

Can FDI improve the resilience of health systems?

Policy note for discussion at the second session of the 2020
Roundtable on Investment and Sustainable Development



Abstract

The aim of this policy paper is to provide a basis for discussion among investment policymakers, private sector representatives and other stakeholders on the role of private investment, and specifically FDI, in building resilient and accessible health systems. The note shows that FDI in the health sector has been steadily increasing, not only in medical goods and technologies, but also in healthcare infrastructure and services. It examines some key investment policies that affect FDI in the health sector, including entry and establishment limitations, investment promotion practices, and intellectual property protection, including extraordinary measures put in place to tackle the current health crisis. It examines the key risks and opportunities associated with FDI in the health sector and concludes that the impact of FDI in health services and infrastructure for equity, access, costs, and quality of services depends on the safeguards that are in place to ensure accessibility for all. The paper was prepared by Iris Mantovani and Martin Wermelinger of the OECD Investment Division at the Directorate for Financial and Enterprise Affairs.

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Summary and policy questions

The ongoing COVID-19 pandemic has put unprecedented strain on health systems across the globe, and brought resilience of national health systems to the forefront of international policy discussions. This note explores the extent to which private provision of healthcare goods, infrastructure and services, in particular by foreign investors, can increase this resilience without deteriorating access to healthcare. The focus is on developing countries, as their health systems often suffer from underinvestment and poor accessibility.

The key segments of the health sector – goods, infrastructure and services – are subject to different degrees of state regulation and private sector participation, with private investors, domestic and foreign, prevailing in manufacturing and distribution of medical goods and technologies, and the public sector often prevailing in health infrastructure and services.

FDI flows in the health sector have grown considerably, and continue to rise, although still a small fraction of overall FDI. While healthcare goods and technologies dominate these investments, FDI in health infrastructure and services is also on the rise, particularly in developing Asia. In some developing regions, notably in Africa, foreign mergers and acquisitions in the health sector exceed domestic deals, though their value remains low. Moreover, in some Sub-Saharan African countries, healthcare goods account for over a third of manufacturing output, and foreign firms account for a significant share of this output. In terms of impact, preliminary indicators provide evidence that in some developing regions foreign investors that manufacture pharmaceuticals and medical devices are on average more productive and innovative than their domestic counterparts, suggesting that the potential for knowledge and technology spillovers may warrant active promotion of FDI in the sector. Evidence of this is weaker in OECD countries.

The key segments of the health sector are governed by different regulatory and investment regimes. The regime for entry and establishment of foreign investors tends to be very open and non-discriminatory for health goods like pharmaceuticals and medical devices. Conversely, more FDI restrictions are in place for healthcare facilities and services, although a full analysis would require an extension of the OECD FDI Regulatory Restrictiveness Index to cover these activities.

Policies to promote FDI in healthcare include, among others, active targeting by investment promotion agencies, industry-specific investment incentives, and targeted economic zones under special regulatory regimes. In addition, numerous countries have implemented extraordinary measures to respond to the COVID-19 crisis, including alleviating administrative burdens on investors, additional fiscal incentives for producers of medical equipment, and incentives for conversion of production lines to essential medical goods needed to contain the pandemic.

Intellectual property systems are crucial for making investments in research and development of medical technologies, pharmaceuticals and vaccines financial viable for companies, and thereby attracting FDI in these research-intensive activities. A key challenge for policymakers is to establish an environment that stimulates health innovation while ensuring widespread access to new, more effective products to address unmet global health needs.

The key segments of the health sector present distinct concerns with respect to foreign control of related assets and activities. Health goods and technologies are global and their production has long been fragmented across countries and regions. The current health crisis has called into question the resilience of these global value chains to global shocks. Foreign control of healthcare infrastructure and services has historically been more heavily regulated and restricted to foreigners for national security concerns, but has been experiencing gradual liberalisation in some countries, and active promotion in others.

FDI can increase capacity for health goods and services, alleviate pressures on government finances and improve quality and choice for nationals of the host country who can afford private health services, but may also worsen inequality. By drawing away resources from public health services, FDI in healthcare can generate or aggravate a two-tier system, with high-quality care for the rich and low-quality for the poor.

The impact of FDI in health services and infrastructure for equity, access, costs, and quality of services depends on the safeguards that are in place to ensure accessibility for all. FDI promotion in the health sector should be accompanied by better regulation to raise quality standards of health facilities, and FDI should complement the public sector by expanding the range of services available and raising their standards and efficiency.

Policy questions

- What policy approaches are taken in OECD and partner countries to balance the risks and opportunities of private – and in particular foreign – investment in health goods and services?
- What are good policy approaches to ensure that FDI advances social objectives related to increased capacity, improved quality and inclusive accessibility and affordability of health services?
- How are governments reassessing their investment policies for medical goods and technologies in light of supply constraints and security concerns during the ongoing pandemic?

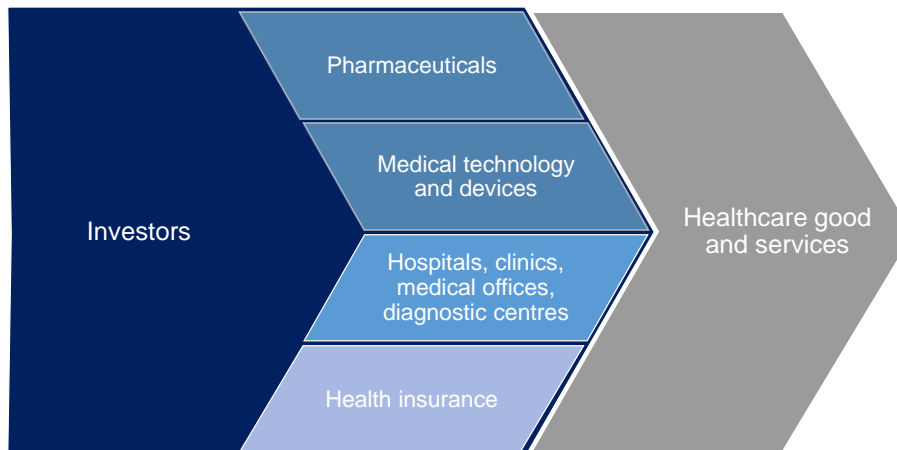
1. Context and motivation

The outbreak of COVID-19 has put unprecedented strain on health systems across the world. Easing the pressure on healthcare resources and reversing the propagation of the virus are immediate global and national policy priorities. At the same time, ensuring access to high-quality healthcare goods and services is a permanent policy objective and the foundation for sustainable development. The current health crisis has further exposed the ways in which accessibility and affordability of healthcare goods and services (e.g. diagnostics and treatment) are linked to greater preparedness and ability of health systems to cope with health emergencies.

The literature has often framed the discussion of access to healthcare in terms of population coverage, the relative contributions of public and private spending, and the share of spending covered by prepayment schemes (OECD, 2019^[1]; OECD, forthcoming^[2]; OECD, 2010^[3]). This note considers the extent to which private provision of healthcare goods and services – in particular by foreign investors – can improve resilience and accessibility of health systems, irrespective of provider payment schemes. The note focuses on developing countries, where health systems often suffer from underinvestment, and FDI can play a significant role in filling investment and financing gaps. While an exhaustive assessment of the debate on privatisation of healthcare is beyond the scope of this analysis, the note explores the main risks and opportunities associated with private investment in health-related industries, including health goods, infrastructure and service provision, and possible additional advantages or disadvantages associated with FDI in these activities.

WHO defines health systems as comprising all the resources, organisations and institutions that undertake interdependent activities aimed primarily at improving, maintaining or restoring health (WHO, 2012^[4]). In economic terms, a health system translates to an aggregation of sectors within the economic system that provides goods and services to treat patients. Private investment, including FDI, can contribute to a variety of economic activities across the different segments of the health system, with different risks, opportunities policy implications (Figure 1). The scope of industries and activities considered in the proposed note, and henceforth referred to as the health sector, is outlined in Box 1.

Figure 1. Key segments of the healthcare sector



Source: Adapted from ASEAN-UNCTAD (2019^[5]).

Box 1. Definition and scope of health sector

For the purpose of this policy note, FDI in the health sector refers to all types of foreign investment (e.g. FDI, venture capital, private equity, non-equity arrangements) and different modes of market entry (mergers and acquisitions, greenfield projects and joint ventures) in the following broad segments:

- *Healthcare goods and technology* comprise pharmaceuticals, medical technology (including biotechnology) and devices (including parts). Key investment activities related to this segment include R&D, manufacturing, and distribution.
- *Healthcare infrastructure and services* comprise the facilities and services offered by private hospitals, clinics, medical offices, medical and diagnostic laboratories, and nursing homes. Key investment activities related to this segment are construction and professional services.

The financing dimension of healthcare (e.g. public coverage, private coverage, out-of-pocket), though crucially linked to health equity, is beyond the scope of this note.

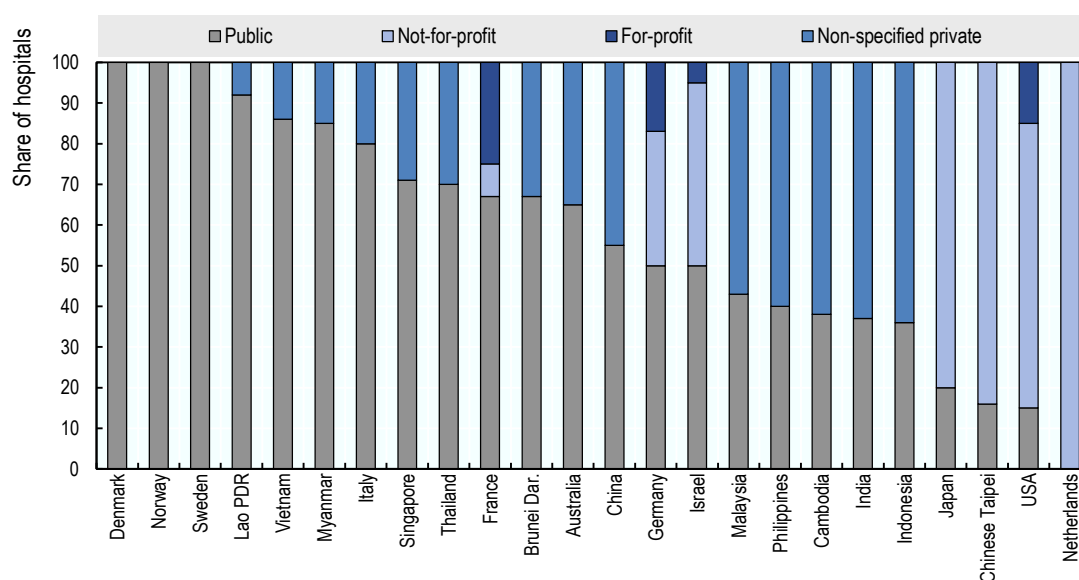
2. Investment trends in the health sector

The key segments of the health sector – goods, infrastructure and services – are subject to different degrees of state regulation and private sector participation. Private investors, domestic and foreign, tend to prevail in manufacturing and distribution of healthcare goods and technologies, although there are countries in which state-owned enterprises are important actors too (e.g. South Africa, India). In contrast, health infrastructure and service provision are in many cases heavily regulated and dominated by the public sector. Thus, before examining the role of FDI in the health sector, it is worth considering the role of the private sector, more generally, particularly in these more regulated industries.

Private sector participation in health infrastructure, measured as the share of private hospitals (in 2017), varies considerably across countries, ranging from close to zero in Nordic countries, to over 80% in Japan, the United States and the Netherlands (Figure 2). This variation is not necessarily linked to income level or stage of development, as low-income countries like Lao PDR, Viet Nam and Myanmar, closely follow the Nordic countries with under 15% private sector participation, while Cambodia, Indonesia and India are

at the other end of the spectrum with Japan and the USA. The types of private hospitals that prevail also differ across countries, with French private hospitals dominated by profit-seeking enterprises, and Japanese and Dutch private hospitals primarily not-for-profit.

Figure 2. Private provision in health infrastructure



Source: Mossialos et al. (2017^[6]) and ASEAN-UNCTAD (2019^[5]).

FDI in the health sector is on the rise

The determinants of FDI in the health sector are the same as for other sectors: geographic and cultural vicinity, governance and country risk, level of socio-economic development, and availability of quality inputs. Market-seeking motivations and strategies dominate private firms' activities in healthcare services, while efficiency-seeking firms also exploit the tradability of healthcare goods (Outreville, 2008^[7]).

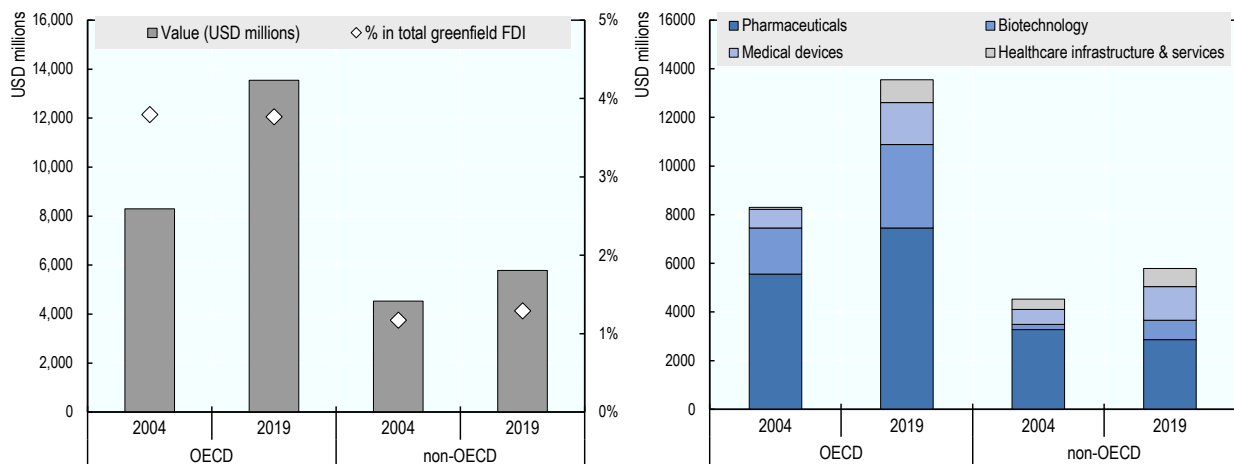
Still accounting for only a fraction of overall greenfield FDI (1-4%), cross-border investment flows in the health sector have grown considerably, across OECD and developing countries (Figure 3).¹ Within the developing world, East Asia and the Pacific attract the majority of these investments, although developing Europe, Central Asia and Sub-Saharan Africa also witnessed steady growth in the FDI flows in the sector over the last fifteen years (Figure 4). The trend has been flatter in other developing regions, and in South Asia, greenfield FDI in the health sector peaked (at around USD 16 billion) in 2011 and then gradually fell back to levels similar to the early 2000s.

Reflecting the global configuration of their value chains, healthcare goods and technologies – including pharmaceuticals, biotechnologies, and medical devices – jointly accounted for over 90% of global greenfield FDI projects in the sector in 2019. While still dominated by pharmaceuticals in absolute levels, the expansion of FDI in healthcare goods has been driven primarily by medical devices and technologies, which more than doubled over the last fifteen years. This rise has been particularly strong in developing countries, where FDI flows into pharmaceuticals instead declined slightly.

¹ The value of announced greenfield FDI projects is used as a proxy for FDI flows. As some projects never materialise, it is likely to overestimate the overall value of investments.

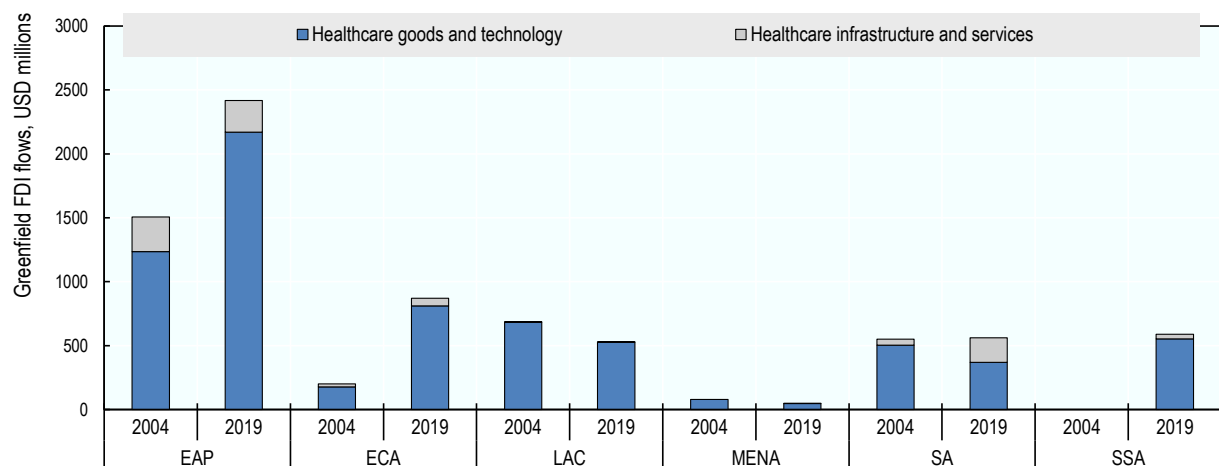
Non-tradable by nature and often more heavily regulated for essential security concerns, healthcare infrastructure and services tend to attract much less foreign investment, which was almost negligible in OECD countries in 2004. Nevertheless, FDI flows in healthcare infrastructure and services have since expanded by a factor of 12, in OECD countries, and are even more sizable as a share of overall FDI in the health sector in non-OECD countries, reaching 12% in 2019. Within the developing world, East, South and Southeast Asia account for most of the cross-border investment flows in healthcare infrastructure and services. In South Asia, in particular, healthcare infrastructure and services accounted for over a third of FDI in the health sector in 2019.

Figure 3. Greenfield FDI in the health sector



Note: The figure reflects estimated values of announced greenfield FDI projects.
Source: OECD based on FDI Markets (2020^[8]).

Figure 4. Greenfield FDI in the health sector in developing regions

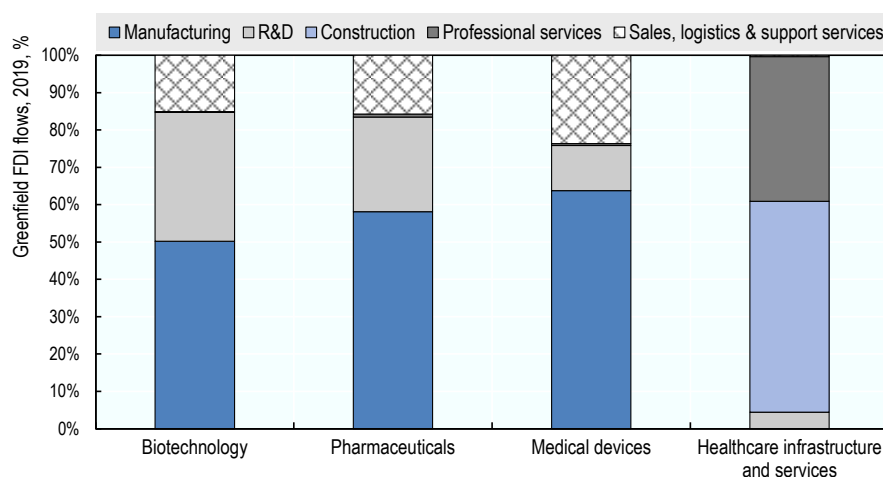


Note: Regional groups include developing countries only (based on [World Bank lending groups](#)). EAP = East Asia Pacific; ECA = Europe and Central Asia; LAC = Latin America and the Caribbean; MENA = Middle East and North Africa; SA = South Asia; SSA = Sub-Saharan Africa.
Source: OECD based on FDI Markets (2020^[8]).

Given their different intrinsic sectoral characteristics, the key segments of the healthcare value chain attract clearly distinct foreign investment activities (Figure 5). Manufacturing investments dominate healthcare

goods and technologies, followed by investments in R&D, and distribution activities. Unsurprisingly, foreign investments in healthcare infrastructure and services involve primarily construction activities and professional services (e.g. operation and management of healthcare facilities, hospital and other medical services). This distinction in economic activities is suggestive that risks and opportunities associated with private foreign participation and resulting policy concerns are also specific to each healthcare segment.

Figure 5. Greenfield FDI in the health sector by activity



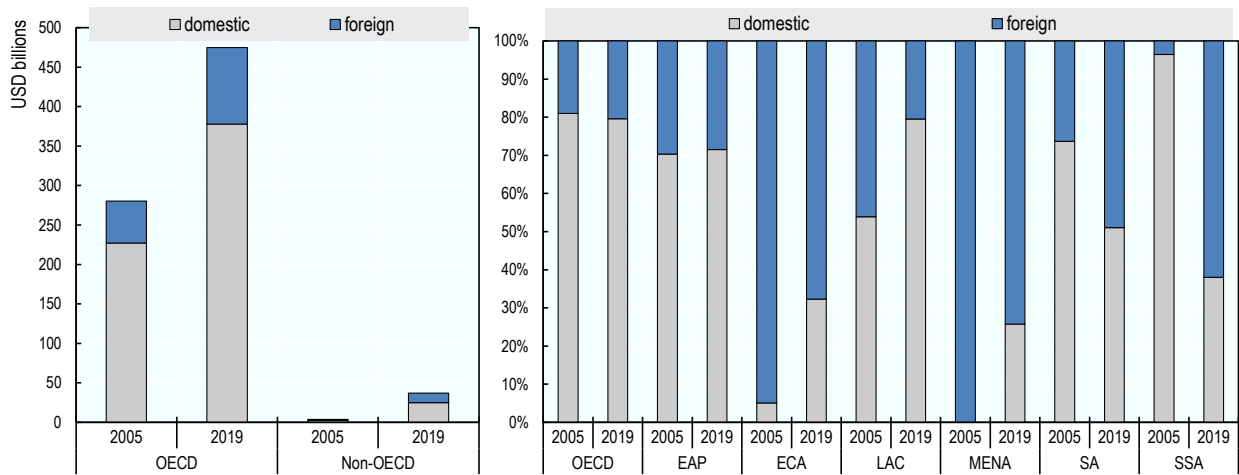
Note: The figure reflects estimated values of announced greenfield FDI projects.

Source: OECD based on FDI Markets (2020^[8]).

An examination of mergers and acquisitions (M&A) provides further insights on private sector participation in the health sector, and particularly, on the relative contributions of domestic and foreign investors. As is the case in most industries, the vast majority of M&A transactions in the health sector involve both acquiring and target companies from OECD countries (Figure 6).² While these investment flows have expanded dramatically over the past fifteen years, the share of cross-border M&A deals in the health sector has remained fairly stable, around 20%. The value of deals in the developing world remains marginal by comparison, although East Asia and the Pacific have witnessed a ten-fold expansion in investments over the last fifteen years. Across developing countries, FDI accounted for over 20% of M&A deals in the health sector in 2019, and significantly more in Middle East and North Africa (74%), developing Europe and Central Asia (68%), and Sub-Saharan Africa (62%).

² Around 50% of deal values in the health sector are undisclosed, although the proportion is higher for OECD countries (57%) than developing countries (39%), so the gap could be much larger. In any case, these figures should be taken with caution.

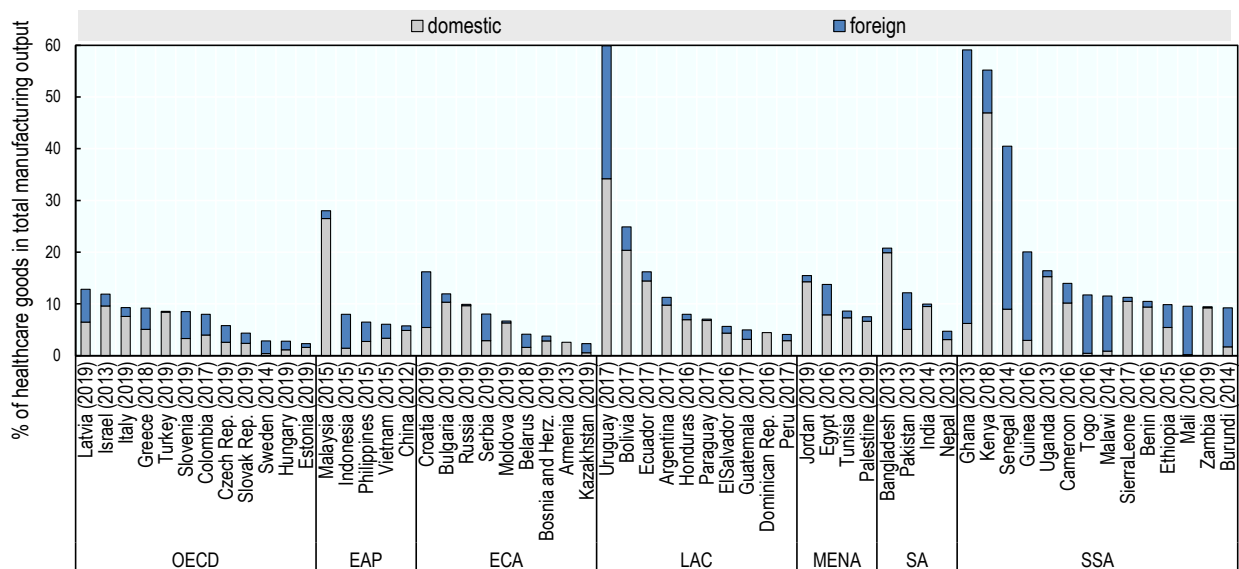
Figure 6. Domestic and foreign M&A in the health sector



Note: Regional groups include developing countries only (based on [World Bank lending groups](#)). EAP = East Asia Pacific; ECA = Europe and Central Asia; LAC = Latin America and the Caribbean; MENA = Middle East and North Africa; SA = South Asia; SSA = Sub-Saharan Africa. Source: OECD based on Refinitiv (2020^[9]).

While FDI flows in the health sector remain relatively minor both in comparison to domestic investments and relative to FDI in other sectors, in some countries, healthcare goods account for over 30% of overall manufacturing output, and foreign firms contribute significantly to the sector and manufacturing more broadly in terms of output (Figure 7). This is particularly evident in a number of Sub-Saharan African economies, where medical devices and pharmaceuticals represent a relatively large share of manufacturing output, and are in some cases dominated by foreign actors. In the more diversified OECD and developing Asian countries these industries typically constitute a much smaller share of manufacturing output, yet foreign contribution relative to domestic often remains very high.

Figure 7. Foreign and domestic activity in the healthcare goods manufacturing

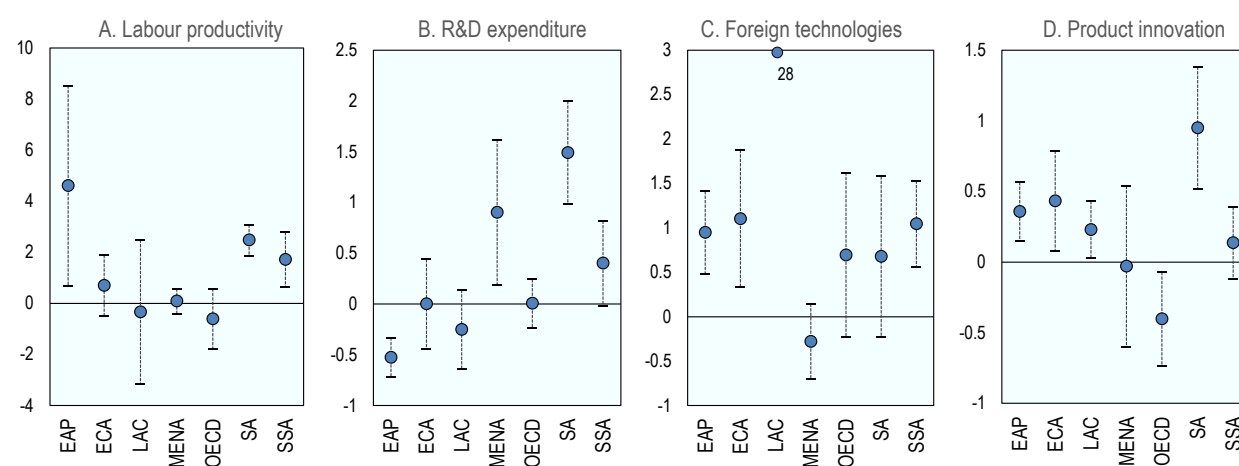


Note: Only surveys from 2012 and in which healthcare goods (defined as ISIC Rev. 3 categories 24 and 33) account for over 2% of manufacturing output are included. Firms are defined as foreign when foreign investors own at least 10% of their equity stocks. Healthcare goods include Source: OECD based on World Bank Enterprise Surveys (2020^[10]).

One of the main justifications behind policy efforts to enable and attract FDI is that, thanks to access to better technologies, knowhow and other strategic assets, foreign firms often outperform domestic firms, both in terms of economic outcomes and sustainability (OECD, 2019_[11]). From a health sector perspective, a key potential contribution of FDI is to bring medical technologies and innovations to the host country. Comparing the performance of domestic and foreign investors in healthcare manufacturing across a number of measures of innovation provides some insights on this conjecture. The resulting indicators suggests that in some developing regions – notably, South Asia and sub-Saharan Africa – relative to domestic investors, foreign investors that manufacture pharmaceuticals and medical devices are often more productive, spend more on R&D, make greater use of foreign technologies, and are more likely to introduce new products. (Figure 8). In developing Europe, Central and East Asia and the Pacific, foreign firms are also for the most part associated with better innovation performance, although spending in R&D is not necessarily greater. By contrast, in the OECD there is little statistical difference between the innovation performance of foreign and domestic private investors in healthcare manufacturing, suggesting that the justification for promoting FDI in the sector is weaker.

Figure 8. Innovation outcomes of foreign and domestic health sector manufacturers

Are foreign investors more productive / innovative than domestic investors? (yes if value > 0; no if value < 0)



Note: The figure shows regional indicators (circles) and their respective 95% confidence intervals. See OECD (2019_[11]) for methodological details. The geographic groupings include developing countries only. EAP = East Asia and Pacific; ECA = Europe and Central Asia; LAC = Latin America and the Caribbean; MENA = Middle East and North Africa; SA = South Asia; SSA = Sub-Saharan Africa.

Source: Adapted OECD FDI Qualities Indicators based on World Bank Enterprise Surveys (2020_[10]).

Lastly, in addition to traditional healthcare providers, there is some anecdotal evidence of health service provision by multinationals with core business activities that are unrelated to healthcare. For instance, OECD case studies with large textile and garments manufacturers in South Africa and Lesotho indicate that some of these multinationals offer basic health services (e.g. regular check-ups, vaccinations, etc.) to their employees as part of their corporate social responsibility strategy (Mantovani and Horj, 2018_[12]). As each of these corporations can employ thousands of workers, their contribution to reducing the financing and investment gap in basic healthcare provision can be substantial and warrants further investigation.

3. Policies affecting FDI in the health sector

The health sector spans a range of distinct industries and business activities that are governed by different regulatory and investment regimes. Across all industries, a critical factor for attracting FDI is a favourable investment climate, which, in turn, hinges on a clear and stable regulatory framework that is consistent

with global standards and practices (OECD, 2015^[13]). Without going into detail into all aspects of the investment climate, this section explores some of the most salient policy areas that affect FDI in the health sector – namely, (1) admission and national treatment of foreign investors; (2) investment promotion activities; and (3) protection of intellectual property. Naturally, the relevance of each policy area varies across the various segments of the health sector, with admission of FDI more relevant for healthcare infrastructure and services, for instance, and intellectual property and patent rules more pertinent to biomedical technologies and pharmaceuticals.

Restrictions to FDI in health infrastructure are widespread

An open and non-discriminatory investment environment helps to ensure that all investors are treated alike in like circumstances, irrespective of their ownership. One of the concepts derived from the principle of non-discrimination in the context of foreign investment is that of national treatment, which requires that governments treat foreign-owned or foreign-controlled enterprises no less favourably than domestic enterprises in like situations (OECD, 2015^[13]).

No economy accords full market access or national treatment to foreign-owned enterprises across the board. Despite FDI attraction having become an important policy tool to finance development in many economies, concerns over the loss of national sovereignty and the protection of national interests leads governments to discriminate or impose statutory restrictions on foreign direct investments. While manufacturing industries have undergone significant FDI liberalisation worldwide, over the last three decades, some services and primary sectors still remain partly off limits to foreign investors, although this varies greatly across economies.

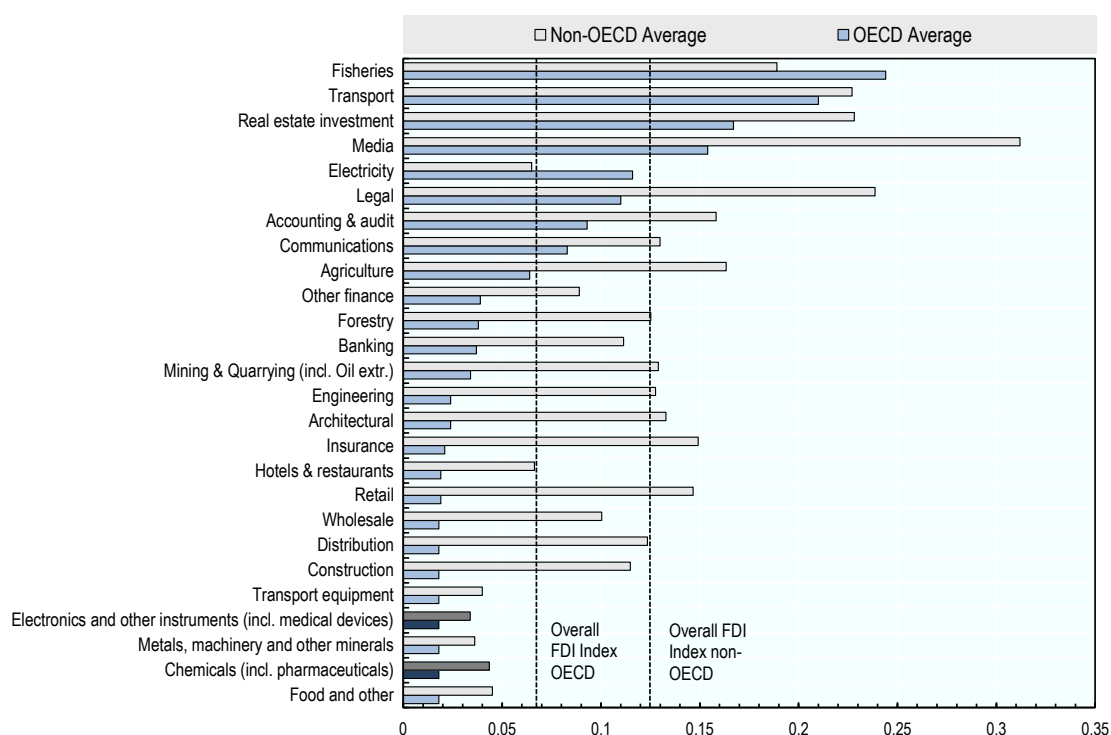
The OECD FDI Regulatory Restrictiveness Index gauges the level of restrictiveness of an economy's statutory measures on FDI (OECD, 2010^[14]).³ Presently, the Index covers 22 broad sectors including agriculture, mining, electricity, manufacturing and most services, but excludes healthcare infrastructure and services. As such, the Index can be used to assess restrictions to FDI in health-related manufacturing goods, only. Extraordinary FDI screening measures implemented, primarily in OECD countries, in response to the COVID-19 health crisis are discussed in Box 2.

A sectoral comparison of the Index suggests that healthcare goods like pharmaceuticals (included with refined oil and chemicals) and medical devices and equipment (included with electronics and instruments) are among the least discriminatory to FDI, both in OECD and developing countries (Figure 9). In fact, only half of the 70 countries covered by the index have statutory measures in place that discriminate against foreign investors in these broad health-related manufacturing industries (Figure 10). Only for two of these countries – Lao PDR and Myanmar – refined oil and chemicals (including pharmaceuticals) are more restrictive than the economy-wide average. Instruments, including medical equipment, are in all cases less discriminatory than the overall national index, suggesting that statutory entry and establishment regimes tends to favour FDI in these industries. This is in line with the widely accepted benefits of FDI in research- and technology-intensive manufacturing industries for the host economy.

³ The Index covers four main types of restrictions: (1) foreign equity limitations; (2) discriminatory screening and approval mechanisms for foreign investments; (3) nationality restrictions on the employment of key personnel; and (4) other operational restrictions, for instance, on branching, land ownership, and capital repatriation. It does not cover restrictions related to national security interests, state ownership and monopolies (to the extent that they are not discriminatory toward foreigners), or preferential treatment accorded in special economic zones.

Figure 9. FDI restrictions by sector

OECD FDI Regulatory Restrictiveness Index 2018, 0=open; 1=closed

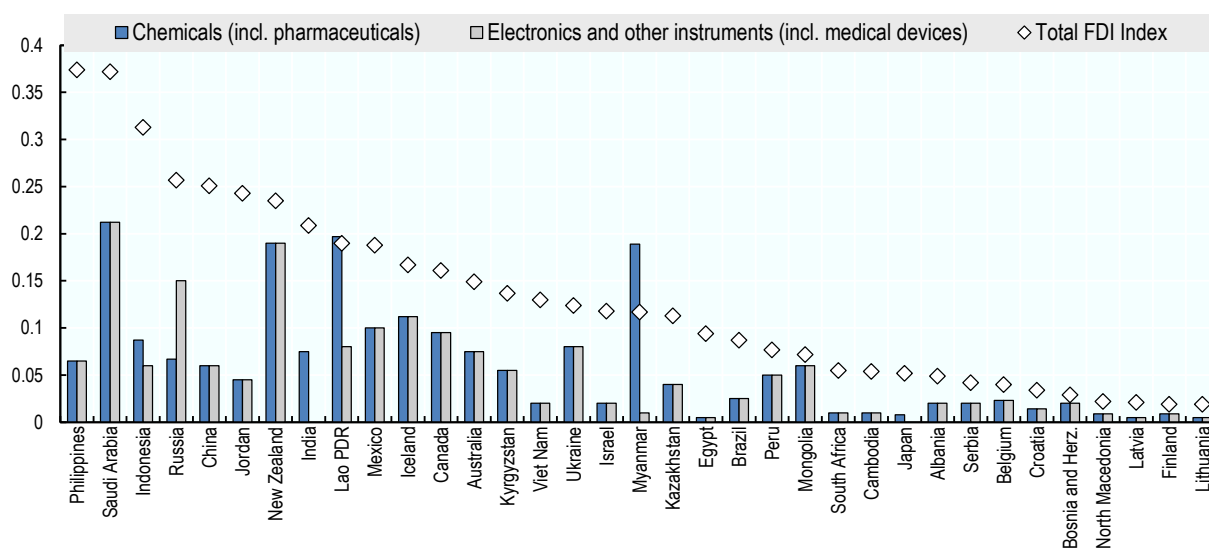


Note: Data reflect regulatory restrictions in 70 countries as of end-December 2018.

Source: OECD (2018_[15]).

Figure 10. FDI restrictions by country

OECD FDI Regulatory Restrictiveness Index 2018, 0=open 1=closed



Note: Data reflect regulatory restrictions as of end-December 2018. Only countries in which restrictions are present in the two available health-related manufacturing sectors are included in the figure.

Source: OECD (2018_[15]).

Box 2. FDI screening in the time of COVID-19

Investment screening mechanisms are rules that allow governments to scrutinise individual investment proposals for their potential impact on essential security interests. The use of these mechanisms to prevent potential acquisitions of sensitive assets has been in expansion since 2016 – before and independent of the current pandemic.

Adjustments to investment screening mechanisms, in some countries, can be directly attributed to COVID-19. These include reforms that broaden the scope of screening mechanisms to assets that are crucial for the pandemic response – namely, the health sector and associated supply chains. Having been spared epidemics in recent decades, advanced economies have not experienced supply chain vulnerabilities in health-related industries, so these assets were often not included in lists of FDI screening mechanisms related to national security issues. The experience of unforeseen shortages in this sector led governments to swiftly remedy this omission. Several countries have either added these assets to lists on sectors in which investment screening applies or moved to apply tighter procedural rules that countries apply to investments in particularly sensitive sectors.

Some countries' investment screening mechanisms apply economy-wide and do not distinguish between sectors for their application. This explains why those countries did not review their screening mechanism to include health-related industries were within their scope. The following table provides an overview of measures that selected countries have taken – or did not need to take – to ensure that their FDI screening mechanisms apply to the health sector.

Policy measures in selected OECD countries to ensure health-related industries are under the scope of FDI screening mechanisms

Policy measures	Countries
Health-related industry added to sector list	France (B), Italy (B/I), Austria* (B/I)
Reclassification of health-related sector under stricter regime	Germany, Spain (B/I), Japan* (certain B companies)
Entirely new mechanism that covers health-related industries introduced	Czech Republic* (B/I), Hungary (B/I), Slovenia (B/I), Poland (B/I)
Sector-list had contained health-related industries prior to the pandemic	Austria (I), France (I), Hungary (I), Korea (B), Latvia (I)
FDI screening does not use sectors as criterion	Australia, Canada, Finland, Germany, Iceland, New Zealand, USA

Note: B = biotechnologies; I = critical health infrastructure. Lists include OECD countries and are up to date as of 12 June 2020. Only changes that official statements or the legislation itself associate with the COVID-19 pandemic are included. "*" indicates legislation or rules not yet into effect on 12 June 2020.

Source: <http://www.oecd.org/coronavirus/policy-responses/investment-screening-in-times-of-covid-19-and-beyond-aa60af47/>.

Although the FDI Index does not cover the industries that one would expect to be more discriminatory toward FDI – i.e. healthcare infrastructure and services – a closer look at equity thresholds for foreign investments in the health sector in selected Southeast Asian economies provides some evidence in support of this presumption (Table 1). While 100% foreign equity is permitted in manufacturing and distribution of healthcare goods in most ASEAN countries, only Singapore, Brunei Darussalam and Cambodia allow 100% equity in healthcare facilities. Typically, joint ventures with domestic investors are required for larger facilities (e.g. 200 or more beds), while no foreign equity is permitted in smaller private hospitals and clinics. Extending the FDI index to cover healthcare infrastructure and services is one avenue for further research to better understand the role of FDI in building resilient health systems.

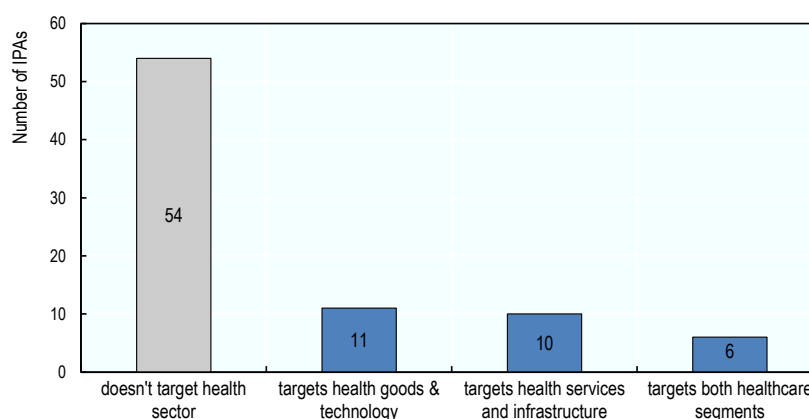
Table 1. Equity threshold for foreign investments in health sector

Country	Manufacturing of medical devices and pharmaceuticals	Distribution of medical devices and pharmaceuticals	Healthcare facilities
Brunei Darussalam	100%	100%	100%
Cambodia	100%	100%	100%
Indonesia	100%	100%	Hospitals (200+ beds) <100% Small hospitals and clinics 0%
Lao PDR	50-100%	50-100%	Private hospitals (100+ beds) <100%; Small hospitals and clinics 0%
Malaysia	100%	100%	private hospitals (100+ beds) 30%; Small hospitals and clinics 0%
Myanmar	70%	<100% (JV)	Hospitals and clinics 70%; Nursing homes and research labs 0%
Philippines	100% (provided >50% exported)	100%	40%
Singapore	100%	100%	100%
Thailand	<100%	<50%	Hospitals and clinics <50%; Digital healthcare 0%
Viet Nam	100%	0%	0%

Source: OECD elaboration based on (2019_[5]).

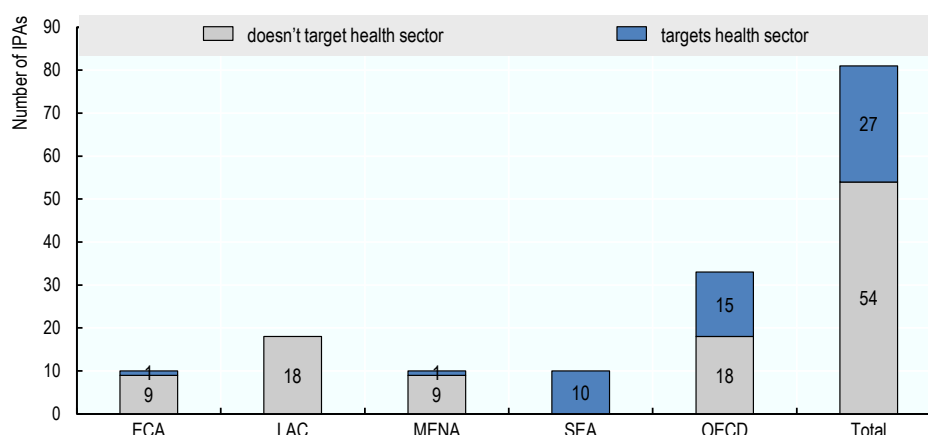
IPAs target investments in the health sector

Among the core functions of investment promotion agencies (IPAs) is that of generating investments, including by targeting specific sectors, markets, projects, activities and investors, in line with national priorities. Over 70 IPAs across the globe participated in a survey developed by the OECD and the Inter-American Development Bank (IDB), gathering detailed information on the governance, mandates and activities of IPAs, over 2017 to 2019 (OECD, 2018_[16]). Almost a third of surveyed IPAs prioritise investments in the health sector, among other sectors (Figure 11). Most of these IPAs are in OECD countries, while among developing countries only Southeast Asia stands out as a region in which FDI in health is actively promoted (Figure 12). OECD IPAs tend to prioritise life sciences and medical devices, while non-OECD IPAs also prioritise healthcare infrastructure and services, suggesting that there may be a particular role in these countries for FDI to help finance and develop critical health infrastructure and related services. At present, no information is available for Sub-Saharan Africa, where health infrastructure is in many cases insufficient. Extending the IPA survey to Sub-Saharan African countries may help inform on their positioning with respect to attracting FDI in the health sector.

Figure 11. IPAs tend to target both healthcare goods and services

Source: OECD based on OECD-IDB survey of Investment Promotion Agencies (2019_[17]) and ASEAN-UNCTAD (2019_[5]).

Figure 12. Almost half of OECD IPAs target the health sector



Note: MENA includes Southern Mediterranean countries only. SEA includes ASEAN members only.

Source: OECD based on OECD-IDB Survey of Investment Promotion Agencies (2019^[17]) ASEAN-UNCTAD (2019^[5]).

Governments and their IPAs employ a variety of tools to influence the size, location or industry of an investment project, including targeted events and promotional activities, targeted fiscal and non-fiscal incentives, and by establishing designated zones for targeted investors, subject to a special regulatory and tax regime. Investment tax incentives are particularly common as they are simpler and more immediate to provide than to correct deficiencies in infrastructure and labour skills, and often politically easier to deliver than other types of advantages.

As all ten ASEAN members prioritise private investments in the health sector, and private participation in healthcare provision is relatively high in several of these countries (Figure 12), it is worth taking a closer look at the measures they have implemented to promote FDI in the sector (Table 2). All countries with the exception of Lao PDR, host an international trade fair to showcase their pharmaceutical and medical devices capabilities or those of supporting industries. Half of the countries in the region offer special fiscal advantages to investments in the health sector, in the form of extended corporate income tax (CIT) holiday or exemption from import fees on machinery and inputs used to produce health goods. Other fiscal incentives include deductions on transport, utilities and construction expenses. Non-fiscal advantages offered in Thailand include access to the Smart Visa programme for high-skilled experts, investors, and employees of foreign start-ups in high-tech medical devices.

Four countries in the region have designated special economic zones (SEZs) to promote FDI in health-related activities. For the most part, these zones are essentially medical tourism parks, offering high quality medical services and facilities to foreigners. However, in Singapore, one of the leading medical tourism destinations in the world, these zones prioritise biomedical research, while in Thailand, the zones prioritise manufacturing of medical devices and pharmaceuticals. Equity restrictions are also relaxed in medical tourism zones, often allowing 100% foreign ownership of facilities and practices. Although policies to promote medical tourism hubs have been effective in developing capabilities in the health sector, there are potential drawbacks that must be taken into consideration, including drawing medical resources away from local patients, and potentially, worsening inequality with respect to access to health services, discussed at greater length in the next section.

In addition to long-term policies to attract FDI in the health sector as a means of developing health systems, numerous countries have implemented extraordinary measures to accelerate FDI in the health sector in response to the COVID-19 crisis. Among Southeast Asian economies, these measures include accelerated investment approvals and licensing, extensions on CIT holidays, and waivers of import duties on machinery and equipment to re-orient production lines to essential medical goods needed to contain the pandemic.

Table 2. Policies in support of FDI in health sector in ASEAN

Country	Investment promotion activities	Investment incentives	SEZs	COVID-19 response measures
Brunei Dar.	<ul style="list-style-type: none"> Brunei International Medical Expo (BIME) 			
Cambodia	<ul style="list-style-type: none"> Cambodia Phar Med Expo 			
Indonesia	<ul style="list-style-type: none"> Indonesia Hospital Expo 			<ul style="list-style-type: none"> Accelerated licensing for medical equipment providers (1 day)
Lao PDR		<ul style="list-style-type: none"> Extended CIT holiday on qualifying investments 		
Malaysia	<ul style="list-style-type: none"> Malaysia Medical Device Expo (MyMEDEX) 	<ul style="list-style-type: none"> Double deduction on expenses for obtaining recognised accreditation (hospital operations) 	<ul style="list-style-type: none"> Iskandar Development Region (established in 2006) offers additional incentives to 6 sectors including healthcare 	
Myanmar	<ul style="list-style-type: none"> MEDEX – Myanmar’s Medical and Pharmaceuticals equipment and Supplies Show 	<ul style="list-style-type: none"> CIT holiday (3-7 years) for hospitals, clinics and medical labs Import licence fee exemption on 67 pharmaceutical raw materials 		<ul style="list-style-type: none"> Accelerated investment approvals (health infrastructure, services and medical equipment) Prioritisation of pharmaceuticals and health service investors
Philippines	<ul style="list-style-type: none"> Medical Philippines Expo 		<ul style="list-style-type: none"> Ecozones: special PEZA-registered medical tourism zones allow 100% equity across health sector; 3 approved as of Dec. 2018 	
Singapore	<ul style="list-style-type: none"> Medical Fair Asia 		<ul style="list-style-type: none"> Dedicated parks and hubs that target life sciences and biomedical R&D 	<ul style="list-style-type: none"> Freely available medical devices standards
Thailand	<ul style="list-style-type: none"> Medical Fair Thailand Smart Visa programme for high-skilled experts and investors in high-tech medical devices 	<ul style="list-style-type: none"> CIT holiday (3-8 years) Exemption/reduction of import duties on machinery and materials used for exports or R&D; Double deduction on transport and utility expenses 25% deduction on construction expenses 	<ul style="list-style-type: none"> Eastern Economic Corridor: medical devices and pharmaceuticals manufacturers eligible for financial assistance with research and additional tax waivers 	<ul style="list-style-type: none"> Extension of CIT holiday on production of inputs for medical devices (5 years) and pharma. (8 years) 50% reduced CIT rate (additional 3 years) to qualifying investments Import duty exemption on machinery to re-orient production lines
Viet Nam	<ul style="list-style-type: none"> Vietnam Medi-Pharm Expo 	<ul style="list-style-type: none"> CIT holiday Import duty exemption Land use tax exemption 		

Note: CIT = corporate income tax.

Source: OECD elaboration based on ASEAN-UNCTAD (2019^[5]); OECD (forthcoming^[18]); OECD (forthcoming^[19]); OECD (forthcoming^[20]); PR Newswire (2020^[21]).

Multilateral agreements seek to balance IP protection against public health interests

Intellectual property (IP) systems provide limited rights to exclude certain defined third-party use of protected material, with the intention of strengthening incentives for the private-sector to invest resources in product development and the marketing of new technologies. Such incentives are considered especially valuable for the development of medical technologies due to the considerable financial and technical resources required, coupled with the high risk of failure even at a late stage in product development. Many medical technologies are expensive to develop but are relatively cheap to reproduce (WTO-WIPO-WHO, 2013^[22]). As such, it would be unsustainable for companies to invest in product development and regulatory

approval if their competitors were in a position to immediately replicate their products. The challenge for policymakers is to establish an environment that stimulates health innovation while ensuring widespread access to new, more effective products to address unmet global health needs. While an in-depth analysis of the national and international frameworks designed to strike this balance is beyond the scope of this note, some important achievements of multilateral agreements and remaining challenges are noted below.

The 1995 Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS) brought about significant changes to the standards of IP protection by requiring member nations of the World Trade Organization (WTO) to provide patent protection in all fields of technology for a minimum period of 20 years. Developing countries that did not recognise product patents in certain areas of technology, such as pharmaceuticals, had to amend their laws to become TRIPS-compliant. While the TRIPS Agreement allows Members to implement a number of flexibilities (e.g. compulsory licences, parallel imports, exceptions to patent rights, etc.) as a means to balance patent rights with public health needs, in practice, the right to make use of these flexibilities by developing countries was consistently challenged by multinational pharmaceutical companies and governments of developed countries.

The Doha Declaration on the TRIPS Agreement and Public Health, adopted in 2001, reaffirmed the right of WTO Members to use the TRIPS flexibilities to the fullest extent possible for the purpose of protecting public health and promoting access to medicines. The Declaration recognises the right of each Member to determine what constitutes a national emergency or a situation of extreme urgency. In such a situation, a member country is entitled to grant compulsory licenses to manufacture patent-protected products without prior negotiations with the patent owner. Such measures can be maintained as long as the situation of emergency or extreme urgency persists, and in the event of a dispute, the burden of proof is on the complainant. The Declaration further establishes a system of compulsory licenses for the purposes of exporting generic medicines to countries with insufficient pharmaceutical manufacturing capacity.

The Declaration is a landmark achievement for clarifying the relationship between IP rights and public health, and an important example of compromise between developed and developing country interests. Yet, lack of appropriate national legislation in developing countries for fully implementing the TRIPS flexibilities, as well as a continued push by developed countries for standards of IP protection that go beyond those of TRIPS in exchange for other concessions, have been key challenges for effective implementation of the Doha Declaration (South Centre, 2011^[23]).

Beyond TRIPS, governments are increasingly using trade and investment agreements as a means to address the interaction between public health interests and IP rights, as well as to improve their domestic IP frameworks in a broad range of areas. EU association agreements with partner countries such as Georgia and Ukraine, for example, include commitments by which these partners have undertaken to improve various aspects of their IP regimes as part of Deep and Comprehensive Free Trade Agreements (DCFTAs) with the European Union. In Georgia, commitments in the EU-Georgia DCFTA prompted a suite of amendments to Georgian IP laws that came into force in January 2018, as well as Georgia's accession in 2018 to the TRIPS amendment that arose from the Doha Declaration (OECD, forthcoming^[24]). Other important examples of recent trade and investment agreements – including the United States-Mexico-Canada Agreement (2019), the EU's trade and investment agreements with Canada (2016), Singapore (2018) and Viet Nam (2019), and the Comprehensive and Progressive Agreement for Trans-Pacific Partnership (2018) – contain detailed chapters on IP rights protection and enforcement, including in relation to the rights of governments to regulate to protect public health.

The current health crisis gives rise to several challenges for governments in this regard. In coping with the current crisis, governments need to ensure that a future vaccine and treatments will be widely accessible (Box 3). This requires reaching an agreement upfront on rules for intellectual property rights, so as to avoid bidding wars between countries and high prices, which could prevent the most vulnerable from having access. Public funding should be tied to conditions for accessibility and affordability, and governments should agree on how to allocate scarce product volumes between them based on need (OECD, 2020^[25]).

Box 3. Compulsory patent licensing to speed up R&D during COVID-19

Countries protect IP rights for pharmaceutical products and other medical technologies to encourage R&D by individual companies and researchers. In light of the extraordinary health emergency created by the COVID-19 pandemic, some governments (e.g. Canada, Chile, Ecuador, Germany) have taken measures to speed up R&D and facilitate mass production of needed diagnostics, treatments and vaccines, by issuing legislative acts that allow the grant of non-voluntary licenses to make use of existing protected technologies. These acts enable authorities to issue an approval to use IP-protected technologies to address the pandemic by third parties.

Businesses have argued against such measures, claiming that not only is there no demonstrated need for compulsory licensing, doing so or any other action to weaken IP could delay or complicate the development and distribution of any future treatments and vaccines for COVID-19 and inhibit the biopharmaceutical industry's ability to respond to future pandemics.

The WHO is in the process of developing a voluntary IP pool to develop anti-COVID-19 products, so as to encourage holder of IP rights to contribute their rights to a pool and to enable further R&D, production and supply of anti-COVID-19 products under reasonable license terms. This effort is supported by the Medicines Patent Pool, mandated to license IP rights from innovator companies and sub-license the rights for manufacturing and supply in developing countries. The International Federation of Pharmaceutical Manufacturers and Associations (IFPMA) confirmed that it is open to exploring innovative approaches and partnerships to facilitate further R&D to develop new medicines and vaccines for patients suffering from COVID-19 and to expand access.

Source: BIAC (2020^[26]); UNCTAD (2020^[27]); Jones Day (2020^[28])

4. Assessment of risks and opportunities

The key segments of the health sector present distinct concerns with respect to foreign control of related assets and activities. Healthcare goods are global and their production has long been fragmented across countries and regions. The current health crisis has called into question these global value chains (GVCs) and their resilience to global shocks. Conversely, foreign control of healthcare infrastructure and services has historically been more heavily regulated and restricted for national security concerns, but has been experiencing gradual liberalisation in some countries in the last decade, and is actively promoted in others. The following discussion therefore differentiates across these two segments, focusing on the more recent concerns of (mostly OECD) governments with respect to FDI in health goods and their global value chain, and the potential benefits but also risks associated with FDI in health services and infrastructure (particularly for developing countries).

The GVCs behind health goods may need rethinking and rebuilding

The benefits of international investment flows in medical goods and technologies are reflected in the global configuration of the value chains that produce them, and have until recently been unquestioned. The COVID-19 pandemic has exposed weaknesses, dependencies and bottlenecks in these value chains that were hitherto unknown or tacitly accepted, with shortages in essential medical supplies exacerbated by containment measures that arrested economic activity and interrupted international supply lines (OECD, 2020^[29]).

Over 90 governments addressed these shortages by restricting exports of medical goods, and over 100 liberalised imports, or adopted a combination of both measures depending on the health product. In its March 2020 Trade and Investment Ministerial Statement, the G20 emphasised that any newly introduced distortionary measures should remain temporary tools to mitigate the crisis, and not permanent fixtures in the world trade and investment system (G20, 2020^[30]). A number of countries are already unwinding their recent export controls, while other countries continue to reduce import tariffs (EU-GTA-World Bank, 2020^[31]).

In the area of investment policy (see Box 2), some countries have adjusted instruments that enable them to prevent potential acquisitions of sensitive assets that are exposed to pandemic-related valuation changes, or considered critical for the supply of healthcare goods (OECD, 2020^[29]). As suggested by the European Union, these mechanisms can prove useful under the current market conditions, as price disruptions and economic stress risk making these sensitive assets susceptible to predatory investment practices. Concurrently, to help governments fight the pandemic, investment promotion agencies (IPAs) have activated their existing business networks, including to find alternative ways of producing essential medical goods (OECD, 2020^[32]).

In the aftermath of this crisis, governments may need to reconsider GVC resilience related to health goods and the inputs used to produce them, in order to increase their preparedness against potential future health crises. This will require reassessing the respective roles of international trade and investment, state regulation, and state control, with regard to assets used in the production of essential medical goods and technologies. In order for open trade and investment regimes to continue to deliver allocative efficiency, but also guarantee access to essential health products where needed in times of crisis, existing international frameworks and commitments may need to be rethought. A new deal could, for instance, require the elimination of import tariffs by importing governments on selected medical goods in exchange for acceptance on the side of exporting government of qualified rights to introduce temporary export curbs on shipments abroad (Evenett and Winters, 2020^[33]). Other commitments may address investment policy aspects, such as investment screening or investment incentives.

FDI can improve health services if necessary safeguards are in place

Despite highly polarised views for and against FDI in healthcare, there remain considerable gaps in the knowledge base underpinning these views. Most of the literature is based on theories, conjectures and anecdotal evidence, precluding a full assessment of the net benefits of FDI in the health sector that puts forward clear and informed policy recommendations (Zimny, 2013^[34]; Blouin et al., 2006^[35]; Smith, 2004^[36]). Nevertheless, examining the key points considered in the literature is useful for raising policy questions and identifying areas for future research.

The main risks and opportunities related to FDI in healthcare infrastructure and services can be summarised along three broad and inter-related dimensions: capacity, quality, and equity (Table 4). The most immediate appeal of FDI (and private investment more generally) in the health sector is debt-free investment that increases physical capacity and infrastructure and alleviates pre-existing shortages in the supply of healthcare. This increased capacity may be particularly beneficial in low-income countries that suffer from underinvestment in health infrastructure, as it eases pressures on public finances, and can potentially offer specialised medical services that were previously unavailable locally. Greater domestic capacity can thereby reduce the need for medical travel and reliance on imports of health services. In countries in which highly qualified doctors are underpaid, FDI in health services and infrastructure may further diminish or reverse potential international brain drains of qualified medical staff. Counter to this point, the capacity of public health services maybe suffer, as the presence of foreign investors that offer higher wages and better equipment may entice qualified personnel away from public (and private domestic) facilities, creating or aggravating an internal brain drain (Smith, 2004^[36]). For instance, by one estimate,

an increase of 100 000 additional foreign patients in private hospitals in Thailand leads to an internal brain drain of 240-700 medical doctors (Arunanondchai and Fink, 2007^[37]).

Table 3. Summary of risks and opportunities of FDI in healthcare

	Risks	Opportunities
Capacity	<ul style="list-style-type: none"> • Generation or aggravation of internal brain drain by attracting better quality specialists and nurses away from the domestic public and private sector • Shortage of medical resources in public facilities 	<ul style="list-style-type: none"> • Alleviation of pre-existing supply shortages • Reduction or reversal of international brain drain • Newly available services, equipment and treatment • Reduction in imports of health services
Quality	<ul style="list-style-type: none"> • Deterioration of the quality of public services due to lack of high quality resources • Over-investment in superior private sector technology by government at the expense of other social and public health needs. 	<ul style="list-style-type: none"> • Technology and knowledge upgrades and transfers (e.g. medical training and education, management techniques, information systems) • Competition among providers raising standards and quality and lowering prices
Equity	<ul style="list-style-type: none"> • Aggravation of two-tier healthcare market • Crowding out of poorer patients • Cream-skimming of wealthier patients 	<ul style="list-style-type: none"> • Reduction of burden on government resources (including need for sponsoring medical travel) • Reallocation of government expenditure to the public healthcare sector

Source: OECD elaboration based on Cattaneo (2009^[38]), Zimny (2013^[34]), and Smith (2004^[36]).

In addition to influencing capacity, FDI can affect the overall quality of host country health services through knowledge spillovers. By spreading innovations in medical technology, drugs and health services, as well as superior management techniques, organisational skills and information systems, and by creating employment opportunities that benefit the health sector and the economy at large, FDI provides an impetus to raise the standards and quality of healthcare (Mackintosh, 2003^[39]). The flip side of the coin is that, as a result of heightened internal brain drain from lower-pay public facilities to higher-pay multinationals, with fewer resources, the quality of public health services may deteriorate. Moreover, better health technology of private sector providers may distort government incentives to invest in such technology in the public sector at the expense of more pressing social and public health needs (Smith, 2004^[36]).

While improving quality and increasing choice for nationals of the host country who can afford private health services, FDI can worsen inequality. Healthcare may become a two-tier system, with high-quality care for the rich and low-quality for the poor. This may or may not worsen access to the health system for patients who rely on public provision or public insurance schemes, depending on the structure of the domestic health sector and the safeguards that are in place to ensure accessibility and affordability. As noted in a study on ASEAN countries, existing health systems, with little FDI, already favour more affluent patients who are covered by private health insurance or can pay for treatment out-of-pocket (Arunanondchai and Fink, 2007^[37]). Case study evidence of the impact of FDI on Indian hospital services suggests that private investment can play a complementary role in providing tertiary and speciality care but should not be considered as the substitute of public provisioning of healthcare services (Hooda, 2017^[40]). The study concludes that the role of the government is to guarantee cost-effective care to the general population across remotest areas of the country.

In short, the impact of FDI in health services and infrastructure for equity, access, costs, and quality of services is in large part dependent on the policies and safeguards governments put in place. If adequate safeguards are in place, FDI can augment the resources available for investment and alleviate the pressure on the healthcare sector by expanding facilities for all (Chanda, 2002^[41]). Nevertheless, health is a public good and FDI objectives in the health sector should be compatible with other social objectives like universal access and affordability. Regulation of the health sector is necessary to achieve these social objectives and advance the Sustainable Development Goals (SDGs). FDI promotion in the health sector is therefore not about deregulating, but better regulating, and sometime even regulating more, for instance to adopt higher quality standards for hospitals and clinics (Cattaneo, 2009^[38]). Similarly, FDI promotion is not about

challenging the public health sector, which often plays a crucial role in the supply of health services, but complementing the public sector by expanding the range of services available and raising their standards and efficiency.

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