Gorodnichenko, Svejnar and Terrell, 2014^[38]; Farole and Winkler, 2014^[39]; Crespo and Fontoura, 2007^[21]).

2.2.3. Magnitude and direction of FDI impacts depend on contextual factors

The magnitude and direction of FDI impacts depend on contextual factors, including the structure of the economy, the type of FDI that a country attracts, the capacity of domestic firms, in particular SMEs, to absorb knowledge from foreign firms, and economic geography factors.

The industrial structure, specialisation and internationalisation of the domestic economy influence the potential to benefit from FDI's presence

The industrial structure, economic specialisation and technological sophistication of the host country are primary determinants of FDI inflows. Differences in the comparative advantage of economies result in differing FDI profiles, with some countries attracting more knowledge-intensive investment than others do. Economies driven by sectors with higher average productivity levels and technological intensity are expected to have greater potential to absorb and utilise the knowledge and technology brought by foreign MNEs. Countries with more advanced industrial structures tend to attract FDI in higher value added activities, involving more productive and technology-intensive activities that allow them to further advance the industrialisation process (Benfratello and Sembenelli, 2006^[40]; Criscuolo and Martin, 2003^[41]). Conversely, countries at early stages of the industrialisation process may benefit more from investments in lower value added sectors where local producers, often SMEs, have a comparative advantage, allowing them to move up the value chain within those sectors into activities that are more complex.

Economic specialisations may differ even within countries, leading to different FDI impacts across regions. Specialisation patterns are often driven by natural endowments and regional assets that cannot be changed or can only be changed in the long run, such as geographic location, natural resources, urban or rural settings and demographics (OECD, 2007^[42]). They are often the outcome of natural configurations, market dynamics and past economic and policy choices. For instance, metropolitan regions tend to have greater endowments of human and physical capital, including more favourable demographic structure, higher intensity of skills, and better infrastructure facilities. This leads to a high concentration of knowledge-intensive FDI in urban areas and therefore greater potential for market interactions with

domestic firms compared to rural areas. Within OECD countries, there are rural regions that have higher rates of growth than urban regions (OECD, 2009^[43]). These regions have found ways to exploit their resource endowment in an efficient manner – for instance through specialisation that takes into account place-based capabilities. Regional economies can, therefore, attract productivity-enhancing FDI with strong spillover potential based on location-specific comparative advantages.

Beyond economic specialisations, the exposure of an economy to international markets also matters for FDI impacts on productivity and innovation. Integration into GVCs is an important driver of aggregate productivity growth and can have important consequences on the ability (and incentives) of firms to exploit the knowledge transmitted through international production networks (Gal and Witheridge, 2019^[44]). Domestic firms that are exposed to international markets (through forward and backward GVC participation) may be better equipped to develop linkages and partnerships with foreign investors.

The magnitude of knowledge spillovers often depends on the characteristics of FDI

There is emerging evidence that FDI concentration in high technology manufacturing is particularly beneficial for local SMEs. For example, in three Eastern European countries (i.e. Bulgaria, Poland and Romania), a recent study found that horizontal FDI spillovers (e.g. as a result of imitation and competition effects) are observed in labour-intensive sectors, while vertical FDI spillovers (e.g. related to buy and supply linkages) are mostly observed in high technology sectors (Nicolini and Resmini, 2010^[45]). In the context of the United States, FDI spillovers are particularly strong in high technology sectors, while they are largely absent in low technology sectors (Keller and Yeaple, 2009^[46]). Furthermore, low-productivity small firms benefit more from FDI spillovers than high-productivity larger firms do. FDI can however be isolated from the rest of the economy in high technology manufacturing. For example, Israel has succeeded in attracting many ICT R&D labs from large US-based MNEs (e.g. Intel, IBM, etc.); however, these labs are often self-contained and have developed limited relationships with the rest of the economy (OECD, 2016^[47]; OECD, 2019^[5]).

The type of FDI – greenfield investment or mergers/acquisitions – that a country attracts has implications on the extent of FDI linkages with the local economy. A greenfield investment is more likely to involve the implementation of a new technology in the host country and is therefore accompanied by a direct transfer of knowledge and technology from the parent firm to the new affiliate (Farole and Winkler, 2014^[48]). On the other hand, the acquisition of a domestic firm allows foreign investors to primarily access the host country's technology as well as the already established business networks and knowledge sharing relationships possessed by the acquired firm. In this case, the deployment of the foreign investor's technology would be implemented more gradually, thus making knowledge spillovers to domestic firms less likely in the short term but may still occur in the longer term (Crespo and Fontoura, 2007^[21]; Braconier, Ekholm and Knarvik, 2001^[49]; Branstetter, Fisman and Foley, 2006^[50]).

The degree and structure of foreign ownership is also an important factor affecting the strength of linkages between domestic and foreign firms. Empirical evidence shows that MNEs with fully foreign-owned affiliates exert greater control upon the technologies they transfer to their foreign locations and seek to avoid knowledge and technology leakages, thereby limiting the potential for FDI spillovers (Konwar et al., 2015^[51]). In contrast, MNEs with more domestic participation may have greater potential for linkages with the local economy due to better knowledge of, and well-established relations with, domestic supplier networks (Farole and Winkler, 2014^[39]). This is particularly the case for joint venture agreements, which have been found to have positive horizontal spillovers on local firms (Abraham, Konings and Sloomackers, 2010^[52]). However, as highlighted in the following sections, restrictions on foreign ownership as a means to achieve knowledge spillovers should be generally avoided as they have been found to deter FDI, especially when intellectual property rights are not protected (OECD, 2021^[53]).

Turning to the motives of investments, foreign investors may enter a country to expand sales in a new, often large, market (i.e. market-seeking); to tap into natural resources (resource-seeking), which is often

the case in commodity sectors and agribusiness; or to achieve efficiency (efficiency-seeking), either by reducing costs (e.g. labour costs) or by seizing new local assets in the form of technology, innovation and related skills. In general, FDI motives are often interlinked, so that they cannot be fully separated but rather emerge in combination.

Domestic firms with strong absorptive capacities are better positioned to integrate new knowledge and technologies into their production processes

Global production networks and the presence of foreign MNEs provide domestic firms with an important opportunity to increase their productivity and acquire new knowledge. Technology transfers are more effective when domestic firms possess previously accumulated knowledge and innovative capabilities. This set of knowledge and capabilities is generally identified by the literature as absorptive capacity (OECD, 2022^[23]). More specifically, absorptive capacity is defined as the ability of the firm to acquire, assimilate and exploit the available information, knowledge and technology that comes through interaction with other firms (Cohen and Levinthal, 1990^[54]; Todorova and Durisin, 2007^[55]). It largely depends on the financial, human and knowledge-based capital of companies and their ability to access the strategic resources they need to adapt to market conditions, become more productive and innovate (i.e. access to finance, skills and innovation assets, including technology, data and networks).

Empirical evidence shows that the absorptive capacity of domestic firms is an important determinant of knowledge spillovers. Domestic suppliers with better technical capabilities tend to develop more knowledge-intensive types of linkages with foreign firms (Saliola and Zanfei, 2009^[56]). FDI is also found to have a positive effect on domestic productivity growth when the technology gap between domestic and foreign firms is not too large (Nicolini and Resmini, 2010^[45]). The absorptive capacity is typically measured in terms of performance gaps (e.g. productivity gaps) between foreign and domestic companies as illustrated in Figure 2.3 (OECD, 2019^[2]; Gal and Witheridge, 2019^[44]; Farole and Winkler, 2014^[48]).

However, domestic firms vary in terms of size, business model, performance and ability to access and make use of the necessary strategic resources for their growth and upgrading. This heterogeneity means that different types of firms have different chances to enter into knowledge-sharing relationships with foreign MNEs. For instance, SMEs typically have greater difficulty in attracting skilled workers, face internal and external barriers in accessing finance, and often struggle to find the technology, information and networks that would enable them to participate in innovative activities with foreign MNEs (OECD, 2019^[5]; 2020^[57]; 2021^[58]). Given that SMEs account for almost all enterprises in both OECD and developing economies, strengthening their absorptive capacities is key to enhancing FDI's spillover potential for domestic productivity and innovation (OECD, 2022^[23]).

Recent OECD work on FDI-SME linkages and spillovers in Portugal and the Slovak Republic shows that cross-country differences in SME productivity and innovation performance can explain differences in the sourcing strategies of foreign MNEs. In Portugal, foreign investors source extensively from the domestic market, reflecting the fact that SMEs are relatively more innovative and digitally savvy than those in many other OECD economies (OECD, 2022^[59]). In contrast, foreign investors in the Slovak Republic rely mainly on imports for the sourcing of inputs, which could be linked to the poor productivity performance and innovation capacity of the Slovak SME population.

Economic geography factors shape agglomeration and network dynamics, which are key for domestic firms to benefit from FDI's presence

Economic geography factors generate spatial and agglomeration effects. The localised nature of FDI means that geographical and cultural proximity between foreign and domestic firms affects the likelihood of knowledge spillovers, which often involve tacit knowledge, and whose strength decays with distance (Audretsch and Feldman, 1996^[60]). Recent work confirms that when there are productivity spillovers from FDI, these are concentrated in the same region of the investment (Lembcke and Wildnerova, 2020^[37];

Girma, Görg and Pisu, 2008^[61]). When deciding where to invest, foreign firms are considering the specific factor endowment of a region – rather than just of the country. SME activity and performance are also unevenly distributed within countries, with high concentration of R&D and innovation activities and investments in few regions, and large cross-regional disparities in SME productivity (OECD, 2016^[62]).

Agglomeration effects, notably through the presence of local industrial clusters, have been also reported to affect the volume of FDI and its potential for knowledge spillovers. Clusters embed characteristics such as industrial specialisation (through specialised skilled workers and suppliers) and geographical proximity that make knowledge spillovers more likely to happen, including from MNE operations. For the same reasons, MNEs can also expect to benefit from investing in local clusters, notably through the sourcing of local knowledge and technology. Evidence from the United Kingdom, Italy, Poland and Romania shows that firms located in clusters benefit from FDI, both in the same sector of the foreign affiliate and in other sectors. However, these benefits do not materialise for companies located outside the clusters (De Propris and Driffield, 2005^[63]; Menghinello, De Propris and Driffield, 2010^[64]; Franco and Kozovska, 2008^[65]).

2.3. Policies that influence FDI impacts on productivity and innovation

Productivity and innovation impacts of FDI may not materialise automatically. Besides economic and market conditions, public policies and institutional arrangements play an important role in fostering positive FDI impacts. Policies and institutions are also essential to avoid negative implications that may result from the presence of foreign firms, such as crowding out of local SMEs and jobs (see Chapter 3). Most public policies do not specifically target foreign firms; they treat foreign and domestic investors alike. Yet, the extent to which they affect the two groups, and with that their outcomes on sustainable development, can vary. Laws, regulations and public support schemes directly affect foreign firms' choice of location, incentivise specific types of foreign firms to invest and keep away others.

The OECD Policy Framework for Investment (PFI) provides guidance on investment climate reforms that are concurrent with enabling investment for productivity growth (OECD, 2015^[66]). Yet, ensuring that FDI leads to higher productivity levels and supports the competitiveness and innovation of domestic firms, in particular SMEs, requires more tailored policy considerations and increased focus on complementary policies outside the PFI, including industrial, innovation, SME and entrepreneurship policies. Given the important role that FDI can play in meeting territorial development objectives and alleviating (or sometimes exacerbating) regional disparities in economic growth and competitiveness, regional development policies are also key in shaping the economic geography of FDI impacts on productivity and innovation.

Interest in industrial policies has grown over the past decade as both OECD and developing economies are looking at how to strengthen their domestic industrial capacities, advance technological development, address the structural productivity slowdown and improve their global positioning in higher value-added segments of production (OECD, 2016^[67]). There is a growing consensus that the risks associated with selective industrial policy and the influence of vested interests could be minimised. New industrial policies are increasingly focusing on market failure-correcting interventions that help build systems, create networks, develop institutions and align strategic priorities (Warwick, 2013^[68]). OECD work on the role that industrial policies (including innovation and general business framework policies) can play in advancing the SDGs demonstrates that a diverse set of policy instruments (e.g. rewards and incentives, government assistance policies, compliance instruments), adequate business framework conditions, and enhanced focus on SMEs, innovative startups and local entrepreneurial ecosystems are needed to improve domestic productive capacities (OECD, 2021^[69]).

This Policy Toolkit aims to provide a thorough assessment of policy initiatives, from national strategies and regulations to financial incentives and technical assistance programmes, at the intersection of these policy areas to help policy makers enhance the impacts of FDI on productivity and innovation (Table 2.1). It explains what institutional settings, regulatory conditions, policies and programmes are important

ingredients of a policy mix that enables positive FDI impacts – both directly and through spillovers. The policy guidance provided in the following sections also incorporates OECD research on the contribution of FDI-SME linkages and spillovers to the productivity of local economies, based on evidence from policy approaches implemented in EU countries and regions (OECD, 2022^[23]). The Policy Toolkit is structured around four broad principles and the policy instruments that support these principles (Table 2.1). Annex Table 2.A.2 provides a detailed checklist of questions for governments to self-assess their policy frameworks.

Table 2.1. Overview of the FDI Qualities Policy Toolkit for strengthening the impacts of FDI on productivity and innovation

Principle 1: Provide strategic direction and promote policy co-ordination and coherence on investment, innovation and SME development	Governance	National strategies and plans
		Oversight and co-ordination bodies
		Policy dialogue and evaluation of policy impacts
Principle 2: Ensure that domestic and international regulations create a conducive business environment for FDI-driven productivity growth and innovation	Domestic regulations	Legal framework for investment
		Competition policy and intellectual property rights protection
		Labour and financial market laws and regulations
		Regulatory incentives
	International agreements and standards	Regulatory impact assessments
		Innovation and SME policy provisions in IIAs
		Provisions on intellectual property rights, the digital economy, and competition in IIAs
Principle 3: Stimulate knowledge-intensive investment and support the productive capacities and innovation potential of the domestic economy	Financial support	Incentives for knowledge-intensive investment
		Financial support for SME internationalisation and innovation
		Incentives for business-to-business and science-to-business collaboration
	Technical support	Business and supplier development services
		Training and skills development services
		Network and knowledge infrastructure
Principle 4: Facilitate knowledge and technology spillovers from FDI by eliminating information barriers and administrative hurdles	Information & facilitation services	Cluster policies
		Investment promotion activities
		Investment facilitation and aftercare
		Information services, networking and knowledge exchange activities

2.3.1. Provide strategic direction and ensure policy co-ordination and coherence on investment, innovation and SME development

Ensure that national strategies can foster policy coherence and a whole-of-government approach to investment promotion, innovation and SME development

The institutional framework that governs the investment, innovation and SME development policy areas differs from country to country. Different governance arrangements are feasible as long as appropriate reporting mechanisms and communication channels are in place to ensure policy alignment among different institutions and tiers of government. To this end, clear responsibility and accountability among government institutions is a pre-condition for designing and implementing coherent and effective policies that strengthen the impact of FDI on productivity and innovation.

National strategies and action plans can be important instruments for policy coherence as they are crosscutting in nature and often require whole-of-government responses to ensure their effective implementation. Establishing a clear, overarching and comprehensive strategic framework for investment

promotion policy allows to create an integrated vision across government and set out long-term strategic objectives, quantifiable targets, policy pillars, related programme actions and clearly defined roles for all the institutions involved in its implementation. Such a long-term and country-wide vision for inward investment attraction should sufficiently consider FDI's contribution to productivity growth, innovation promotion and SME development, and identify specific policy priorities, short-term and long-term targets, and policy interventions to achieve these objectives.

It is also critical that investment promotion strategies are not developed in silos, but are sufficiently aligned with and include cross-references to national strategies addressing innovation, SME and industrial policy issues. Many OECD countries have dedicated national strategies on these policy areas, while others mainstream relevant policy priorities in economic reform programmes, sectoral action plans and national development strategies. As part of their policy response to the supply chain disruptions caused by the COVID-19 pandemic, both Ireland and the Czech Republic have recently developed dedicated SME and entrepreneurship strategies, focusing on strengthening their productivity, internationalisation and innovation including through linkages with foreign MNEs (OECD, 2021^[8]). Conversely, many investment and innovation promotion strategies increasingly consider the role that FDI can play in strengthening the domestic R&D ecosystem. The national investment strategies of Norway, Spain, Slovenia and the UK include specific measures aimed at supporting the upgrading of SMEs in GVCs, while the Czech Republic's National Research, Development and Innovation Policy Strategy (2016-20) foresees business support measures to help SMEs become more involved in international R&D collaborations (OECD, 2019^[5]).

Ensure effective policy co-ordination and multi-level governance in the design and implementation of investment promotion, innovation and SME policies

Actions to improve the impact of FDI on productivity and innovation need to be aligned with the objectives and priorities set by government across different policy areas. This often entails co-operating with a number of government institutions at national and subnational levels. Although co-ordination is a fundamental and longstanding problem for public administration, much of the success or failure of attempts to co-ordinate appear to depend upon country contexts, including the complexity of the institutional setting and the co-ordination instruments at play. In many OECD and developing economies, the institutional framework governing investment promotion, innovation and SME policies is structured along lines reflecting different policy domains. In Belgium, Portugal and Canada, for instance, several implementing agencies operate across the three policy areas under the supervision of different ministries. Such institutional settings may induce more complex governance systems – i.e. higher risks of information asymmetry, transaction costs and trade-offs – and require strong inter-institutional co-ordination mechanisms to overcome potential policy silos. In contrast, other governments (e.g. Croatia, Finland, Lithuania, Luxembourg, and Slovenia) target the entire FDI-SME-innovation ecosystem through a single government entity to facilitate co-ordination and synergies among different policy domains.

Irrespective of the complexity of the institutional setting, the set-up of effective inter-institutional co-ordination mechanisms at the strategic and policy implementation level is key. Instruments of co-ordination can be formal or informal; based on regulation, incentives, norms and information sharing; top-down relying on the authority of a lead government body, or bottom-up and emergent. For instance, high-level government councils can bring together line ministries responsible for investment, SME, innovation and industrial policy issues, implementing agencies and regional and local governments to identify priority areas where cross-ministerial policy planning and decision-making is necessary. In many countries, some of these councils are also responsible for the co-ordination of national strategies while others have been given broader mandates to foster policy dialogue, convene stakeholders and issue opinions on legislative initiatives.

At the policy implementation level, the establishment of inter-agency working groups, committees and task forces can help policy makers pull resources from different parts of government to effectively advance specific policy agendas. Inter-agency joint programming can also facilitate the implementation of crosscutting measures that span several policy areas, in particular in countries with highly fragmented institutional settings (e.g. large number of public institutions involved in policy design and implementation). In these country contexts, the Centre of Government, i.e. the office serving the highest level of the executive branch of government (e.g. presidents, prime ministers), can also play an important role in bridging bureaucratic boundaries across ministries and improving the enforcement of policy decisions. Finally, informal channels of communication between officials or job circulation of civil servants can play an important role in improving co-ordination and often suggest a relatively well-developed culture of inter-agency trust and communication.

Beyond horizontal co-ordination, effective multi-level governance is also key to ensuring policy effectiveness. Given the localised nature of foreign MNEs' operations and the economic geography factors affecting FDI spillovers, policies aimed at strengthening FDI impacts on productivity and innovation require synergies among various levels of government and complementary expertise from regional and local actors. Responsibilities assigned to different tiers of government should therefore be clearly defined to reduce potential duplication and overlaps. Subnational governments (e.g. regional authorities, municipalities, regional development agencies) have better knowledge of local market needs and greater potential to interact with local business enterprises, foreign or domestic. Their active involvement in the design and implementation of investment promotion, innovation and SME support policies can help unlock the growth potential of the territories where these are implemented by drawing on the knowledge and expertise of local actors and linking investment promotion and SME development priorities to regional and local development strategies.

Assess the impact of FDI and relevant policies on the productivity and innovation of the domestic economy and promote policy dialogue to enhance the effectiveness of policy interventions

Monitoring and evaluation (M&E) practices have been at the centre of governance frameworks as a result of the emergence of multi-dimensional policy issues and the increasing expectations over the effectiveness of public policy. The systematic collection of disaggregated data for the assessment of FDI impacts on productivity and innovation can help governments assess the economic and market conditions that underpin FDI-driven productivity growth, identify market failures and possible policy responses. The OECD FDI Qualities Indicators allow policy makers to make the necessary link between investment and host economy impacts, and assess how FDI supports national policy objectives with regard to productivity, innovation, SME growth and upgrading (OECD, 2019^[2]).

Furthermore, a comprehensive framework for evaluating the impact of policies on foreign direct investors, local SMEs and other actors of the domestic research and innovation ecosystem (e.g. R&D organisations, technology parks, applied research centres, collaborative laboratories, universities) could play a crucial role as an “early warning mechanism” to identify potential policy gaps and take corrective action. For line ministries and implementing agencies responsible for investment promotion, it is critical that impacts on innovation, R&D and the capacities of domestic firms are sufficiently considered when measuring success in reaching the policy objectives of related investment promotion measures. In fact, 53% of OECD IPAs and 60% of MENA IPAs use innovation and R&D-related performance indicators when measuring the impact of their policy actions in the economy (OECD, 2018^[70]). Policy impacts on the capacities of domestic firms are also evaluated by 22% of OECD IPAs and 60% of MENA IPAs.

For many OECD and developing countries, the development of better systems to track and collect reliable statistical data based on international standards is a pre-requisite to the development of more robust outcome indicators, including on productivity and innovation. The use of qualitative evaluation

methodologies (e.g. surveys, benchmarking, consultations), and the establishment of data tracking tools and feedback processes can ensure that relevant and reliable data on the impact of policy interventions are available. Co-ordination and collaboration between investment promotion, innovation and SME agencies can facilitate the exchange of data, experiences and expertise. Apart from the use of quantifiable outcome-based performance indicators, a reliable assessment of policy impacts also requires strong internal capacity to plan, prepare and execute ex ante and ex post evaluations. Setting up dedicated evaluation units within implementing agencies and involving specialised staff with technical knowledge of M&E principles and implementation tools could strengthen internal competences and improve the effectiveness of their programmes.

Active engagement and consultation with foreign direct investors, local SMEs and R&D organisations is necessary for the effective implementation of relevant policies. Through their interactions with the private sector, public institutions are able to understand the challenges and expectations of foreign and domestic firms, receive feedback on the relevance of their policy programmes, and enrich policy making processes with insights from various stakeholders of the domestic research and innovation ecosystem. Mechanisms for regular public-private dialogue within specific sectors and supply chains should be combined with bottom-up communication processes to ensure that local level market needs and perspectives are fed into higher-level policy processes.

2.3.2. Ensure that domestic and international regulations create a conducive business environment for FDI-driven productivity growth and innovation

Ensure an open, transparent and non-discriminatory regulatory environment for productive and knowledge-intensive investment

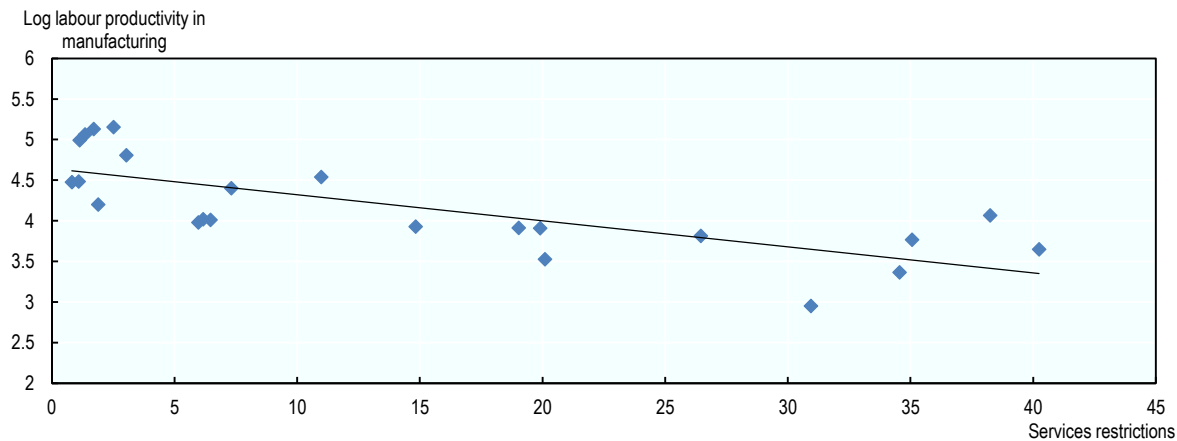
An open and non-discriminatory regulatory environment can increase the amount and spillover potential of FDI and strengthen the absorptive capacities of domestic firms, in particular SMEs (Figure 2.5). Fewer restrictions for investments in more productive, innovative and knowledge-intensive sectors can increase the direct impact that foreign firms have through their own activities on sectoral and aggregate productivity growth. Openness to FDI may not only affect productivity in industries that get market access, but also those in downstream sectors that benefit from potentially better access to high quality inputs and services domestically. Recent OECD work on Southeast Asia shows that liberalising FDI in services is positively associated with productivity in downstream manufacturing industries, where SMEs benefit in particular (OECD, 2019^[71]).

FDI spillovers also tend to be larger in countries that are more open towards trade (Meyer and Sinani, 2009^[72]; Havranek and Irsova, 2011^[73]; Du, Harrison and Jefferson, 2011^[74]). A study on Thailand's manufacturing sector, found that technology spillovers from FDI to the domestic economy happen predominantly in sectors with low trade restrictions, while evidence from China's entry into the World Trade Organisation (WTO) suggests that vertical backward spillovers increased after its accession when tariffs were lowered and domestic content restrictions relaxed (Du, Harrison and Jefferson, 2011^[74]). Trade openness can also shape the absorptive capacity of domestic firms, which are more exposed to international competition in an open trade regime, and therefore more likely to access new markets, participate in GVCs, and produce intermediate goods required by foreign investors (Havranek and Irsova, 2011^[73]).

FDI-driven productivity growth and innovation may not automatically materialise just because a country is able to attract FDI (Alfaro, 2017^[75]). Competition rules that ensure a level playing field for foreign and domestic firms facilitate the entry of foreign investors and, at the same time, incentivise domestic firms to become more productive, innovate and improve the quality of their products (Lembcke and Wildnerova, 2020^[37]). Firms exposed to stronger competition might also be better prepared to imitate good practices from foreign firms. As described in Section 2.2, competition and imitation effects are an important channel

through which knowledge and technology spillovers from FDI take place in the host economy. In this context, it is important to assess the degree to which laws and policies promote or inhibit competition in areas of the product and services markets where competition is viable.

Figure 2.5. FDI openness in services and productivity in downstream manufacturing sectors



Note: Analysis is based on firm-level data from 23 OECD and developing countries; see methodology in OECD (2019^[71]). Services restrictions are based on the OECD FDI Regulatory Restrictiveness Index.

Source: OECD (2019^[71]), *OECD Investment Policy Reviews: Southeast Asia*, <http://www.oecd.org/investment/oecd-investment-policy-review-southeast-asia.htm>

Policies that ensure intellectual property rights (IPR) protection are also important as they guarantee the appropriability of knowledge and innovation benefits, and determine the qualities of FDI that can be attracted. Empirical evidence suggests that where rights are strong, foreign firms are not only more likely to invest but are also more likely to engage in local R&D and more willing to share new technologies with local partners through joint ventures and licensing agreements (OECD, 2015^[66]). Branstetter et al. (Branstetter, Fisman and Foley, 2006^[50]) find that US MNEs respond to changes in IPR regimes abroad by increasing technology transfer to their affiliates in countries that undertake reforms to strengthen IPRs. Similarly, Javorcik (2004^[14]) finds that, in Central and Eastern Europe, the strength of patent laws as well as the overall level of IPR protection increases the likelihood of attracting FDI in several high technology sectors where IPRs play an important role. Foreign investors are also found to be more likely to engage in local production, as opposed to focusing solely on setting up distribution networks, in countries with stronger IPR regimes, increasing therefore the potential for more linkages with the local economy.

Several countries have chosen to introduce local content requirements (LCRs) to induce foreign firms to use domestically manufactured goods or domestically supplied services in exchange for market access in certain strategic sectors. Recent OECD work shows that, while LCRs may help governments achieve certain short-term objectives in targeted industries (e.g. potential learning and technological spillovers, economies of scale), they undermine long-term competitiveness and may prove to be detrimental for FDI attraction and productivity growth in the long run (Stone, Messent and Flaig, 2015^[76]). LCRs may restrain competition from imports, which might contribute to higher production costs and ultimately higher prices to downstream industries and consumers. The literature on the potential effects of LCRs also points to potential market distortions and inefficiencies arising from a suboptimal allocation of resources. They may undermine the original goals for imposing LCRs. Targeted incentives that generate less negative economy-wide effects and do not impede market access may be preferable to incentivise linkages between FDI and domestic firms (see section on financial support and technical assistance).

Consider the impact of laws and regulations on business capacity and incentives to engage in innovation and technology development

Firm size is a determinant of absorptive capacity and a critical factor shaping a firm's ability to move towards high value added, knowledge-based production. OECD and developing economies are often dominated by SMEs with low productivity, which may find it difficult to grow and obtain a critical scale that would allow them to join GVCs, participate in innovation activities and become suppliers and partners of foreign firms. Overly burdensome regulations often perpetuate informality, particularly of smaller and less productive firms, which have less capacity to screen the regulatory landscape and allocate the necessary resources to address legal and regulatory requirements (OECD, 2018^[77]). It is important that a conducive business environment is created and regulatory hurdles removed to enable small businesses to expand. These include areas such as the ease of registering a business, dealing with reporting and tax compliance requirements, trading across borders, resolving insolvency and dealing with licence and permit systems.

Stringent regulations can also deter innovation by imposing high compliance costs that reduce the attractiveness of R&D and limit the capacity of domestic entrepreneurs and foreign firms to experiment with alternative business and production models (Davidson, Kauffmann and de Liedekerke, 2021^[78]). One option for encouraging FDI-driven productivity growth and innovation is to develop laws and regulations that are sufficiently flexible and forward-looking to anticipate and adapt to fast-changing technologies. This is particularly the case for regulations addressing issues related to digital innovation (e.g. use of AI applications, robotics, Internet of Things). Related technological standards should be also updated regularly to catch up with the latest market developments. Finally, regulatory impact assessment (RIA) tools and processes should move beyond assessing the economic impacts of regulations (e.g. impacts on competition, economic growth, etc.) to also cover impacts on SME competitiveness, innovation and the internationalisation of the economy.

In many countries, the simplification of the regulatory framework is often combined with targeted easing of the regulatory burden for certain types of investment. This usually comes in the form of special investment regimes granted to FDI projects that are deemed to be of strategic importance for the host economy, giving access to expedited administrative and licensing procedures. These special regimes are usually predicated on certain conditions such as creating a number of jobs, investing in knowledge-intensive and productivity-enhancing sectors, or benefitting specific geographic areas. In Portugal, for instance, the government has introduced several special regulatory regimes allowing investors to benefit from simplified licensing procedures, conditional to introducing innovative and technology-based production processes in co-operation with domestic R&D institutions (OECD, 2022^[59]). Many developing countries have also established special economic zones (SEZs) as a tool to attract FDI that creates linkages with the local economy.

Evidence on the effectiveness of these regulatory measures has been mixed. Anecdotal evidence on their impacts, in particular of the SEZs, shows that they have often failed to sustain innovation and competitiveness over time, delivering little technological upgrading or new firm creation. In many instances, SEZs have been criticised for negative social and environmental impacts as a result of excessive competition between regions and a misuse of resources and land where the SEZs are located (Farole and Akinci, 2011^[79]; OECD, 2018^[80]). In principle, regulatory concessions should not be used as a substitute for improving the general investment climate but instead be embedded in broader national development strategies. Accompanying measures need to be in place to generate productivity spillovers on the rest of the economy, including supplier development programmes, business matchmaking services, and initiatives to engage the private sector and local education institutions in cluster building activities.

It is also critical that policy efforts to reduce the regulatory burden on business do not lead to a “race to the bottom” in terms of social and environmental standards (see chapters 3, 4 and 5). This becomes even more crucial for industries driven by digital innovation, which rely on alternative business models and often lead to new and more precarious forms of employment or weakened social protection conditions (OECD,

2020^[81]). In fact, regulation should mitigate the potential socio-economic risks arising from the adoption of new, innovative and digitally enabled business models while at the same time ensuring that regulatory responses are proportional, set out some level of certainty and predictability, and do not stifle the innovation potential of the economy.

Ensure that labour market regulations facilitate FDI spillovers through labour mobility

Labour market regulations shape FDI impacts on productivity and innovation by affecting the potential for knowledge and technology spillovers through labour mobility (see section 2.2) and the availability of skills in the local labour force. Recent evidence from EU countries shows that less rigid labour markets with strong absorptive capacities are better positioned to moderate any adverse labour market effects of FDI, in particular the crowding out of employees in domestic firms, which occurs when foreign and domestic firms compete for the same scarce labour resources (Becker et al., 2020^[36]). In contrast, the benefits for a local economy from FDI are lowest where there exist a combination of stringent employment protection legislation and low absorptive capacities. This is because foreign firms seek to attract local talent by offering higher wages that less productive domestic firms are unable to match. Increased wage disparities coupled with rigid labour market conditions limit the ability of domestic firms to retain and attract skilled workers, holding back labour mobility and the potential for knowledge spillovers that this entails.

These findings highlight the need to examine labour market regulations and their role in FDI-driven productivity growth by looking at how they relate to other drivers of FDI impacts, namely domestic SME performance and the availability (or lack) of skills in the local labour force. Spillovers from labour mobility cannot be fully leveraged unless structural challenges related to the absorptive capacities of domestic firms, in particular SMEs, are addressed, and the complexity of hiring regulations reduced (and with that the disproportionate impact they may have on small businesses). Targeted measures that allow micro and small firms to be exempted from certain procedural requirements or other hiring restrictions of the labour legislation can facilitate the movement of highly skilled workers from foreign affiliates to the domestic entrepreneurial ecosystem.

Encouraging the uptake of permanent employment can also have a positive impact on domestic firms' willingness to invest in job training of their employees, which is an important component of a firm's absorptive capacity. Evidence on the role of employment protection regulations in shaping the incentives of firms to invest in formal training shows that enforcing stricter hiring regulations for temporary contracts and less rigid regulations for dismissals of permanent workers is associated with higher investment by firms in the human capital of their employees (Almeida and Aterido, 2011^[82]). Similarly, a stricter enforcement of employment protection regulation is found to have a positive impact on firms' willingness to upskill their employees. This is mainly because firms have greater incentive to invest in firm-specific knowledge and skills for employees who stay longer on the job and seek to exploit the career advancement opportunities provided by the firm (OECD, 2020^[83]). Chapter 3 provides a detailed analysis of the positive impacts that labour market regulations can have on human capital formation.

Linked to the need for a skilled labour force is the increasing number of governments that introduce regulatory incentives to encourage workforce skills development and facilitate the immigration of business talent as a way to help domestic economies address labour shortages. Some OECD countries have introduced statutory rights for employees for training leave – however, their take-up is generally not high with less than 2% of employees benefitting from such measures (OECD, 2019^[5]). In recent years, there has been also an increase of entrepreneur visa programmes (e.g. Startup Visa, Tech Visa), which seek to attract innovative entrepreneurs and highly skilled workers by allowing them to obtain residence and employment rights. For the visa to be granted, entrepreneurs usually have to demonstrate solid business and financial plans and undertake innovative activities in knowledge-intensive sectors. The impact of these schemes on the productivity and innovation of domestic economies is not clear yet, but other factors such

as labour market conditions, the presence of a thriving startup ecosystem, and the quality of the business environment are thought to be key determinants.

Ensure that financial market laws and regulations facilitate access to finance for innovative and technology-intensive activities

Well-functioning financial markets can facilitate FDI spillovers by enabling SMEs to access supply chain finance and secure investments for entrepreneurial activity. Studies find that well-developed financial markets can strengthen the absorptive capacity of domestic firms and provide the liquidity that SMEs need to export, develop new products and invest in technology upgrading (Farole and Winkler, 2014^[48]). For many SMEs, the high fixed costs of establishing a distribution network and adjusting their products for overseas standards, often require external finance (OECD, 2020^[57]). Similarly, access to finance is an important condition for foreign firms that seek to finance collaborative technology-based projects or enter into partnerships with domestic firms (for instance, through joint ventures).

Financial stability risks (e.g. low bank profitability, high sovereign and corporate debt) and structural market deficiencies (e.g. underdeveloped equity markets and credit rating systems, insufficient market liquidity, weak contract enforcement, inefficiencies in the judicial system, etc.) are often the most common causes that hold back the necessary capital that foreign and domestic firms need to expand their operations. Governments can play an important role in improving access to credit by creating a regulatory environment that provides flexible collateral options and transparent legal recourse in cases of default, and by establishing easily accessible financial support schemes (OECD, 2019^[5]). Regulatory reforms that facilitate market-based long-term debt financing, increase the availability of alternative financing instruments, and promote access to equity capital through the stock market can help free up capital for innovative business projects. Raising awareness about alternative forms of financing such as crowdfunding, venture capital and business angels, and encouraging firms to source finance from equity markets can also further stimulate innovative business activities.

Integrate innovation and SME policy considerations into international investment agreements

Most investment treaties in force today do not contain provisions that seek expressly to promote productivity and innovation. Rather, they have tended to focus almost exclusively on providing legal protections to investors. Recent international investment agreements (IIAs) concluded in the past decade, especially free trade agreements (FTAs) that address investment issues, have covered broader policy areas beyond investment protection that pertain to fostering international co-operation on science, technology and innovation (STI) policy and strengthening the capacities of SMEs to engage in international trade and investment.

Recent IIAs address regulatory issues affecting host country SMEs by envisaging international co-operation and dialogue to promote investment opportunities for SMEs in the economies of the treaty parties (Clicteur et al., 2021^[84]). SME-specific provisions may take the form of standalone chapters, or be mainstreamed across FTA chapters dealing with e-commerce, trade facilitation, procurement, investment and trade in services (Box 2.2). The degree of commitment that they require varies; from general principles emphasising the importance of SMEs in international trade and investment, to binding agreements on simplified administrative procedures for SMEs trading or investing abroad, and commitments to the establishment of dedicated SME Committees to ensure co-operation and information sharing among treaty signatories (UKTPO, 2020^[85]; Lodrant and Cernat, 2017^[86]). These initiatives may help SMEs to overcome a lack of familiarity with foreign markets as well as logistical, managerial and other challenges when trading or investing abroad. By facilitating the internationalisation of host country SMEs, these provisions can also increase the exposure of SMEs to international competition and improve their capacities to become suppliers and partners of foreign firms, including foreign direct investors located in their own countries.

The inclusion of STI provisions in bilateral investment treaties (BITs) and regional trade agreements (RTAs) is another channel through which governments often seek to signal their readiness to attract FDI in high-technology areas, promote international co-operation on technology transfer issues and strengthen domestic innovation capabilities. Provisions on intellectual property rights (IPRs) are the most commonly found STI provisions in IIAs (Stone, Kim and Engen, 2017^[87]). They often include general principles stressing the importance of IPRs for innovation and economic growth; binding commitments on specific IP issues (e.g. minimum standards for IP protection, use and enforcement of IPRs, settlement of IP disputes); and bilateral or multilateral co-operation provisions. The economy-wide effects of including IPR provisions in RTAs or BITs have seldom been quantified, but it is widely accepted that they can support innovation in the treaty party economies to the extent that they lead to improvements in domestic laws in these areas (WTO, 2014^[88]). New IIAs concluded over the past few years have been also increasingly incorporating more general provisions on the digital economy (e.g. data protection, cybersecurity, data localisation and online consumer protection rules) as well as STI co-operation (Stone, Kim and Engen, 2017^[87]). The latter usually seek to facilitate the exchange of information on cross-border innovation programmes, the joint conduct of R&D projects; the exchange of country visits of specialised delegations, industry representatives, universities and research centres; and the promotion of public-private sector partnerships for the development of innovative products and services (Box 2.2).

Another feature of some recent IIAs that can affect productivity and innovation is disciplines on performance requirements. These provisions, inspired by the WTO TRIMs Agreement, prohibit treaty parties from imposing mandatory performance requirements on incoming foreign investors such as forced technology transfers, local content or R&D quotas. As outlined in the previous section, performance requirements have been found to deter FDI inflows and undermine the long-term competitiveness of the domestic economy. Some IIAs adopt a more nuanced approach by creating express exceptions or reservations in some areas (e.g. allowing governments to impose technology transfers on foreign investors as part of investment screening review processes) or allowing governments to attach certain conditions to non-mandatory advantages offered under domestic law (e.g. incentive schemes, tax breaks, subsidies, etc.) that would require foreign investors to perform in some way to benefit the domestic economy (e.g. locate production, train or employ workers, carry out R&D locally, etc.). The impacts of such policies need to be carefully weighed and examined alongside other factors that drive FDI spillovers such as the productive capacities of domestic firms and the availability (or lack) of skills in the local labour market.

Some recent IIAs also contain government commitments on market access, investment facilitation and promoting fair competition that may generate tangible impacts for productivity and innovation. Through the elimination of regulatory barriers to investment based on nationality, IIAs can stimulate more potential FDI primarily based on market considerations, which in turn can generate many benefits for host economies as described above. Greater openness to foreign competition can lead to new competition for local SMEs, which may stimulate greater productivity or lead to crowding-out effects depending on the maturity of the domestic market. In addition to market access barriers, businesses can face myriad other obstacles to effective entry and success of FDI in foreign markets. Recent IIAs have sought to alleviate these barriers through rules to address problems such as transfers and visas for personnel, clarity on different environmental and technical standards, a lack of transparency in regulatory procedures, or logistics issues.

Box 2.2. STI co-operation and SME facilitation provisions in international trade and investment agreements

The EU-Canada Comprehensive Economic and Trade Agreement (CETA)

Article 25.5: Enhanced co-operation on science, technology, research and innovation

1. The Parties acknowledge the interdependence of science, technology, research and innovation, and international trade and investment in increasing industrial competitiveness and social and economic prosperity.
2. Building upon this shared understanding, the Parties agree to strengthen their co-operation in the areas of science, technology, research and innovation.
3. The Parties shall endeavour to encourage, develop and facilitate co-operative activities on a reciprocal basis in support of, or supplementary to the Agreement for Scientific and Technological Co-operation between the European Community and Canada, done at Halifax on 17 June 1995. The Parties agree to conduct these activities on the basis of the following principles: (a) the activities are of mutual benefit to the Parties; (b) the Parties agree on the scope and parameters of the activities; and (c) the activities should take into account the important role of the private sector and research institutions in the development of science, technology, research and innovation, and the commercialisation of goods and services thereof.
4. The Parties also recognise the importance of enhanced co-operation in science, technology, research and innovation, such as activities initiated, developed or undertaken by a variety of stakeholders, including the Canadian federal government, the Canadian Provinces and Territories, the European Union and its Member States.
5. Each Party shall encourage, in accordance with its law, the participation of the private sector, research institutions and civil society within its territory in activities to enhance co-operation.

The Trans-Pacific Partnership (TPP) Agreement

Article 24.2: Committee on SMEs

1. The Parties hereby establish a Committee on SMEs (Committee), composed of government representatives of each Party.
2. The Committee shall: (a) identify ways to assist SMEs of the Parties to take advantage of the commercial opportunities under this Agreement; (b) exchange and discuss each Party's experiences and best practices in supporting and assisting SME exporters with respect to, among other things, training programmes, trade education, trade finance, identifying commercial partners in other Parties and establishing good business credentials; (c) develop and promote seminars, workshops or other activities to inform SMEs of the benefits available to them under this Agreement; (d) explore opportunities for capacity building to assist the Parties in developing and enhancing SME export counselling, assistance and training programmes; (e) recommend additional information that a Party may include on the website referred to in Article 24.1 (Information Sharing); (f) review and co-ordinate the Committee's work programme with those of other committees, working groups and any subsidiary body established under this Agreement, as well as those of other relevant international bodies, in order not to duplicate those work programmes and to identify appropriate opportunities for co-operation to improve the ability of SMEs to engage in trade and investment opportunities provided by this Agreement; (g) facilitate the development of programmes to assist SMEs to participate and integrate effectively into the global supply chain; (h) exchange information to assist in monitoring the implementation of this Agreement as it relates to SMEs; (i) submit a report of its activities on a regular basis and make appropriate recommendations to the

Commission; and (j) consider any other matter pertaining to SMEs as the Committee may decide, including any issues raised by SMEs regarding their ability to benefit from this Agreement.

3. The Committee shall meet within one year of the date of entry into force of this Agreement, and thereafter as necessary.

Source: (European Commission, 2021^[89]; USTR, 2021^[90])

2.3.3. Stimulate knowledge-intensive investment and support the productive capacities and innovation potential of the domestic economy

Implement clearly defined, transparent and rules-based investment incentive schemes that target FDI in productive and knowledge-intensive activities

Investment incentives are widely used by governments to attract investors, promote investment in specific sectors or locations, and encourage or discourage certain types of business activities (Box 2.3). They can take many forms, including direct financial support, tax relief and regulatory concessions.¹

Direct funding (e.g. grants, loans and guarantees, provision of infrastructure and land, other subsidised goods and services) is often used to compensate foreign investors for the perceived disadvantages of a particular location or subsidise the actual costs of relocating corporate units (e.g. job training costs, expatriation support, temporary wage subsidies). It represents a more selective form of public support as it allows governments to target investment projects that they consider to generate public goods (e.g. green technology, social innovation and other novel areas) or have a high potential for knowledge spillovers (OECD, 2015^[91]; 2021^[92]). Grants and other forms of direct support may therefore be valuable to promote mission-oriented innovation that offers high economic and social returns. Tax incentives, on the other hand, such as tax holidays, tax credits, accelerated depreciation allowances, consist of an easing of the tax burden on the investing companies (Table 2.2). They are usually granted to all firms that qualify for a set of pre-defined conditions, leaving the selection of supported projects to firms. In principle, their non-discretionary nature makes it easier and less costly for governments to administer.² Ultimately, the optimal mix of investment incentives (i.e. direct versus indirect financial support) depends on the specific policy goals, market conditions and country contexts.

Investment incentives are not always aligned with the objective to enhance domestic resource mobilisation for productivity and innovation. They can distort competition and resource allocation, reduce the revenue-raising capacity of the public administration, increase administrative and compliance costs, and are not always cost-effective in attracting investment that creates linkages with the host economy (Celani, Dressler and Wermelinger, 2022^[93]; IMF-OECD-UN-World Bank, 2015^[94]). Transparency around investment incentives is also often lacking as responsibility for their granting is usually spread among multiple agencies and stipulated in numerous pieces of legislation. If used, governments should ensure that incentives address a well-identified market failure such as information asymmetries between foreign and domestic firms, the inherent risks and uncertainty arising from engaging in innovation, or the high fixed costs of undertaking technology-intensive activities (Martin and Scott, 2000^[95]). The design, eligibility conditions, sectoral targeting and administration of incentive schemes should be also taken into consideration. Different types of incentives present advantages and disadvantages related to their financial and administrative costs, their impact on economic and social conditions, and their effectiveness in attracting productivity-enhancing FDI.

Box 2.3. Investment incentives for knowledge- and technology-intensive activities in Thailand and Rwanda

Thailand

Following the development of its investment promotion strategy in 2015, Thailand moved from a system of location-based investment incentives (economic zones) to an activity- and merit-based one, with emphasis on SME linkages, R&D investments and skills development (OECD, 2021^[53]). Thailand's investment promotion policy aims to attract investment into research and development (R&D) projects in 10 target sectors and particularly in areas that involve technologies in which Thailand is considered to have potential to enhance the country's overall competitiveness. Supported investment projects must involve a component on technology transfer by co-operating with educational and research institutions, for example via programmes of the National Science and Technology Development Agency (NSTDA) or the Thailand Institute of Scientific and Technological Research.

Activity-based incentives are granted for knowledge-based activities as well as investment projects that strengthen supply chain development. Merit-based incentives provide an add-on to the basic scheme with additional corporate income tax (CIT) exemptions and tax deductions if a project undertakes R&D or skills development activities or locates in specific regions and industrial zones. In 2017, the government amended the Investment Promotion Act to introduce an additional set of technology-based incentives that grant CIT exemption for up to 10 years to projects with targeted core technology development such as biotechnology, nanotechnology, advanced materials technology and digital technology.

Rwanda

In January 2021, Rwanda enacted a new Investment Promotion and Facilitation Law, which introduces new priority sectors and various tax incentives aimed at improving the competitiveness and productivity of the economy and make Kigali, the country's capital, a hub for innovative investors and startups (Government of Rwanda, 2021^[96]). Investments in the construction of specialised industrial and innovation parks, R&D and skills development facilities, creative arts, e-mobility and high-value horticulture figure among the new priority economic activities that will drive Rwanda's investment promotion policy in the coming decade. Foreign firms that establish a R&D facility, ICT training centre, software build and test lab, ICT specialised institution or a business incubator benefit from a 15% preferential CIT rate. The incentives apply for investments that take place in the Kigali Innovation City, a technology cluster area located in Kigali's special economic zone.

Rwanda's new investment law also exhibits a strong focus on the role that small investors and startups can play in spurring innovation and productivity growth. Small, medium and emerging investors are given access to a Seed Innovation Fund that will provide grants, loans and equity for training costs, technology acquisition, professional services and costs incurred on intellectual property rights. A 150% tax deduction also applies to expenditures relating to internationalisation activities (e.g. exports, participation in overseas trade fairs and business missions, etc.). In an effort to attract business talent, innovative foreign entrepreneurs are eligible for a two-year entrepreneurship visa to start or move their business to Rwanda, while highly skilled international students can apply for a two-year talent visa to gain access to the local labour market.

Table 2.2. Tax incentives targeting SME linkages, exports/GVC linkages, SEZs, R&D and high-tech activities in ASEAN countries

	Local sourcing, SME linkages	R&D and other strategic sectors	High-tech activities	Exports, GVC linkages	Less developed regions and SEZs
Brunei Darussalam		Deduction	Deduction		
Cambodia				Trade tax exemption	Trade tax exemption
Indonesia			Tax holiday		Deduction, trade tax exemption
Laos				Trade tax exemption	Tax holiday
Malaysia	Tax holiday, reduction	Tax holiday, reduction	Tax holiday, reduction	Trade tax exemption	Reduction
Myanmar		Deduction		Trade tax exemption	Reduction
Singapore		Deduction	Tax holiday, deduction		Trade tax exemption
Thailand	Deduction	Deduction			Tax holiday
Viet Nam		Deduction	Deduction		Tax holiday, reduction, trade tax exemption

Note: Tax holiday = total income tax exemption over defined period; reduction = income tax rate reduction over defined period; deduction = deductions of certain expenses from taxable income; tax credits = deduction of certain expenses from payable taxes (loss carried forward and accelerated depreciation also fall under this category for simplicity); trade tax exemption = exemption from import duties, export taxes or VAT. Source: OECD (2019^[71]), *OECD Investment Policy Reviews: Southeast Asia*, <http://www.oecd.org/investment/oecd-investment-policy-review-southeast-asia.htm>

For instance, cross-country differences in the generosity of R&D tax incentives can lead to differences in the cost of capital faced by firms – and subsequently encourage or discourage them from increasing their R&D investment or locating their R&D functions in a given country (González Cabral, Appelt and Hanappi, 2021^[97]; OECD, 2021^[98]). Moreover, there is growing anecdotal evidence suggesting that income-based tax incentives (e.g. tax holidays, preferential tax rates), which reduce the rate applied to profits/income already secured, tend to attract mobile activities rather than long-term FDI projects that are more likely to create linkages with the local economy and generate knowledge spillovers (OECD, 2019^[71]). Income-based tax incentives may also have limited effectiveness in attracting new investment and often come at a substantial cost to a country by resulting in windfall gains for projects that would already have taken place in the absence of the incentive. In contrast, expenditure-based tax incentives – such as tax deductions, tax credits, and accelerated depreciation – that lower the cost of specific inputs of production factors allow to link investments to performance criteria that support progress towards specific development objectives, including innovation promotion and linkages with domestic firms.

Beyond the type of incentive, more targeted approaches in terms of supported sectors and activities should be preferred (OECD, 2021^[99]). Governments could consider making the granting of direct financial support and tax relief conditional to creating linkages with domestic SMEs, undertaking R&D locally, or investing in more productive, knowledge-intensive and high-tech sectors. Recent OECD evidence from 36 developing economies shows that an increasing number of countries are adopting tax incentives that include outcome conditions associated with the SDGs (e.g. export promotion, skills development, local linkages) (Celani, Dressler and Wermelinger, 2022^[93]). The conditions and criteria for the granting of incentives should be transparent, clearly defined and rules-based to facilitate their verification, avoid discretionary and distortive granting decisions, and strengthen the link to the intended policy goal of increasing productivity gains for the domestic economy. When the provision of financial support depends

on discretionary decisions by government agencies, selection processes must be competitive and designed so as to ensure efficiency, avoid rent-seeking activities and alleviate problems of adverse selection (OECD, 2015^[91]).

Given the ever-changing nature of innovation and the fast pace of technological developments, investment incentives targeting R&D and high-tech activities should be also reviewed periodically to ensure that they continue to reflect the latest market developments and that their costs – in terms of revenue forgone and potential economic distortions – outweigh their benefits. Cost-benefit analysis prior to introducing incentives, robust monitoring frameworks, and systematic ex-post impact evaluations are crucial to ensure the continuing validity of their objectives and whether their targeting and design remain appropriate. One option to ensure periodic reviews is to make them mandatory by law or integrate them into the monitoring and evaluation framework of national investment promotion strategies.

Effective targeting may come at the cost of significant financial and administrative resource requirements. Serious policy consideration should be given to the impact that incentive schemes have on the complexity of the tax system and the capacity of the public administration to implement more targeted policy approaches. Targeted tax incentives, for example, require higher tax administration capacities and the necessary resources to monitor the compliance of beneficiaries to outcome-based criteria, carry out regular audits to avoid fraudulent behaviour, measure their costs and value-for-money and assess their overall effectiveness over time. Country contexts and institutional arrangements discussed in the previous section should be taken into account. For developing countries, where institutional capacities are lagging, a simple and unspecific incentives scheme (i.e. applying to all types of firms uniformly, targeting all types of activities, not requiring discretionary decisions by government agencies) may bring longer-term benefits to the domestic economy by creating more certainty for potential investors.

Provide financial support and technical assistance to strengthen the absorptive capacities of domestic firms, in particular SMEs

Governments can strengthen the absorptive capacity of domestic firms, in particular SMEs, not only by ensuring that the regulatory environment is conducive to business growth but also by implementing targeted measures that support the development of strategic assets and resources at the firm level (e.g. access to skills, finance, innovation and digitalisation, etc.) (OECD, 2021^[8]). Such measures often involve financial support and technical assistance in diagnosing weaknesses in business performance, experimenting with and adopting alternative business models, and undertaking innovative, technology-based activities with foreign firms. In many cases, financial and technical support is supplemented with training and guidance on the skills, managerial and organisational changes that are required to strengthen firm productivity and innovation (Table 2.3).

Supplier development programmes can play a crucial role in enhancing the absorptive capacity of local SMEs and increasing their chances of becoming partners and suppliers of foreign firms. These programmes usually assess the need for upgrading SME capabilities in various aspects of their performance – management, production, sales and commercialisation, innovation, human resources and overall productivity – and provide coaching and training in quality control, product certification and foreign market standards. As part of these programmes, government agencies organise seminars, workshops and courses (e.g. SME academies) to help domestic firms become familiar with foreign markets, enhance their export capacities and explore alternative sales strategies based on the use of ICT tools (e.g. e-commerce). To maximise the effectiveness of supplier development programmes, it is critical that their scope is aligned with the investment facilitation and aftercare services offered to foreign firms to ensure that the goods and services of domestic suppliers respond to the needs of foreign direct investors, especially in FDI-intensive sectors.

Table 2.3. Technical support to strengthen the absorptive capacities of domestic firms, in particular SMEs, in selected OECD and developing countries

Country	Policy initiative	Description
Portugal	Internationalisation Academy	Training programmes and online courses developed in partnership with Portuguese universities and business schools to help companies acquire knowledge of overseas product certification standards and processes.
	Innovation Scoring Tool	A performance assessment platform that allows companies to measure the degree of innovation of their business activities, receive a score and a set of recommended actions.
Costa Rica	Chain Acceleration Programme	Tailored support through managerial and technical training to SMEs that have a high potential to become suppliers of export-oriented companies based in Costa Rica.
	Digital Check-up Platform	Providing companies with a diagnosis of their digital maturity in 8 areas, and offering recommendations according to the level of maturity in each area.
Morocco	Mowakaba programme	Financial and technical support covering domestic companies' development strategy, financial optimisation, operational resilience, skills as well as product design and development for domestic and international markets.
	Skills Transfer Platform	Matchmaking platform comprising more than 1 000 entrepreneurship advisors and technical experts that seek to support SMEs upgrade the managerial skills of their employees.
Turkey	SME Technology Support Programme	Providing professional services (coaching, consultancy, mentoring) to enterprises through Technology Development Centres (TEKMER).
	KOBIGEL/SME Development Support Programme	Increasing SME productivity and competitiveness with the help of digital technologies, with a focus on the manufacturing sector.

Source: OECD (2022_[100]), FDI Qualities mapping: A survey of policies and institutions that can strengthen sustainable investment.

Given the increasing digitalisation of supply chain management processes, supplier development programmes should be combined with technology extension services (TES) to improve the use of “new-to-firm” innovation by SMEs (Shapira, Youtie and Kay, 2011_[101]). The main objective of these services is to facilitate the adoption of existing technology through diagnostic assessments of a firm’s operations, processes and technological maturity; information services to bring awareness of new business models and digitally enabled sale practices; benchmarking to identify areas for improvement; consulting, training and technical assistance to implement internal organisational changes.

Addressing the financing challenges of SMEs across all stages of their business cycle is also of particular importance to help them invest in technology upgrading and improve the quality of their products and services in line with the needs of foreign investors. Public support to SME financing can take a variety of forms, from loans and credit guarantees to grants, equity and quasi-equity schemes, which help SMEs invest in R&D, acquire new technologies, adopt digital tools and processes, and engage in innovation and internationalisation activities (OECD, 2019_[5]). Tax relief measures can be also provided to support subgroups of the SME population such as young high-growth firms and startups to expand their business operations and join GVCs. Many of these financial support schemes often include additional financial incentives for the development of products and services through science-to-business (S2B) and business-to-business (B2B) collaboration, including with foreign firms, reflecting the importance of networks and strategic partnerships for FDI-driven knowledge transmission.

The G20/OECD High-Level Principles on SME Financing provide guidance to G20 and OECD governments for the development of cross-cutting policy strategies on SME financing, highlighting in particular the need for a diverse range of bank-based and alternative financing instruments and the importance of safeguarding financial stability, transparency and investor protection (G20/OECD, 2015_[102]). Diversifying the finance mix of SMEs requires government action to address both demand-side barriers (i.e. insufficient market incentives for investors) and supply-side barriers (i.e. lack of financial knowledge and guarantees among SMEs). Given the challenges that many SMEs face in accessing traditional bank financing, governments should promote alternative financing instruments such as equity, venture capital and fintech solutions. Policymakers can provide incentives for collaboration between banks and other

private investors; capacity building to improve the way SME managers present their business model to potential funders; public tenders to encourage joint financing between several investors; and establishing platforms with easily accessible information on financing tools for growth-oriented SMEs.

Measures that facilitate access to qualified human capital should be also available to domestic firms to strengthen their capabilities in areas that require highly specialised expertise and skillsets such as those involving the use of innovative production processes, automation and digitalisation. Small businesses tend to offer fewer training and upskilling opportunities than large firms due to the increased financial costs of organising tailored training programmes, the lack of internal organisational capacities, and lower levels of resources to anticipate skill needs. Many OECD countries provide tax exemptions to encourage small businesses to provide on-the-job training to their employees, while others offer direct subsidies such as training vouchers that allow SMEs to purchase training hours from accredited training and educational institutions (OECD, 2021^[8]).

Managerial skill development programmes in the form of seminars, workshops and individual consulting should be part of technical support packages provided by investment promotion and enterprise development agencies. Canada's Operational Efficiency Programme, for example, strengthens operational efficiency in manufacturing SMEs by enabling participating companies to benchmark and monitor their operational performance against the industry average (OECD, 2019^[103]). Linking the development of SME workforce skills to vocational education and training (VET) frameworks can also foster greater collaboration between employers and vocational schools and help SMEs access highly skilled young employees through apprenticeship programmes. By combining school-based education and on-the-job training, apprenticeships can stimulate company productivity and profitability. Evidence from countries for which data are available show that more than half of all apprentices work in companies with 50 employees or fewer (Kergroach, 2021^[104]). Work placement, employee exchange programmes and wage subsidies for highly skilled or R&D workers should be also used to ensure that SMEs have access to high quality human capital. For instance, the Portuguese investment promotion agency, AICEP, manages the INOV Contacto programme, which gives the opportunity to highly skilled graduates to conduct a short-term internship in a Portuguese company, followed by a long-term internship in a multinational company abroad. Such programmes play a crucial role in strengthening labour mobility and facilitating the transfer of knowledge and skills to domestic firms.

Ensure access to quality infrastructure to promote productive investment that creates linkages with the domestic economy

Infrastructure is a key enabler of agglomeration and connectivity and a pre-condition for the attraction of investment that contributes to productivity and innovation (OECD, 2015^[105]). A well-functioning network infrastructure (e.g. transport and logistics, energy, ICTs) ensures secure and cost-efficient use of the host country's resources, reduces operational costs and facilitates access to local and international markets for foreign and domestic firms.

The quality of the transport infrastructure influences the decisions of foreign MNEs about where to locate their investment projects. It also allows economically weaker regions of the host country to benefit from the concentration of FDI in more urban and developed areas (OECD, 2019^[5]). By expanding commuting opportunities for workers and facilitating the integration of rural regions into the labour market of the cities located in their proximity, transport infrastructure can foster FDI spillovers through labour mobility and increase productivity gains for remote local economies. Information and communication technologies (ICT) infrastructure is also critical for promoting technology-intensive investment and attracting digital economy MNEs that can make use of the domestic IT infrastructure to set up their supply chain operations (Gestrin and Staudt, 2018^[106]). High-speed digital networks also enable small domestic firms to build digital capacity and become suppliers and partners of foreign MNEs operating in high-tech sectors. Energy infrastructure also matters for MNE operations (see chapter 5). Affordable energy supply can influence the cost of doing

business and improve energy efficiency at the firm level. The quality of the energy infrastructure also has implications for FDI location decisions. Recent commitments to green and renewable energy production mean that foreign MNEs involved in green innovation could be put off by the lack of sustainable and affordable green energy in a specific country or region.

The OECD Compendium of Policy Good Practices for Quality Infrastructure Investment provides a set of international good practices and measures relevant to policymakers and practitioners in both developed and developing economies to pursue quality infrastructure investment (OECD, 2020^[107]). In order to develop quality infrastructure that helps attract productivity-enhancing FDI, governments need to establish procedures to assess infrastructure needs, build robust policy coordination mechanisms (e.g. through dedicated administrative units, inter-ministerial task forces), promote a diverse mix of financial instruments for infrastructure investment and ensure a credible regulatory and legal environment for contract enforcement and the functioning of infrastructure partnerships (OECD, 2015^[66]). Developing comprehensive national infrastructure plans, communicating priorities and identifying infrastructure projects across sectors aligned with development objectives can make infrastructure networks attractive for private participation and increase value for money in the use of public funds for infrastructure development.

Although ensuring access to quality infrastructure is a joint challenge of all levels of government, subnational governments can play a vital role in the infrastructure landscape since they are often responsible for key policy areas such as spatial planning, local public transport networks, the energy grid, broadband and telecommunications systems (OECD, 2019^[5]). Strengthening the involvement of regional authorities and municipalities in the design and implementation of local infrastructure development plans can help ensure that infrastructure planning is linked to an assessment of regional (or local) characteristics, competitive advantages, growth and innovation potential.

Mobilising sufficient financial resources is also important. In many countries, where the government owns a range of key economic and social infrastructure assets, the public sector will be a key driver of infrastructure investment. Developing economies, however, do not often have the fiscal capacity to increase public investment significantly. Private investment can supplement public investment including through public-private partnerships (PPPs). Securing the necessary financial resources and making infrastructure networks more attractive for private involvement is possible by improving the efficiency of public service delivery, facilitating investor access to land, and establishing a more level playing field between State-owned infrastructure operators and private investors (OECD, 2015^[105]). A diverse range of financing instruments and vehicles, along with appropriate risk mitigation approaches, can broaden the investor base and reduce investment risks.

Establish intermediary organisations and specialised facilities to support business-to-business and science-to-business collaboration

The impact of FDI on productivity and innovation is also influenced by the domestic knowledge infrastructure, which may include technology transfer offices, applied research centres, collaborative laboratories, universities and other facilities that contribute to the creation and diffusion of knowledge through synergies. Knowledge co-creation, i.e. the joint production of innovation between industry, research and possibly other stakeholders of the entrepreneurial ecosystem, is increasingly acknowledged as an important mechanism to bring together complementary expertise and facilitate the transfer of tacit knowledge (Kreiling and Paunov, 2021^[108]). The establishment of facilities that provide a physical environment for foreign firms to interact, network, exchange knowledge and collaborate with domestic actors can be instrumental for the development of knowledge-intensive partnerships. Local SMEs can also gain access to technological premises, equipment, manpower and activities provided by universities and public research institutes that they could not afford independently (OECD, 2019^[5]).

Over the past decade, there has been a rapid increase of intermediary technology transfer organisations in many OECD countries (Rossi et al., 2020_[109]). These infrastructures seek to address the market failure, which exists in taking innovative ideas forward to commercial application by providing resources, competences and expertise that SMEs often lack. Their role is to provide from the earliest possible moment hands-on support in innovation processes and help SMEs undertake foresight exercises, technology development, and manage intellectual assets. Governments should ensure that particular emphasis is placed on supporting collaborative projects that involve foreign firms, domestic entrepreneurs and R&D institutions. These intermediary organisations can play the role of an innovation broker and create “communities of innovators” that undertake joint R&D and product development activities.

Furthermore, establishing and operating business incubators and accelerators in regions and sectors with high innovation potential allows entrepreneurs and early-stage startups to experiment with new business models, access frontier expertise, and technologies that they can use to further develop their innovative ideas, often in collaboration with foreign firms. Business facilities and services supporting the startup ecosystem can also further boost knowledge-intensive FDI by facilitating acquisitions of innovative startups by foreign multinationals. In fact, startup acquisitions are a common practice among MNEs that seek to maintain their position in digital economy sectors by acquiring and exploiting the technological “inventions” and valuable data and information held by young high-growth firms. In Israel, for example, the number and value of M&As and buyouts involving innovative startups has continuously grown over the past decade to reach a total value of USD 21.7 billion in 2019, as local players and multinational corporations expanded open innovation activities in a wide variety of sectors (OECD, 2020_[110]).

Implement cluster development programmes that facilitate business linkages, foster cross-sectoral interactions and take into account place-based capabilities

The development of effective network and knowledge infrastructure can foster the spatial proximity of firms, thereby generating agglomeration externalities that reduce production costs through economies of scale and network effects. Well-designed cluster development policies may encourage companies to group together for the development of joint projects, foster industry-science linkages, and enhance cross-sectoral interactions. When foreign direct investors are located in such clusters, they are likely to be more willing to collaborate with other local firms and organisations (Potter, 2001_[111]). From a policy perspective, this means that cluster policies should be aligned with FDI promotion, SME and regional development policies to increase the potential of FDI for local productivity gains. Cluster policies can achieve meaningful impacts when they integrate sectoral priorities, keep regional and local actors involved (e.g. businesses, municipalities, universities), and provide support (e.g. technical assistance, funding, capacity building) that takes into account the diversity of regional economies and FDI-SME ecosystems.

Public support can take many forms depending on the stage of development of a country (or region) and the level of maturity of the cluster itself – ranging from mature export-oriented clusters in metropolitan areas and technology-centred clusters built around R&D organisations, to smaller agglomerations in niche fields and small-scale networks in less mature ecosystems. Recent evidence from France shows that cluster policies are more effective in promoting knowledge diffusion when they are implemented in regions with a minimum degree of specialisation (N’Ghauran and Autant-Bernard, 2020_[112]). This means that other types of policy interventions may be needed in economically weaker regions before cluster policies are implemented (e.g. strengthening SME absorptive capacities or establishing basic infrastructure). Intra-regional effects should be also taken into consideration. Knowledge spillovers arising from cluster policies in one region may negatively affect innovation diffusion in other locations, in particular neighbouring regions (i.e. ‘beggar-thy-neighbour’ effects). Subnational governments can play a strong role in the design and implementation of cluster policies by pooling resources, mobilising local actors and ensuring that public action is aligned with local market characteristics.

The establishment of industrial, science and technology parks can also facilitate FDI spillovers by fostering agglomeration economies. These parks are location-specific and target both foreign and domestic firms, providing them with land or office space to set up their business activities. Apart from providing basic infrastructure, many industrial parks are often associated with the provision of other services such as incentives for entrepreneurs to grow, business diagnostic tools, and programmes involving public-private partnerships. The co-location of companies facilitates the development of networks and information sharing among firms and can be an important source of knowledge and technology spillovers. Evidence on the effectiveness of science and technology parks in attracting FDI and promoting intra-firm linkages is overall positive, at least through tacit learning and informal interactions among park tenants (Vásquez-Urriago, Barge-Gil and Modrego Rico, 2016^[113]; Cantù, 2010^[114]; Vaidyanathan, 2007^[115]). Specialised parks that apply rigorous selection criteria and target sector-specific firms in line with the sectoral make-up of the local economy have been found to be more effective in facilitating knowledge spillovers, promoting on-park relationships and spurring innovation (Kocak and Can, 2013^[116]; Lamperti, Mavilia and Castellini, 2015^[117]).

2.3.4. Facilitate knowledge and technology spillovers from FDI by eliminating information barriers and administrative hurdles

Implement effective investment promotion strategies geared towards productive and knowledge-intensive investment with strong spillover potential

IPAs are key players in promoting productive and knowledge-intensive investment. Effective investment promotion includes raising potential investors' awareness of the host country's strengths, branding the country as an attractive investment destination, and directly reaching out to potential investors to generate leads and investment projects (OECD, 2018^[70]). IPAs should review and identify specific economic activities where they see a potential to enhance productivity growth and strengthen the technological sophistication and knowledge base of the economy. On this basis, they can design investment promotion packages geared towards productivity-enhancing activities, combining a variety of investment generation tools such as intelligence gathering (e.g. raw data analysis, market studies), sector-specific events (e.g. road-shows, business fora and fairs, country missions), and pro-active investor engagement (one-to-one meetings, email/phone campaigns, enquiry handling). These activities should provide potential investors with information that allows them to identify investment opportunities with the highest potential for knowledge spillovers, including information on the host country's knowledge infrastructure and the productive capabilities of domestic firms.

Implementing prioritisation strategies aligned with the economy's industrial capabilities and innovation potential is another way through which IPAs can influence the impact of FDI on productivity and innovation. Most IPAs prioritise certain types of investments over others by selecting priority sectors, countries or investment projects, and allocating resources accordingly (OECD, 2018^[70]). Such an approach allows governments to focus on investments that have a higher probability of being realised and may bring unique benefits to the host economy. Evidence from 97 IPAs worldwide shows that the prioritisation of specific economic activities translates into higher levels of FDI in the targeted sectors (Harding and Javorcik, 2011^[118]). Recent OECD evidence from 32 OECD IPAs also shows that investment policy makers increasingly take into account sustainable development considerations when setting their prioritisation strategy, with 90% of them using productivity and innovation-related indicators to prioritise investment attraction (Sztajerowska and Volpe Martincus, 2021^[119]).

To leverage the potential of FDI for productivity, IPAs can prioritise FDI in knowledge- and technology-intensive sectors, target potential investors in countries with higher average productivity levels, or focus on specific types of foreign firms such as top R&D performers. Targets and promotion activities should be coherent with policy priorities set out in national investment promotion, innovation and SME development strategies, and reasonably reflect the country's production capacities and innovation potential. The use of

prioritisation tools such as sustainability-related KPIs, scoring mechanisms, surveys and big data analytics, can help IPAs focus their limited resources on the most valuable deals (Sztajerowska and Volpe Martincus, 2021^[119]).

Provide comprehensive investment facilitation and aftercare services to foster greater embedding of foreign firms in local economies

Investment facilitation and aftercare services can be instrumental in encouraging greater embedding of foreign affiliates in local economies and building relationships that contribute to greater use of local SME suppliers. They often involve accompanying investors in their project definition and during their establishment phase, ensuring that they identify local suppliers and clients, providing additional assistance once the project is implemented and encouraging expansions and reinvestments through aftercare. The aim of these services is to maximise the socio-economic benefits from investment.

Practically, IPAs have several options to bring down information barriers and help foreign firms identify local suppliers for future collaboration. Matchmaking services and B2B meetings allow representatives of foreign and domestic firms to meet and discuss potential local sourcing and business partnership opportunities. Many IPAs also use supplier databases to help foreign firms find information on domestically manufactured goods and domestically supplied services. Online matchmaking platforms can also serve as a single access point for B2B technology offers and requests, allowing companies to receive information on collaborative R&D projects. Measures to improve the quality of facilitation and aftercare services should therefore be at the centre of policy efforts to foster knowledge spillovers from FDI. IPAs should have sufficient resources and dedicated staff that is trained to identify the sourcing needs of foreign investors and steer FDI projects toward locations with the greatest potential for supporting supplier linkages. The development of clear objectives, a strategy and an action programme for embedding foreign investors in the local economy can help create policy momentum and mobilise public resources and relevant government actors.

Investment facilitation and aftercare services should be aligned with the priorities and objectives of supplier development programmes (see previous section) and combined with other types of support such as capacity building for local firms, training programmes for local staff, and cluster building initiatives. Evidence from OECD and developing economies shows that MNE-SME linkage programmes and other matchmaking services are often combined with policy initiatives aimed at promoting supply chain development and strengthening SME absorptive capacities. This mix of policy instruments allows aligning domestic supplier capabilities with the needs of foreign investors. It is therefore critical that governments increase the focus of investment promotion policy on FDI's potential for supply chain development by strengthening the IPA's policy footprint on issues that shape the capacities of domestic firms. This can be done either directly by integrating SME development into the mandate and mission of IPAs – as is the case with many European IPAs such as Enterprise Estonia, Business Finland, SPIRIT Slovenia – or indirectly by strengthening co-ordination and promoting joint programming between IPAs and government agencies responsible for SME and innovation policy.

MNE-SME linkage programmes and matchmaking services should be also integrated into wider regional development initiatives. Linkages between foreign and domestic firms are often location-specific and therefore depend on the availability of facilitation services at the local level. Recent findings from EU countries show that FDI responds better to the activity of IPAs operating in closer proximity to investors' operations (Crescenzi, Di Cataldo and Giua, 2019^[120]). Similarly, the availability of appropriate business development services is a local issue because SMEs and entrepreneurs generally access the services within a narrow local area. There are, however, wide cross-country disparities in the way national agencies operate at the subnational level. In some countries where inter-institutional co-ordination is limited, local presence in the form of secondary offices may be crucial to ensure the effectiveness of aftercare. In some countries, such as France and Canada, investment facilitation and aftercare services are provided by local

autonomous agencies such as local regional development agencies, who possess knowledge of the local context. In these cases, co-ordination and collaboration with subnational governments and regional development agencies is necessary to ensure an end-to-end service to foreign investors.

The organisation of networking and knowledge exchange events is a common practice among government agencies responsible for investment promotion, SME and innovation policies. Such events strengthen FDI spillovers arising from the imitation of MNE activities by local firms. The demonstration effect resulting from the improved visibility of foreign firm practices and technologies and the informal sharing of views and ideas during conferences, seminars and site visits involves significant learning opportunities for local SMEs. For instance, Enterprise Ireland, the Irish SME agency, organises Best Practice Study Visits that allow Irish firms to visit the manufacturing plants of foreign firms and get first-hand experience on their business practices and processes. Similarly in Portugal, the national SME agency, IAPMEI, implements the Open Days i4.0 initiative, which aims to present the technological capabilities of innovative companies during stakeholder events and promote the sharing of experiences between market actors operating in the same value chain (OECD, 2022^[59]). These public events include, in addition to moments of networking and information sharing, visits to the most advanced industrial plants in Portugal, presentations of innovative technologies, exhibitions of technological products and hands-on discussions between business representatives and other market stakeholders.

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Annex 2.A. Assessing the impact of FDI on productivity and innovation

Annex Table 2.A.1. Core questions to assess the impact of FDI on productivity and innovation

Dimension	Questions	Potential data sources
Structure and characteristics of the economy	What is the industrial structure and specialisation of the economy? What sectors and value chains are driving growth, productivity and innovation?	OECD STAN Database for Structural Analysis; World Bank Enterprise Surveys; OECD Analytical AMNE Database
	Is economic activity concentrated in high technology and/or knowledge-intensive sectors?	
	What is the level of GVC integration (both through backward and forward linkages)? What sectors are better integrated into GVCs?	OECD Trade in Value Added Database; World Bank Enterprise Surveys; OECD Trade in Goods and Services Indicators
	How vulnerable is the economy, including SME and FDI performance, to economic shocks?	OECD Economic Outlook; OECD FDI Statistics
FDI characteristics	What is the sectoral composition of FDI inflows? Is FDI concentrated in sectors with higher average productivity and R&D intensity levels?	OECD FDI Qualities Indicators; Refinitiv Database on cross-border M&A; Financial Times' fDi Markets Database; OECD FDI Statistics
	What type of FDI is more prevalent (e.g. greenfield investment, M&As) and what are the key investment motives of foreign MNEs (e.g. technology-exploiting, market-seeking, efficiency-seeking FDI)?	Refinitiv Database on cross-border M&A; Financial Times' fDi Markets Database (for greenfield FDI); World Bank Enterprise Surveys
	What is the contribution of foreign investors to value added, employment and exports? To what extent does FDI drive the economy's participation in GVCs?	OECD Analytical AMNE database; World Bank Enterprise Surveys
	What are the main countries of origin of FDI (e.g. higher or lower-productivity economies)?	OECD FDI Statistics
Domestic absorptive capacities	Is there a productivity (performance) gap between foreign and domestic firms? In what sectors are these gaps larger?	OECD FDI Qualities Indicators
	What are the characteristics of the SME population in terms of size, location, sector and position in GVCs?	OECD Structural and Demographic Business Statistics (SDBS)
	What is the contribution of SMEs to value added, employment and exports?	OECD Structural and Demographic Business Statistics (SDBS); OECD Trade by Enterprise Characteristics
	How do domestic firms, in particular SMEs, perform in terms of access to finance, skills, knowledge and technology? What are the main internal and external barriers that SMEs face in accessing these strategic resources?	OECD SME and Entrepreneurship Outlook; OECD Financing SMEs and Entrepreneurship Scoreboard; OECD Entrepreneurship Financing Database; OECD Skills for Jobs database; OECD ICT use by Businesses Database; OECD R&D Statistics Database; OECD Education database
	How dynamic is the startup and entrepreneurial ecosystem?	Global Entrepreneurship Report; Flash Eurobarometer on Entrepreneurship
Economic geography factors	Are there regional disparities in economic growth, labour productivity and innovation performance? What is the industrial structure and specialisation of regions?	OECD Regional Statistics
	What is the geographic distribution of FDI within the country?	Refinitiv Database on cross-border M&A; Financial Times' fDi Markets Database (greenfield FDI); World Bank Enterprise Surveys
	In what regions are productivity (performance) gaps between foreign and domestic firms more pronounced?	OECD FDI Qualities Indicators

Dimension	Questions	Potential data sources
	To what extent does SME performance varies across regions (in terms of innovation capacity, digitalisation, access to finance, skill-intensity, etc.)?	OECD Regional Statistics; EU Regional Innovation Scoreboard; EC Regional Entrepreneurship and Development Index
	Is there any evidence of market-driven industrial clustering either at the sectoral or regional level?	World Economic Forum Global Competitiveness Index
FDI transmission channels	To what extent do foreign investors source intermediate goods and services from domestic firms, in particular SMEs?	OECD Analytical AMNE database
	To what extent do domestic firms, in particular SMEs, purchase inputs from foreign investors?	OECD Analytical AMNE database
	How common are strategic partnerships between foreign investors and local SMEs (e.g. joint ventures, licensing agreements, R&D collaborations)?	World Bank Enterprise Surveys; Factset
	How common and likely is the mobility of workers from foreign investors to domestic firms? What is the wage premium of foreign investors compared to domestic firms?	OECD Job Quality Database; World Bank Enterprise Surveys; Eurostat CIS surveys
	Is there any evidence of tacit learning/imitation by domestic firms of foreign investors operating in the same sector or value chain? Does market competition hamper innovation in SMEs?	National statistics and empirical research; Eurostat CIS surveys

Annex Table 2.A.2. Core questions to assess policies that influence the impact of FDI on productivity and innovation

Dimension	Instrument	Policy questions
Governance	National strategies and plans	Are the country's strategic priorities in terms of productivity growth and innovation performance clearly defined in a national strategy or action plan?
		Does the country's investment promotion strategy articulate the government's vision on the contribution of investment to productivity and innovation? If yes, does the strategy set specific goals, identify priority policy actions and clarify responsibilities of institutions in order to maximise FDI impacts on productivity and innovation?
		Do national development or economic plans provide coherent and strategic directions on investment promotion, innovation and SME development? Are investment considerations integrated into innovation, SME and entrepreneurship strategies and vice versa?
	Oversight and co-ordination bodies	Are responsibilities across line ministries and government agencies on investment, SMEs and innovation clearly defined, balanced and mutually understood by all government actors?
		Is there horizontal strategic co-ordination between different ministries and operational co-ordination between implementing agencies involved in the design and implementation of investment promotion, innovation and SME development policies? Are co-ordination mechanisms formal (e.g. inter-ministerial councils, working groups, inter-agency committees, joint programming) or informal?
		Are the mandates and internal governance structures of co-ordinating bodies clearly defined and supported with sufficient human and financial resources?
		What is the role of subnational governments in the design and implementation of investment promotion, innovation and SME development policies? What governance frameworks and institutional arrangements are in place to ensure effective multi-level governance?
	Policy dialogue and evaluation of policy impacts	Do relevant government institutions systematically monitor and evaluate the impact of FDI, and relevant policies and programmes, on domestic productivity and innovation?
		Do relevant government institutions have the necessary analytical capacities, tools and frameworks in place to collect information on the implementation of their policy initiatives and regularly conduct comprehensive impact assessments?
		Have relevant government institutions established policy dialogue mechanisms, processes and frameworks to consult with foreign investors, local SMEs and other actors of the domestic research and innovation ecosystem?
Domestic regulation	Legal framework for investment	Are there regulatory restrictions on FDI and trade in sectors that drive labour productivity and innovation?
		What steps has the government taken to ensure that the laws and regulations dealing with investments, and their implementation and enforcement, are clear, transparent, readily accessible and do not impose unnecessary burdens?

Dimension	Instrument	Policy questions
	Competition policy	Do competition rules ensure a level playing field for foreign and domestic firms alike? Is there a robust legal framework that prohibits anti-competitive conduct by dominant companies, and that provides the necessary tools to uncover and deter such illegal practices?
	Intellectual property rights protection	Are intellectual property rights (IPR) protected by adequate laws and regulations? Is the IPR legislation effectively enforced?
	Regulatory impact assessments	How does the government ensure that laws and regulations do not impose an unnecessary burden on foreign and domestic firms' innovation activities? Are there built-in mechanisms or processes such as SME tests and regulatory impact assessments (RIAs) to periodically review these burdens?
	Regulatory incentives	Does the government grant regulatory incentives (e.g. eased licensing procedures, SEZs) to foreign investors that invest in productive and knowledge-intensive activities? If yes, are there accompanying measures and standards in place to avoid a regulatory "race to the bottom" and mitigate potential socio-economic risks?
	Labour market laws and regulations	Do labour market laws and regulations provide a level of employment stability that encourages learning in the workplace while allowing for enhanced mobility of workers from foreign to domestic firms? How do these regulations take into account other drivers of labour mobility such as the availability (or lack) of skills in the labour market and the absorptive capacities of domestic firms? What regulatory measures are in place to address skills shortages in the economy, in particular in FDI-intensive sectors and regions (e.g. tax relief on training expenses, statutory training leave, and entrepreneur visas)?
	Financial market laws and regulations	Do financial market laws and regulations facilitate access to finance for foreign and domestic firms' innovation activities, in particular by addressing financial stability risks, increasing the availability of alternative financing instruments and facilitating access to equity capital?
International agreements & standards	Innovation and SME policy provisions in IIAs	Is the country party to international investment agreements (IIAs) that include provisions on fostering international co-operation and dialogue on science, technology and innovation (STI) policy and facilitating SMEs' participation in international trade and investment?
	Provisions on IPRs, the digital economy and competition in IIAs	Is the country party to international investment agreements with provisions that strengthen domestic legal frameworks for competition, intellectual property rights protection and the digital economy?
Financial & technical support	Investment incentives	Has the government enacted investment incentive schemes targeting productive and knowledge-intensive activities or sectors where domestic absorptive capacities are strong? Are the criteria for the granting of incentives clearly defined, transparent, rules-based and subject to regular reviews?
		What types of investment incentives are provided (e.g. grants, subsidised loans, income-based tax incentives, expenditure-based tax exemptions) and what eligibility criteria or performance requirements apply (e.g. R&D, supplier linkages, skills development, size)?
	Financial support to SMEs	Do government institutions provide targeted financial support (e.g. training vouchers, R&D grants, technology-upgrading loans) to strengthen the competitiveness, productivity and innovation capacity of domestic firms, in particular SMEs? Do financial support schemes support collaborative business-to-business and science-to-business projects involving foreign firms?
	Business and supplier development services	Do government institutions provide technical assistance to domestic firms, in particular SMEs, to improve their productive capacities and help them become suppliers/partners of foreign investors, including through supplier development programmes, technology extension services, product certification, business diagnostics and advisory services?
	Training and skills development services	What measures are in place to address potential skills shortages in FDI-intensive sectors and improve foreign and domestic firms' access to innovation-related skills and capabilities in the domestic labour market (e.g. digital skills, managerial skills and management practices, workforce skills)?
	Network infrastructure	Has the government developed a coherent and comprehensive infrastructure plan, delineating its policy goals and priorities for the development of the country's network infrastructure (e.g. transport, energy, ICTs)? Has the government enacted policies to mobilise public and private investments in infrastructure?
	Knowledge infrastructure	Are knowledge transfer organisations and other facilities in place (e.g. technology centres, collaborative laboratories, business incubators, applied research centres, technology transfer offices) to provide knowledge exchange and innovation services and support FDI-SME collaboration?
	Cluster policies	What initiatives are in place to promote industrial clusters and business networks involving foreign investors, local SMEs and actors of the domestic research and innovation ecosystem (e.g. industrial parks, science and technology parks, financial support to business networks)? How does the government ensure that cluster policies are aligned with sectoral priorities and place-based capabilities?
	Investment promotion	Within the investment promotion agency (IPA), are there clear goals and targets defined to help attract productivity-enhancing and knowledge-intensive FDI? Are there sufficient staff and resources available

Dimension	Instrument	Policy questions
Information & facilitation services	activities	to achieve these goals?
		Are specific sectors, markets and investors targeted as part of the investment promotion activities? If so, what are the prioritisation criteria (e.g. R&D investors) used for the implementation of these activities?
	Investment facilitation and aftercare	Does the IPA provide comprehensive investment facilitation and aftercare services? Does the IPA have sufficient resources and dedicated staff that is trained to identify the sourcing needs of foreign investors and promote linkages with local suppliers?
		Are investment facilitation and aftercare services aligned with the priorities and sectoral scope of supplier development programmes?
	Information services, networking and knowledge exchange activities	Does the IPA provide matchmaking services between foreign and domestic firms? Is there a local suppliers database? If so, is it regularly updated and easy to access for interested firms?
		What information pertaining to the host country's innovation ecosystem and the productive capabilities of domestic firms is made readily available, or available upon request, to foreign investors? What are the main vehicles of information to foreign investors?
Does the IPA or other government agency organise networking and knowledge exchange events involving foreign and domestic firms?		

Notes

¹ Regulatory incentives are examined in the previous section as part of the regulatory framework conditions.

² Since 2007, the OECD has worked to extend the international evidence on tax incentives for R&D and innovation (<https://oe.cd/rdtax>) and has developed methodologies and data infrastructures in this area. This includes indicators on direct government support for business R&D and on expenditure-based R&D tax incentives (Appelt, Galindo-Rueda and González Cabral, 2019^[121]; González Cabral, Appelt and Hanappi, 2021^[97]). This work is now being extended to cover income-based tax incentives for R&D and innovation. The STIP Compass is a joint European Commission and OECD database that compiles qualitative information on R&D and innovation policies, covering both tax and non-tax incentives (<https://stip.oecd.org/stip/>).



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