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The impact of the China–Australia Free Trade Agreement on Australia's education exports to China: A legal and economic assessment

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1 | INTRODUCTION

For over two decades, the service sector has been the most dynamic and fastest growing sector of the global economy (World Trade Organisation [WTO], 2015). In contrast, the liberalisation of trade in services has progressed remarkably slowly in the multilateral arena under the WTO due to widespread regulatory barriers (Francois & Hoekman, 2010). The need for regulatory space for various policy objectives has been prioritised over the potential for significant gains from liberalisation of regulatory barriers to service trade. It is anticipated that progressive liberalisation of trade in services would be more likely to occur through unilateral actions and cooperation between free trade agreement ("FTA") partners (Dee & Findlay, 2009; Hoekman & Mattoo, 2013; Roy, 2016).

Under the WTO, education service is one of the most regulated and least liberalised service sectors (Lim & Saner, 2011; WTO, 2015). Greater liberalisation in this sector has yet to be achieved in existing FTAs either (Lim & Saner, 2011). Efforts pushing for further liberalisation in this sector both regionally and globally have been swamped by a host of domestic regulatory concerns including but not limited to quality assurance, equal access to education for all citizens and the potential threat to the role of government in providing education services as a public good for non-commercial purposes (Harman, 2004; Lim & Saner, 2011).

Against this backdrop, the China–Australia Free Trade Agreement ("ChAFTA") was concluded in June 2015 and implemented in December 2015.¹ As a landmark achievement in the development of the China–Australia bilateral economic relations, the ChAFTA is widely regarded as having great potential to facilitate trade and investment between the two countries. As far as education services are concerned, both governments committed to further cooperation in important areas such as mutual recognition of academic qualifications and exchange of teachers and students (DFAT, 2017a). These commitments reflect the latest approach to the liberalisation of trade in education services between two major economies, which is of significance to the future development of trade rules in this sector.

This paper studies China's commitments to liberalising education services under the ChAFTA, compares these commitments with China's commitments under the WTO and other FTAs and analyses the impacts of the ChAFTA on Australia's education service exports to China. Since the ChAFTA took

¹For general information and an overview of the ChAFTA, see Australian Government, Department of Foreign Affairs and Trade (DFAT), "China–Australia Free Trade Agreement," available at: WWW.dfat.gov.au/trade/agreements/chafta/Pages/australia-china-fta.aspx.

effect in December 2015, very few scholarly works have provided a legal and economic assessment of China's commitments in terms of education services. With regard to legal assessment, the first comprehensive volume of the ChAFTA contains one chapter on education services which, however, does not discuss the ChAFTA in the context of China's commitments under the WTO and its other FTAs or whether the ChAFTA has contributed to the growth of Australia's education exports to China (Chye, 2018). The Australia–China Relations Institute at the University of Technology Sydney provided a brief comparative overview of the ChAFTA and Australia's other FTAs (Qu & Laurenceson, 2017). With regard to economic assessment, there have been studies of the economic implications of the ChAFTA in general, and studies of cross-border education that do not focus on the ChAFTA. For example, Xiang et al. (2017) offered a prospective empirical analysis of the economic impacts of the ChAFTA on global coal output, trade, consumption and welfare from 2014. Levatino (2017) conducted a macro-level panel data analysis of international student enrolments in Australia's higher education, showing that the determinants of onshore enrolment are also related to offshore enrolment. Earlier work has been predominantly dedicated to studying the various factors which may affect student mobility globally or in other regions (e.g., Beine, Noël, & Ragot, 2014; Bessey, 2012; Kritz, 2016; Rosenzweig, Irwin, & Williamson, 2006). Therefore, this paper contributes to the literature by focusing on China's approach to liberalising its education sector under the WTO and FTAs with a focus on the ChAFTA and its impact on Australia's education exports to China.

The paper proceeds as follows. Section 2 reviews China's commitments on education services under the WTO and FTAs and discusses whether the ChAFTA has achieved a higher level of liberalisation in the sector. Section 3 starts by offering a preliminary assessment of the impacts of the ChAFTA on Australia's education exports to China based on data collected from various sources. This assessment is then tested through a regression analysis of the impacts of the ChAFTA under selected modes of services based on data availability. Section 4 concludes the paper.

2 | CHINA'S LIBERALISATION OF EDUCATION SERVICES

In China, education is a national priority and has long been regarded as being fundamental to the social and economic development and modernisation. As a key element of China's economic reform and opening-up, the Chinese government has made tremendous efforts to restructuring and promoting the education sector with an aim to expanding access to education, enhancing the competitiveness and quality of education services, building human capital and so forth. The value of education and the various objectives of the reform of the education sector are endorsed in some of the most fundamental national policy documents, such as the *Outline of China's National Plan for Medium and Long-term Education Reform and Development (2010–20)²* and the *National Education Development Thirteenth Five Year Plan.*³ A progressive education reform and development is crucial for China's transition to a new model of development based on services and innovation, as affirmed in the *13th Five Year Plan for National Economic and Social Development (2016–20).*⁴ These policy documents are implemented through a complex web of laws and regulations, which are amended or updated from time to

²国家中长期教育改革和发展规划纲要 (2010-20 年), Ministry of Education of the People's Republic of China, issued on 29 July 2010, available at: www.moe.gov.cn/srcsite/A01/s7048/201007/t20100729_171904.html (in Chinese).

³国务院关于印发国家教育事业发展"十三五"规划的通知, Issued by the State Council, Circular No. 4, 10 January 2017, available at: www.gov.cn/zhengce/content/2017-01/19/content_5161341.htm (in Chinese).

⁴中华人民共和国国民经济和社会发展第十三个五年规划纲要, adopted by the 4th Session of the 12th National People's Congress, 16 March 2016, available at: www.ndrc.gov.cn/zcfb/zcfbghwb/201603/P020160318573830195512.pdf (in Chinese).

time to comply with "the country's social and economic development, as well as new education needs and trends." (Organisation for Economic Co-operation and Development [OECD], 2016).

Through the accession to the WTO and active participation in bilateral and regional FTAs, China has strategically engaged in the process of globalisation and adroitly utilised it to facilitate and deepen domestic economic reform (Buckley & Zhou, 2013). In liberalising the service sector, China has taken an incremental approach to mitigate the impacts of foreign competition on the pursuit of various policy objectives including the growth of domestic service industries (Chen & Whalley, 2014; Shi, 2013). Globalisation has reshaped China's education industry (Mok, 2005). As a notable example, China's entry into the WTO has significantly promoted the internationalisation of its higher education in terms of cross-border education, cooperation with foreign educational institutions and competent regulatory bodies, international mobility of students and scholars, and the development of a more open and transparent regulatory framework for education (Ding, Yue, & Sun, 2009; Huang, 2003; Li & Zhao, 2010; Xu & Kan, 2013). The Chinese leadership holds the belief that to build a world-class education system, further education reform must deepen the level of opening-up and improve the quality of international cooperation. The ultimate goals of the opening-up are to train and attract international talents, improve the quality of education and research and build China's influence globally in the development of education policies and standards.⁵ Despite China's ambitions in liberalising the education sector, its commitments under the WTO and FTAs remain limited, allowing China flexibility in managing the pace of liberalisation and strengthening regulation and supervision when needed.

2.1 | China's WTO commitments on education services

Under the WTO, Members' obligations to liberalising service trade are set out in the General Agreement on Trade in Services ("GATS") and in each Member's "Schedule of Specific Commitments" ("GATS Schedule"). A GATS Schedule typically provides a list of sectors and subsectors, and a Member's commitments and limitations on market access and national treatment under each relevant sector or subsector. The commitments and limitations contain "horizontal commitments" (which apply to all listed sectors) and "sectoral commitments," all scheduled with regard to each of the four modes of service supply. These four modes are as follows: (1) Cross-border supply (i.e., services provided remotely by suppliers in one member via electronic means, the post, etc. to clients in another member); (2) consumption abroad (i.e., customers from one member enter the territory of another member to obtain services); (3) commercial presence (i.e., services suppliers of one member establish a presence in the territory of another member to provide services); and (4) presence of natural persons (i.e., persons of one member enter the territory of another member to supply services). This scheduling technique is applied in all of China's existing FTAs.

China's GATS Schedule covers primary and secondary education services (excluding national compulsory education), higher education services, adult education services and other education services (including English language training) (WTO, 2001). Special education services, such as military, police, political and party school education, are excluded. This list of sectors suggests that China was not prepared at the time to open the market in primary and junior secondary education—which is known as the 9 years of compulsory education—and special education services (Li & Zhao, 2010). This remains the case in China's latest FTAs as will be shown later. With respect to senior secondary education (i.e., Grades 9–12), higher education and the others, China's commitments are summarised below.

China made no commitments under Mode 1. Therefore, China retains the right to restrict education services provided remotely without the movement of suppliers and students, such as distance education and e-learning.

⁵See above note².

Under Mode 2, China committed to not imposing limitations on market access or national treatment in relation to Chinese students studying overseas.

With respect to Mode 3, China made no commitments on national treatment, which means that more favourable treatment can be afforded to Chinese education service providers in establishing a commercial facility to provide the services. However, China agreed to allow foreign education institutions to partner with Chinese education institutions and establish Sino-foreign joint schools with the former holding a majority interest. In addition, according to the horizontal commitments, China is free to impose restrictions on the establishment of branches by foreign education institutions. These foreign institutions may enter the Chinese market in the form of representative offices, but they may not engage in profit-making activities.

Under Mode 4, China's commitments are limited to permitting individuals (e.g., professors, researchers) to enter and provide education services in China when invited or employed by Chinese education institutions. These individuals must satisfy certain qualification thresholds (i.e., a Bachelor's degree or above and an appropriate professional title or certificate) and experience requirements (i.e., minimum 2 years' professional experiences). In addition, China's horizontal commitments allow senior employees (i.e., managers, executives and specialists) or salespersons from foreign education institutions to enter and temporarily stay for up to 3 years or 90 days in China. However, these commitments do not affect China's ability to use visa policies or other measures to restrict the entry and stay of foreign education providers.

2.2 | China's commitments on education services under the ChAFTA and other FTAs

Most of China's FTAs essentially reproduce its WTO commitments on education services as set out above. These include China's FTA with Singapore,⁶ Pakistan,⁷ Peru,⁸ Chile,⁹ Costa Rica,¹⁰ Iceland,¹¹ Switzerland¹² and Korea.¹³ However, the ChAFTA goes beyond these WTO commitments in several aspects.

⁶China–Singapore Free Trade Agreement, China's Schedule of Specific Commitments on Services, effective on 1 January 2009, http://fta.mofcom.gov.cn/topic/ensingapore.shtml.

⁷China–Pakistan Free Trade Agreement, China's Schedule of Specific Commitments, effective on 10 October 2009, http:// fta.mofcom.gov.cn/pakistan/xieyi/chinachengruo_en.pdf.

⁸China–Peru Free Trade Agreement, China's Schedule of Specific Commitments on Services, effective on 1 March 2010, http://fta.mofcom.gov.cn/bilu/annex/bilu_fujian6_01_en.pdf.

⁹China–Chile Free Trade Agreement, Schedule of Specific Commitments—Schedule of China, effective on 1 August 2010, http://fta.mofcom.gov.cn/chile/xieyi/zhongfangchengruo2.pdf. It is notable that the parties have concluded negotiations of the upgrading of the FTA, the legal text of which has not been made publicly available.

¹⁰China–Costa Rica Free Trade Agreement, Schedule of Specific Commitments—Schedule of China, effective on 1 August 2011, http://fta.mofcom.gov.cn/topic/encosta.shtml.

¹¹China–Iceland Free Trade Agreement, China—Schedule of Specific Commitments—Schedule of China, effective on 1 July 2014, http://fta.mofcom.gov.cn/iceland/xieyi/xieyifj07-zfcrb_en.pdf.

¹²China–Switzerland Free Trade Agreement, China—Schedule of Specific Commitments, effective on 1 July 2014, http://fta. mofcom.gov.cn/topic/enswiss.shtml (see Annex 6 on General Provision & Definitions and Annex 7 on Specific Commitments).

¹³China–Korea Free Trade Agreement, China–Schedule of Specific Commitments, effective on 20 December 2015, http:// fta.mofcom.gov.cn/korea/annex/fujian8_A-2_zfcrb_en.pdf.

First, China agreed to list on its official website (www.jsj.edu.cn) 77 Australian higher education institutions registered under the Commonwealth Register of Institutions and Courses for Overseas Students ("CRICOS") within 1 year after the ChAFTA took effect. At the time of writing, China has listed 42 Australian universities and colleges, 67 CRICOS-registered private institutions and 38 technical and further education institutes. This has the effect of enhancing the recognition of Australian institutions in China and attracting Chinese students to study in Australia.

Second, in a Side Letter on Education,¹⁴ the parties agreed to "maintain programs facilitating teacher and student exchanges," subject to discussions between their respective government organs, namely, Australia's Department of Education and Training and China's Ministry of Education. China confirmed its willingness to receive more Australian students under Australian Government-funded programs, including the New Colombo Plan. These commitments would serve to facilitate the movement of scholars and students between the two countries. Furthermore, the parties will "discuss options for marketing and recruitment opportunities for Australian education suppliers in China," including "application processing, the issuing of offers and provision of visa assistance." Developments in this regard would help promote Australian institutions and facilitate and expand student recruitment in China. In return, Australia confirmed that its door is open for Chinese international schools, subject to the relevant regulations maintained at state and territory levels.

Third, with respect to domestic regulation and mutual recognition, the ChAFTA predominantly reproduces the relevant sections of the GATS, with three major additions, including:

- when an incomplete application is received for the approval of the supply of education services, the competent authorities of each party must inform the applicant of all the additional information required to complete the application (Article 8.13(3a));
- when an application is terminated or denied, written reasons for the decision must be provided to applicants (Article 8.13(3c)); and
- where possible, the parties agree to encourage their relevant competent bodies to recognise, or to explore possibilities for mutual recognition of, respective professional and vocational qualifications (Article 8.15(1)), such as "the education or experience obtained, requirements met, or licenses or certifications granted in the other Party" (Article 8.14(1)).

Compared with China's other recent FTAs, these commitments represent a positive step towards the development of disciplines on domestic regulation and mutual recognition. For example, the China–Korea FTA, which was concluded at the same time as the ChAFTA, does not contain the commitments on the approval of applications for the supply of education services (i.e., Articles 8.13(3a)& (3c) of the ChAFTA) and the qualification recognition cooperation (i.e., Article 8.15(1) of the ChAFTA).¹⁵ The first two additional commitments under the ChAFTA would contribute to enhancing the procedural reasonableness and transparency of decision-making and hence reduce undue administrative costs and uncertainty. The last commitment may encourage wider and deeper cooperation on mutual recognition over time although it is an aspirational rather than obligatory commitment. However, it must be noted that the parties' substantive commitments on domestic regulation relating to qualification requirements and procedures, technical standards and licensing requirements remain substantially the same as those under the GATS. Any further development of these commitments

¹⁴China–Australia Free Trade Agreement, Side Letter on Education, 17 June 2015, available at: http://dfat.gov.au/trade/ agreements/chafta/official-documents/Documents/chafta-side-letter-on-education.pdf.

¹⁵China–Korea Free Trade Agreement, effective on 20 December 2015, Articles 8.7 and 8.9, http://fta.mofcom.gov.cn/korea/annex/xdzw_en.pdf.

under the ChAFTA is also dependent upon the GATS negotiations on the disciplines on domestic regulation (Article 8.13(4)). In practice, neither the GATS negotiations nor FTAs have been successful in developing regulatory disciplines for services in general, although regulatory disciplines in specific service sectors have been gradually developed under FTAs (Krajewski, 2016). Accordingly, the ChAFTA does not break new ground in developing substantive rules on domestic regulation and mutual recognition. This means that China retains the right to determine how to regulate in these areas. As far as mutual recognition is concerned, the parties *may* negotiate arrangements "relating to professional and vocational services" according to Article 8.15 of the ChAFTA. In other words, there are no binding commitments on mutual recognition. This clause is a hortatory one and arguably has limited effects. In practice, it is typically up to the relevant regulatory bodies in both countries to conduct the negotiations and produce substantive outcomes when possible.¹⁶

Fourth, like China's FTAs with New Zealand, Singapore, Peru and Switzerland, the ChAFTA extends the period of temporary stay for service salespersons (which are also referred to as a type of Business Visitor) from 90 days to 6 months. However, the ChAFTA provides a higher level of liberalisation by granting spouses and dependents of senior employees of Australian education institutions that have a commercial presence in China the same period of stay subject to the condition that the senior employees stay in China for more than 12 months. In addition, beyond China's GATS commitments, the ChAFTA allows education service suppliers with the relevant qualifications and experience, from Australian institutions that have no commercial presence in China, to enter and perform a service in China "pursuant to a contract(s) between their employers and a service consumer(s) of China" for the period stipulated in the contract and with the initial stay not more than 1 year. This commitment also appears in the ASEAN–China FTA.¹⁷

Overall, the ChAFTA reflects China's best practice in liberalising the education sector so far with one notable exception. That is, the China–New Zealand FTA, concluded in 2008, contains a commitment for the parties to jointly work on the "evaluation of the quality assurance criteria for qualifications which include a distance delivery component."¹⁸ This represents a step towards further liberalisation under Mode 1.

3 | IMPACTS OF THE ChAFTA ON AUSTRALIA'S EDUCATION SERVICE EXPORTS

International education is Australia's third largest export and largest service export, making significant contributions to Australia's gross domestic product (GDP), local employment and human capital development (Deloitte, 2016). In 2016, the education sector accounted for 30.8% of Australia's service exports, with international education delivered onshore contributing over \$22 billion to the Australian economy (DFAT, 2017b). Australia has long been committed to improving the quality and global competitiveness of its education services and to expanding international education

¹⁶For example, in the legal services sector, mutual recognition of legal qualifications between Australia and China has not been achieved under the ChAFTA (Zhou & Xi, 2017). The competent bodies in both countries continue to discuss possible arrangements in this regard.

¹⁷ASEAN–China Free Trade Agreement, China—Schedule of Specific Commitments for the 2nd Package of Commitments under the ASEAN–China FTA Trade in Services, effective on 1 May 2016, http://asean.org/storage/2012/10/Protocol-to-Amend-the-Framework-Agreement-ACFTA-Complete.pdf.

¹⁸China–New Zealand Free Trade Agreement, China Schedule of Specific Commitments on Services, effective on 1 October 2008, http://images.mofcom.gov.cn/gjs/accessory/200804/1208159672262.pdf.

(particularly higher education) (Department of Education and Training, 2016; Harman, 2004). These efforts have made Australia the third most preferred destination for international students after the United States and the UK (Australian Trade and Investment Commission, 2017). China is the largest market for Australia's education exports. Notably, in sharp contrast to globally declining student mobility in 2016 (OECD, 2017a), the two-way student flows between China and Australia continued to increase.

3.1 | Cross-border supply

Given the availability of data, our analysis under Mode 1 focuses on Australia's higher education exports to China. Under this mode, the main component of Australia's higher education exports to China has been the various joint programmes between education institutions in both countries. Similar to the so-called franchise/twining arrangement (Asia-Pacific Economic Cooperation [APEC], 2009), the programmes allow Chinese students to undertake studies/courses at the Chinese partner institution and obtain qualifications from the Australian or both institution(s). Under the joint programmes at the undergraduate level, students are typically enrolled with the Chinese institution and undertake the courses offered by both institutions in China. Students are often required to undertake the final year of study in Australia. Both institutions will award a Bachelor degree. Under the postgraduate joint programmes, while the Chinese partner institution provides the facilities and manages the programmes, students are often enrolled with the Australian institution and undertake courses designed by that institution. Degrees are awarded by the Australian institution. Accordingly, the joint programmes tend to fall within Mode 1 as they do not require the movement of the Australian suppliers (Lim & Saner, 2011), although the final year of study in Australia falls within Mode 2. By August 2017, 151 Sino-Australia joint programmes had been approved by China's Ministry of Education including 114 programmes offering Bachelor degrees and 37 offering Master's degrees (Ministry of Education, 2017). Figure 1 shows the number of China–Australia joint programmes approved between 2002 and 2017.

The significant surge of the joint programmes in 2003 was most likely a result of the promulgation of the Regulation on Chinese-Foreign Cooperative Education.¹⁹ The Regulation provides the legal basis for the joint programmes between Chinese and foreign education institutions and recognises the degrees awarded by these institutions under the programmes (Article 34). Consistent with China's commitments under the GATS and FTAs, the joint programmes must not involve compulsory education and special education services (Article 6). The increase in 2006, after a sharp decline in 2004 and 2005, may have to do with the commencement of the ChAFTA negotiations following the joint feasibility study between the two governments in 2005, which offered a positive estimation of the benefits of an FTA on the two-way trade in education services (DFAT, 2005). In 2007, China's Ministry of Education released the Notice on Further Regulating Chinese-Foreign Cooperative Education,²⁰ which tightened the review and approval of joint programmes to safeguard the quality of the cooperative education. This is likely the cause of the decrease in the approved programmes in that year. The 2007 measure, combined with the influence of the global financial crisis ("GFC"), meant that there were no China-Australia joint programmes approved in 2008. After the GFC, the number of joint programmes rebounded and peaked in 2012, without a clear correlation with the ChAFTA negotiations. Notably, the conclusion of the ChAFTA negotiations in November 2014, the signing of the

¹⁹中华人民共和国中外合作办学条例, promulgated by the State Council, Decree No. 372, 1 March 2003, effective on 1 September 2003, available at: www.crs.jsj.edu.cn/index.php/default/news/index/2 (in Chinese).

²⁰教育部关于进一步规范中外合作办学秩序的通知, promulgated by the Ministry of Education, Circular No. 14, 6 April 2007, available at: www.crs.jsj.edu.cn/index.php/default/news/index/18 (in Chinese).

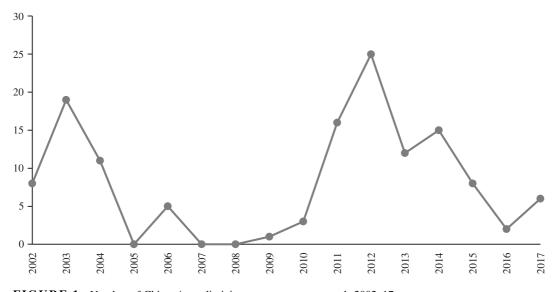


FIGURE 1 Number of China–Australia joint programmes approved 2002–17 *Notes:* The data are collected from Ministry of Education of the People's Republic of China, available at: http://www.crs.jsj.edu.cn/index.php/default/approval/orglists. For programmes without approved date information, the date for enrolment is used.

ChAFTA in June 2015 and the commencement of its implementation in December 2015 did not lead to an increase in the joint programmes. In early 2017, the Chinese government promised to relax the approval procedure for Chinese-Foreign cooperative education in the *National Education Development Thirteenth Five Year Plan*, which led to an increase in the approval of joint programmes. It is uncertain whether the continuous implementation of the ChAFTA contributed to the increase in 2017. Accordingly, one may tentatively conclude that the ChAFTA has not played a significant role in motivating applications for joint programmes so far. Rather, it is most likely that China's regulatory changes have been the main factor affecting the number of approved programmes. This conclusion is confirmed by our regression analysis in Section 3.5 below.

Under Mode 1, the major regulatory barrier in China remains the lack of recognition of cross-border distance and online education.²¹ While the expansion of Internet education is one of the policy priorities in China's *National Education Development Thirteenth Five Year Plan*, the regulatory framework for transnational distance education has yet to be established. The exponential growth of China's online education industry in recent years has created issues relating to quality assurance (OECD, 2017b). This explains why China did not make any commitments on distance and online learning under the WTO or the FTAs. China's only commitment under the FTA with New Zealand is also limited to joint work programmes whereby the two governments aim to develop assessment criteria for the recognition of distance learning. Currently, degrees or diploma obtained through distance education, network education and other non-face-to-face education will not be verified by China's Ministry of Education.²² However,

²¹This regulatory barrier is also a common major restriction under Mode 1 in the Asia-Pacific region (APEC, 2009).

²²Chinese Service Center for Scholarly Exchange (CSCSE) Notice on the Verification of Overseas Academic Degrees and Diploma (教育部留学服务中心国(境)外学历学位认证须知), available at: WWW.renzheng.cscse.edu.cn/Html/rz_xz.html. The CSCSE is the national professional accrediting authority under the Ministry of Education, providing a wide range of services for Chinese students studying overseas and foreign students studying in China. Under the CSCSE, the Overseas Academic Credential Evaluation Office is responsible for verifying foreign academic higher education qualifications for official recognition in China.

as China continues to promote distance and online education, a regulatory framework for transnational distance education will be established over time so that this regulatory barrier may be lifted. The removal of the barrier will provide a massive Chinese market for Australian higher education providers which are already delivering online education on a wide range of subjects to a great number of students (Chye, 2018; Norton, 2016).

3.2 | Consumption abroad

Consumption abroad has been the most common way of education services. International students in Australia undertake all levels of studies ranging from primary and high schools, English language courses (i.e., English Language Intensive Courses for Overseas Students [ELICOS]), vocational education and training (VET) and higher education. In 2017, the total number of international student enrolments was approximately 800,000, of which 44% was in higher education: see Figure 2.²³ China was the largest source country, accounting for 29% of all international student enrolments in 2017: see Figure 3.

Overall, international student enrolments in Australia have seen a high-growth trajectory since 2002—especially in higher education—despite the sectoral downturn between 2009 and 2011 (Deloitte, 2016; Productivity Commission, 2015): also see Figure 4. This trend may be attributed to a host of factors (Deloitte, 2016; Productivity Commission, 2015). In general, the growth of international student enrolments has been mainly driven by income growth and rapidly increasing demand for education in emerging economies, as well as the direct pathway from the student visa programme to Australian permanent residency. A major decline between 2009 and 2011 was caused by the appreciation of Australian dollar, the GFC, visa policy changes and several safety incidents. This was followed by a strong resurgence as the world economy continued to recover. The depreciation of the Australian dollar since 2013 may be another contributing factor: see Figure 5.²⁴ Besides, according to Australia's Productivity Commission (2015), the introduction of streamlined visa processing ("SVP") and post-study work rights ("PSWR") in 2012 and 2013, respectively, may have also promoted international student enrolments. While the SVP created a fast track visa processing pathway for international students, the application of the less restrictive and longer PSWR programme improved the opportunities for these graduates to gain working experience and access to permanent residency in Australia. However, our regression study in Section 3.5 will show that the impact of the SVP and the PSWR should not be overstated.

In addition to the factors above, the significant and steady increase in the number of Chinese students in Australia's higher education must also be attributed to the "Arrangement on Higher Education Qualifications Recognition" between China and Australia signed in 2003 and subsequently renewed in 2007, 2011 and 2014.²⁵ This seems to have offset the impact of the sectoral downtown on Chinese student enrolments from 2009 to 2011. Following a slight decline in 2013,

²³Figures 2–4 are based on data collected from Australian Trade and Investment Commission, available at: www.austrade. gov.au/Australian/Education/Education-Data/2017/Pivot-tables.

²⁴The data are collected from the Reserve Bank of Australia, available at: www.rba.gov.au/statistics/historical-data.html#exc hange-rates. Figure 5 has considered both the nominal exchange rate between the Australian and Chinese currencies as well as Australia's trade weighted exchange rate showing a consistent trend in the changes in the value of the Australian currency.

²⁵Department of Education and Training, Arrangement on Higher Education Qualifications Recognition between the Government of Australia and the Government of People's Republic of China, resigned on 17 November 2014, available at: WWW.internationaleducation.gov.au/International-network/china/publications/Documents/U-Chi-282.PDF.

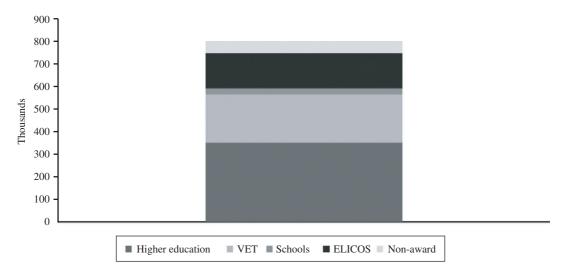


FIGURE 2 Number of international student enrolled by sector, 2017

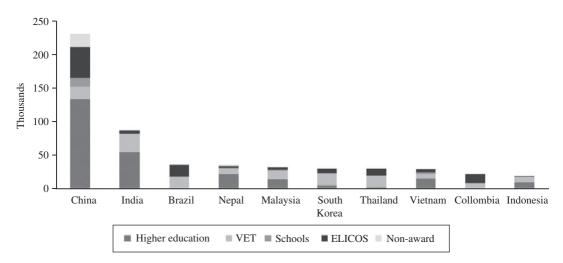


FIGURE 3 International student enrolment by source country, 2017

Chinese student enrolments in Australia's higher education have continued to grow since 2014, with a remarkable increase of 15% in 2016 (based on the level of enrolments in 2015). This growth may have a bearing on the conclusion of the ChAFTA negotiations in 2014, the signing of the ChAFTA in mid-2015 and the implementation of the ChAFTA since December 2015. Since 2015, Australia's total exports of education-related services to China increased by approximately 30% for two consecutive years, with the higher education sector generating \$19.1 billion in export income (Department of Education and Training, 2017).

Compared with the other modes of service supplies, home or service importing countries do not usually impose regulatory restrictions under consumption abroad which concerns consumers not service suppliers (APEC, 2009). Instead, host or service exporting countries may regulate international students. Australia is a typical example in this regard. To manage the large number of incoming students, Australia has maintained a high level of regulatory intervention through immigration policies, qualification and reporting requirements for education providers, etc., with an aim to preserve the quality of education and protect the interests of international students (APEC,

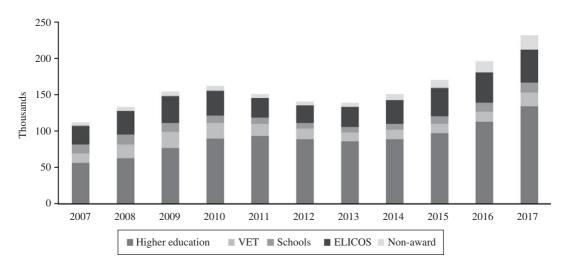


FIGURE 4 Number of international student enrolment by China, 2007–17

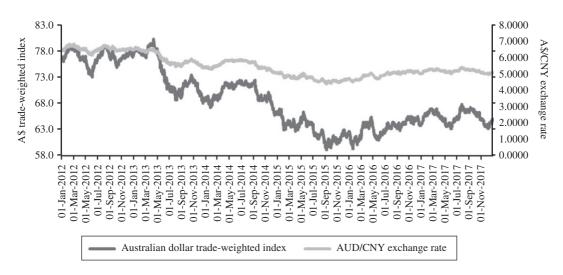


FIGURE 5 Australian dollar exchange rate, 2012–17

2009; Productivity Commission, 2015). To reduce unnecessary restrictions, Australia's latest regulatory reform focused on deregulation through streamlining compliance and reporting requirements and processes for education institutions, and enhancing the division of labour and coordination between the competent regulatory bodies (Department of Education and Training, n.d.; Dow & Braithwaite, 2013). The ultimate goal is to ensure that "the benefits to the entire community from such intervention outweigh the costs of that intervention" (Productivity Commission, 2015). As the reform continues in that direction, it will create a more liberal environment for Australia's education exports under Mode 2.

3.3 | Commercial presence

Mode 3 (commercial presence) requires foreign education providers to establish physical facilities to provide services in China. While this means higher levels of commitment and risk of foreign

education institutions, they do so to secure new markets, promote reputation and recognition and facilitate and enlarge recruitment (Levatino, 2017). As flagged in Section 2, China maintains restrictions on the entry of foreign education institutions. Essentially, foreign higher education institutions must partner with a Chinese institution through Sino-foreign cooperative joint ventures and hence cannot establish a wholly foreign-owned institution.²⁶ The operation of the joint ventures must be led by Chinese parties (e.g., the principal of the joint institutions must be Chinese). In addition, the operation of joint institutions is subject to other regulatory restrictions and uncertainties, such as limitations on profit-making (i.e., education is a public service and an exercise of government function), financing and repatriation of profits, access to government assistance (e.g., tax exemptions) and so forth (Chye, 2018). These potential barriers have not been relaxed under the ChAFTA and hence would remain an obstacle to Australia's investment in education services in China. In practice, these restrictions have discouraged Australian universities from entering the Chinese market via joint ventures. As of this writing, only six joint campuses have been established between Australian and Chinese universities in China: see Table 1. The joint schools have a total of 9,000 students who receive joint or double degrees from both Chinese and Australian institutions. As China continues to simplify the requirements and review processes for Sino-foreign joint schools and requests for enhanced market access for Chinese education institutions in Australia, Australia should seek to relax the above regulatory restrictions under the current review of the Services Chapter of the ChAFTA.

3.4 | Presence of natural persons

Mode 4 (presence of natural persons) concerns the movement of individual Australian education providers (e.g., teachers, scholars and researchers) to provide services in China. Due to the lack of data, it is difficult to evaluate the trend of such movement and the impact of the ChAFTA. However, China's more liberal commitments under the ChAFTA (as discussed in Section 2) would serve to improve the mobility of Australian academic and professional staff to China. Furthermore, the joint programmes under Mode 1 would have already promoted research and teaching collaboration and exchange between partner institutions. In addition, there are other existing cooperation arrangements between the two countries dedicated to the expansion of research and teaching collaboration and exchange, particularly the *Memorandum of Understanding on Cooperation in Education, Training and Higher Education Research*²⁷ and the *Memorandum of Understanding on*

²⁶Catalogue of Industries for Guiding Foreign Investment (外商投资产业指导目录), promulgated by the State Planning Commission (SPC), State Economic and Trade Commission (SETC) and the MOFTEC, effective on June 20, 1995; amended in 1997 (by Order No. 9 of the SPC, the SETC and the MOFTEC), in 2002 (by Order No. 21 of the SPC, the SETC and the MOFTEC), in 2007 (by Order No. 57 of the NDRC and the MOFCOM), in 2011 (by Order No. 12 of the NDRC and the MOFCOM), in 2015 (by Order No. 12 of the NDRC and the MOFCOM, effective on 10 April 2015) and in 2017 (by Order No. 4 of the NDRC and the MOFCOM, effective on 28 July 2017). China has now adopted a negative list approach to regulating foreign investment. The prohibition of wholly foreign-owned education institutions remains applicable to higher education, amongst other sectors. See Special Administrative Measures on Access to Foreign Investment (Negative List) (2018) 《外商投资准入特别管理措施 (负面 清单) (2018年版)》, issued by Order No. 18 of the NDRC, 28 June 2018, available at: http://www.ndrc.gov.cn/zcfb/zcfbl/201806/t20180628_890730.html (in Chinese).

²⁷The Department of Industry, Innovation, Science, Research and Tertiary Education of Australia, the Department of Education, Employment and Workplace Relations and the Ministry of Education of the Peoples' Republic of China, *Memorandum* of Understanding on Cooperation in Education, Training and Higher Education Research, signed on 2 December 2002, renewed on 13 October 2009 and 12 December 2012, available at: www.internationaleducation.gov.au/About-AEI/Gove rnment-Relations/Bilateral-Relationships/Documents/China%20Education%20MoU.pdf.

*Cooperation in Student, Researcher and Academic Mobility.*²⁸ These commitments and arrangements are reflective of China's policy priorities in support of such cooperation and exchange as shown in Section 2.

3.5 | Regression analysis

This subsection offers a regression analysis of the impacts of the ChAFTA on Australia's education exports to China under Modes 1 and 2. While the analysis reports the impacts of the ChAFTA on higher education exports under Mode 1 (i.e., Sino-Australia joint programmes), it shows the regression results of the total number of international student enrolments from China (including higher education, VET, schools and ELICOS) as well as the number of Chinese student enrolments in higher education. The impacts of the ChAFTA under Mode 3 will remain limited until the relevant Chinese regulatory barriers are relaxed. We do not have sufficient data to conduct the same analysis for Mode 4.

Broadly speaking, existing studies have classified the factors affecting international student flows into two categories including "push factors (i.e., factors encouraging outward student flows) and pull factors (i.e., factors encouraging inward student flows)" (e.g., Beine et al., 2014; Eder, Smith, & Pitts, 2010; Mazzarol & Soutar, 2002; Tan, 2013). While these studies show that the relevance of such factors varies from country to country, they have identified a number of major "push and pull" factors including, inter alia, per capita GDP and tuition fee, reputation and quality of education institutions, visa policies and opportunities for migration and work (Beine et al., 2014; Eder et al., 2010; Hao, 2013; Mazzarol & Soutar, 2002). These factors have also been found to be highly relevant to Chinese students' choice of studying in Australia (Meek, 2013; Yang, 2007; Yue, 2013), largely consistent with the variables discussed in Section 3.2 above. For the purpose of the regression analysis in this section, we consider five variables including the ChAFTA, China's GDP per capita, Australia's relaxation of visa processing requirements and PSWR and the fluctuation of Australian dollar.²⁹ To measure the impacts of the ChAFTA (as one of the variables) on Australia's education exports to China, the other variables are held fixed. The effects of these variables can be controlled in the following regressions:

$$\ln(PROG_t + 1) = \alpha_0 + \alpha_1 ChAFTA + \alpha_2 X_t + \varepsilon_t, \tag{1}$$

$$\ln(ENROL_t) = \beta_0 + \beta_1 ChAFTA + \beta_2 X_t + \varepsilon_t, \qquad (2)$$

where $PROG_t$ and $ENROL_t$ indicate, respectively, the number of Australia–China joint programmes approved and the number of international student enrolments from China. Since the logarithm of zero is undefined, a very small value is added so that no observation is lost when the natural logarithm is taken (Levatino, 2017). *ChAFTA* is a dummy variable and indicates the China–Australia Free Trade Agreement. It is set to be 0 before 2015 and 1 afterwards to reflect the conclusion and implementation of the agreement in 2015. X_t contains the control variables, including GDP per capita, enrolment ratio, exchange rate and dummy variables of SVP and PSWR. The data range

²⁸The Government of Australia and the Government of the Peoples' Republic of China, Memorandum of Understanding on Cooperation in Student, Researcher and Academic Mobility, signed on 12 December 2012, renewed on 17 November 2014, available at: WWW.china.embassy.gov.au/files/bjng/Australia-%20China%20MoU%20Student%20Mobility.pdf.

²⁹The reputation and quality of Australia's education are highly and widely recognised and remain stable and hence are not included as a variable in the regression analysis.

Date to chinese partnerDate to studentEducationSchoolChinese partnerartnerstudentevelscaleLiaoning UniversityVictoria2000Bachelor1,8001ubiSoutheast UniversityUniversity2012Master & 1,450EasSoutheast UniversityUniversity of2012Bachelor & 3,500EasSoutheast UniversityUniversity of2012Bachelor & 3,500EointUniversity ofUniversity of2016Bachelor & 3,500EointUniversityUniversity of2016Bachelor & 3,500Estate china NormalUniversity of2016Bachelor & 3,500EogyXi'an University ofUniversity of2016Bachelor & 200DoctorogyArchitecture and TechnologyUniversity ofUniversity of2016Bachelor & 200DoctorogyArchitecture and TechnologyUniversity ofUniversity ofUniversity of00O	۰ د						
Chinese partnerpartnerstudentlevelscaleCnessLiaoning UniversityVictoria2000Bachelor1,800Liy-MonashSoutheast UniversityVictoria2012Master & 1,450Ey-MonashSoutheast UniversityUniversity2012Bachelor8,3,500EraduateShanghai UniversityUniversity of2012Bachelor & 3,500ELanguageShanghai UniversityUniversity of2012Bachelor & 3,500EualCentral China NormalUniversity of2016Master3,500EnalCentral China NormalUniversity of2016Bachelor & 3,500Eogong JointUniversity ofVollongong2016Bachelor & 3,500EuthwestSouthwestVesta2016Bachelor & 1,200CofVesta2016Bachelor & 1,200CofVestaSouthVesta2016Bachelor & 1,200ChArchitecture and TechnologySouthAustraliaAustralia2017Master200CofSouthVesta2016Bachelor & 1,200CCCCChArchitecture and TechnologySouthAustraliaAustraliaCCChArchitecture and TechnologySouthAustraliaCCCChArchitecture and TechnologySouthAustraliaCC			Australian	Date to enrol	Education	School	
Liaoning UniversityVictoria2000Bachelor1,800ISoutheast UniversityMonash2012Master & 1,450HSoutheast UniversityUniversity of2012Bachelor & 3,500HShanghai UniversityUniversity of2012Bachelor & 3,500HShanghai UniversityUniversity of2016Master3,500HUniversityUniversity of2016Master3,500HUniversityUniversity of2016Bachelor & 3,20OUniversityUniversity of2016Bachelor & 1,200OSouthwest University ofUniversity of2016Bachelor & 1,200OXi'an University ofUniversity ofUniversity of2017Bachelor & 1,200OXi'an University ofUniversity ofSouth2017Bachelor & 1,200OXi'an University ofUniversity ofUniversity ofSouthMaster1,200O	Foreign campuses	Chinese partner	partner	student	level	scale	Courses
Southcast University University Shanghai University Shanghai UniversityMaster University StateMaster State1,450HShanghai University 	Asia-Australia Business College of Liaoning University	Liaoning University	Victoria University	2000	Bachelor	1,800	International Business, Accounting, Finance
Shanghai UniversityUniversity of Technology, Sydney2012Bachelor & Master3,500ECentral China NormalUniversity of UniversityUniversity of Wollongong2016Master320CCentral China NormalUniversity of WollongongUniversity of Southwest University2016Bachelor & Bachelor320CSouthwest UniversityWesta College2016Bachelor & 	Southeast University-Monash University Joint Graduate School (Suzhou)	Southeast University	Monash University	2012	Master & Doctor	1,450	Environmental Science and Engineering, Computer Science and Engineering, Traffic Engineering, Applied Economics, etc.
OintCentral China NormalUniversity of Wollongong2016Master320COintUniversityWesta2016Bachelor920HSouthwest University of ogyCollegeUniversity of Australia2017Bachelor & 1,200C	Sydney Institute of Language & Commerce, Shanghai University	Shanghai University	University of Technology, Sydney	2012	Bachelor & Master	3,500	Business Administration, International Business and Trade, Information Management and Information System, Finance, etc.
thwest Southwest University Westa 2016 Bachelor 920 F College Xi'an University of University of 2017 Bachelor & 1,200 C echnology Architecture and Technology South Master Master of Outburgh Australia	Central China Normal University Wollongong Joint Institute	Central China Normal University	University of Wollongong	2016	Master	320	Computer Science, Communication Engineering
Xi'an University ofUniversity of2017Bachelor & 1,200CechnologyArchitecture and TechnologySouthMasterhAustraliaollege	Westa College, Southwest University	Southwest University	Westa College	2016	Bachelor	920	Biotechnology, Electronic Information Engineering, Food Quality and Safety, Economics
	Xi'an University of Architecture and Technology University of South Australia An De College	Xi'an University of Architecture and Technology	University of South Australia	2017	Bachelor & Master	1,200	Civil Engineering, Engineering Management, Computer Science and Technology, Building Electrical and Intelligent Engineering, Environmental Science and Engineering

^aThe data are collected from China's Ministry of Education, available at: www.crs.jsj.edu.cn/index.php/default/approval/orglists.

TABLE 1 Foreign campuses of Australian universities in China^a

from 2007 to 2017. The descriptions of the above variables and data sources are given in Table 2 below. Table 3 presents the descriptive statistics of all the variables included in the analysis. Table 4 shows the results of the regression analysis of the effects of the ChAFTA on the number of Australia–China joint programmes approved (i.e., Mode 1) and the number of international student enrolments from China (i.e., Mode 2). To deal with the potential heteroscedasticity and autocorrelation, the Newey–West HAC estimators are adopted (Newey & West, 1994).

The regression results show that the ChAFTA is statistically negatively related to the number of Australia–China joint programmes approved and positively related to the number of international student enrolments from China. The results are in line with our preliminary assessment of the impacts in Sections 3.1 and 3.2, which observed that while the ChAFTA may have not contributed to the increase in the number of Sino-Australia joint programmes, its contribution to the growth of Chinese student enrolments in Australia's education institutions in general and particularly in higher education may have been significant. The major factor affecting the number of the joint programmes has been China's regulatory changes which are likely to continue to affect the application and approval of these programmes.

In addition, the regression coefficients for GDP per capita are positive, implying that GDP per capita is positively related to both the number of Australia–China joint programmes approved and the number of international student enrolments from China. Enrolment ratio is highly correlated with GDP per capita and is also positively related to the number of Australia–China joint programmes approved. Regression coefficients of exchange rate are not statistically significant. Notably, neither SVP nor PSWR show positive results consistently, suggesting that the effects of SVP and PSWR on the number of international student enrolments from China should not be overstated.

Towards this end, the limitations of our regression analysis should be noted. First of all, the sampling is necessarily limited as the ChAFTA has been effective for 3 years only. Although our study shows a positive contribution of ChAFTA to Chinese student enrolments in Australia, this result needs to be reinforced when a longer period of data is available. Second, we have considered the major variables only. A more comprehensive study including all of the relevant "push and pull" factors would be desirable to reflect better the impact of ChAFTA. Third, our study has focused on the variables relating to China and Australia only and has not considered these variables in a broader and more dynamic context in which Australia competes with other major destination countries (such as the United States and the UK) for Chinese students. This would require a comparative study of the relevant variables in Australia and the other countries, which is beyond the scope of this paper. In addition, in focusing on legal and economic analysis, we have not considered the potential impact of the ups and downs of the Australia-China relations. Despite some recent media report on an increasing tension between the two countries on certain matters (Dziedzic, 2018), we believe that such a tension is temporary and would not undermine the prospects of the steady development of the bilateral economic relationship going forward (EABER & CCIEE, 2016).

4 | CONCLUSIONS

Education services are crucial to the future development of the China–Australia trade relationship and will have growing economic implications for the two countries. Compared with China's commitments on education service under the WTO and the other FTAs, the ChAFTA achieves a higher level of liberalisation in many areas. These include not only enhanced market access for

Variables	Description	Source
Programmes approved	Number of Australia–China joint programmes approved	Ministry of Education of the People's Republic of China
Student enrolment, total	Number of international student enrolment from China, including higher education, vocational education, schools and ELICOS	Australian Trade and Investment Commission
Student enrolment, higher education	Number of international student enrolment from China in Australia's higher education	Australian Trade and Investment Commission
ChAFTA	= 1 for year 2015, 2016, 2017	Australian Government, Department of Foreign Affairs and Trade
GDP per capita	Gross domestic product divided by population. Data in constant US dollars	World Bank Development Indicators
Enrolment ratio	Total enrolment in tertiary education, expressed as a percentage of the total population of the 5-year age group following on from secondary school leaving	World Bank Development Indicators
Exchange rate	Exchange rate expressed as units of RMB per A\$	Reserve Bank of Australia
Streamlined visa processing	Streamlined visa process, = 1 for year 2012, 2013, 2014, 2015, 2016, 2017	Australian Government, Department of Immigration and Border Protection
Post-study work rights	Longer and less restrictive post-study work rights to higher education graduates, = 1 for year 2013, 2014, 2015, 2016, 2017	Australian Government, Department of Immigration and Border Protection

TABLE 2 List of variables

TABLE 3 Summary of statistics

Variables	Min.	Max.	Mean	SD	No. obs.
Programmes approved $+ 1$ (log)	0	3.258	1.701	1.149	11
Student enrolment, total (log)	11.622	12.351	11.953	0.195	11
Student enrolment, higher education (log)	10.940	11.805	11.378	0.241	11
ChAFTA	0	1	0.364	0.505	11
GDP per capita (log)	8.157	8.900	8.558	0.247	11
Enrolment ratio (log)	3.019	3.880	3.376	0.325	10
Exchange rate (log)	1.553	1.898	1.747	0.116	11
Streamlined visa processing	0	1	0.545	0.522	11
Post-study work rights	0	1	0.455	0.522	11

Australia's education service suppliers, but also improved governance norms such as procedural reasonableness and transparency of administrative decision-making. Through a number of aspirational commitments, the ChAFTA also creates an agenda for the two governments or their education authorities to continue to explore collaborative opportunities. However, the ChAFTA fails to

c										
	Dependent variable:	riable:					Dependent v	variable: stude	Dependent variable: student enrolment, higher	higher
	programmes a	approved	Dependent v	Dependent variable: student enrolment, total	ent enrolment	, total	education			
Independent variable	M1	M2	M3	M4	M5	M6	M7	M8	6M	M10
ChAFTA	-2.333^{***}	-2.631^{**}	0.329^{**}	0.321^{***}	0.189^{**}	0.312^{*}	0.358^{**}	0.254^{***}	0.260^{**}	0.388*
	(0.649)	(1.106)	(0.084)	(0.080)	(0.084)	(0.156)	(0.123)	(0.074)	(0.082)	(0.176)
GDP per capita	6.059***									
	(0.983)									
Enrolment ratio		4.284**								
		(1.560)								
Exchange rate						0.018				0.849
						(0.802)				(066.0)
Streamlined visa processing				0.014	-0.008	-0.009		0.166	0.178	0.120
				(0.085)	(0.086)	(0.127)		(0.127)	(0.136)	(0.189)
Post-study work rights					0.036	0.035			-0.018	060.0
					(0.021)	(0.105)			(0.010)	(0.125)
Constant	-49.512***	-12.263^{**}	11.863^{***}	11.858^{***}	11.858***	11.825***	11.281^{***}	11.218^{***}	11.218^{***}	9.683***
	(8.219)	(5.145)	(0.047)	(0.080)	(0.086)	(1.411)	(0.093)	(0.127)	(0.136)	(1.703)
R^2	0.790	0.560	0.622	0.622	0.624	0.624	0.482	0.571	0.572	0.611
Matzee ***Statictically ciunificant at 1% lavel **Statictically ciunificant at 5% lavel *Statictically ciunificant at 10% lavel	at 1% level **Stat	ietically signific	ant at 5% level	*Statictically cio	nificant at 10% 1	امتنع				

Notes: ***Statistically significant at 1% level. **Statistically significant at 5% level. *Statistically significant at 10% level.

TABLE 4 Regression results

remove some of the major regulatory barriers to Australia's education exports to China, including, for example, distance learning and online education (i.e., Mode 1), the establishment of commercial presence in China (i.e., Mode 3) and mutual recognition.

Our preliminary study and regression analysis of the impact of the ChAFTA on Australia's education exports to China have shown that the ChAFTA did not play a significant role in promoting the application and approval of Sino-Australia joint programmes under Mode 1, which tends to be vulnerable to China's regulatory changes. In contrast, the ChAFTA did contribute to the growth of international student enrolments from China under Mode 2, which is generally not subject to domestic regulations in China. The paper does not conduct a regression analysis for Modes 3 and 4, as the impacts of the ChAFTA under Mode 3 will remain limited until the relevant Chinese regulatory barriers are relaxed, and due to the lack of data with regard to Mode 4. A number of limitations of the regression analysis and hence possible areas for future studies have also been identified. Overall, it is reasonable to conclude that domestic regulation constitutes the major obstacle to Australia's education exports to China. The effect of the ChAFTA is, at best, secondary to that of domestic regulation and tends to be greater in less regulated areas. The ongoing review of the Services Chapter of the ChAFTA will need to address the issues relating to these barriers and how they may be gradually lifted. As China seeks to expand its own education exports to the world including Australia, it will need to consider relaxing its regulatory barriers in exchange for enhanced market access in foreign markets.

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