Chapter 5. Insights into strategic sectors: Health, METS, ICT, education and tourism

Chapter 5 extends the analysis of Australian services exports. This chapter focuses on five key sectors that contribute significantly to Australia's services exports (education and tourism), have linkages to Australia's traditional comparative advantage (METS), are important to modern economies and have a high tradability (ICT) or have potentially rising levels of tradability in the future (health). Individual sections in this chapter are in the form of case studies, providing data on the economic importance of the respective sector as well as key information on regulatory regimes in Australia and abroad.

Australia's exports of health services

The Australia New Zealand Standard Industrial Classification (ANZSIC) contains a Division Q on Health Care and Social Assistance. Within this division, the health segment can be further differentiated into Subdivision 84 on Hospitals and Subdivision 85 which covers Medical services (including General Practice and Specialist Medical Services), Pathology and Diagnostic Imaging Services, Allied Health Services (comprised of Dental Services, Optometry, Physiotherapy, and Chiropractic and Osteopathic Services) and Other Health Care Services (e.g. Ambulance services and other health care services not elsewhere classified).

From a trade perspective, these services can be distinguished by modes of supply. Important activities include exports of health care services via Mode 3 through outbound investment activity. Depending on the type of service and regulatory requirements in the host country, Australian firms will either set up specialist service providers abroad or they will partner up with local firms in order to provide health services.

Foreign direct investment in health services accounts for a relatively small share of total Australian outward FDI stocks. In 2016, Australian investors held direct investment in the health sector worth AUD 6.3 billion, corresponding to 1.1% of total Australian outward FDI stocks of that year, even though value added in health and social work accounts for roughly 7% of Australia's GDP. However, there is anecdotal evidence from various firms that successfully operate affiliates abroad.

The hospital business is usually heavily regulated. However, market access barriers have recently been reduced for operating hospitals in the People's Republic of China (hereafter "China"). Through the China-Australia Free Trade Agreement (ChAFTA), Australian services providers are now allowed to establish fully owned private hospitals in seven Chinese provinces.[1] Even though this segment is liberalised on paper, no Australian health services companies have so far managed to successfully establish and operate private hospitals in China.

Weak enforcement of national laws by provincial governments is among the most important barriers to entry in China mentioned by health businesses. Contacts with provincial and municipal government representatives are crucial to smooth business operations. Hence, even though fully owned subsidiaries are now possible, local partners are still essential to overcome difficulties on the ground. Furthermore, businesses reported fears about a loss of reputation in an environment where the legal system is not sufficiently strong and mediation of complaints is unregulated. Instead, people often use public media and orchestrated protests to enforce redress in cases of malpractice. In addition, there is a general fear that red tape might be added after entry in an attempt to thwart the operation of successful foreign hospital to the benefit of local providers.

However, some important steps have been taken to facilitate entry of foreign hospital operators into China. For example, a regulation that used to restrict doctors from practising in more than one hospital has recently been removed. The abolition of this policy brings benefits from economies of scale in the operation of commercial hospitals, where the mobility of highly qualified professionals leads to knowledge spillovers across different hospitals belonging to a single corporate group.

In other segments of health services, such as pathology, many Asian countries are characterised by less restrictive regulations than comparable activities in Australia. In Singapore, Malaysia and Viet Nam, pathology services can be advertised directly to

consumers, creating business opportunities in societies with a growing and ageing middle class that is increasingly able to afford modern health care services. For example, expenditure on health care services measured at constant prices doubled between 2006 and 2014 in Viet Nam and between 2005 and 2014 in Malaysia (WHO Global Health Expenditure database). This provides an opportunity for Australian services providers to enter a market via the acquisition of foreign providers and achieve substantial growth through increased operational efficiency.

A second Mode of health services trade is the treatment of non-residents within Australia (Mode 2). In many cases, this type of health export results from the treatment of non-residents who did not come to Australia specifically for treatment, such as tourists, business visitors or foreign students. Medical tourism, where people visit a certain country for the purpose of receiving medical treatment in that country, is not yet frequent in Australia. In 2010, only 12 000 visitors came to Australia for medical reasons, accounting for 0.23% of all visitors in that year (TRA, 2011, quoted from Deloitte, 2011).[2]

At first sight, this number seems very small. Data for other countries can set it in context: Hanefeld et al. (2013) report 52 000 patients travelling to the United Kingdom for medical care in 2010, whereas Johnson and Garman (2010) estimate the number of foreign patients visiting the United States annually for medical treatment at between 42 400 and 102 900. Consequently, the Australian figures suggest a market that is still relatively small, and this despite anecdotal evidence of an increase in medical tourism in many developed countries. However, data on the size of the sector are not harmonised across countries and cannot be used for international comparison for a larger number of countries.[3] Crucial determinants of the patterns of health-related travel are, first and foremost, the cost and quality of the treatment. While these two factors are usually considered jointly, more travellers in developed economies seem to seek low cost for a sufficient level of quality while only a minority seek maximum treatment quality irrespective of the price. An increasing number of people are travelling for medical treatment from developed countries to developing and transition economies in South East Asia, Latin America and Eastern Europe since the appearance of facilities targeting foreign consumers with offers of high-quality health services in these countries. Other important factors are geographic proximity and cultural affinity. For specific health problems, ethical regulation prohibiting certain treatments can be another crucial determinant for the patterns of cross-border health travellers.

Table 5.1 shows that prices for different types of surgery are comparable in developed economies. A notable exception is the United States with significantly higher prices for all treatments. The table also shows that in Singapore, Thailand and India many operations can be offered at more competitive prices than in Australia. In addition, there are many more competitors than those listed in the table, such as the United Arab Emirates, China, Malaysia, Sri Lanka, Mexico, Costa Rica or Hungary. All these countries have realised the potential of a growing market for health care services and are located closer to other major economies, suggesting that competition for Australia will remain difficult in the future.

A strong area of Australian comparative advantage is related to research and development (R&D) in the health and biotech sectors. For example, clinical trials in Australia benefit from a robust regulatory environment with strong intellectual property protection and legal standards. This is particularly true for early trial stages, for which fewer participants are required. By contrast, later trials with thousands of participants are more often conducted in countries like China or the United States. Moreover, most companies in the segment benefit from the R&D Tax Incentive, helping them to remain competitive in the face of increasing competition from Asian countries such as Singapore, Korea, and Chinese Taipei.[4]

Table 5.1. Selected surgery costs by country 2008 (USD thousands)

	Australia	New Zealand	United States	United Kingdom	Korea	Singapore	Thailand	India
Heart bypass	23.1	30.5	130.0	24.6	34.2	16.5	11.0	9.3
Heart valve replacement	n/a	30.5	160.0	n/a	n/a	12.5	10.0	9.0
Angioplasty	n/a	8.5	57.0	14.9	n/a	13.0	13.0	11.0
Hip replacement	16.5	15.0	43.0	14.0	11.4	9.2	12.0	7.1
Knee replacement	13.9	14.0	40.0	16.6	24.1	11.0	10.0	8.5
Hysterectomy	4.9	6.0	20.0	n/a	12.7	6.0	4.5	6.0
Spinal fusion	n/a	n/a	62.0	n/a	n/a	9.0	7.0	5.5

Note: All values in USD converted at 2008 exchange rates.
Source: Voigt et al. (2010), Deloitte (2010), Tattara (2010), quoted from Deloitte (2011).

International trained medical graduates (IMGs) must obtain registration at the Medical Board of Australia (MBA) or the relevant specialist medical college in order to practise in Australia. A recent report (Deloitte, 2017) found that found that specialist colleges mostly comply with the Good Practice Guidelines in the quality assessment process. Assessments and additional requirements for Specialist IMGs are mostly consistent across colleges. Nevertheless, the authors note that some colleges may not be applying a standard assessment and that at some colleges there was a lack of information about additional registration requirements. There are different registration types, which are available for IMGs to practise for periods of supervision or for teaching and training purposes. Even though a number of pathways exist, hospital operators mentioned that they face obstacles when trying to bring in foreign specialist doctors for short-term visits.

Given the lack of a clear competitive edge and its remote geographical location, Australia could try to identify a profitable niche within its areas of comparative advantage. For example, a coordinated strategy for tourism and health services could help to promote a combination of medical treatment and holidays in Australia, increasing the average spending and duration of stay for foreign tourists. Businesses mentioned the difficulty of promoting medical services offered by general hospitals, compared to those of specialised medical centres. Offering a wider diversity of medical institutions, including small and specialised clinics, may help to promote Australia as a high-quality location for specific treatments.

Mining equipment, technology and services (METS)

Mining represents about 57% of Australia's exports and 8% of GDP, and rents from its mineral extraction are estimated at 5% of its GDP (ICMM, 2016). The Mining Contribution Index (MCI) ranks Australia 11th out of 183 countries in terms of the contribution of mining to its economy.[5] The only other OECD country with a similar profile for mining is Chile (24th in the MCI in 2016). All other OECD countries produce and export a wider variety of goods, and mineral rents represent a smaller percentage of their GDP.

Not only is the mining sector the largest indirect exporter of services, but also most of these services are sourced domestically. Currently, only about 5% of services inputs into mining are imported, expressed in terms of value added of final demand, for different types of mining outputs. The stability over time of the ratio of imported to domestically sourced services input in

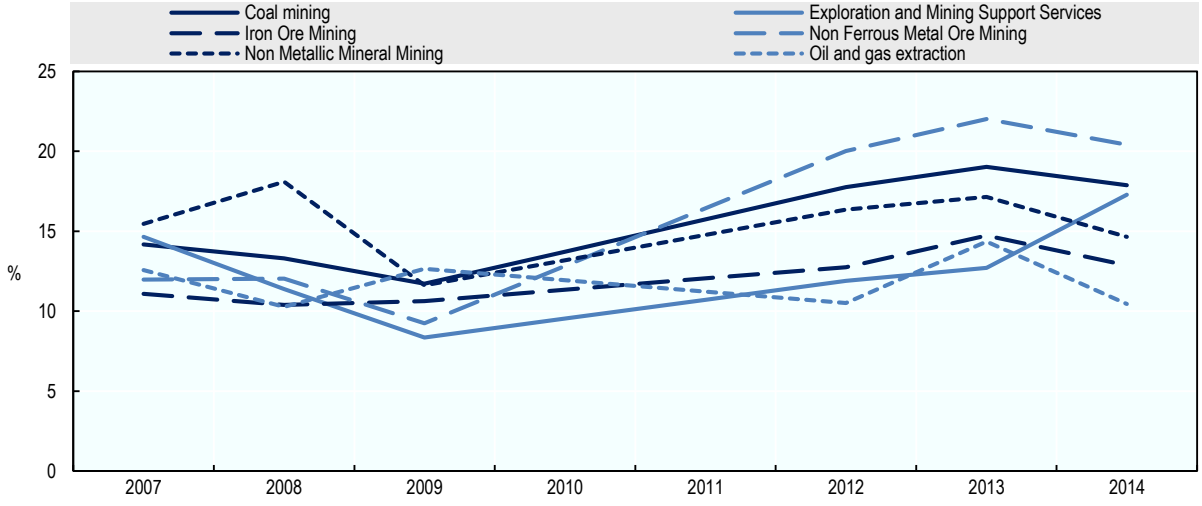
The impact of the economic crisis on the mining sector is seen to have been stronger when inputs of goods are also considered. Imported inputs (goods and services) accounted for 9-22% of total inputs, depending on the segment of the mining sector. The share of imported inputs fell sharply with the onset of the crisis, suggesting that trade in inputs into the mining sector was less resilient to random shocks than trade in services (Figure 5.1).[6]

A breakdown of the substantial share of the services value added embedded in mining exports shows that exploration and mining supportive services are the largest input into mining exports, other than the mining sector itself, accounting for 7% of the value added embodied in mining exports (Table 5.2). These services represent the first stage of the mining value chain and so understandably account for an important portion of value-added in mining exports. Professional and technical services is the second most important input at 6%, followed by finance and insurance (4%), construction (4%), and wholesale and retail (3%).

In fact, the seven most important inputs into the mining sector, after those from the sector itself, are services. They include both specialised services to the mining sector (e.g. exploration and mining support services, specialised engineering and technical services) and non-specialised services (e.g. financial services, construction, wholesale and retail trade, real estate and other supporting services). The breakdown in a dynamic context suggests that, among the various mining services industries, growth areas during periods of increasing services demand are mostly professional, scientific and administrative services. These include both specialised mining services like mining engineering and non-specialised services such as accounting and legal services. Financial services and wholesale and retail services also increase strongly when mining firms increase spending on services.

Figure 5.1. Share of imported inputs in domestic production

Selected mining segments



Note: ABS I-O data for 2010 and 2011 are missing hence ratios for these two years are interpolated.
Source: Own calculations on ABS, Australian National Accounts: Input-Output Tables, selected years, catalogue no. 5209.0.55.001.

Table 5.2. Sectoral decomposition of value added in mining exports

Value added (in %)

Sector	2014
Mining and quarrying	54.8
Exploration and mining support services	6.9
Professional, scientific and technical services	5.6
Finance and insurance	4.4
Construction	3.5
Wholesale and retail trade	2.9
Building cleaning, pest control, administrative and other support services	1.7
Non-residential property operators and real estate services	1.5

Source: Own calculations on ABS, Australian National Accounts: Input-Output Tables, selected years, catalogue no. 5209.0.55.001.

Providers of non-specialised services to the mining sector were able to increase their activity outside mining when commodity prices plummeted in 2014. Conversely, after the economic and financial crisis hit in 2008-09, and mining was less affected than many other sectors, some services firms diversified into mining. For example, some engineering and construction firms switched from non-residential commercial building into mining-related work, and some legal, accounting and financial firms moved resources into servicing the mining industry. This means that mining support services are less likely to move in a cyclical pattern with other services, and that mining support services may be more resilient to the inevitable downturns in the highly cyclical mining sector activity. In fact, the data confirm that demand for mining services is on average quite resilient to downturns – the negative growth rates during downturns are substantially smaller than the positive ones during boom years. It also suggests that certain services inputs into mining are increasing over time in the aggregate in Australia.

International growth and domestic competition

The mining sector is the largest indirect exporter of services, and most of those services are sourced domestically. Nonetheless, there is no specific classification of mining services that is internationally comparable. Services to the mining sector include sector-specific services like some engineering and geological services, digital mining, drilling, and exploration, and others that are non-specific to the sector like construction, transport and logistics, catering, machinery and equipment repairs. METS firms also export their goods and services directly, but this is a small fraction of their domestic consumption (about 1% in 2014). Therefore, the potential for export is substantial.

Australian METS firms (Box 5.1) have named three areas where the biggest opportunities exist: diversification ("expanding into new market segments and industries", mentioned by 55% of all firms), trade ("international growth and export expansion", 42%) and innovation ("development of new technologies and products", 37%) (Austmine, 2015). Ensuring that METS firms are able and encouraged to export and expand to new markets is therefore highly relevant to their growth potential.

Australia has engaged in active economic diplomacy, signing preferential trade agreements with ASEAN, Chile, China, Japan, Malaysia, New Zealand, Singapore, Korea, Thailand and the United States (Box 4.1). Many of these economies are important markets for METS firms. For example, in the ChAFTA (2015) China allows Australian services suppliers to provide technical consulting and field services in coal bed methane and shale gas

extraction. Consistent with its most liberal FTAs to date, China also guarantees access for Australian suppliers to provide a range of services related to exploiting oil and gas, iron, copper and manganese resources in cooperation with Chinese partners. Australian suppliers may also provide mineral resources exploitation services in the central and western regions of China. Under ChAFTA, market access is guaranteed to Australian companies established in the Shanghai Free Trade Zone that are undertaking joint construction projects with Chinese counterparts in Shanghai. These companies are exempt from business scope restrictions, allowing them to undertake a wider range of commercially meaningful projects.[7]

The most recent addition to the set of Australian FTAs, the Australia-Peru FTA (PAFTA), signed on 12 February 2018, has not yet entered into force. Its focus is on mining services, with guaranteed access on non-discriminatory terms for Australian suppliers of mining-related consultancy, research and development, engineering, environmental, mining and technical testing and analysis services. PAFTA also improves access for Australian suppliers to government procurement in Peru and foreign direct investment is liberalised by raising investment protection and introducing streamlined processes.

There is already a significant Australian investment presence in Peru, and in particular in Peru's mining sector, with over ninety Australian businesses currently located there, up from ten in 2003. Australia has also become an associate member of the Pacific Alliance of Chile, Peru, Colombia and Mexico, all of which have important extractive sectors.[8]

In 2015, METS firms reported that their most important challenge in starting or expanding an export business was "lack of internal resources, including international marketing capabilities" (Austmine, 2015). Among the main reasons were "inability to find suitable partners/distributors", "difficulty accessing supply chains", "lack of information on local culture, business practice, language of potential export market" and "limited export procedures knowledge". This is not surprising as many mining services firms are small and SMEs do not always export easily. Further assistance helping mining services firms navigate foreign environments, facilitating contacts, and helping to promote their services, are all within the mandate of export promotion agencies. Austrade provides this function in Australia, with an annual budget of AUD 424 million in 2016-17 for an average staff of 1 036 in ten Australian regions and 29 foreign offices.[9] See chapter 6 for an overview of Austrade's initiatives in export promotion and those of some of its competitors.

The growth of the METS sector, including its international expansion, requires a highly skilled work force. However, many firms in Australia experience finding and keeping professional and skilled employees as a major challenge. An actively outward-looking approach may help to address the scarcity of such professionals. METS firms may need to partner with foreign engineering and professional schools in countries where they operate. Partnering of research facilities abroad, such as CSIRO Chile, could help to ensure Australian METS firms access the best global talent.[10]

Within Australia, METS firms have developed a strong knowledge base about their clients and form relationships that are close to their comparative advantage: 80% of firms work directly with mining companies, 65% saying that their *relationship with customers* is their "key competitive advantage" and for 81%, *working closely with customers* is how competitive advantage is maintained (Austmine, 2013).

Box 5.1. Characterisation of METS firms

Austmine, the Australian agency for mining equipment, technology and services (METS), undertook two in-depth surveys of the METS sector, covering 860 firms (2013) and 432 firms (2015) providing "specialised support and solutions to global miners" and having "a specialist knowledge and core competency in the mining and minerals industry". The sector comprises between 1 200 and 1 500 companies in Australia; the large sample size indicates a fairly comprehensive picture.

Manufacturers dominate the METS sector and represent 38% of its firms and 41% of the sector's gross revenue. Engineering, procurement and construction management firms (EPCM) are 15.2% in number, and represent 22% in value, respectively. Contract mining firms are very large, accounting for 18% of sector revenue, but only 6.4% of companies. Conversely, firms providing consulting, information technology, technology developers and other professional services (CITP) are much greater in number (27%) than they are in overall revenue (8%). Around three-quarters of these firms have less than 100 employees. In total, gross revenue of specialised mining services firms represent around 41% of the METS sector or AUD 37 billion in 2012. Contract mining is not considered a specialised mining service in this study, as it represents outsourcing of the mining activity itself.

Australian METS firms have a diversified customer base: while close to 25% of firms work exclusively in the mining sector, 39% of METS firms obtain less than half their revenue from the mining sector. In general, smaller firms in the CITP sector were the least diversified. Australian-owned firms represent 84% of all firms in the sector, with foreign-owned firms tending to be larger. By order of frequency, foreign-owned firms are from United States, United Kingdom, Germany, France, Switzerland, Japan, South Africa, Sweden, Canada, China and New Zealand. The median age of a METS firm is 20 years. Australian-owned METS firms tend to be younger than their foreign counterparts.

Most METS firms export, especially those that rely on innovation and technologies. These firms are also smaller and younger so are genuinely "born global". Top export destinations include New Zealand, Indonesia and Papua New Guinea. A high percentage of firms also export to the United States, Chile, Malaysia, Canada and Thailand. In 2014, 52% of exporters had offices or operations offshore, signalling a committed approach to growing their international business.

Table 5.3. Share of METS firms that export, by activity

Business activity	Share of firms that export
EPCM / Engineering / Construction	50.4%
Consulting	66.3%
Contract mining	23.6%
IT developer or equipment provider	71.7%
Technology development/application	81.8%
Other professional services	38.0%

Source: Austmine (2013, 2015).

Documentary evidence and consensus opinion in the sector suggest that these relationships have developed organically. However, there are also domestic policies that encourage national value chains in mining. For example, the *Australian Jobs Act 2013* requires public and private major projects in Australia, with a capital expenditure of AUD 500 million or more, to prepare and implement a plan according to the Australian Industry Participation National Framework (AIP).[11] The Act requires firms to have a broad understanding of the capacity and ability of Australian entities to supply goods and services and to conduct

awareness campaigns about key procurement opportunities for Australian suppliers. Australian firms must regularly report on the value of procurement done locally and in the country. There is, however, no requirement to procure any share of goods and services in country.

Some agreements at sub-national level grant explicit preferences to Australian suppliers. For example, the 2001 *McArthur River Project Agreement-Ratification Act* specifies that preference should be given to local professional services, labour and materials by the mining firm extracting materials and by all its sub-contractors (Northern Territory of Australia, 2007). This must be seen in the light of Australia's commitments to the GATS regarding national treatment. Australia has bound Mode 3 (commercial presence) for services incidental to mining in relation to consultancy on a fee or contract basis relating to mining and oil field development, except for preferences given to indigenous or Aboriginal people (GATS, 1994).[12] However, Australia is not the only country to apply such policies (for an overview, see OECD, 2017b).

Mining is Australia's largest indirect exporter of services, exporting mostly exploration and mining support services, specialised engineering and technical services, but also financial services, construction, wholesale and retail trade, real estate and other supporting services. In comparison with the mining sector itself, one important characteristic of these services is a lower degree of cyclicality, creating employment that is relatively stable and resilient.

Compared to services embodied in mining exports, direct exports of mining services are of relatively low importance for the Australian economy, indicating a huge potential for future growth. Australia has engaged in active economic diplomacy, signing preferential trade agreements with various countries in order to facilitate such direct exports in the METS sector. While market access is an important first step, further assistance is vital, helping METS firms navigate foreign environments, facilitating contacts, and helping to promote their services.

Innovation

Many mining firms have difficulty-accessing funding. In other sectors where innovation is key to survival and competitiveness, such as IT or biotechnology, venture capital firms provide financing for start-ups and small, young firms. Given the specialised nature of mining innovation, non-specialised venture capital firms like those investing in the information technology space are unlikely to invest in mining services. There are few private equity funds specialising in mining innovations. Jolimont Global and Aurus are two such funds with a METS focus.

Some innovation is financed through large firms in the supply chain. Heavy machinery and mining equipment producers like Caterpillar and Komatsu have their own financing departments offering various funding options, including for developing innovation. Some finance firms have dedicated corporate financing divisions for mining; examples are Resource Capital Funds (RCF), a private equity fund focused on mining in over 51 countries, and GE Capital and Balboa Capital. In 2016, the Canadian company Red Cloud Klondike launched the first regulated online equity crowdfunding platform for the mining sector.

Due to the cyclical nature of the mining industry, innovation in mining services is prone to a misallocation of capital, leading to funding shortages when prices for natural resources are low. Chapter 6 analyses different government programs in Australia and other countries related to the promotion of R&D, including the Innovation and Science Agenda (NISA), as

well as funding for start-ups and other small companies, and evaluates their performance in a comparative perspective with similar programs in other major economies.

Energy consumption by the mining sector is an area that might benefit from R&D spillovers and innovation from other sectors. Such spillovers can be very relevant due to the large share of energy costs in the sector's total expenditure. Energy-related innovation may not only help to reduce the cost of energy consumption, but also to reduce emissions of greenhouse gases and air pollution. In recent years, Chile has attempted to transform its mining sector into a frontrunner in the renewable energy segment. Information on Chile's strategy and its lessons for Australia are summarised in Box 5.2.

Box 5.2. Renewable energy for mining services

Energy is a major input into the mining sector. Energy generation requires the procurement of many ancillary services necessary to support the reliable transmission of electric power from seller to purchaser. Energy consumption is generally between 15% and 40% of the operating budget of a mine (Ernst and Young, 2016). The mining sector uses more energy than all Australian residential uses combined, and five times more than the agriculture sector. Renewable energy has an insignificant share in the Australian mining sector's energy mix, even though the price of renewable energy has fallen substantially and has become a strongly viable choice, particularly in remote, sunny areas.

By contrast, other countries have been more active in promoting solar energy generation in mining-intensive areas. For example, in Chile a roadmap with targets of renewable energy aims for at least 20% of energy used for mining coming from renewable sources by 2020. Various initiatives and policies have been put in place to this end, making it likely that the objective will be achieved earlier than expected. *Law 20257* of 2008 established a quota for the generation of renewable energy. This quota is gradually increasing. From 5% in 2010, the quota will reach 10% by 2024. Energy producing companies can buy their required quotas from other companies or invest in infrastructure to generate it themselves. Chile enacted a carbon tax (*Law 20571*) in 2014 imposing a levy of USD 5 on each metric ton of carbon dioxide emitted by fixed sources with a generation capacity of at least 50 MW, except biomass.

Since 2005, Chile has required distribution companies to run tender processes for securing energy supply to those with an energy demand of up to two MWs. In 2015 the tender process was amended (*Law 20805*) by introducing different sized hourly blocks of energy supply (spanning day, peak times, night and also 24 hour options). This led to a much greater participation in tenders from the renewables sector, which was no longer restricted to offer energy continuously. Supply periods were also lengthened to 20 years attracting long-term investment. Moreover, the Chilean energy sector allows producers to sell freely the electricity they produce back to the grid through power purchase agreements (PPA).

Law 19940 of 2004 opened up the spot market and guaranteed connection to the country's power grids for small renewable generating plants. The reform exempted projects using renewables from paying all or lower transmission fees and encouraged SMEs (the lowest tier including plants generating up to 9 MW). A bill of 2016 pushed the cost of transmission tolls onto the final client, further reducing entrance barriers for SMEs, encouraging transparency and avoiding congestion.

Australia has made strong commitments on combatting climate change in various international agreements including the Paris Agreement (ratified by Australia on 9 November 2016 and entering into force on 9 December 2016). Promoting the use of renewable energy, particularly solar power, in mining and mining services, can make a substantial contribution to achieving Australia's targeted reduction of CO2 emissions by 26-28% (on 2005 levels) by 2030.

In summary, mining is Australia's largest indirect exporter of services, exporting mostly exploration and mining support services, specialised engineering and technical services, but

also financial services, construction, wholesale and retail trade, real estate and other supporting services. In comparison with the mining sector itself, one important characteristic of these services is a lower degree of cyclicality, creating employment that is relatively stable and resilient.

Compared to services embodied in mining exports, direct exports of mining services are of relatively low importance for the Australian economy, indicating a huge potential for future growth. Australia has engaged in active economic diplomacy, signing preferential trade agreements with various countries in order to facilitate such direct exports in the METS sector. While market access is an important first step, further assistance is vital, helping METS firms navigate foreign environments, facilitating contacts, and helping to promote their services.

ICT and digital trade in services

Information and Communications Technology (ICT) is important throughout the Australian economy. Developments from the ICT sphere are of wide applicability and may overturn business models in other sectors, offering enormous potential for profitable ventures using technologies like artificial intelligence, machine learning, block chain and distributed ledgers, or sensor technology. The sector is labour-intensive, offering high-paid jobs, and compared to other sectors, it relies less on geographic proximity to its customers. Hence, a thriving ICT sector must be a priority for a healthy, modern economy.

More than other industries, this sector benefits from foreign talent. Australian businesses have made extensive use of the 457 visa in order to bring the most talented workers into the country. Occupations like developer/programmer, ICT business analyst, software engineer and ICT project manager are consistently among the occupations with the most 457 visa grants, jointly accounting for more than 12% of the total number of 457 visas granted (DIBP, 2017). Therefore, a liberal visa regime for this sector is important in times when ICT skills are not sufficiently available domestically.

Consultations with businesses from the ICT sector revealed a group of successful firms in this field that do not feel restricted by horizontal barriers to services trade mentioned by firms in other sectors. Whether in the area of app development, business intelligence or digital transformation, these firms find it easy to offer their services to clients worldwide through cross-border trade in digital services and occasional business visits to their most important markets.

The relative ease with which Australian ICT business participate in digital trade also results from Australia's progressive inclusion of digital trade aspects in its most recent FTAs. For example, under the Peru-Australia FTA (PAFTA), Australia and Peru guarantee the free flow of data across borders and are committed not to impose any localisation requirements on data. Requirements on the transfer of technology or other proprietary information, like source codes, as well as customs duties on electronically transmitted content are ruled out by this agreement. In order to facilitate consumer access to digital services, the agreement establishes rules that allow smaller firms to compete with dominant providers in the telecommunications sector, using technologies like co-location, interconnection or resale of services.

Nevertheless, some ICT businesses expect more support from the Australian Government than they currently receive. Larger ICT businesses mentioned the importance of long-term public procurement contracts for attracting multinational enterprises to establish a commercial presence in Australia. In those MNEs, subsidiaries from different countries

often compete against each other in order to attract new business functions to the country. Inward foreign direct investment of this type may help to create a significant number of well-paid jobs in the Australian economy. While public procurement contracts should, in general, be given to the bidder offering the best terms, including second-tier considerations like job creation in public procurement contracts can help to make commercial establishment a viable option for international businesses and secure more inward FDI. On a different front, several ICT interviewees mentioned the existence of national award programs for successful businesses. The main motive for such programs is not monetary reward but the resulting national and international attention and the associated gain in reputation. These programs do exist in Australia, yet businesses feel that their profile is too low and that the awards do not promote innovative Australian businesses adequately. Moreover, businesses mentioned that the selection criteria for export awards are often targeted towards manufacturing firms and do not reflect the reality of services businesses, for which concepts like productivity are much more difficult to measure. Consequently, services businesses feel excluded from these award schemes and suggest a revision of the selection criteria to facilitate an equal treatment of firms in different sectors of the economy.

Challenges and opportunities for Australian education services exports

As already seen in chapter 3, education contributes largely to Australia's exports.[13] This section concentrates on the main barriers and opportunities for Australia's exports of educational services. A particular emphasis is put on the Asia-Pacific region, where Australia could make good use of its proximity and trade linkages to fast-growing Asian markets. Australia could further diversify its trading partners to ensure a more sustainable long-term export growth for the education sector by tapping into the great opportunities emerging from ASEAN economies. In fact, the ASEAN population, of which over 65% is under 35, has a strong appetite for education and skills development (McKinsey, 2014). Australia could leverage on its long-standing expertise in providing high quality international education and take advantage of ASEAN strong commitment to human resources development.

However, it is worth keeping in mind that the nature of education supply and demand is changing. Traditionally, students from non-English-speaking countries looking for a study experience abroad would select English-speaking countries. China, Malaysia and India are now beginning to challenge this trend and are working to become major education destinations providing high-quality education services domestically to their own students as well as foreign ones, by offering price-competitive courses in English.

The significance of Australian education services exports

Australia's on-shore education exports (e.g. education services provided to international students enrolled in Australian educational institutions) were valued at about AUD 22 billion in 2016.[14] Education services accounted for 31% of total services exports in 2016, up from barely 12% in 2000.[15] International education supports more than 130 000 jobs (Deloitte, 2015a) and is Australia's third largest export and the most important services export sector. In 2016, there were nearly 400 000 international students enrolled in higher education courses, 8% up from 2015.[16] Export growth has been remarkable over the past two decades, helped by Australia's proximity to fast growing markets in Asia-Pacific region. In particular, students from China and India accounted for nearly 40% of Australia's total enrolments in 2016.[17]Australian off-shore provision of education services

(i.e. revenues from Australian campuses abroad or from online courses) was worth AUD 434 million in 2014. However, the value of off-shore education provision is small compared to that of on-shore exports, valued in 2014 at AUD 17 billion (DFAT, 2017). Yet, in that same year, off-shore campuses, most of which are based in Asian countries, enrolled about one-quarter of all international students studying at Australian education institutes (PC, 2015b).[18]

Vocational education training (VET) by Australian education providers is also an important component of Australian education services exports. In 2016, VET cross-border exports (e.g. training offered on-shore to international students and professionals) was 17% of total education services exports, the second highest component after higher and tertiary education (69%). While the value of off-shore provision of VET is not available, data published by the Department of Education and Training (DET) shows that in 2016 there were over 39 000 enrolments overseas, with the vast majority offered by Technical And Further Education (TAFE) institutes and largely delivered in China (nearly 70%), Kuwait (6%), the United Arab Emirates, Fiji and Mauritius (around 3% each).[19]

Australia is a popular destination for international students. The United Nations Educational, Scientific and Cultural Organization (UNESCO) ranked Australia the third most popular destination of international students in 2015, after the United States and the United Kingdom, attracting 6% of the global total of internationally mobile students.[20] A 2016 survey of more than 65,000 international students studying in Australia by the DET shows that the key factors that influenced higher education student's choice to study in Australia included the reputation of Australian qualification (95%), of the education system in Australia (94%), of the higher education provider (92%), and a generally safe and secure setting (93%). Over 89% of respondents were satisfied with their overall experience of studying in Australia.[21]

Australia's international education sector is supported by a well-established regulatory environment. Australia has two quality assurance frameworks for the provision of higher education and Vocational Education and Training (VET): the *Higher Education Standards Framework (Threshold Standards) 2011* and the *National Vocational Education and Training Regulator Act 2011*. The Tertiary Education Quality and Standards Agency (TEQSA) is Australia's independent national quality assurance and regulatory agency for higher education. In addition, the Australian Skills Quality Authority (ASQA) is the national regulator for Australia's vocational education and training sector. ASQA regulates courses and training providers to ensure nationally approved quality standards are met within the VET Sector. Furthermore, the international education sector in Australia is underpinned by strong consumer protection measures for international students, through the *Education Services for Overseas Students (ESOS) Act* (discussed in more details below), which sets out the legislative requirements and standards for the quality assurance, and Tuition Protection Service (TPS).[22] Consumer protection, qualification frameworks and national quality assurance standards are essential to establish and maintain Australia's valuable reputation for high-quality education.

Providing education services to international students or training students and professionals on-shore (Mode 2), and teaching international students in campuses located abroad or offering English language/skill training courses to students and businesses overseas (Mode 3), are just two ways Australian institutions export their educational services. Australia exports educational services also through distance learning (Mode 1), or through the temporary visits by Australian academics or teachers to foreign education institutions (Mode 4).[23] Barriers in the destination country can affect all these modes. However, some

characteristics of the Australian domestic regulation may affect Australian education services exports. These might equally influence on-shore provision of educational services to international students.

Outside Australia, trade negotiations have gradually reduced barriers to market access and national treatment (Box 5.3). Education services in the region are slowly becoming more liberalised following specific commitments found in the World Trade Organisation's (WTO) General Agreement on Trade in Services (GATS) and those negotiated in Free Trade Agreements (FTAs). Nevertheless, negotiating commitments around higher education so far remains rather limited, and despite these efforts, residual limitations are still present at home and abroad.

Box 5.3. Trade negotiations in higher education services

Education is still one of the least committed sectors under the GATS. Only 62 WTO Members have made commitments in one or more education sub-sectors, and only 53 (including Australia) for higher education services. Asia-Pacific economies with commitments in higher education services include Cambodia, Chinese Taipei, Japan, Lao People's Democratic Republic, China, and Viet Nam.

On a bilateral level, Australia has concluded FTAs including services provisions with several Asian economies. Some of these agreements aim to facilitate on-shore and off-shore provision of education services among its parties. For example, under ChAFTA, there is a focus on the mutual abilities of education institutions from the two economies to market themselves, improve their public profile and provide recruitment opportunities in both economies and to facilitate mobility through recognition of prior qualifications. Australia and China also have a MoU on education co-operation, including information exchange briefings on VET policy reform and joint research on occupational standards in priority areas. Similarly, JAEPA (2015) aims to improve recognition of qualifications issued in both economies, strengthening student mobility and guaranteeing equal access to education providers. JAEPA's recognition of qualifications has contributed to Japan formally recognising Australian bachelor degrees for entry into postgraduate programmes in Japanese institutions, making Australia's education services more attractive in Japan.

MAFTA (2013) is another FTA with positive list commitments on higher education services provision. It has enabled the commercial establishment of privately funded higher education institutions, including university campuses in each respective country, with up to 70% Australian ownership for establishments in Malaysia (100% after 2015). Malaysia has raised the quota on Australian lecturers teaching in Malay universities from 20% to 30%. SAFTA (2011) also covers higher education services, with provisions focused on mutual recognition of previously obtained degrees with course accreditation and professional experience. Majority ownership of higher education institutions is possible under TAFTA. Through the ASEAN-Australia-New Zealand Free Trade Agreement, Laos committed to allow wholly owned foreign subsidiaries in higher education. Moreover, in 2011, Australia and Viet Nam signed a MoU on cooperation in VET, including mobility of personal data and materials, quality assurance, qualification recognition, accreditation and access for foreign institutions (DET, 2013).

Sources: WTO Integrated Trade Intelligence Portal (I-TIP), DFAT, and Austrade.

Australia's domestic regulation

Elements of national regulation that might affect the demand for educational services by international students are:

- **Australia's student visa framework**

  Inefficient visa processes are a key barrier to potential international students. Acknowledging this, in mid-2016, the Australian Government implemented a new

Simplified Student Visa Framework (SSVF), aiming to minimise the cost of regulatory and administrative compliance associated with student visa applications and handling.[24] The SSVF is definitively an improvement on the previous rather complex student visa framework, which encompassed eight visa subclasses, an Assessment Level framework and Streamlined Visa Processing (SVP) arrangements. The two most significant changes under this new framework are a reduction in the number of visa subclasses from eight to two, and the introduction of a single immigration risk framework, under which all international students are assessed, regardless of the programme of study.[25] The SSVF risk rating system assigns to each country and Commonwealth Register of Institutions and Courses for Overseas Students (CRICOS) registered education provider a risk level from 1 (low risk) to 3 (high risk, subject to more rigorous checks). Risk ratings are reviewed periodically by the DoHA and are not made public, to reduce targeting of specific education providers by non-genuine students. It is too early to say whether the SSVF will be able to address some of the negative effects generated by the SVP framework, including market distortions for education providers and 'course-hopping' practices introduced by limiting the number of education providers eligible for streamlined visa arrangements (Box 5.4).[26]

Box 5.4. Education providers' perceptions on the Simplified Student Visa Framework

The preparation of this report involved a public consultation with businesses of different sizes and from several services sectors. The consultation was facilitated by the Australian Department of Foreign Affairs and Trade and the Australian Services Roundtable. In a first phase, semi-structured interviews gathered businesses' perceptions on sector-specific matters. In the second phase, the same businesses filled out a questionnaire on a wide range of subjects aimed at assessing obstacles to trade in foreign markets and at home, and the effectiveness of government initiatives. Ten education providers were interviewed, including senior managers, deputy vice chancellors and executive deans from several Australian universities, TAFEs, English language providers and other private Registered Training Organisations (RTOs), across five Australian states. These providers were asked to describe their direct experiences with the new immigration risk rating system. Although DoHA data suggest that the majority of applications lodged outside Australia are processed on average in 20 calendar days and that the grant rate continues to be relatively high under the SSVF, the educational providers interviewed expressed some reservations about the new risk rating system.

Given the demonstrated importance of education exports in the context of Australia's services trade performance, the results of these consultations highlight the importance of diligent policy attention in the following areas:

- The role of service providers in immigration risk management.
- The relationship between visa processing times and the start of courses, scholarships and business relationships with foreign education providers (or other arrangements with foreign governments).
- The provision of feedback on visa rejections.

Information requirements related to the travel history of the student visa applicants (and their families) and online payments.

- **Student benefits and financial assistance**

  The Australian Government provides financial support for local students but seldom for international students. Financial support can come in the form of loans.[27] Government grants and privately funded scholarships also help to assist foreign students.[28] Nevertheless, the inability to access financial support for education is a barrier for prospective international students. Similarly, not being able to access other student benefits might influence international students' decision to study overseas. Reduced fare transport concessions are an example of such benefits. International students of higher degree in Australia might only be able to access concession-priced public transport in certain states and territories.[29]

- **Online education**

  International students holding a student visa and enrolled with an Australian education provider may not complete more than one quarter of their total course by distance and/or online learning. Understandably, this quantitative limitation to e-learning comes from the need to manage the risk of non-compliance with visa requirements should international students opt to work instead of attending classes on campus. However, limiting e-learning might harm both the education provider (incurring higher costs) and the 'genuine' student, who might choose a more technology-savvy foreign education institute. Austrade has stressed the importance for Australia's competitiveness to cater for learner and employer demands for borderless learning 24/7 in its *Australian International Education 2025 market development roadmap* (Austrade, 2016). This roadmap recognises the changing demands of students and their increasing preference for a more flexible and "borderless" delivery of education services (including online and through transnational education experiences). Recognising these demand shifts, the e-learning cap will be raised from 25% to one-third of the student's course from 1 January 2018, following a review of the *ESOS framework* (PC, 2015a).[30]

- **Access to post-study employment**

  The reform of the Temporary Work (Skilled) visa program (subclass 457) (Box 2.2) might have some consequences for the ability of some international students to stay in Australia after graduation. In fact, under the TSS visa program (subclass 482), which abolishes and replaces subclass 457, applicants are required to have a minimum of two years' work experience relevant to a specific occupation. Only international students holding higher education degrees from Australian education providers and who, through the Temporary Graduate visa (subclass 485) Post-study work stream, have acquired the qualifying working experience, will be able to apply for the new TSS visa, provided the qualification is related to an occupation on the list of eligible skilled occupations.[31] Students who do not hold a bachelor degree qualification may be impacted; however, there is the potential to recognise prior work experience by these students or experience from work experience undertaken on a part time basis while studying, as well as experience as part of an industry placement under their qualification. Box 5.5 presents an international comparison of post-study work visas.

Among the elements that might affect the supply side of education services are domestic regulatory requirements, and quality and accountability standards. These are there to safeguard students' interests and, in the specific case, to ensure that international students

get a high-quality learning experience that meets their needs. A brief overview of major regulatory requirements is reported below: [32]

- The provision of higher education services to international students is governed by the *ESOS Act 2000.* Institutions and their courses must be registered on CRI|COS in order to enrol overseas students to study in Australia on a student visa. In addition, higher education providers can only accept international students after meeting quality standards required by the *National Code of Practice for Registration Authorities and Providers of Education and Training to Overseas Students 2018 (The National Code 2008)*. Besides these two requirements, education providers need to register on the CRICOS.[33]
- Providers of *English Language Intensive Courses for Overseas Students (ELICOS)* must adhere to additional regulatory requirements and a set of national standards, the ELICOS standards 2018, which are sector-specific and cover standards for the provider, the course (its delivery and assessment), and for educational resources, the physical premises and standards of business management.[34]

Additional requirements on tuition assurance as well as quality and accountability standards, as outlined in the *Higher Education Support Act 2003 (HESA)*, must be met in order for national students to be eligible for government support. These requirements concern financial viability, quality, fairness to students, arrangements for student contributions and tuition fees. Foreign e-learning providers must be registered with the Australian Government's *Tertiary Education Quality and Standards Agency (TEQSA)*.[35] Registration is not necessary for foreign providers that partner up with an established Australian university. Recent initiatives adopted by the Australian Government aim at enhancing the education system. These include revisions to the National Code of Practice for Providers *of Education and Training to Overseas Students 2018*, designed to provide stronger student protection, and the recent amendments to the *ESOS Act*, aimed at ensuring all registered education providers act with integrity. Nevertheless, education providers that intend to establish campuses or subsidiaries abroad, or that want to negotiate strategic partnerships with foreign education institutes, still face considerable regulatory differences between the Australian quality assurance schemes (TEQSA or ASQA) and the respective quality and accountability standards of the foreign country where they would like to do business.

Participants in the business consultations found adherence to local quality standards even more challenging in foreign countries that did not have a national strategy and rather relied on state or provincial frameworks. Further alignment and harmonisation of quality standards would facilitate investment in transnational education as well as increase business partnerships in foreign markets. This is a large task, particularly when the two countries start from very different quality frameworks. The Australian Government is working to harmonise standards bilaterally or in international fora (e.g. China-Australia MOU on qualification recognitions in higher education, or APEC education strategy, and to reach some form of economic cooperation with less developed and emerging countries.

Box 5.5. Comparison of Post-study Work visas in English-speaking countries

The option of staying on after graduation to undertake qualified work is one element that prospective students consider when choosing their study abroad destination. Therefore, offering effective post-study working opportunities is as essential as building a strong university brand with international recognition.

Australia's post-study working arrangements allow international students who have recently graduated from an Australian educational institution to apply for a Temporary Graduate visa and stay for a period of time ranging from 18 months to four years, depending on the level of qualification they obtain in Australia. The number of Temporary Graduate visas lodged with the DoHA continues to rise over time. In 2015-16 there were over 34 000 visas lodged (the majority of which in the Post-Study Work stream), up by 42% compared to the previous period. Like Australia, other English-speaking countries, such as the United States, the United Kingdom and Canada, have similar working arrangements.

United States: international students can stay for up to 60 days after their studies end. Those that graduate with F-1 status, and provided their studies lasted longer than nine months, can stay and work for a total of 12 months after graduation (Optional Practical Training, OPT). Students who graduate with a science, technology, engineering and math (STEM) degree can, since March 2016, apply for a 24-month extension of their OPT, giving them the possibility of three years working experience. Once OPT expires an H-1B visa (specialty occupation) will be required to continue working in the United States.

United Kingdom: the post-study work visa route was closed in line with changes to immigration policy in 2012. Typically, non-EU graduates have only four months after their studies end to look for a job. If in that time they secure a job at a particular skill level that pays at least GBP 20 800, then they can apply for a Tier 2 (General) visa. This process is, however, more complicated for non-EU graduates as jobs have to be first advertised to workers in European Economic Area (EEA) before being offered to non-EEA immigrants, unless these jobs are on the shortage occupation list. The closest to a post-study working visa still available in the United Kingdom is the Tier 4 Doctoral Extension Scheme, available for PhD students who want to stay for an additional year to work or look for a job. To push its competitive edge as an innovation centre, the United Kingdom allows graduates with a genuine and credible business idea to apply for a Tier 1 Graduate Entrepreneur visa, which allows graduates that meet a set of eligibility requirements and that want to set up and run a business in the country to stay for up to three years and four months, with the possibility of renewal.

Canada: Study Permits become invalid 90 days after graduation; however, foreign graduates can still apply for a Post-Graduation Work Permit Program (PGWPP) if they studied in Canada for at least eight months and for a maximum of three years. The duration of stay of the PGWPP is equal to the length of full-time studying program. Studying in Canada also helps international graduates to qualify for permanent residency through programs like Express Entry.

Australian education providers considered post-study work arrangements just as important as an effective student visa framework and the global ranking of Australian education institutions. In fact, foreign students who can complement their studies with a professional experience are not only able to offset part of their education costs, but are also, and more importantly, able to build their professional skills, gain new insights into new working environments and build lasting professional connections. These working ties are essential not just for those that remain in the country as they increase employability outcomes, and might even contribute to developing new businesses in Australia, but also for graduates that eventually return to their home country, as these could be good leverage points for subsequent business interactions with Australia. Hence, well designed post-study work visas not only promote strategies attracting prospective international students but also trade and future business opportunities by building people-to-people links.

Regulatory challenges abroad

Barriers exist within the Asia-Pacific region to Australian exports of education services via commercial presence abroad (off-shore provision), domestic consumption by overseas students (in terms of recognition of Australian qualifications in their country of origin) and temporary movement of Australian academic and teaching staff abroad. Some economies allow Australia to set up overseas campuses, establishing branches of Australian institutions overseas and developing further offshore education services (Deloitte, 2015a). Among those campuses that have been successful in their international expansion abroad are Wollongong University's campus in Dubai (where enrolments have risen by 41% in the last five years), James Cook University in Singapore, Monash University's campuses in Malaysia and South Africa, Curtin University in Malaysia, and RMIT University's two campuses in Viet Nam. In 2014, there were over 800 higher education programmes offered by Australian universities abroad (Universities Australia website). Thousands of formal agreements are signed every year between Australian universities and those in foreign markets (Box 5.6). In 2016, 9 171 agreements in place were (up from 7 133 in 2012), facilitating Australian universities entry into foreign markets.

Barriers to Australian providers abroad can include a high level of control by local authorities and the need to wade through numerous domestic administrative hurdles and local content requirements before they can establish a commercial presence, including a stand-alone campus. This is the case in Indonesia, where Australian providers must be in partnership with an approved Indonesian higher education institution. In China, foreign higher education institutions may only be established as a joint venture where the head of the institution is a Chinese citizen. Australian providers also face some limitations on the number of their joint venture campuses in China and on how many times the same course can be repeated across Chinese campuses.

The Philippines maintains a foreign equity cap of up to 40% of ownership for investors in educational institutions other than those established by religious groups and mission boards (SEC, 2015). The Commission on Higher Education (CHED), the independent government regulator of higher education services in the Philippines, has tight control over all colleges and universities in the country. The commission regulates the closure, programme offerings, building specifications and tuition fees that universities are required to charge. Only a few private universities and colleges are granted autonomy or deregulated status.

By contrast, Viet Nam allows 100% foreign-owned investments and campuses to open under the 2005 *Decree 73/2012ND-CP, Investment Law* (Australian Government, 2013). Foreign providers of education in Viet Nam may establish as fully foreign-owned institutions, joint ventures, business cooperation contracts or representative offices, all of which are considered Vietnamese legal entities. Under business cooperation contracts, foreign providers can partner with Vietnamese investors without creating a new entity.

Despite the degree of freedom that foreign investors enjoy in Viet Nam, there are still minimum capital investment requirements for prospective foreign institutions.[36] For example, a foreign-invested university must secure a minimum investment of VND 150 million (approximately AUD 7 500) per student. More broadly, there is also a ban on acquiring and renting land in Viet Nam.

Australia and Viet Nam renewed two MOU for Cooperation in Education and Training in March 2018, outlining cooperation across all levels of education, including school education, English language collaboration, higher education and training.

Viet Nam and the Philippines both have restrictions on curricula, inscribed in their AANZFTA schedule of services commitments. In the Philippines, the status of post-graduate business programmes is decided by a technical panel of experts. In Viet Nam, adult education and other education services including foreign language training content must be approved by Viet Nam's Ministry of Education and Training, and foreign firms are also subject to restrictions on advertising online. Australian education exporters may have more investment opportunities in China, as indicated in China's 13th Five-Year Plan for Economic and Social Development (2016-2020). The plan suggests that private capital participation in education will be eased and favourable policies launched, so that the range of educational services available to consumers can be diversified and extended (KPMG, 2016).Limitations to temporary movement of Australian academics and teachers

Box 5.6. Entry modes for Australian education providers

Australian education institutions can expand their presence overseas following different business models. Universities can establish a fully-fledged university abroad or open only a campus to offer specific courses to domestic and third-country students. Some of these foreign establishments act as 'feeder campuses' by offering pre-university course or English language training. Feeder campuses can also provide the initial part of a programme overseas and then channel students to Australia, either to complete the rest of the programme or to upgrade to a higher degree/qualification.

Other education providers choose to operate through partnership agreements. These can take the form of joint ventures or licensing agreements, and might not necessarily be driven by the regulatory conditions found on site. A partnership can be a very effective way of overcoming some implicit and hidden barriers. A local partner would not only offer the infrastructure and better access to resident workforce, but also its extensive knowledge of the local demand, compliance with domestic regulation and red-tape, accreditation requirements, marketing to and recruiting new students (both domestic and international), and so on. A strategic partnership can also be an entry point into third foreign markets. Some providers have indicated in the business consultation that partnerships allowed them to expand their presence abroad simply by following their partners into new foreign countries.

Partnerships can be another way of overcoming the competition faced in foreign markets. Foreign private providers might find it harder to enter markets where the domestic provider is heavily subsidised by the local government. Some businesses also indicated that subsidies could benefit foreign education providers when their respective governments back them. This can be the case for ELICOS providers in some Asian markets competing with English providers, which are strongly supported by their own foreign government agencies, such as the British Council.

Some VET providers, particularly those with a relatively large global footprint, make frequent use of licensing agreements, where the foreign teaching staff is trained in Australia and once a certain level of competence and skill is attained, return to the provider overseas and deliver qualifications that are fully recognised in Australia. The Australian education provider is responsible for the intellectual property of courses and curricula offered abroad. The Australian institution also conducts quality controls to ensure that Australian accreditation standards are met. However, finding the right partner is critical for this model. In that respect, some VET providers have expressed doubts on whether such licensing agreements are a sustainable and efficient business model in the long run. Other forms of collaboration, such as joint ventures, would allow closer monitoring of the inputs and performance of the local partner. Experience with partners in certain foreign markets suggests this might be a critical factor.

Viet Nam restricts the recruitment of foreign teachers: 60% of course modules must be delivered by permanent teachers, although twinning programmes allow foreign courses to be taught in Viet Nam. The Vietnamese Ministry of Education and Training (MOET) or Presidents of certain Vietnamese universities are responsible for their approval at all levels. Equivalency needs to be set for curricula, facilities, legal status, quality assurance and accreditation. For twinning programmes, foreign teachers must have at least five years of experience and their qualifications need to be recognised by the competent authority.[37] To work as teachers in China, foreigners need a Z (work) visa (which requires a bachelor's degree), the necessary professional skills, two years of work experience, two sets of medical exams, no criminal record and English as their first language. The visa must be obtained from the applicants' home country or Hong Kong, China. Teachers typically will also need a Foreign Experts Certificate (SAFEA) and an Invitation Letter from the institution they will be working for.[38]

Government initiatives to boost the competitiveness of the sector

Australia's higher education market relies on attracting international students to study in Australia or at an Australian institution abroad. The DET has created a *National Strategy for International Education 2025* designed to increase the competitiveness of the Australian international education sector. This ten-year blueprint has three objectives: strengthening the sector's fundamentals by maintaining high quality education, training and research, fostering a positive student experience and ensuring effective quality assurance and regulation; enhancing partnerships with other universities, academics, institutions and governments, to build and maintain global and domestic connections, and promote mobility; and becoming globally competitive and responding flexibly to changing demands and opportunities.

Austrade has created the *Australian International Education 2025 market development* (AIE2025) roadmap to ensure that Australian institutions can be agile and responsive to the changing demands of the sector (Austrade, 2016a). The roadmap responds to possible market changes including borderless learning, technology utilisation and attracting capital flows from global sources (Box 5.7).

The Department of Foreign Affairs and Trade (DFAT) has set up the *Australian Global Alumni Engagement Strategy 2016-2020* to promote connection and engagement with the more than 2.5 million international students that have studied at Australian institutions. This strategy is planned to provide recent alumni with career and networking opportunities, and to inform them of special government-funded opportunities to undertake high-level research projects (DFAT, 2016).

Additionally, all states and territories have state-wide comprehensive plans for the education sector, except to some extent Western Australia (WA). Stakeholder consultations found that some Western Australian institutions felt disadvantaged because of this. RTOs also felt that WA could work toward attracting foreign students and professionals by taking advantage of its extensive knowledge and wealth of experience in the mining and energy sector, which could fuel demand for professional training in WA. Participants in the consultation called for greater collaboration among the largest universities in the state to sell the state brand better, but also pushed for an integrated state-wide strategy that would connect tourism and international education agendas.

Box 5.7. The digital transformation of higher education

The emergence of new technologies has been transforming traditional university models. Artificial Intelligence (AI), the Internet of Things (IoT), Augmented or Virtual Realities (AR/VR) are already been contributing to increasing efficiency and enhancing knowledge in various disciplines. Data-driven decision-making is widely used in universities in the form of search tools for scientific research, connecting learners to universities and matching students to career tutors. The surge in connected technology is replacing paper material with its digital version, enhancing information- sharing through cloud services, facilitating scheduling of courses, tracking capability developments, and providing the platform for e-learning. AR/VR are pushing research in science and medical fields and allowing students and vocational training professionals to engage directly with their subject matter via immersive and interactive experiences. Various alternative education models are already operating in the higher education sector: Modular Object Oriented Dynamic Learning Environments (MOODLEs) and Massive Open Online Course (MOOCs) provide open-source platforms for e-learning, while innovative methods are challenging conventional education models.

Navitas Ventures, part of the global education provider Navitas, collected the views of leaders from partner universities in Australia, the United States, Canada and the United Kingdom, students and recent graduates from all continents and founders of education start-ups in key markets, on how the digital transformation is changing higher education and what the challenges and possibilities might be. Most participants expected the traditional university model to be disrupted by the digital transformation within the next ten years. However, while universities focused more on administrative efficiency and lower operating costs through digitised learning content, students were more concerned with their immediate job prospects, calling for innovation to support their internships and pathways to employment.

Universities participating in this study also indicated the crucial role that digitising marketing and admission plays in driving enrolment growth, a view echoed by the Australian education providers interviewed during the stakeholder consultations. Some believed that online promotion via social media would offer a new alternative channel compared to education agents to directly reach out to international students. Others suggested that online models would increase transparency in international partnerships based on licensing agreements and enable the Australian provider to retain greater control on the education process, content and quality.

Thanks to the digital transformation of the education sector, distance learning allows a more inclusive delivery of education services, reaching out to more disadvantaged groups (in remote locations and poor communities). Distance learning might also help foster the skills underpinning knowledge-based economies and potentially bridge the education-employment divide. Nonetheless, distance learning, particularly when transnational, is still governed by a multi-layered framework of laws and regulations. Data localisation requirements, financial regulation restricting e-payments, broadband connection speed, complications with accessing and processing information, ownership of online course material, accreditation of qualifications obtained online, are some of the hurdles education institutions face when providing cross-border education services. Often laws and regulations are not aligned with recent technological developments. The pace of innovation and the establishment of new and alternative education models require a more flexible regulatory environment, with a coordinated answer from different regulatory bodies, which would enable hybrid education systems rather than maintain or create new barriers.

Source: Navitas Ventures (2017).

In summary, there are considerable opportunities for Australia to take advantage of its reputation, geographical location and proximity to Asia, and its extensive experience to establish itself as the world leader in education services exports. Nevertheless, the growth potential of the education sector may be compromised by some characteristics of the domestic regulation and limitations found in foreign markets. In particular, Australia's off-shore provision of education services still faces many obstacles in the form of restrictions to establishing wholly-owned Australian campuses abroad, non-accreditation of qualifications

delivered by Australian education providers overseas and limitations to the international mobility of Australian academics. Targeted promotion strategies by Australian State and Territory Governments would ensure greater visibility for Australian education institutions abroad and could boost the number of international students still higher. More concerted efforts are required, within the country and with foreign partners via FTAs, to address barriers at and behind the border that might inhibit education services exports.

The growth potential of the Australian tourism sector

Tourism is a vital part of the Australian economy. In the year to June 2017, Australia welcomed 8.5 million international visitors, up by 9% from previous year, who spent a record AUD 41 billion in the same year, 7% up from June 2016.[39] The strong growth in international tourism is moving Australia towards the lower bound of its *Tourism 2020* growth target for overnight visitor expenditure. Despite all the growth potential outlined in the national strategy for tourism, Australia still faces considerable challenges.

Promoting Australia's image overseas and marketing Australia as an international destination are critical for increasing the number of international visitors, particularly in a very competitive environment. Australia might benefit from recent geopolitical developments, including concerns around safety, increased levels of protectionism, and greater economic and political uncertainty, but cannot afford to be complacent. Much can still be done to increase the visibility of the country, secure major international events and entice international tourists to visit Australia. A coordinated response from the Commonwealth and individual states and territories, as well as from industry associations, is necessary to create interesting and effective marketing strategies to publicise Australia attractiveness as a great tourism destination.

Australia has made considerable progress in facilitating visa applications for certain nationalities, for instance implementing new and innovative tourist visa products, such as trials of lodgement in Simplified Chinese and a ten-year-validity Visitor Visa (subclass 600) for Chinese citizens to reduce red tape for frequent travellers. In addition, Australia has introduced a priority consideration service, whereby 'fast-tracked' Visitor Visa applications (including those lodged online) can be processed within 48 hours for an additional fee. Furthermore, as of July 2017, Chinese, Indian and United Arab Emirates nationals can lodge their application for the Visitor Visa online. Extending online lodgement to a wider range of nationalities is a significant enhancement in reducing part of the red tape involved in Visitor visa applications and might help to reduce processing time. Further embracing new technology and risk management settings would continue to ensure Australia maintains a sustainable growth of the tourism sector.

The national strategy *Tourism 2020* was introduced in 2011 with the objective of doubling overnight visitor expenditure by 2020. The plan identified the following key policy priorities: encourage high-quality tourism experiences, including Indigenous tourism; limit the tax, red-tape and other regulatory burdens the industry faces; undertake coordinated and effective marketing campaigns; and work with industry to support the development of tourism infrastructure that can drive demand. Tangible targets of the national strategy include increasing accommodation by 6 000 – 20 000 new rooms by 2020, capacity increases of 40-50% in international aviation and of 23-30% in domestic aviation, and an additional 152 000 persons employed by 2020 to meet demand.

The Australian National Audit Office (ANAO) recently published a review of the *Tourism 2020* strategy to assess its implementation so far by Austrade and Tourism Australia.

Monitoring and reporting of progress against the strategy targets, based on robust performance measures, concluded that there is sound evidence pointing to effective implementation. However, there is a gap in the assessment of the overall impact of the strategy in terms of net benefits to the Australian economy. Finally, the review also indicated that Australian Government funding allocated to the tourism sector is based on a transparent communication strategy, although there is still scope to improve on performance measurement at the operational level (ANAO, 2017).

The tourism industry and government have a major partnership role in promoting sustainable and more inclusive tourism growth. Achieving strong and sustained growth in international tourism depends on public confidence in Australia as a safe and secure tourism destination, and on well-managed and orderly visa programmes. The Government is embarking on a transformation of the existing visa system (Box 2.3), which will make it easier to understand and navigate, to the benefit not only international tourists but also international students and professional services providers making business visits to supply their services.

Tourists pay additional border charges, such as the Passenger Movement Charge (PMC) of AUD 60. This tax, included in the plane ticket price, is levied on all passengers departing Australia on international flights.[40] Australia has the third highest departure tax of all OECD members after the United Kingdom and Germany. The United Kingdom charges an Air Passenger Duty (APD) of GBP 75 (approximately AUD 127) on outbound flights in economy class, and GBP 150 (AUD 253) for all other classes. However, the APD offers lower rates of GBP 13 (AUD 22) for economy class and GBP 26 (AUD 45) for all other classes on flights of less than 2000 miles. The rate in Germany varies between EUR 7.47 (AUD 11.40) for European destinations and EUR 41.99 (AUD 64) for long-distance flights. As the PMC does not vary with distance, it is relatively more expensive than the tax levied in other countries for short-haul flights. For instance on the Trans-Tasman route, the International Air Transport Association (IATA) estimates it accounts for nearly 10% of an average return fare. The PMC was raised from AUD 55 to AUD 60 in 2016 and IATA estimated that the "reduction in aviation-related gross value-added (GVA), compared with a scenario where the passenger movement charge was abolished, could total AUD 375 million with 3800 fewer jobs supported" (IATA, 2016). The higher PMC not only affects international visitors but also Australian passengers, via higher fares, and Australian exporters by increasing transport costs and hence reducing competitiveness. Tourism and travel industry groups reacted to the 2016 increase by claiming that the tax might reduce demand from inbound passengers.

Industry associations are also calling for an expansion of air routes and agreements and the removal of aviation capacity restrictions. Aviation capacity is typically regulated by bilateral Air Service Agreements (ASAs), which set out the operation of scheduled international air services between two countries. Capacity, or access, entitlements, include the number of seats or flights that can be operated on established routes between the ASA partners. To date, the capacity of international airlines is restricted in Australian major gateway airports like Brisbane, Melbourne, Perth and Sydney, and secondary airports in Melbourne and Sydney, but is unrestricted for other regional Australian airports. Industry associations and major airports claim that the lack of capacity within certain ASAs effectively restricts access to the Australian market for some international airlines, limiting competition between foreign and domestic airlines on a number of routes, involving for instance main Australian gateway airports and Hong Kong, China or Malaysia. Lack of competition drives up airfares, dampening demand for tourism, travel, and trade in

general.[41] Costs are affected by exchange rate fluctuations as well, which might contribute to influence the motivation to travel.

There is also an infrastructure shortfall. Private and public investment is needed to improve the breadth and quality of offering, for projects like new airports and road links. In 2016–17, aviation infrastructure projects were worth over AUD 10 billion. More than half the pipeline investment in aviation was accounted for by the Western Sydney Airport at Badgery's Creek, with the rest spread across other major aviation infrastructure projects including upgrading and expanding of existing airports.[42] Increasing port capacity to accommodate more ships could also work to increase tourist demand. The estimated total output of the cruise industry in 2015-16 was AUD 2.9 billion, 10% up from the previous period.[43] In just over twelve years, the number of cruises has doubled, as has the passenger capacity of visiting ships (ACA, 2016). Industry associations suggested that infrastructure investment, including accommodation, attractions and telecommunications, could create a more diversified and widespread offer, reaching beyond the most visited cities, so as to ensure a more equitable and sustainable future growth of the sector.

There have already been various policy responses under the *Tourism 2020* plan, including the establishment of a network of investment specialists around the world to assist prospective foreign investors. These specialists should help identify high-potential projects, connect international investors with Australian counterparts, and assist them through the investment approval process.[44] Increasing investment in transport infrastructure like airports, roads, trains and cruise ship terminals, would address current growth constraints in the sector.

Availability of an adequately skilled workforce is another challenge to the growth potential of the tourism sector. A recent report suggests that skilled labour supply in the sector falls short by 38 000 positions based on 2014 ABS data, with rising vacancy rates (Deloitte, 2015b).[45] It also indicates that there has been a large increase in the number of businesses signalling skills deficiencies. In addition, productivity growth in the tourism sector is at below average to average relative to that of other industries, according to a recent report by the Committee for Economic Development of Australia (CEDA, 2017). Over the last fifteen years, labour productivity (output per hour worked) has increased in the retail trade, accommodation and food and transport sector, but has lagged behind elsewhere in the tourism sector. The sector's slow productivity growth could be explained by rapid wage growth, but also by the changing composition of tourism workforce. Jobs in the sector have become more seasonal, with increasing staff turnover rates, and higher shares of part-time workers, which are less likely to be involved in skills training programs. The report suggests that the Government could assist by improving the quality of training opportunities and the management of temporary workers. The provision of training would ensure a future supply of skilled workers to undertake tourism jobs that respond to the effects of digital disruption. A simplification of the visa arrangements around foreign skilled workers would also boost efforts addressing the skills shortage in the tourism sector. It would also be important to build the right management skills among tourism operators so they can tailor their services better to the rising demands of visitors from key tourism markets.

In summary, there is strong potential for increasing Australia's tourism market share, although some challenges still need to be addressed. From the perspective of a potential international tourist, the country's appeal could be enhanced with more effective tourist campaigns overseas, easier entry and more competitive air services competition. A more diversified intake of international visitors would reduce the dependence of Australian tourism on certain countries. There is also a need to better understand the commonalities and market synergies between tourism and international education.

Notes

1. Beijing, Tianjin, Shanghai, Jiangsu, Fujian, Guangdong and Hainan. An additional area of liberalisation in ChAFTA is the possibility for Australian providers to establish age care institutions throughout China.
2. The Revised System of Health Accounts (OECD/Eurostat/WHO, 2017) was recently established to provide a framework to record trade in health services. However, no data are available for Australia yet.
3. Definitions of the sector sometimes seem to be inflated by other health services, such as wellness treatment. Numbers based on visa applications only exist in cases where visas are required and when medical reasons are stated as the main reason for travel on the application. Data published by hospitals on the treatment of foreign nationals often do not distinguish between residents and non-residents. Also see Helble (2011).
4. See Chapter 6 on Governments initiatives for services competitiveness for a more detailed description of this program.
5. The Mining Contribution Index (MCI), a composite indicator including one on mineral rents as a percentage of GDP, summarises in a single number the mining and metals sector's contribution to over 180 national economies. Mineral rents are defined as production values minus "normal costs" so they loosely approximate the sum of tax and profit above "normal" profits from mining. For more information see ICMM (2016).
6. A caveat is that part of this drop may also be explained by a reduction in the price of intermediate goods relative to final output. An additional explanation might be that intermediate goods are used directly in the production process, while services are provided on a contractual basis with contract duration of several years.
7. For more information see: http://dfat.gov.au/trade/agreements/chafta/fact-sheets/Documents/fact-sheet-trade-in-services.pdf
8. http://www.ictsd.org/bridges-news/bridges/news/pacific-alliance-eyes-new-trade-deals-with-creation-of-associate-member
9. https://www.austrade.gov.au/About/about. The figure of AUD 424 million includes both administered (EMDG) and departmental funds. Austrade's departmental appropriation was AUD 198.4 million in 2016-17.
10. For more information, see: https://www.csiro.au/en/Research/Mining-manufacturing.
11. https://industry.gov.au/industry/IndustryInitiatives/AustralianIndustryParticipation/Pages/default.aspx.
12. It should be noted that no known dispute settlement case has been brought before WTO dispute settlement tribunals concerning national treatment measures regarding mining or mining services (OECD, 2017a).
13. This section focuses on higher education. According to the United Nations Central Product Classification, higher education includes post-secondary general, technical and vocational

education services as well as other higher (tertiary) education services leading to a university degree or an advanced research qualification such as a doctoral degree. The main providers of higher education services in Australia are universities, technical and further education (TAFE) institutes (which are owned, operated and financed by the various state and territory governments and provide vocational tertiary education courses) and registered training organisations (RTOs).

14. Revised ABS data indicates that Education-related travel services exports were valued at around AUD 26 billion in 2016, accounting for 33% of total services exports. The revision results from improvements made to the model ABS uses to estimate trade in travel services, and access to updated data sources, which, in August 2017, led to changes to a range of international trade in services data. The international services trade data used throughout this publication are taken from publications prior to August 2017, and thus are not the latest data available. For more information on the revisions to international services trade data please refer to the following ABS publication, Information Paper: Changes to the Australian System of National Accounts, 2016-17 (catalogue no. 5204.0.55.012).

15. These figures refer to 'Education-related travel' exports (from ABS BoP data) covering expenditure on course fees, accommodation, international travel, daily living costs, etc., and to all sub-sectors of educational services: primary and secondary, higher and tertiary, and other education and training programmes, such as English Language Intensive Courses for Overseas Students (ELICOS) and Vocational Education and Training (VET). Source: ABS, *International Trade in Goods and Services*, catalogue no. 5368.0 Table 9.

16. For more information, see the full year data on higher education statistics in 2016, available from the Department of Education and Training (DET).

17. For more information, see the end of year summary of international student enrolment data in 2016 available from DET.

18. Most (85%) of international students enrolled with Australian education institutes providing off-shore services were studying at off-shore campuses, while a small minority (15%) were receiving educational services through distance learning from Australian institutes.

19. Source: Department of Education and Training, Total VET Activity (TVA) data 2016.

20. For more details, see 2016 data on the global flow of tertiary-level students data from UNESCO.

21. More information is available from the Department of Education and Training, International Student Survey 2016.

22. The TPS assists international students whose education institution is unable to fully deliver their course of study and ensures that students are able to either complete their studies in another course, with another education institution or receive a refund of unspent tuition fees.

23. Mode 4 export also occurs in the business model adopted by Australian VET providers with licensing agreements with foreign partners to deliver Australian accredited and recognised courses, which requires Australian VET officials to visit their foreign partners to assess the quality of the courses and ensure that certain Australian Skills Quality Authority (ASQA) requirements are met.

24. This framework was a response to the 'Future directions for streamlined visa processing' report (DIBP, 2015), containing recommendations to enhance the system's long-term financial sustainability, Australia's border integrity and simplify the application process. In response a finding of some cases of misconduct by unregistered education agents, the Australian Government introduced measures in its *Protecting Vulnerable Workers Policy* (2016) and the *Migrant Worker's Taskforce*. The report also highlighted a large number of 'non-genuine'

students entering Australia. About 11 000 student visas were cancelled in 2015, after further assessments revealed these visas were being used as a pathway to permanent immigration.

25. The two visas types are: the Student Visa (subclass 500), and the Student Guardian Visa (subclass 590). The latter is foreseen for parents, relatives or other legal guardians of international students younger than 18 years of age studying in Australia on a student visa. A student visa is granted only if the prospective student is enrolled for a course that is registered, or is part of a registered course (a registered course is an education or training course offered by an Australian education provider registered on the CRICOS to offer courses to overseas students), on a full time basis. International student visas allow a maximum of 40 hours per fortnight while the course is in session and unlimited hours during scheduled course breaks. Students completing a Masters' degree by research or a doctoral degree (PhD) do not have work hours restrictions. The salary and employment conditions will be determined by the applicable Australian workplace law and international students can seek advice from the Fair Work Ombudsman on their salary and entitlements under the *Fair Work Act 2009*.

26. Misperceptions arose by foreign students and education agents that SVP was a 'stamp of quality' and therefore disadvantaging non-eligible education providers. Moreover, the practice of "course-hopping" was mostly associated with international students targeting education institutions eligible for SVP and then, once they obtained the student visa, switching to easier or cheaper education providers – e.g. from higher education to VET (PC, 2015b). An attempt to tackle this practice was made through the *National Code*, a legislative instrument of the *ESOS Act 2000*, which imposed a six month transfer restriction period for incoming international students.

27. Very few countries offer student loans to non-citizens as well as 'home' students. Norway grants loans to EEA and EFTA students. Exceptionally, as part of the recent Australian Higher Education Reform Package, which will commence from January 2018, New Zealand citizens will be eligible for student loans, although at the cost of no longer being entitled to Commonwealth fee subsidies.

28. For example, the *Australia Awards Scholarships*, administered by DFAT, is available to students from Asia, the Pacific, Middle East and Africa wanting to pursue full-time undergraduate or post-graduate studies in Australia. Recipients must return to their home country once graduated. The Australian Government also offers two additional scholarships to international students wanting to undertake a postgraduate qualification at Masters or PhD level (*Endeavour Postgraduate Scholarship*) or a postgraduate research qualification (*Research Training Program*). Some Australian universities offer financial support to selected international students, covering tuition fees and other costs fully or partly. The United Kingdom offers many government funding opportunities to overseas students (e.g. through the *British Chevening Scholarships*, the *Marshall Scholarships*, and the *Overseas Research Students Awards Scheme*). In addition, several UK universities offer scholarships to a wide range of international students. Similar opportunities are available in Canada, where many universities offer scholarships to international students. The Japanese Government also awards scholarships to international students wishing to study at Japanese universities.

29. International students receive 35% off multiple services in New South Wales and a discount in the Northern Territory. International students in Queensland and in Victoria pay a full-priced fare.

30. Following a consultation early in 2017, the Australian Government revised the *National Code of Practice for Providers of Education and Training 2018* (National Code), to come into effect on 1 January 2018. The National Code is a legislative instrument made under the *ESOS Act 2000*.

31. The Temporary Graduate visa (subclass 485) has two streams: a Graduate Work stream, with a length of stay of maximum 18 months (mostly for studies leading to a diploma level qualification or trade qualification closely related to nominated skilled occupations); and a Post-Study Work stream, which allows foreign students holding higher education degrees from CRICOS-registered education providers to stay 2-4 years.

32. Regulatory requirements are also in place for the accreditation of VET courses provided off-shore. VET providers must adhere to Australian accreditation requirements for the credentials and qualifications issued abroad to be nationally recognised, hence allowing the foreign graduate to use them in Australia. VET providers can offer qualifications in line with the AQF offshore (which needs to be audited at RTOs' cost), but can also have a top-up element to the AQF qualifications that covers aspects specific to the local labour market. Nevertheless, evidence from some Australian VET providers active overseas and consulted for this project reveals the intention of moving away from Australian accreditation so as to have more flexibility on curricula and to target more closely local standards so that the qualifications provided abroad are effectively recognised in the market where they are delivered.

33. RTOs like VET or ELICOS providers, offering training and courses to international students, must also register on CRICOS. The registration is not unique to the provider but rather a separate CRICOS application is required for each state or territory where the provider offers its services, increasing compliance costs.

34. For more details see the recently updated version of ELICOS Standards 2018: https://www.legislation.gov.au/Details/F2017L01349.

35. Australian higher education institutions have already started offering versions of their established programmes online due to the scale of its internal distances, which disadvantages students living in rural or remote areas of the country. A common platform for accessing this option is via Open Universities Australia, the national leader in online higher education, offering students the ability to choose over 150 degrees across a variety of disciplines from ten leading Australian universities.

36. Decree 73 on Foreign Investment in Education and Training (Decree 73/2012/ND-CP). See also Australian Government (2013).

37. Under the Agreement Establishing the ASEAN-Australia-New Zealand Free Trade Area (AANZFTA) the minimum required teaching experience of foreign staff has been reduced to three years. See also Invest ASEAN (2012).

38. Foreigners with high skill levels and specialists whose skills are urgently needed in China can apply for an R visa renewable every 180 days. Highly skilled workers can then get a five-year working residence permit. This visa, intended to attract global talent, began in 2013 and makes it easier to work temporarily in China. Once having worked in China for three years, eligible workers can apply for a Chinese green card.

39. For more details, see the Tourism Australia, International Visitor Survey, available at: http://www.tourism.australia.com/en. According to the ABS Tourism Satellite Account statistics (cat. no. 5249.0), total consumption by non-residents on inbound trips amounted to nearly AUD 45 billion in 2016-17.

40. According to IATA, the PMC is considered more of a departure tax than an airport charge, as its revenue is collected by the DIBP and does not directly contribute to passenger processing at airports.

41. The Productivity Commission suggested tackling this lack of competition by providing unrestricted access to foreign airlines operating air transport services to and from Australian's major gateway airports through open sky or open capacity agreements (PC 2015c).

42. More details can be found in the Tourism Investment Monitor 2017, from Tourism Research Australia, made available at https://www.tra.gov.au/.

43. While this figure refers to all passengers, including domestic ones, expenditures by international passengers contributed to more than half.

44. For additional information on current investment promotion initiatives in the tourism sector see: http://www.tourisminvestment.com.au/en.

45. However, that the term "skilled" used by Deloitte (2015b) does not align to the definition of skilled for migration (visa) purposes, which is referenced to Skill Level 1 to 3 occupations in the Australian and New Zealand Standard Classification of Occupations (ANZSCO).

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