CHAPTER

FOREIGN DIRECT INVESTMENT: LINKAGES TO TRADE, GROWTH AND SUSTAINABLE DEVELOPMENT

Over the past 25 years, the world has witnessed an unprecedented wave of globalization, including a proliferation of deeper regional trade agreements and bilateral investment treaties. The Asia-Pacific region has played a leading role in promoting regional economic integration focused on trade and foreign direct investment (FDI). While the impact of trade liberalization on development has been studied extensively, the impact of FDI is less understood.[1] Indeed, despite the significant efforts to liberalize trade and promote FDI in the Asia-Pacific region, and the visible positive economic outcomes of these efforts, there is relatively little quantitative research on the relationship between FDI, international trade and growth.

Accordingly, this chapter analyses the impact of FDI on trade and growth in Asia and the Pacific empirically. Policy considerations for attracting and enhancing the linkages between FDI and sustainable development are then presented, building on the discussion in chapter 4.

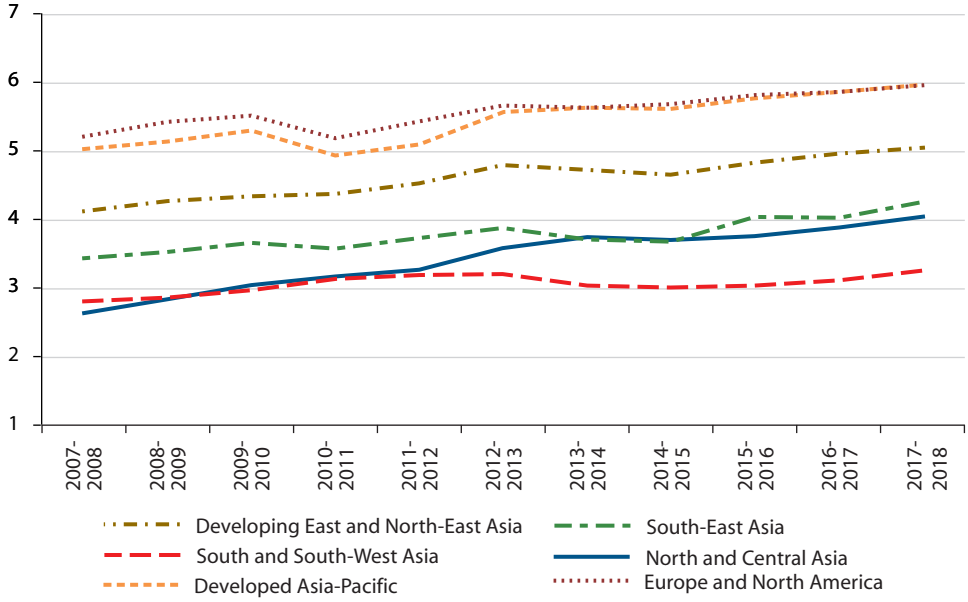
A. IMPACT OF FOREIGN DIRECT INVESTMENT ON TRADE AND GROWTH IN ASIA AND THE PACIFIC

In order to evaluate the relationship between FDI, trade and growth, the structural computable general equilibrium (CGE) model of Anderson, Larch and Yotov (2017) was employed (see annex).[2] This model provides a comprehensive and unified framework to quantify the relationship between trade, domestic investment (through physical capital accumulation) and FDI (in the form of non-rival technology capital).[3]

In the model, trade liberalization affects growth through capital accumulation. Studies show that accumulation of capital and other production factors are responsible for large increases in trade, in response to moderate trade cost reductions, such as small tariff cuts. Furthermore, the link between domestic investment and trade operates in both directions: trade affects growth by changing consumer and producer prices, which, in turn, stimulates or impedes physical capital accumulation. At the same time, domestic investment affects trade directly, through changes in economy size, and indirectly, by altering the incidence of trade costs on the consumers and on the producers through prices.

FDI is modelled as technological capital, where a country can use its technology capital not only at home but also abroad. Technology or knowledge capital refers to patents, blueprints, and management skills or practices among other things. Modelling FDI as technology capital is consistent with the fact that "[t]oday, FDI is […] about technology and know-how, [...] International patterns of production are leading to new forms of cross-border investment, in which foreign investors share their intangible assets such as know-how or brands in conjunction with local capital or tangible assets of domestic investors." (Qiang, Eschandi and Krajcoviaova, 2015). Such modelling approach is particularly appropriate for the Asia-Pacific region. Indeed, although the technological gap between many of the investing developed countries and many of the recipient Asia-Pacific economies remains wide (figure 5.1), the level of skill, infrastructure and education in the region is sufficiently high to complement the incoming knowledge capital.

Figure 5.1 **Technological readiness in Asia-Pacific, Europe and North America, 2007-2018**



Source: ESCAP calculations based on World Economic Forum, Global Competitiveness Index 2007-2008 through 2017-2018 (accessed October 2017).
Note: Technological readiness is based on the Global Competitiveness Index score, specifically the 9th pillar "Technological readiness" which measures the technological adoption and ICT usage.

The results of the empirical analysis indicate that the contributions of FDI to trade, investment and gross domestic product (GDP) growth in the Asia-Pacific region are large.[4] Specifically, FDI has increased exports of the region by 7% and physical capital accumulation by 3.1%.[5] Most importantly, FDI has contributed to enhancing aggregate welfare of the region, accounting for 7.1% of GDP per capita on average.

"FDI has helped increase both regional exports and GDP by 7%, while the physical capital accumulation attributable to FDI stood at about 3%."

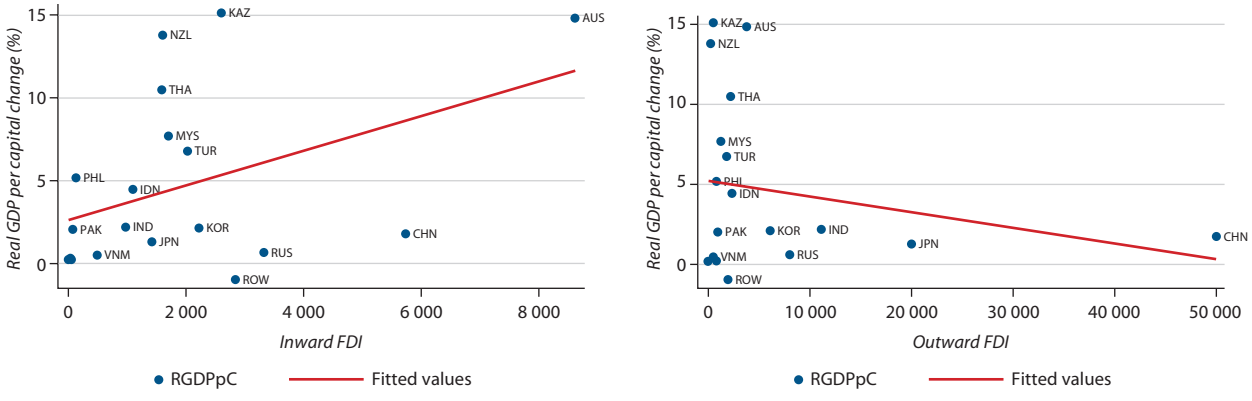
The impact of FDI on the economies of the Asia-Pacific region has been quite heterogeneous. The countries that have benefited the most from FDI are those that have the largest FDI shares in production and are engaged in investment-related treaties.[6] These include Hong Kong, China (with a 151% increase in exports, 90% increase in physical capital, and 132% increase in real GDP per capita) and Singapore (with an 80% increase in exports, 64% increase in physical capital, and 93% increase in real GDP per capita).[7] Those that have benefited the least are countries that have largely been outsiders to the intensive globalization of the last 25 years. These include, for example, Uzbekistan (with a 0.5% increase in exports, 0.1% increase in physical capital, and 0.3% increase in real GDP per capita).

"While contributions of FDI to trade, investment and growth in the Asia-Pacific region were significant, the impact of FDI has varied among economies."

Whereas growth in real GDP per capita and inward FDI are positively linked, changes in real GDP per capita and outward FDI are negatively linked: in other words, higher inward and lower outward FDI resulting from liberalization drive larger positive changes in real GDP per capita (figure 5.2). Overall, a country with higher inward than outward FDI has the potential to benefit more from FDI because the net capital and foreign technology inflow can be used for production at home.[8]

However, the effect of FDI on exports is more ambiguous. Some countries, such as Singapore, New Zealand and Kazakhstan, have seen substantial increases in their total exports due to FDI. This suggests FDI and trade may be complement, i.e. increasing FDI inflows stimulates trade. However, other countries, such as Pakistan, India and China, have had total exports fall. In these cases, FDI and trade may be substitutes rather than complements.

Figure 5.2 **Inward and outward foreign direct investment impact on GDP per capita, 2011**



Source: Larch and Yotov (2017).

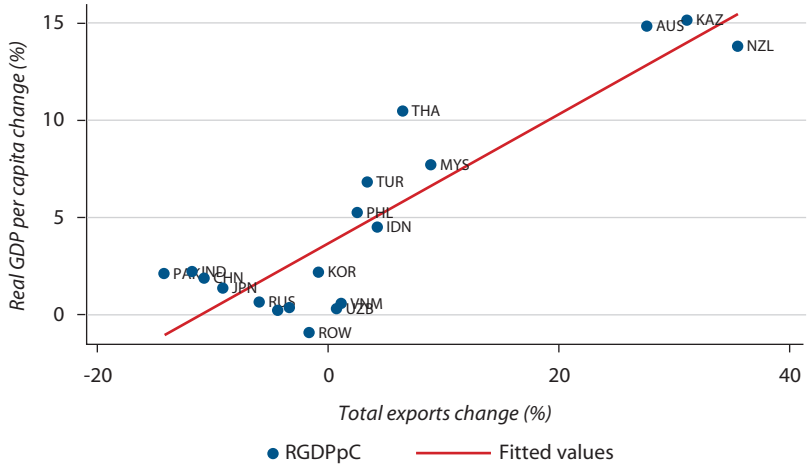
Notes: This figure does not include Hong Kong, China and Singapore.

ISO country codes in parentheses: Australia (AUS), China (CHN), India (IND), Indonesia (IDN), Iran (Islamic Republic of) (IRN), Japan (JPN), Kazakhstan (KAZ), Republic of Korea (KOR), Malaysia (MYS), New Zealand (NZL), Pakistan (PAK), Philippines (PHL), Russian Federation (RUS), Thailand (THA), Turkey (TUR) and Viet Nam (VNM).

ROW – rest of the world.

Figure 5.3

Impact of foreign direct investment on real GDP per capita and the change in total exports, 2011



Source: Larch and Yotov (2017).

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ISO country codes in parentheses: Australia (AUS), China (CHN), India (IND), Indonesia (IDN), Iran (Islamic Republic of) (IRN), Japan (JPN), Kazakhstan (KAZ), Republic of Korea (KOR), Malaysia (MYS), New Zealand (NZL), Pakistan (PAK), Philippines (PHL), Russian Federation (RUS), Thailand (THA), Turkey (TUR), Uzbekistan (UZB) and Viet Nam (VNM).

ROW – rest of the world.

"FDI and exports are complements rather than substitutes in most of the observed economies, in line with Asia-Pacific countries' participation in international production networks."

Figure 5.3 shows the relationship between the real GDP per capita change and the change in total exports induced by FDI liberalization. The figure suggests a positive relationship, i.e. FDI leads to larger trade changes and larger real GDP per capita gains. However, this applies mainly to countries with large positive trade and real GDP per capita gains. For countries with negative trade effects, the relationship is less pronounced.

Overall, the results confirm that FDI and exports are complementary rather than substitutes in most of the observed economies. Such complementarity is expected to increase as Asia-Pacific countries continue to develop and participate in regional and global production networks. FDI can provide the capital and management know-how to develop such networks, enabling trade to flourish. A more coordinated and integrated approach to trade and FDI policies will be important in that context, in particular to support sustainable development.

B. ATTRACTING AND LINKING FOREIGN DIRECT INVESTMENT TO SUSTAINABLE DEVELOPMENT

FDI is recognized as a powerful tool for promoting sustainable development. Both the 2002 Monterrey Consensus on Financing for Development and its successor, the 2015 Addis Ababa Action Agenda on Financing for Development, identified FDI as a mechanism that can facilitate sustainable development and the implementation of the Sustainable Development Goals (SDGs). However, accurately measuring the impact of FDI on sustainable development is not straightforward, as the impact of each investment may be different depending on circumstances and conditions. Generally, however, greenfield investment may be more likely to add to new production capacity and employment than FDI through mergers and acquisitions (M&A)[9]. Similarly, efficiency-seeking FDI may have more positive impact on local small and medium-sized enterprises (SMEs) than resource- or market-seeking FDI.

FDI is essentially a financial flow and hence an important source of financing for development, as mentioned in chapter 4. FDI can also be thought of

as technological capital and is a potential channel for transferring technology to developing countries (box 5.1). However, the picture of FDI's impact is more complicated when the social and environmental dimensions of sustainable development are included. While FDI is known to contribute to the "growth enhancing effect" (the economic dimension of sustainable development), its contribution to the "distribution effect" (social dimension) remains low (Fortanier and Maher, 2001). The potential for environmentally damaging effects of FDI in extractive industries or the agricultural and construction sectors in developing countries has also been noted (e.g. GIZ, 2010).

Box 5.1

Technology transfer through foreign direct investment: the experiences of Malaysia and Thailand[a]

The positive effects of FDI through technology transfer are very much linked to a host country's local technological capabilities and absorptive capacity. Establishing functioning backward and forward linkages with domestic enterprises can encourage technology transfer from transnational corporations (TNCs) to the host country. Malaysia and Thailand are good examples of successful transfer of technology through FDI.

Since the second half of the 20th century, the Government of Malaysia has encouraged foreign investment in their industries and formulated specific industrial policies to attract TNCs in ever-higher technology-intensive industries. Average annual FDI inflows has been over $10 billion since 2010, accounting for around 10% of total FDI to ASEAN (UNCTAD, 2014). A significant portion of these inflows have gone to the manufacturing sector, improving both the quantity and quality of the domestic stock of capital goods as well as the local production facilities. The successful vertical transfer of technology in Malaysia's manufacturing sector has also led to the upgrade of machinery and product lines and increased production capabilities of local workers (Lee and Tan, 2006).

FDI has also been a vehicle for strengthening research and development (R&D) and human resource development in Thailand. Since 2000, the automobile industry in Thailand has shifted towards more technology-intensive activities, including engineering (Poon and Sajarattanochote, 2010). One of the major causes of this shift was the expansion of Japanese investment in and technology transfer to Thailand (Techakanont, 2008). Between 2005 and 2012, Japan invested $3 billion, or 35% of the total FDI inflows, per year on average (UNCTAD, 2014). In addition, Japanese automotive firms, such as Toyota and Honda, have established R&D centres in Thailand and have trained engineers and technicians (Yamauchi, Paopongsakorn and Srianant, 2009). The transferred technology from Japanese firms has allowed the Thai labour force to develop capacity in various areas, ranging from assembly, operating and maintenance to quality control technology.

Despite these gains, technology transfer in Thailand has been modest compared to Malaysia and Singapore, which have implemented policies in education, skill development and local technological capacity building. In Thailand, on the contrary, science and technology policies remain rather fragmented (Poon and Sajarattanochote, 2010). Additionally, Thai supplier firms' lack of engineers and technological capabilities have prevented Thailand from catching up with other more advanced ASEAN countries (Sadoi, 2010).

[a] Adapted from ESCAP (2017).

1. General policy considerations for attracting foreign direct investment

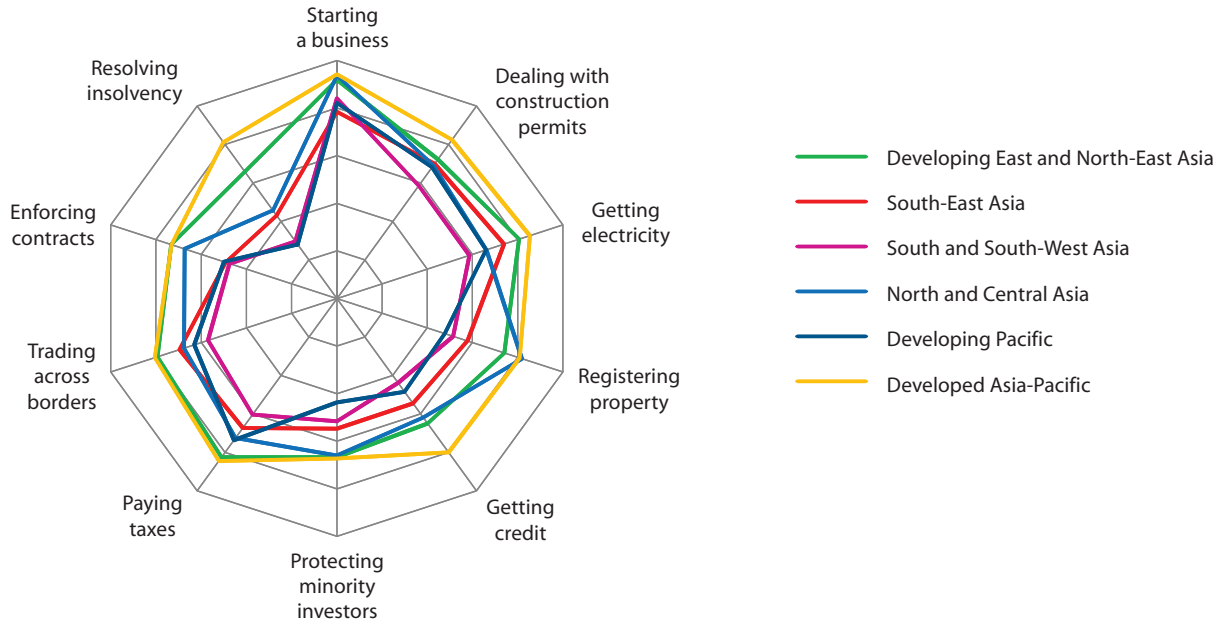
Given the potential impacts of FDI on development, a comprehensive policy framework is required that not only attracts quality FDI but also allows host countries to benefit from FDI along all three dimensions of sustainable development. Policies to attract FDI should not be formulated in isolation. Rather, they should be well integrated and mainstreamed in national development plans and strategies because FDI cuts across virtually all aspects of development. This will require the active cooperation and proper coordination of all concerned government agencies and ministries.

"Policies to attract FDI require the active cooperation and proper coordination of all concerned government agencies and ministries."

FDI policies have generally focused on the economic dimension of development. In the 1980s, such policies often consisted of economic and investment liberalization and deregulation measures. While such liberalization often improves the efficiency of the economy, various crises, including the 1997 Asian financial crisis and the 2008-2009 global financial crisis, have demonstrated the need for prudent regulation and supervision in order to improve the stability of the economy and investment environment. Moreover, foreign investors value transparent, fair, non-discriminatory and predictable rule of law that ensures property rights, among others. While many countries have adopted a national investment law, such laws may need to be complemented by laws in various other areas, resulting in a body of economic and business law that may no longer include or necessitate an investment law.

In the 1990s, the emphasis of FDI policies shifted to strengthening the domestic business and investment climate with the aim of reducing the costs of doing business (for both domestic and foreign investors). At present, this remains a serious challenge for many countries in the region. The World Bank Ease of Doing Business indicators provide insights on the quality of individual countries' investment climates (figure 5.4). Based on these indicators, 20 developing-country ESCAP members ranked in the top half, while 21 ranked in the bottom half. For example, Singapore ranked number two in the 2017 global rankings (it was number one in 2016), but Afghanistan was ranked 183 out of 190 countries. Improving the investment climate is, therefore, a priority in many countries. To a large extent, this relates to reducing bureaucracy and red tape and making it easier for businesses to start up and conduct operations. Given that much FDI is related to trade, reducing trade costs by streamlining and harmonizing customs procedures, including the adoption of single windows and paperless trade practices, is also very important.

Figure 5.4 **Ease of doing business: Asia-Pacific performance, by subregion, 2017**



Source: ESCAP calculations based on World Bank (2016).
Note: The figure is based on "distance to frontier" scores for each subregion. The scores are reflected on a scale from 0 to 100, where 0 represents the lowest performance and 100 represents the frontier.

As competition for FDI has intensified among individual countries with similar competitive advantages, so has the use of ever more generous incentives, especially tax incentives, to attract foreign investors. However, the evidence is not strong that such incentives play a crucial role in the investment location decision. They certainly cannot turn a bad investment climate into a good one and cannot compensate for the lack of more essential requirements for the success of a standard investment project. Rather than tax incentives, countries would be better served by financing more important development projects, such as the provision of infrastructure or special economic zones, that would also benefit investors.

Nonetheless, tax incentives can sometimes influence an investment decision in favour of one location that is otherwise very similar to other potential investment locations. They can also be linked to performance requirements as a quid pro quo,[10] and incentives may play a bigger role in global value chain (GVC) (i.e. export-related) FDI than in other forms of FDI (Mutti and Grubert, 2004). Some countries are also now moving to make their incentive regime more impact-oriented (box 5.2). As a general rule, incentive regimes should be transparent, time-bound, clearly linked to a specific policy objective and subject to thorough monitoring and evaluation. In the context of the 2030 Agenda for Sustainable Development, providing incentives aimed at attracting FDI in sectors

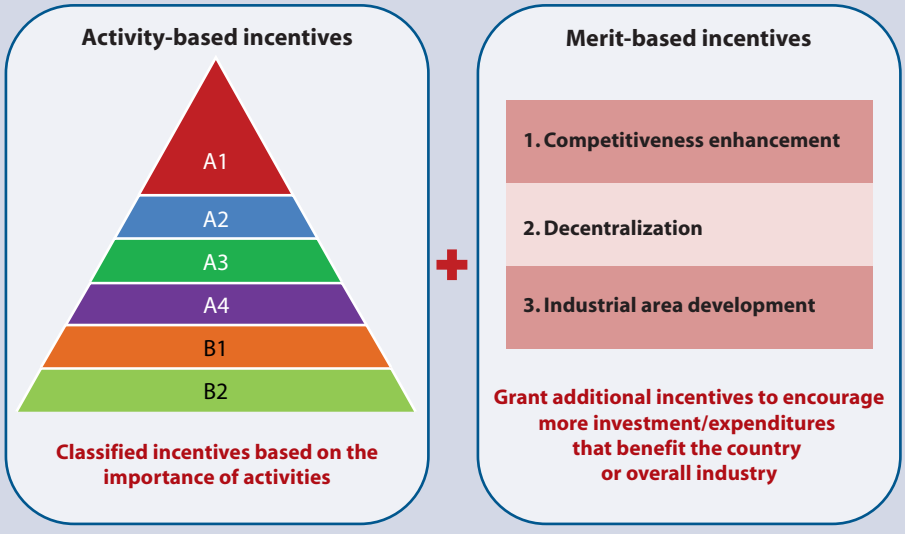
Box 5.2

Thailand's new approach to granting foreign direct investment incentives

Under Thailand's Board of Investment 7-Year Investment Promotion Policy (2015-2021), the country promotes: (a) investment that helps enhance national competitiveness by encouraging R&D, innovation, SMEs, fair competition, inclusive growth and value creation in the agricultural, industrial and services sectors; (b) activities that are environment-friendly, save energy and use alternative energy to drive balanced and sustainable growth; (c) clusters to create investment concentration in accordance with regional potential and to strengthen value chains; and (d) special economic zones to create economic connectivity with neighbouring countries and to prepare for entry into the ASEAN Economic Community (AEC).

For that purpose, the Board has shifted its incentive policy from location-based incentives ("zones") to activity and merit based incentives as illustrated in figure.

Figure: Shifting investment incentive policy in Thailand



Source: Board of Investment, Thailand.

that would contribute to more inclusive development and provide access to environmentally sound technologies should be considered.

A popular policy tool to attract FDI in an overall substandard investment climate is the establishment of special economic zones. Special economic zones can take many different forms, of which the export processing zone is probably the most popular. While they have played an important role in the expansion of global value chains, special economic zones have a varied success rate. They have been generally successful in some countries, such as China and Malaysia (box 5.3), but not in others. This is often because they are poorly designed, located in areas lacking competitive advantage and poorly managed (Foreign Investment Advisory Service, 2008). They also often have negative social and environmental impacts (UNIDO, 2015). Successful special economic zones are properly planned with due regard to social and environmental considerations, and properly designed and managed, preferably by a private operator. They should also have linkages with the rest of the economy, including domestic small and medium-sized enterprises, be demand-driven and provide top quality infrastructure. Lastly, they should conform to international legal obligations of the World Trade Organization (WTO) agreements and free trade agreements.

Investment policy needs to be complemented by proactive investment promotion, particularly to address information asymmetries. Studies by the World Bank have shown that a 10% increase in an investment promotion budget leads to a 2.5% increase in FDI, while the net present value of proactive investment promotion is almost $4 for every $1 expended.[11] The focus of investment promotion efforts depends on the level of development and investors' overall perception of a particular location.

Box 5.3

The experience of China with special economic zones[a]

In China, special economic zones (SEZ) programmes on average have increased the level of per capita FDI by 21.7% and the growth rate of FDI inflows by 6.9%. (Wang, 2013). During the 1980s-1990s, over 70% of FDI flowed to provinces with SEZs or SEZ-like zones. The zones have been extremely successful in attracting FDI, and there is a clear positive relationship between FDI inflows and SEZ expansion (McCallum, 2011).

What makes the SEZ programme in China unique is its decentralized management structure. An administrative committee, commonly selected by the local government, oversees the economic and social management of the zone. This includes approving FDI projects up to a certain limit, building and improving infrastructure, and regulating the land use on behalf of the local administration. The World Bank has described China's SEZs as a unique zone-within-zone case because large opened economic zones (the whole municipality) hosted smaller zones (state-level and province-level economic zones) within their territory.

The early example set by the SEZ in Shenzhen is exemplary. Shenzhen's objective was "learning by doing" and creating forward and backward linkages with multiple local suppliers. As of 1998, high-tech industries accounted for almost 40% of the industrial output within Shenzhen SEZ. In 2008, Shenzhen registered more patents than any other city in China, with 2,480 new patents. Between 1978 and 2014, Shenzhen's GDP per capita grew by almost 25% from RMB 606 to RMB 149,500 (around $24,000). The population at the same time grew from a mere 30,000 to a world city of more than 10 million inhabitants (UNIDO, 2015).

In spite of the success at Shenzhen, there is disagreement about the impacts of SEZs. On the positive side, Wang (2013) found that the SEZs contributed to inflows of FDI increases in total factor productivity, technology transfer and higher wages for workers in SEZs. He also found that SEZs neither crowd out nor crowd in domestic investment. However, Gopalakrishnan (2007) argues that only the Shenzhen SEZ could be considered a success. He criticizes SEZs for creating speculative markets in land use rights and real estate, labour abuse and child labour, distress migration, and crime.

[a] Adapted from ESCAP (2017).

Investment promotion, in the end, is about marketing a specific location to foreign investors. In many cases, such marketing begins with a campaign to improve the image of the location or dispel negative and often unrealistic perceptions. After investors are aware of the potential associated with a location, there is more active investment promotion. This involves investor-targeting in specific sectors from specific countries and individual companies.

Most countries have set up agencies that specifically engage in investment promotion and facilitation activities. Investment promotion is a distinct function from investment policy and requires an agency that works directly with investors. While investment promotion is often undertaken by specific ministries or departments within ministries, best practices have demonstrated that the ideal set-up is an autonomous agency with a board of directors from both the public and the private sectors that reports directly to the Head of Government or Head of State. This ensure that it has the proper authority to perform one-stop functions and undertake the necessary coordination among the many government and private sector institutions involved in effective investment promotion. Such agencies may appear under different names or under generic names such as a board of investment of foreign investment agency. In recent years, the focus of investment promotion has shifted towards investment facilitation, which includes addressing information gaps and conducting site visits for investors in the pre-establishment phase. It also provides one-stop services in the establishment phase and aftercare services in the post-establishment phase. Aftercare, in particular, has emerged as an essential service provided by investment promotion agencies for locations that already have a critical mass of investors. The rationale for aftercare is to close the gap between investment announcements and approvals on the one hand, and actual realized investment on the other.

"Investment policy needs to be complemented by proactive investment promotion and facilitation, including aftercare that addresses information asymmetries and helps retain existing investment."

Investment promotion and facilitation have assumed greater importance with increasing intraregional FDI flows. These currently account for over 50% of total FDI inflows to the region and is mostly GVC-related (Asian Development Bank, 2016). Increasingly, intraregional investment takes the form of South-South investment, such as from China and India, but it also includes the higher-income ASEAN countries, such as Malaysia, Singapore and Thailand, investing in the lower-income ASEAN countries, such as Cambodia, the Lao People's Democratic Republic and Myanmar. Another noticeable trend is that increasingly, SMEs from the region are becoming outward investors in other countries of the region. They often follow larger manufacturing TNCs from their home country as suppliers abroad, and then enter into joint ventures with domestic SMEs in the host country. These investors in particular require assistance from host country investment promotion agencies, both in terms of meeting their information needs and aftercare.

2. Enhancing the sustainability of foreign direct investment

Within the context of the 2030 Agenda for Sustainable Development, the adoption of sustainable FDI policies is increasingly important (box 5.4). Sustainable FDI policies are aimed at: (a) contributing to sustainable development by reducing inequality and poverty, enhancing local productive capacities, strengthening social resilience and solidarity and improving the environment; (b) creating synergies with wider economic development goals or industrial policies and achieving seamless integration into development strategies; (c) fostering responsible investor behaviour and responsible business conduct; and (d) ensuring the effective design and implementation of FDI within a particular institutional context.

It is important to make TNCs, FDI and business in general, part of the solution to achieve sustainable development rather than viewing them as the problem. ESCAP (2011) showed that TNCs and business in general are the producers of climate-smart goods, services and technologies and hence play an important role in climate change mitigation. SDG 17 specifically addresses the need for a global partnership which includes business. One encouraging example is the partnering of the United Nations Global Compact and KPMG on the SDG Industry Matrix project. This project showcases industry-specific examples and ideas for corporate

Box 5.4

Attracting sustainable investment: the case of the Lao People's Democratic Republic

Lao People's Democratic Republic, a landlocked least developed country and a member of the Association of Southeast Asian Nations (ASEAN), illustrates the impact of FDI on sustainable development. The country has experienced remarkable economic progress in the past 15 years – GDP per capita (in constant 2010 United States dollars) increased from $704 in 2001 to $1,538 in 2015, and FDI inflows increased from $24 million to $890 million in the same period.

Despite this progress, there are certain aspects that are less desirable. FDI flows to the Lao People's Democratic Republic have been heavily concentrated in the natural resources sector, which generates few jobs due to its capital-intensive nature. Furthermore, dependency on the natural resources sector increases the country's risk of Dutch disease and exposure to volatile international commodity prices and sector-specific shocks. Also, the boom in natural resources has resulted in increased environmental degradation and pollution (OECD, 2017).

In order to overcome these problems, the Lao People's Democratic Republic should seek to attract more sustainable investment. First, FDI in non-natural resource-based industries could provide positive technological spillovers through learning-by-doing effects and increasing returns to scale in production (World Bank, 2014). Second, expanding the private sector-led natural resource related services and construction sectors could generate technological spillovers and allow the country to benefit more fully from the natural resources sector. Government regulations and assistance will be needed to facilitate this shift to more sustainable FDI.

In this regard, the Government's eighth National Socio-Economic Development Plan for 2016-20 aims to fully incorporate the Sustainable Development Goals, diversify economically and build the country's absorptive capacity (OECD, 2017).

Source: Kim (2017).

action related to each SDG. However, governments also have a responsibility to provide an enabling environment for business to adopt, practise and implement standards and principles of responsible business conduct. In this regard, foreign investors and their home countries are increasingly required to adopt international standards of responsible business conduct. These include the OECD Guidelines for Multinational Enterprises, the applicable International Labour Organization agreements, ISO 26000 standards and principles under the United Nations Global Compact, the Global Reporting Initiative and the Guiding Principles on Business and Human Rights, to name a few.

In addition, mobilizing private investment is critical for achieving the SDGs given the enormous investment gaps. The UNCTAD World Investment Report 2014 notes that in terms of foreign sources, the cash holdings of TNCs were in the order of $5 trillion; sovereign wealth fund (SWF) assets exceeded $6 trillion; and the holdings of pension funds domiciled in developed countries alone have reached $20 trillion. Realizing the vast investment opportunities of SDGs, private companies are increasingly interested in investing in sustainable development, including through innovative financing mechanisms such as social and impact investment and sustainable stock exchanges. However, much more needs to be done to channel the available funds into viable sustainable development projects.

> *"Business is part of the solution to achieveing sustainable development, and governments have to provide an enabling environment to promote responsible business conduct."*

For this purpose, UNCTAD developed a strategic framework for private sector investment in the SDGs. It addresses three main challenges: (a) mobilizing funds for sustainable development; (b) channeling

funds to sustainable development projects; and (c) maximizing impact and mitigating drawbacks. The framework contains a detailed action plan for private sector investment in the SDGs (UNCTAD, 2014). It also includes action packages focusing on (a) a new generation of investment policies and promotion strategies; (b) innovative financing and reorientation of financial markets; (c) regional cooperation mechanisms; (d) changing the global business mindset; (e) new forms of partnerships; and (f) the reorientation of investment incentives.

To boost FDI in sustainable development, a new generation of sustainable investment policies is necessary. These policies should provide a comprehensive framework for evaluating and guiding FDI projects and government policies on both inward and outward FDI. UNCTAD followed its 2014 action plan for private sector investment in the SDGs with a more comprehensive Investment Policy Framework for Sustainable Development in 2015 (UNCTAD, 2015a). The 2015 framework contains national investment policy guidelines, international investment policy guidelines, including policy options for negotiating international investment agreements, and an action menu for promoting FDI for sustainable development. The framework features strategic initiatives to mobilize funds and channel investment towards sectors that are key for sustainable development. Essential to the framework are strengthening domestic, social and environmental laws and regulations, developing more vocal consumer groups and stronger civil society, and promoting inclusive and sustainable international investment agreements.

With regard to international investment agreements, there have been calls for international investment agreements to better balance the rights and obligations of the investor on the one hand and the host country on the other. Traditionally, these have favoured investors. Of course, the objective of investment laws and bilateral investment treaties is to protect investors and give them incentive to invest in a host country. However, in the absence of a multilateral legal framework on investment, investors have often abused treaty provisions or invoked the provisions of the most generous applicable treaty to their favour. As a result, host countries have increasingly terminated such agreements or called for their renegotiation. More recent international investment agreements are more equitable. They contain labour and environmental clauses that better balance the rights of the investor with those of the host country, while provisions on fair and equitable treatment, most-favoured nation and national treatment, and investor-State dispute settlement have also been made more precise to limit potential abuse.

"Future international investment agreements will need to better balance the rights and obligations of both the investor and the host country."

As part of its investment policy framework, UNCTAD has issued a comprehensive road map for international investment agreement reform in support of sustainable development (UNCTAD, 2015b). The road map is based on the principle that international investment agreement (IIA) regime reform should be guided by sustainable development objectives, focus on critical areas, include actions at all levels, take a systematic and sequential approach, and ensure inclusiveness and transparency. UNCTAD is currently reviewing the road map under the next phase, which aims to modernize the existing stock of "old-generation" IIAs (phase 2 of IIA reform). UNCTAD's World Investment Report 2017 also discusses 10 options to reform old-generation treaties that countries can adapt and adopt in line with their specific reform objectives. Despite these efforts, making an IIA regime consisting of thousands of agreements more coherent is a global challenge that calls for coordinated action from all stakeholders.

C. CONCLUSION

An empirical CGE analysis of the contributions of FDI to trade, investment and growth in the Asia-Pacific region suggested that they were both positive and large. Unlike FDI outflows, FDI inflows were found to be strongly and positively linked with growth. FDI inflows increased total exports, leading to larger GDP per capita gains. However, it was also found that the impact of FDI on development of Asian-Pacific economies varies greatly among individual countries and depends on each country's absorptive capacity and policy environment.

With the adoption of the SDGs, FDI impacts on and contributions to sustainable development are becoming more important. While the traditional motivation for attracting FDI has been economic, the focus is increasingly shifting to the impact of FDI on

social and environmental aspects of sustainable development. FDI can, and must, contribute to all three dimensions of sustainable development. This is not automatic, however, and a targeted approach is needed to attract FDI in priority SDG sectors and to address potential adverse social and environmental impacts from FDI. Policies, laws, regulations and institutions need to be established or reformed to guide FDI towards sustainable development and motivate TNCs to invest in the SDGs. This will require strong government and good governance.

Raising businesses' awareness of the investment opportunities in sustainable development will also be important. Increasingly, investors and businesses recognize that future profit maximization requires social and environmental sustainability. In particular, managing human and natural resources responsibly and sustainably is the key to not only future profits but also corporate sustainability. Businesses need to embed sustainability in their daily operations and management, and governments need to provide the necessary enabling environment. In the end, sustainability is about survival for all.

Endnotes

[1] This is partly due to lack of data as well as the need for theoretical foundations that reflect the changing nature of FDI over time.

[2] This section is based on Larch and Yotov (2017).

[3] This is done in this case by running a counterfactual simulation looking at the changes in trade, physical capital, and growth when the countries do not receive any FDI.

[4] Based on a data set covering 20 key ESCAP Asia-Pacific economies.

[5] In other words, the presence of FDI in Asia-Pacific countries has increased exports of the region by 7% compared to a situation where there would have been no FDI. Similarly, the presence of FDI has resulted in regional physical capital to be 3.2% higher than it would have been without it.

[6] A mapping of international investment agreements is available from http://investmentpolicyhub.unctad.org/IIA

[7] As an example, the finding of an 151% increase in exports in Hong Kong, China means that annual exports of Hong Kong, China are 151% higher than they would have been without FDI.

[8] Because the model focuses on GDP growth, it does not take into consideration the impact of FDI on gross national product (GNP). As outward FDI improves a country's national competitiveness, it could be expected to contribute to higher economic growth as measured by GNP, as GNP includes the income generated by a country's citizens abroad.

[9] This is supported by a recent study by Jude (2015), among others.

[10] Performance requirements in the form of export quotas, domestic content, skills development, employment, technology transfer, etc. are seen by some as a useful tool to make FDI work for development. However, in practice, they are often counterproductive as TNCs are not prone to invest in economies where they would be at a competitive disadvantage globally as a result of such requirements. In any case, most trade-related performance requirements are prohibited under relevant WTO agreements such as the Agreement on Trade-Related Investment Measures (TRIMS).

[11] Studies quoted in Vale Columbia Center for Sustainable International Investment (VCC) (2009): Louis T. Wells and Alvin G. Wint, "Marketing a country: promotion as a tool for attracting foreign investment," FIAS Occasional Paper No. 1 (Washington, D.C.: Foreign Investment Advisory Service, 1990) and their 2000 update "Marketing a country: promotion as a tool for attracting foreign investment," FIAS Occasional Paper No. 13 (Washington, D.C.: Foreign Investment Advisory Service, 2000).

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Annex. Structural model of trade and investment: theoretical foundations

The model of Anderson, Larch and Yotov (ALY, 2017) provides theoretical micro-foundations for the relationships between trade, domestic investment in physical capital and FDI within a tractable structural framework. In order to achieve these goals, ALY nest a standard *N*-country Armington (1969) model of trade within a dynamic model of investment, where representative households maximize the present discounted value of their lifetime utility and choose how much to invest in domestic physical capital as well as in non-rival technology capital, which can be used at home, but also in any other country in the world, thus constituting FDI. By solving the consumer's optimization problem, ALY derive the following system. It captures the interactions between trade, domestic investment and foreign direct investment in the steady state of their model:

The structural relationships among the variables in system (1) - (8) are intuitive.

$$X_{ij} = \frac{Y_i E_j}{Y}\left(\frac{t_{ij}}{\Pi_i P_j}\right)^{1-\sigma} \quad \text{for all } i \text{ and } j \tag{1}$$

$$P_j^{1-\sigma} = \sum_{i=1}^{N}\left(\frac{t_{ij}}{\Pi_i}\right)^{1-\sigma}\frac{Y_i}{Y} \quad \text{for all } j, \tag{2}$$

$$\Pi_i^{1-\sigma} = \sum_{j=1}^{N}\left(\frac{t_{ij}}{P_j}\right)^{1-\sigma}\frac{E_j}{Y} \quad \text{for all } i, \tag{3}$$

$$p_j = \frac{\left(Y_j / \sum_{j=1}^{N} Y_j\right)^{\frac{1}{1-\sigma}}}{\gamma_j \Pi_j} \quad \text{for all } j, \tag{4}$$

$$Y_j = p_j A_j \left(L_j^{1-\alpha} K_j^{\alpha}\right)^{1-\phi}\left(\prod_{i=1}^{N}\left(\max\{1, FDI_{ij}\}\right)^{\eta_i}\right)^{\phi} \quad \text{for all } j, \tag{5}$$

$$E_j = Y_j + \phi\eta_j \sum_{i\in N} Y_i - \phi Y_j \sum_{i\in N}\eta_i \quad \text{for all } j, \tag{6}$$

$$K_j = \frac{\alpha\beta\left(1-\phi\right)\left(1-\phi\sum_{i\in N}\eta_i\right)}{1-\beta+\beta\delta_K}\frac{Y_j}{P_j} \quad \text{for all } j, \tag{7}$$

$$FDI_{ji}^{value} = \frac{\beta\phi\eta_j}{1-\beta+\beta\delta_M}\omega_{ij}\frac{E_j}{P_j}\phi\eta_j\frac{Y_i}{M_j} \quad \text{for all } j. \tag{8}$$

- Equation (1) is the familiar structural gravity equation from the trade literature. Equation (1) implies that the value of exports (X_{ij}) from exporter *i* to importer *j* should be proportional to the sizes of the two countries, as measured by the value of the exporter's output (Y_j) and the value of the importer's expenditure (E_j), respectively. It should be inversely proportional to the trade frictions between the two trading partners, which are captured by a composite trade cost term. In addition to bilateral trade costs (t_{ij}), trade between two nations is also influenced by general equilibrium trade costs. These are captured by the multilateral resistance indexes of Anderson and van Wincoop (2003).
- Equations (2) and (3) define the inward multilateral resistances (P_j) and the outward multilateral resistance (Π_i) as general equilibrium trade cost indexes that consistently aggregate all bilateral trade costs for each importer and for each exporter to the country

level, and simultaneously decompose their incidence on the consumers and the producers in each country. The multilateral resistances transmit the impact of bilateral policies and shocks to trade costs throughout the trade-and-investment system (1) - (8). See Yotov and others (2016) for a detailed discussion of the multilateral resistance terms and their properties and importance in relation to GE modeling.

- Equation (4) is a restatement of the market-clearing condition. It states that at delivered prices, the total value of production in each country *j* should be equal to the total shipments of this country to each other country in the world, including *j* itself. As currently written, Equation (4) clearly captures the fact that when the producers in country *j* face lower outward resistance (Π_j) to shipping their goods, they internalize part of this and enjoy higher factory-gate prices (p_j).
- Equation (5) defines the value of production in a Cobb-Douglas functional form, where p_j is the factory-gate price, and production combines technology (A_j), labour (L_j), physical capital (K_j), and, importantly, foreign direct investment (FDI_{ij}). Here, α is the Cobb-Douglas capital share, (η_j) is the share of bilateral FDI from country *i* to country *j,* and (ϕ) is the production share of FDI. In order to be able to capture the empirically relevant case of zero bilateral FDI, ALY employ a *max*-functional form to model FDI.
- Equation (6) defines expenditure (E_j) as a function of nominal national income (Y_j) and the revenues from outward FDI and the payments to inward FDI, respectively. This equation captures the fact that the FDI payments drive a wedge between the value of domestic production and value of domestic expenditure. This also implies that the impact of FDI on national expenditure will depend on the net FDI position of the country.
- Equation (7) defines physical capital (K_j) as a function of model parameters, the value of national income (Y_j) and the inward multilateral resistance (P_j). The intuition for the inverse relationship between capital accumulation and P_j is that, from a theoretical perspective, the latter is also the price of investment and consumer goods, and therefore, it reflects both the direct and the opportunity costs of investment.
- Finally, Equation (8) describes bilateral FDI (FDI_{ij}). Several features of (8) resemble the structural gravity equation of trade. Specifically, (8) implies that bilateral FDI should be proportional to the sizes of the two countries, as measured by the values of output (Y_j) in the destination country and the values of expenditures in the source country (E_j). In addition, bilateral FDI should be inversely proportional to the bilateral FDI barriers (ω_{ij}) between them, where, in ALY's model, larger ω_{ij} is associated with smaller FDI barriers. Finally, (8) implies that FDI is inversely related to the amount of technology capital (M_j). The intuition for this result is that FDI in ALY's framework takes the form of international movements of non-rival technology capital. Therefore, the inverse relationship between FDI and M_j is a simple reflection of the law of diminishing returns to investments into technology capital.

This eight-equation system can be used to perform counterfactual experiments. For example, the impact of trade liberalization or a trade cost shock can be investigated by changing t_{ij}. Alternatively, the impact of FDI liberalization can be investigated by changing ω_{ij}. The results presented in this chapter are based on counterfactually shutting all inward and outward FDI to and from the Asian-Pacific ESCAP member States in our data set and evaluating the overall effect of FDI on trade and growth. Please refer to Larch and Yotov (2017) for more details.