

Industry Snapshot for Auckland: International Education

February 2015

Technical Report 2015/001

Auckland Council Technical report 2015/001 ISSN 2230-4525 (Print) ISSN 2230-4533 (Online)

ISBN 978-1-927216-34-7 (Print) ISBN 978-1-927216-35-4 (PDF) This report has been reviewed by the Peer Review Panel.

Submitted for review on 10 December 2014

Review completed on 16 February 2015

Reviewed by two reviewers

Approved for Auckland Council publication by:

Name: Regan Solomon

Position: Manager, Research and Evaluation

Date: 16 February 2015

Recommended citation:

Wilson, R A (2015). Industry snapshot for Auckland: international education. Auckland Council technical report, TR2015/001

© 2015 Auckland Council

This publication is provided strictly subject to Auckland Council's copyright and other intellectual property rights (if any) in the publication. Users of the publication may only access, reproduce and use the publication, in a secure digital medium or hard copy, for responsible genuine non-commercial purposes relating to personal, public service or educational purposes, provided that the publication is only ever accurately reproduced and proper attribution of its source, publication date and authorship is attached to any use or reproduction. This publication must not be used in any way for any commercial purpose without the prior written consent of Auckland Council. Auckland Council does not give any warranty whatsoever, including without limitation, as to the availability, accuracy, completeness, currency or reliability of the information or data (including third party data) made available via the publication and expressly disclaim (to the maximum extent permitted in law) all liability for any damage or loss resulting from your use of, or reliance on the publication or the information and data provided via the publication. The publication, and data contained within it are provided on an "as is" basis.

Industry Snapshot for Auckland: International Education

Ross Wilson Research and Evaluation Unit Auckland Council

Executive summary

International education in Auckland generated \$1.5 billion of revenue in 2012, comprising \$462 million in tuition fees plus \$997 million direct expenditure on living costs. This is two per cent of the size of Auckland's GDP. The average international student spent \$7,681 on fees, plus more than double that – \$16,588 – on living costs, for a total of \$24,269 per student.

Auckland had 56,253 international fee paying students (IFPS) in 2013, which was nearly two thirds (62%) of New Zealand's total IFPS. Auckland is particularly dominant in enrolments in private training establishments (PTEs).

Auckland's main source country is China (31%), but India (14%), South Korea (11%) and Japan (10%) are also very important. South Korea's share has halved since 2007 and India's tripled, in line with world trends for them. Indians are nearly all at private training establishments (PTEs), funded or unfunded, and most Japanese are at unfunded PTEs or at subsidiary English language schools (see below).

The main fields of study (excluding primary and secondary schools) are English (41%) and management and commerce (28%).

The PTE sub-sectors ("funded" and "unfunded") together generate half of total expenditure, of which a sixth is from specialist English language schools and the remaining third is from all other PTEs.

The unfunded PTEs sub-sector receives no state funding and includes most of the specialist language schools. Unfunded PTEs are Auckland's largest sub-sector in terms of IFPS enrolments, most of them in English and most of the rest in management and commerce. Their IFPSs are spread among a large number of establishments (60). Unfunded PTEs tend to have short-duration courses with low fees – especially the language schools – but high ratios of total duration of visit time (before and after the courses) relative to course duration, which generates high expenditure on living costs relative to fees. They have the most diverse source countries, with the highest proportion of IFPSs that are not from the top four source countries.

The funded PTEs sub-sector is the third largest sub-sector by IFPSs, and has more full-time courses. A relatively high proportion of its IFPSs study information technology and food/hospitality/personal, and the sub-sector has the highest proportion of IFPSs that are from India. Since 2003 the share of Auckland's IFPSs that are at funded PTEs has risen, while the share for unfunded PTEs has fallen - arguably an improvement, given that unfunded PTEs generate lower average tuition fees per student. There are 65 funded PTEs.

The subsidiaries sub-sector consists of the seven English language schools that are attached to the universities. They have a small share (6%) of the sector's IFPSs, most of them Japanese or Chinese; enrolments plummeted in 2004, and have taken until 2013 to fully recover (despite gradual increases in tuition fees).

The universities sub-sector is Auckland's largest (and growing) source of fee income, due to a combination of relatively high fees per student and fairly high numbers of international

students (despite fee increases). The main field of study at this level is management and commerce, and the main source country is China. Four universities now have campuses in Auckland.

There are eight institutes of technology and polytechnics (ITP) in Auckland, with a modest share (8%) of Auckland's IFPSs. As well as management and commerce, they have high shares of their IFPSs studying engineering and information technology, and to a lesser extent English. The main source countries are China and India. Enrolments fell sharply from 2003 to 2007, but have since been stable.

Secondary school IFPSs contribute a sizable share of the sector's enrolments (13%), fees (16%) and total spending (12%). Most secondary schools (90 in total) have at least some IFPSs, averaging 83 each – compared to 600 domestic students for the typical school. Most are from China, South Korea or Japan (not India). IFPS enrolments plummeted from 2003 to 2005, but grew strongly from 2007 to 2013 despite substantial rises in tuition fees per equivalent full time student (EFTS).

Only a small share of IFPSs (3%) are at primary schools, and those are spread amongst 136 primary schools, each averaging 12 IFPS – which still leaves most primary schools with no IFPSs. IFPS enrolments, which are mostly from South Korea, fell sharply in 2004, 2005 and 2009 (when tuition charges jumped) and have never recovered. Much of the decline from 2006 to 2013 was driven by increases in the value of the NZ\$ against the Korean Won.

For the international education sector as a whole, Auckland's total IFPS enrolments in 2013 (56,253) are below their 2011 peak (60,818), which in turn was only a partial recovery from the drop that followed the 2003 peak (66,301).

Contents

1	Introduction1				
	1.1	Report structure	1		
	1.2	Overview of the sector	1		
	1.3	Definitions of the international education sector	1		
2	Sources and market shares – New Zealand and world				
	2.1	New Zealand market share (tertiary only)	3		
	2.2	English speaking destinations	4		
	2.3	Sources of the world's international tertiary students - by continent	5		
	2.4	The world's top 10 source countries	5		
	2.5	New Zealand's top 10 source countries	7		
3	Sou	Source countries – Auckland9			
	3.1	Auckland students country of origin	9		
	3.2	Spotlight on Korea	11		
	3.3	Auckland students sub-sectors by source country	11		
	3.4	Auckland students source countries by sub-sector	12		
4	New Zealand and world international vs domestic by level				
	4.1	Level of international education provided	14		
	4.2	International vs domestic students by destination	15		
	4.3	International vs domestic students by level	16		
5	Enro	Iments Auckland vs New Zealand by sub-sector	18		
	5.1	Sub-sector shares of Auckland enrolment	18		
	5.2	Enrolments Auckland vs New Zealand by sub-sector	19		
	5.3	Auckland vs New Zealand trends: total all sub-sectors	21		
	5.4	Auckland vs New Zealand enrolment trends: primary schools	22		
	5.5	Auckland vs New Zealand enrolment trends: secondary schools	23		
	5.6	Auckland vs New Zealand enrolment trends: ITPs	24		
	5.7	Auckland vs New Zealand enrolment trends: universities	25		
	5.8	Auckland vs New Zealand enrolment trends: SDR PTEs	26		
	5.9	Auckland vs New Zealand enrolment trends: non-SDR PTEs	27		
	5.10	Auckland vs New Zealand enrolment trends: subsidiaries	28		
	5.11	Causes of changes in enrolments	29		

6	International education providers in Auckland			
	6.1	Auckland providers 2013	32	
	6.2	International enrolments per provider by sub-sector	32	
	6.3	Auckland providers: trends since 2007	33	
7	Auc	kland tertiary IFPSs field of study	35	
	7.1	Auckland tertiary IFPSs field of study	35	
	7.2	Auckland tertiary IFPSs sub-sector by field of study	36	
	7.3	Auckland tertiary IFPSs field of study by sub-sector	36	
	7.4	Auckland tertiary IFPSs sub-sector by field of study totals	37	
8	Auc	kland IFPS EFTS by sub-sector	39	
	8.1	Auckland IFPS EFTS ratios by sub-sector	39	
	8.2	Auckland IFPS EFTS per enrolment trends	39	
	8.3	Auckland total IFPS EFTS by sub-sector	40	
	8.4	Auckland IFPS EFTS proportions trends by sub-sector	41	
9	Auc	kland IFPS tuition fees	43	
	9.1	Auckland tuition fees per IFPS EFTS by sub-sector	43	
	9.2	Auckland tuition fees per student (IFPS) by sub-sector	43	
	9.3	Auckland tuition fees per IFPS EFTS by sub-sector trends	44	
	9.4	Auckland total tuition fee income by sub-sector	45	
	9.5	Auckland tuition fee income by sub-sector	46	
10	Auc	kland total revenues from tuition fees and living costs	48	
	10.1	Total spending (fees and living costs) by sub-sector	48	
	10.2	Spending split (fees and living costs) by sub-sector	48	
	10.3	Fees and living costs per student by sub-sector	49	
	10.4	Living costs share by category	50	
11	Con	clusions	51	
12	Refe	erences	52	
13	Glos	ssary and acronyms	53	
Арр	endix	one: Students vs enrolments	57	
Арр	endix	two: Sources of tuition fee variation by sub-sector	58	

Figures

Figure 1: Destination country shares of world's tertiary international students, 2012.3 Figure 2: Market shares of main English speaking countries, tertiary, 2000-2012 4 Figure 4: World's top 10 source countries shares (%), world and NZ, 2012......6 Figure 5: New Zealand's top 10 source countries shares (%), world and NZ, 2012...8 Figure 8: Students by source country, share of Auckland IFPSs, 2007–2013...... 10 Figure 9: Students by sub-sector, shares by source country, Auckland 2013...... 12 Figure 10: Students by source country, shares by sub-sector, Auckland 2013 13 Figure 11: Levels of study of international students, OECD and NZ, 2012 15 Figure 13: International share of tertiary students by level, NZ and OECD, 2012 17 Figure 15: Enrolment shares by sub-sector, Auckland 2003–2013 19 Figure 17: Enrolment shares Auckland vs rest of NZ by sub-sector, 2013...... 20 Figure 18: Auckland share of NZ enrolments by sub-sector, 2003–2013......21 Figure 19: Enrolments total all sub-sectors, NZ total by regions, 2003–2013 21 Figure 20: Enrolments total all sub-sectors, Auckland and rest of NZ, 2003–2013..22 Figure 22: Primary school enrolments, Auckland and rest of NZ, 2003–2013....... 23 Figure 23: Secondary school enrolments, NZ total by regions, 2003–2013 24 Figure 24: Secondary school enrolments, Auckland and rest of NZ, 2003–2013.....24 Figure 25: Polytechnic/ITP enrolments, NZ total by regions, 2003–2013......25 Figure 26: Polytechnic/ITP enrolments, Auckland and rest of NZ, 2003–2013 25 Figure 29: Funded (SDR) PTE enrolments, NZ total by regions, 2003–2013......27 Figure 30: Funded (SDR) PTE enrolments, Auckland and rest of NZ, 2003–2013..27 Figure 31: Unfunded (non-SDR) PTE enrolments, NZ total by regions, 2003–2013 28 Figure 36: International enrolments (IFPS) per provider by sub-sector, Auckland ... 33 Figure 37: International education providers by sub-sector, Auckland 2007–2013..34 Figure 38: Tertiary IFPSs by field of study, number and %, Auckland 2013......35 Figure 39: Tertiary students (IFPS) by sub-sector, shares by field of study 2013 36 Figure 40: Tertiary students (IFPS) by field of study, shares by sub-sector 2013 37

Figure 41: Tertiary students (IFPS) by sub-sector, numbers by field of study	38
Figure 42: EFTS per student (IFPS) by sub-sector, Auckland 2013	39
Figure 43: EFTS per enrolment (IFPS) by sub-sector, Auckland 2007-2013	40
Figure 44: EFTS (IFPS) by sub-sector, Auckland 2013	41
Figure 45: EFTS and students (IFPS) by sub-sector, Auckland 2013	41
Figure 46: EFTS (IFPS) shares by sub-sector, Auckland 2007–2013	42
Figure 47: Tuition fees per EFTS (IFPS) by sub-sector, Auckland 2013	43
Figure 48: Tuition fees per student (IFPS) by sub-sector, Auckland 2013	44
Figure 49: Tuition fees per EFTS (IFPS) by sub-sector, Auckland 2007-2013	45
Figure 50: Tuition fee total revenue by sub-sector, \$NZ million and %	46
Figure 51: Tuition fees total income by sub-sector, Auckland 2007-2013	47
Figure 52: International students' total expenditure by sub-sector	48
Figure 53: Expenditure split fees versus living costs by sub-sector, Auckland 2012	49
Figure 54: Fees and living costs per student by sub-sector, Auckland 2012	50
Figure 55: Living costs by cost category, NZ 2012	50
Figure 56: Students versus enrolments, Auckland 2013	57

Tables

Table 1: International proportion of education by ANZSIC category	2
Table 2: Students versus enrolments, Auckland 2013	57
Table 3: Sources of tuition fee variation by sub-sector, Auckland 2013	

1 Introduction

1.1 Report structure

This report is one of a series of Auckland Council industry snapshots. It provides a snapshot of the Auckland international education industry from data publicly available in 2014 (including custom data for Auckland Council).

The report starts with an overview of New Zealand's position in the world international education market, followed by a look at the source countries of Auckland's international students. Next it looks at the breakdown of student numbers at the various levels of study, first for New Zealand and the world, and then for Auckland. This is followed by analyses of the fields of study of Auckland students, and of the conversion of enrolments to equivalent full time students (EFTS). Finally, the report describes estimates of revenues generated by the industry in Auckland, both from fees plus the students' living costs.

1.2 Overview of the sector

International education has been identified as a key sector in Auckland's Economic Development Strategy¹ (EDS). International education is an export industry in the same way as tourism is: the international students spend money in New Zealand, but it originates overseas and so can be considered to be foreign exchange earnings². The industry's revenue equals the students' expenditure, which consists of tuition fees plus living costs.

Auckland has a comparative advantage in international education, with significant current and future potential for growth in earnings, export revenues, employment and value added (GDP – both direct and also indirect and induced). In addition, it also improves Auckland's international linkages and facilitates access to an international talent pool of skilled workers and researchers.

1.3 Definitions of the international education sector

The international education sector consists of provision of tuition to, plus the living costs of, international students – defined by Education New Zealand (ENZ)³ as students who are non-residents of New Zealand, who have come here to study. Some data series are limited to international fee paying students (IFPSs), which excludes international students who pay the same fees as domestic students (such as exchange students, NZ AID students and PhD students).

Tuition sub-sectors can be defined by tuition providers, which are categorised by the Ministry of Education as consisting of the following:

- primary schools
- secondary schools

¹ Auckland Council (2012)

² apart from local earnings

³ ENZ is a Crown entity that leads the marketing of New Zealand's education industry overseas and supports its business development. It is totally separate from the Ministry of Education.

- institutes of technology and polytechnics (ITP)
- universities
- funded private training establishments (PTEs), which are obliged to submit a Single Data Return (SDR) and so are SDR PTEs
- unfunded PTEs, also known as non-SDR PTEs
- subsidiaries.

Previously, Ministry of Education and related official statistics labelled subsidiaries as "language schools", which also included some PTEs; the remaining PTEs were then labelled "other" or "other tertiary education providers" (OTEPs). Some recent reports still use this classification.

A third definition of the tuition component of the sector is in the Auckland Tourism, Events and Economic Development Limited (ATEED) Sector Engagement Framework of 2012⁴, written by Martin Jenkins, which uses the same definition (and ANZSIC 4-digit categories) as the Auckland Council Economic Development Strategy (EDS). This definition estimates the international education component of the education-related ANZSIC categories as varying in Auckland from a thirtieth (3%) of primary education to a third (30%) of higher education.

ANZSIC code	ANZSIC category	Proportion
P802100	Primary Education	3%
P802200	Secondary Education	12%
P802300	Combined Primary and Secondary Education	7%
P810100	Technical and Vocational Education and Training	15%
P810200	Higher Education	30%
P821900	Adult, Community and Other Education n.e.c.	10%
P822000	Educational Support Services	5%

Table 1: International proportion of education by ANZSIC category, Auckland 2011

The Martin Jenkins/EDS proportions for each category are based on international fee paying student numbers (relative to total student numbers) at a point in time (2011), and so have the serious disadvantage over time of not capturing changes in those proportions. Also, they cannot be applied directly to the rest of New Zealand. This report will instead use the Ministry of Education classifications where possible.

For international comparisons, the OECD focusses on tertiary education only, and bases its categories on the level of study and qualification rather than the type of provider. The OECD splits tertiary education into three levels, as follows:

- tertiary-type A programmes are typically equivalent to bachelors or masters degrees
- tertiary-type B programmes are shorter, more practical or vocationally oriented
- advanced research programmes are typically equivalent to a doctorate.

⁴ Martin Jenkins (2012)

2 Sources and market shares – New Zealand and world⁵

2.1 New Zealand market share (tertiary only)

New Zealand is a relative late-comer to the international education market (only 0.4% global market share as recently as 2000), and faces competition from around the world. By continent, Europe (48%) is the top destination (2012 data) for tertiary level students studying outside their country of origin, followed by North America (21%) and Asia (18%). All other continents combined (including Oceania) have only an eighth (13%) market share.

By country, the largest providers of tertiary level international education are the United States (16%) and the United Kingdom (13%), followed by Germany, France, Australia and Canada. Together these six countries receive half the world's international students (52%), but a dozen other countries also have significant market share (1% to 4%).

New Zealand's share (1.62% in 2012) could be considered quite high relative to the country's size, comparable in relative terms for example to Australia (6%) and Canada (5%).



Figure 1: Destination country shares of world's tertiary international students, 2012

- 1. Data related to international students is defined on the basis of their country of residence.
- 2. Year of reference 2011.
- 3. Student stocks are derived from different sources and therefore results are indicative only

⁵ Source: OECD (2014); 2012 data; tertiary only. In some cases "international" refers to "foreign".

2.2 English speaking destinations

New Zealand is one of five "main English-speaking destination countries" (MESDCs) for international students. The other MESDCs are the United States, United Kingdom, Australia and Canada. New Zealand experienced a rapid rise in international enrolments from 1998 to 2003, driven primarily by increases in Chinese students. New Zealand was one of the first Western countries to permit open access to student visas by Chinese nationals, a measure quickly followed by the other MESDCs.⁶

Between 2000 and 2012, the total MESDC share of the world's foreign students in tertiary education fell slightly (from 48.5% to 46.4%), driven by the United States' share dropping sharply (from 22.8% to 16.4%). "The deterioration of the United States' market share may be attributed to the high tuition fees charged to international students compared with those charged in other, primarily English-speaking destinations that offer similar education opportunities at a lower cost."⁷

In contrast, New Zealand's market share quadrupled, (from 0.4% in 2000 to 1.6% in 2012). Australia and the United Kingdom experienced lower proportional increases in their shares, but greater in absolute terms, while Canada's share saw only minor growth in both relative and absolute terms. (Note that this data excludes primary and secondary school students and also enrolments with private English language providers).





"New Zealand has successfully adopted differentiated tuition fees for international students, and this has not hampered their important growth in foreign students over recent years. This shows that tuition costs do not necessarily discourage prospective international students, as

⁶ Ministry of Education (2013)

⁷ OECD (2014)

long as the quality of education provided is high and its potential returns make the investment worthwhile."⁸

2.3 Sources of the world's international tertiary students – by continent

Half of all international⁹ tertiary students in the world are from Asia (53%).

The world's remaining source continents follow a broadly geometric progression, halving at each step as follows:

- a quarter of the world's international tertiary students are from Europe (23%)
- an eighth are from Africa (12%)
- a sixteenth are from Latin America and the Caribbean (6%)
- a thirty-second are from North America (3%)
- a sixty-fourth are from Oceania (1%).



Figure 3: Source continents of the world's tertiary students, 2012

For international tertiary students studying in New Zealand, the proportion from Asia is nearly three in four (70%), which is the fifth highest Asian proportion out of all destination countries after Japan (94% from Asia), Korea (93%), Australia (82%), and the United States (73%).)

2.4 The world's top 10 source countries

The top 10 source countries to the world provide a total of two fifths (39%) of all the world's tertiary international students. For the tertiary international students that study in New Zealand, those same source countries contribute an even higher share of the total from all

⁸ OECD (2014)

⁹ Or foreign, for some destination countries reporting

sources, namely three fifths (61%). Five of those countries are more important (contribute a higher share) to New Zealand than to the world, but the other five are less important to New Zealand. The difference in shares for each source country (their share of all sources studying in New Zealand, versus their share of all sources studying in all destinations in the world) varies by source country as follows.

- The world's largest source, China, is an even more important source to New Zealand (27.7% of international tertiary students in New Zealand are from China) than to the world as a whole (18.6% of all international tertiary students in the world are from China).
- India is a distant second as a source to the world (5.1%), but it is nearly four times as important to New Zealand (17.7%).
- The United States is also an even more important source of tertiary students to New Zealand than to the world, in relative terms, but the absolute numbers are lower (1.6% world, but 5.4% for New Zealand) than for India and China.
- New Zealand also performs relatively well as a destination for Koreans (3.3% world, but 3.9% for New Zealand) and Saudi Arabians (1.7% world, but 2.4% for New Zealand).

Conversely, New Zealand is a relative under-performer as a destination for students from the world's other top 10 sources, namely Germany (3.3% world, but only 1.6% for New Zealand), Italy, Turkey and to a lesser extent France and the Russian Federation. The majority (56% to 74%) of students from these countries study within the European Union (EU21), as compared to only two fifths (39%) of students from the world as a whole; presumably geographic and cultural/political considerations are a particular barrier to New Zealand and other non-EU21 destinations for students from these countries.



Figure 4: World's top 10 source countries shares (%), world and NZ, 2012

2.5 New Zealand's top 10 source countries

A destination country's main sources of tertiary international students are a result of the combination of those source countries' shares of the word total, and that destination country's relative ability to attract the students from those sources. Consequently, New Zealand's top 10 source countries differ from the world's top 10 sources.

New Zealand's top 10 source countries nearly all contribute significantly higher shares of New Zealand's total than their shares of the world's total (i.e. all destination countries), but to varying extents, as follows.

- Largest sources for New Zealand are China (27.7%) and India (17.7%), as they are for the world (but supplying a much higher share of students in New Zealand than in the world as a whole).
- Next for New Zealand come Australia (6.4%) and the United States (5.4%), whereas they are relatively less significant sources of students for the world as a whole especially Australia (0.3%), which is nowhere near even making the world's top 10; language and cultural similarities and geographic proximity are important drivers for many students.
- Korea, Saudi Arabia, the United Kingdom and Japan are moderately more significant sources to New Zealand than to the rest of world (with Japan and the United Kingdom not in the world's top 10).

In contrast, Germans and Canadians are proportionally less likely to study in New Zealand than elsewhere, but still make New Zealand's top 10 simply because of their sheer size as a source of students (although Canada narrowly misses being in the world's top 10). The majority (53%) of international students from Canada study next door in the United States, while most Germans (74%) choose a fellow European EU21 country.

Four countries from the world's top 10 sources are absent from New Zealand's top 10 sources: France, the Russian Federation, Italy and Turkey.



Figure 5: New Zealand's top 10 source countries shares (%), world and NZ, 2012

3 Source countries – Auckland¹⁰

3.1 Auckland students country of origin

Auckland's IFPSs come from a wide variety of countries around the world. However, four countries dominate, all of them Asian: China, India, South Korea and Japan; and these in turn are dominated by one source: China¹¹. The fifth largest source, Saudi Arabia, is an order of magnitude smaller.



Figure 6: Students by country of origin, Auckland 2013

However, it should not be forgotten that collectively, the smaller source countries (30%) contribute as many students as China (31%).

¹⁰ Source: Ministry of Education (2014b); IFPSs

¹¹ China data here includes Hong Kong data



Figure 7: Students by country of origin, shares, Auckland 2013

The relative importance to Auckland of different sources changes over time. South Korea's share has halved since 2007: it used to be over a fifth (22%), but has been falling sharply every year since the global financial crisis (GFC) in 2008/2009. Conversely, India's share has tripled: it rose sharply from 2007 to 2010, and overtook South Korea in 2013. China's and Japan's shares fell during and after the GFC, but have subsequently recovered, while Saudi Arabia and "all others" experienced the opposite movements.



Figure 8: Students by source country, share of Auckland IFPSs, 2007–2013

3.2 Spotlight on Korea¹²

The significant decline in Korean students in Auckland appears to be part of a global trend of falling numbers of Korean students studying abroad: there was a major (40%) decrease in outbound Korean school students between 2006 and 2012. The decline appears to be driven by two key internal changes within Korea:

- demographic falls in the number of middle class students in Korea, due to a declining birth rate and the shrinking of the middle class
- Korean government policy to retain students, by expanding the delivery of education domestically, especially English language provision.

Korean students returning home must often provide documentation stating that the New Zealand school or training provider they attended was officially "government approved". The current lack of formal recognition arrangements between the two governments may be an impediment to Korean students coming to New Zealand, and to their willingness to stay on in New Zealand for tertiary study, especially at public organisations. NZQA and Education New Zealand are currently negotiating an arrangement.

3.3 Auckland students sub-sectors by source country

Compared to the total for Auckland IFPSs, students from particular countries tend to exhibit particular characteristics. IFPSs from:

- China are more likely to be university students, and less likely to be at a non-SDR PTE (still fairly likely, but less so than for IFPSs from other countries)
- India are more likely to be at SDR PTEs, and not at primary or secondary school or a subsidiary
- South Korea are more likely to be at primary school (although still fairly unlikely), and less at polytechnic, university or SDR PTE (see section on Korean Tertiary Students)
- Japan are more likely to be at a subsidiary or a non-SDR PTE, and less at a polytechnic or university
- Saudi Arabia are more likely to be at a polytechnic (although still fairly unlikely), and less at a secondary school or SDR PTE
- all other countries are less likely to be at a subsidiary or a polytechnic and (slightly) more likely to be at a non-SDR PTE (although still fairly unlikely).

¹² Source: Education New Zealand (2013a)



Figure 9: Students by sub-sector, shares by source country, Auckland 2013

3.4 Auckland students source countries by sub-sector

As a consequence of differences in preference depending on source country, the different sub-sectors rely on different source countries (relative to the total industry) as follows:

- primary school IFPSs are mostly from South Korea, with fewer Chinese and almost no Indians
- secondary schools have almost no Indians or Saudi Arabians
- polytechnics have more Indians and Saudi Arabians, and fewer South Koreans and Japanese
- universities have more Chinese (comprising nearly half of their IFPSs), fewer Indians and South Koreans and very few Japanese
- SDR PTEs have many more Indians and fewer South Koreans and Japanese
- non-SDR PTEs are similar to the average, but have more Japanese and fewer Chinese
- subsidiaries have many more Japanese (relatively), and no Indians.



Figure 10: Students by source country, shares by sub-sector, Auckland 2013

4 New Zealand and world international vs domestic by level¹³

4.1 Level of international education provided

Within host countries, the distribution of tertiary international students by level of education gives an indication of the attractiveness of the different programmes those countries offer (but also depends on the preferences of the students that are attracted to those host countries). The OECD splits tertiary education into three levels, as follows:

- tertiary-type A programmes are typically equivalent to bachelors or masters degrees
- tertiary-type B programmes are shorter, more practical or vocationally oriented
- advanced research programmes are typically equivalent to a doctorate.

Most international students studying in the OECD are enrolled in tertiary-type A programmes (79%), although in New Zealand the proportion is somewhat lower (61%).

New Zealand has a relatively large proportion (31%) of its international students enrolled in tertiary-type B programmes, compared to the OECD average (11%). This is also the case in Spain (35%) and Greece¹⁴ (34%), and to a lesser extent Luxembourg (27%), Chile (23%), Belgium (22%) and Japan (20%).

In some other countries, a large proportion of international students enrol in advanced research programmes compared to the OECD average (11%). This is particularly true in Switzerland (25%), Sweden (22%), the United States (19%), Ireland (18%) and Slovenia (17%). In contrast, in New Zealand the proportion is much lower (only 8%), despite advanced research programmes in New Zealand becoming more attractive since 2005 when tuition fees for international students were reduced to the same level as those paid by domestic students.

¹³ Source: OECD (2014); tertiary international students

¹⁴ "Foreign" rather than "international" - see glossary



Figure 11: Levels of study of international students, OECD and NZ, 2012

4.2 International vs domestic students by destination

The international share of total students in the different types of tertiary education in a destination country is to some extent an indicator of how successful that country is in attracting overseas students, as well as how important they are to its education sector.

New Zealand (15.8%) is one of only six OECD countries where the international proportion of total tertiary students exceeds 15 per cent, along with Luxembourg (41%), Australia (18%), the United Kingdom (17%), Switzerland (16%) and Austria (15%). Most other destinations are at or below the OECD average (8.4%).



Figure 12: International share of total students by destination country, 2012

.Year of reference 2011 .1

Foreign students are defined on the basis of their country of citizenship, these data are not comparable .2 .with data on international students and are therefore presented separately in the chart

4.3 International vs domestic students by level

The difference between New Zealand and the rest of the OECD for proportion of students that are international is particularly pronounced for Type B (short cycle practical programmes) In 2012, on average across OECD countries, international students represented only a twentieth (5.5%) of total enrolments in tertiary-type B programmes. The host countries with the largest proportion of students being international in these programmes were Luxembourg (49%) and New Zealand (21%). The differential arises primarily because of New Zealand's unusually high proportion of international students being at that level, but also in part because New Zealand has relatively fewer of its domestic students at Type B level.

Similarly, international students enrolled in tertiary-type A programmes (largely theorybased, e.g. bachelor or master) accounted for an OECD average of a twelfth (8.1%) of total enrolments at this level in 2012. Luxembourg (34%) was the country with the largest proportion of students at this level being international, followed by Australia (19%), the United Kingdom (18%) and Switzerland (17%). For New Zealand the proportion was more modest (13%), but still well above the OECD average.

The international share of total students enrolled in advanced research programmes (23% OECD average) is higher than in any other tertiary-level programme, for all reporting countries¹⁵. By far the highest proportion that are international is in Luxembourg (83%), then Switzerland (51%); New Zealand (41%) is third-highest, along with the United Kingdom

¹⁵ except Germany

(41%) and France (42%¹⁶). This is despite a below-average share of New Zealand's international students being in the advanced category, and implies that an even lower relative share of New Zealand's domestic students is in the advanced category.

"These large proportions of advanced research students being international may reflect the attractiveness to international students of advanced research programmes in these countries, or a preference by the hosts for recruiting international students at higher levels of education, either because of their potential contribution to domestic research and development, or the potential for recruiting these students as highly qualified immigrants."¹⁷





 ¹⁶ includes all foreign students
¹⁷ OECD (2014)

5 Enrolments Auckland vs New Zealand by sub-sector¹⁸

5.1 Sub-sector shares of Auckland enrolment

Five out of six international students in Auckland are enrolled at the tertiary level (84%), but only one in six (17%) are at university. The different educational sub-sectors' contributions to Auckland's international education enrolments (IFPSs) are as follows:

- primary and secondary schools together account for a sixth (16%) of international enrolments; the bulk of these (13%) are secondary students
- public polytechnics (8%) and universities (17%) together account for a quarter (25%) of international enrolments
- private training establishments constitute over half (53%) of all IFPSs, of which non-SDR PTEs alone account for over a third (37%) of international enrolments
- subsidiary providers have a modest but significant share (6%).



Figure 14: Enrolment shares by sub-sector, Auckland 2013

From 2003 to 2013, the share of Auckland's IFPSs that are at SDR PTEs has risen, while the share for non-SDR PTEs has fallen. (Arguably an improvement, given that non-SDR PTEs generate lower average tuition fees per student). Universities' share peaked (at 21.7%) in 2005 after rising sharply, and has been around 2003 levels since 2009 (14–17%), but with a recent modest uptrend.

¹⁸ Source: Ministry of Education (2014a); IFPSs



Figure 15: Enrolment shares by sub-sector, Auckland 2003–2013

5.2 Enrolments Auckland vs New Zealand by sub-sector

The Auckland international education sector had 56,253 IFPS enrolments in 2013, while the rest of New Zealand had 33,867. Auckland contributes three fifths (62.4%) of New Zealand's IFPS enrolments, which is nearly double its share of the total economy (34% of employment). Auckland is more dominant in some sub-sectors than others, as follows:

- Auckland is extremely dominant in its share of New Zealand IFPS enrolments in private training establishments, both SDR (79%) and non-SDR (74%), as well as subsidiary providers (80%)
- Auckland is also relatively strong in international school enrolments, both primary (67%) and secondary (55%)
- Auckland is least strong in international public tertiary education, especially polytechnics (37%) but also universities (51%).



Figure 16: Enrolments Auckland vs rest of NZ by sub-sector, 2013

Since 2003, Auckland's share of total New Zealand IFPS enrolments has increased (from 52% to 62%), driven in particular by increases in its share for non-SDR PTEs and for universities. Auckland's share of subsidiary provider enrolments also grew strongly (in 2004 and 2005), as did its primary school share (notably in 2011 and 2012), but they are relatively small parts of the sector, and so less of a driver.

Figure 18: Auckland share of NZ enrolments by sub-sector, 2003–2013

5.3 Auckland vs New Zealand trends: total all sub-sectors

At the national level, total international enrolments fell sharply between 2003 and 2005, and have been on a slight downtrend from 2005 to 2013, although with a trough in 2008 and modest peak in 2010. The main regional differences were that Canterbury providers experienced a second sharp drop from 2010 to 2012 following the earthquakes, while Auckland and the rest of New Zealand (RONZ, excluding Canterbury as well as Auckland) showed uptrends from 2008 to 2011.

Figure 19: Enrolments total all sub-sectors, NZ total by regions, 2003–2013

Figure 20: Enrolments total all sub-sectors, Auckland and rest of NZ, 2003–2013

5.4 Auckland vs New Zealand enrolment trends: primary schools

Primary schools saw international enrolments fall significantly over the 2003–2013 period at the national level, especially in 2005 and 2009 but also from 2011 onwards, with regional variances as follows:

- Auckland fell by a third between 2003 and 2005, then fell more gradually over the 2007 to 2013 period, but with a sharp drop in 2009 possibly due to a jump in tuition fees charged per equivalent full time student (EFTS) and a moderate decline in 2013; much of the drop from 2006 to 2013 was due to reductions in South Koreans, driven partly by increases in the value of the NZ\$ against the Won
- Canterbury declined dramatically over the period 2003–2013, primarily in 2005, 2011 and 2012
- The rest of New Zealand fell sharply in 2005, but then was relatively stable over the 2007 to 2013 period, with a slight downtrend.

Figure 21: Primary school enrolments, NZ total by regions, 2003–2013

Figure 22: Primary school enrolments, Auckland and rest of NZ, 2003–2013

5.5 Auckland vs New Zealand enrolment trends: secondary schools

Secondary schools saw international enrolments at the national level fall sharply in 2004 and 2005, then partially recover over the following period 2007 to 2013, with rises especially in 2007 and to a lesser extent between 2007 and 2010, with regional variances as follows:

- Auckland fell by over a third from 2003 to 2005, but then partially recovered, with robust growth throughout the 2007 – 2013 period. This was despite tuition fees charged per EFTS rising substantially from 2007 to 2013.
- Canterbury declined significantly over the period, due to drops in 2006, 2011 and 2012
- the rest of New Zealand dropped in 2005 but then recovered, with robust growth throughout the subsequent period, apart from 2011 and 2012.

Figure 23: Secondary school enrolments, NZ total by regions, 2003–2013

Figure 24: Secondary school enrolments, Auckland and rest of NZ, 2003–2013

5.6 Auckland vs New Zealand enrolment trends: ITPs

Polytechnic/ITP international enrolments at the national level fell overall by a sixth between 2003 and 2013; they saw their sharpest fall in 2006, and partially recovered over the 2007–2013 period, with regional variances as follows.

- Auckland fell by a third between 2003 and 2007, and recovered only slightly from 2007 to 2013 possibly constrained by fees per EFTS also rising over that period.
- Canterbury declined over the 2003–013 period, due to drops in 2006 and especially 2011, despite slight uptrends in most other years

• the rest of New Zealand fell sharply in 2006, then recovered between 2008 and 2012, particularly in 2011 when Canterbury fell.

Figure 25: Polytechnic/ITP enrolments, NZ total by regions, 2003–2013

5.7 Auckland vs New Zealand enrolment trends: universities

University IFPS enrolments for New Zealand rose in 2004 but then fell every year until 2008 (inclusive) and were fairly flat after 2008, with regional variances as follows:

- Auckland fell less sharply from 2004 to 2008, and a modest drop in 2008 was offset by modest rises in 2012 and 2013. Tuition fees per EFTS rose substantially from 2007 to 2012, which presumably suppressed demand; Auckland appears to have benefitted at Canterbury's expense in 2012 and 2013 following the earthquakes
- Canterbury declined significantly over the period, even after 2008 and especially in 2011

• the rest of New Zealand declined sharply from 2004 until 2008, and also fell in 2012.

Figure 27: University enrolments, NZ total by regions, 2003-2013

5.8 Auckland vs New Zealand enrolment trends: SDR PTEs

Private training establishments that submit SDRs experienced a cycle of international enrolments at the national level over the 2003–2013 period, with a trough in 2006 and peak in 2011, with regional variances as follows:

- Auckland had an uptrend overall, especially in 2011, despite small declines in 2012 and 2013. Tuition fees per EFTS grew modestly from 2007 to 2013, and do not seem to be the main driver of these fluctuations and trends.
- Canterbury fell sharply in 2004, then declined slightly in most years 2004–2013, with a strong boom in 2010 more than offset by a drop in 2012

• the rest of New Zealand was relatively stable over the period.

Figure 29: Funded (SDR) PTE enrolments, NZ total by regions, 2003–2013

Figure 30: Funded (SDR) PTE enrolments, Auckland and rest of NZ, 2003–2013

5.9 Auckland vs New Zealand enrolment trends: non-SDR PTEs

Private training establishments that do not submit SDRs (i.e. unfunded) saw international enrolments fall significantly over the 2003–2013 period at the national level despite rises in 2006 and 2009, with regional variances as follows:

- Auckland fell overall, with sharp drops in 2004 and 2005 followed by a sharp rise in 2009 and major declines in 2012 and 2013. Tuition fees per EFTS were fairly flat from 2007 to 2013 and do not seem to be causing these fluctuations and trends.
- Canterbury declined dramatically over the period, primarily 2003 to 2005 and in 2011 and 2012
- the rest of New Zealand fell from 2003 to 2006, then was relatively stable over the period 2006 to 2013.

Figure 31: Unfunded (non-SDR) PTE enrolments, NZ total by regions, 2003–2013

Figure 32: Unfunded (non-SDR) PTE enrolments, Auckland and rest of NZ, 2003–2013

5.10 Auckland vs New Zealand enrolment trends: subsidiaries

Subsidiary providers saw international enrolments at the national level plummet in 2004 and 2005, then increase significantly over the following period, with major rises in 2009 and 2011, with regional variances as follows:

- Auckland halved in 2004, then rose strongly between 2005 and 2013, with minor annual fluctuations including a particularly sharp rise in 2009; tuition fees per EFTS also rose from 2007 to 2009, and then were flat, so clearly were not causing these changes
- Canterbury had no subsidiary providers for IFPSs from 2006 onwards
- the rest of New Zealand was similar to Auckland, with sharp falls in 2004 and 2005 followed by strong growth, but from a lower starting base level than Auckland and with not as strong a recovery (except in 2011) and a fall in 2013.

Figure 33: Subsidiary enrolments, NZ total by regions, 2003–2013

Figure 34: Subsidiary enrolments, Auckland and rest of NZ, 2003–2013

5.11 Causes of changes in enrolments

Changes in international enrolments in Auckland arise due to a number of factors, but "there is limited in-depth data and research available on international education in Auckland. We

recommend that research be commissioned on this sector's scale, issues and opportunities"¹⁹. Such research is beyond the scope of this snapshot, but some preliminary inferences can be drawn based on observed correlations (which may or may not imply causation).

Global demand is an important element, such as strong overall increases in Chinese students studying abroad from 2000 to 2010, and reductions in Koreans globally due in large part to internal factors within Korea. At the tertiary level, the overall number of foreign students enrolled worldwide, from all countries, doubled between 2000 (2.1 million) and 2011 (4.3 million)²⁰.

Another important group of factors are those relating to relative attractiveness of New Zealand and Auckland. International marketing is assumed to be a key factor, as is competition from other countries (notably Australia and Canada), but these are not straightforward to measure or assess. Price is also listed as an important consideration²¹, and is a combination of the price in New Zealand dollars and the exchange rate between the New Zealand dollar and the source country's currency. The exchange rates of competing countries' currencies can also be relevant, as they affect New Zealand's competitive position.

A recent study²² at the national level found partial correlations from 2003 to 2013 between changes in the exchange rate of the New Zealand dollar (NZ\$), and changes in the numbers of IFPSs at New Zealand universities, unfunded PTEs and schools, but not polytechnics or funded PTEs. The New Zealand dollar strengthened against the US dollar between 2003 and 2005, and between 2009 and 2011. The correlation (R-squared) results by sub-sector were as follows.

- Schools had an R-squared of 0.20, meaning only 20% of the variation in enrolments (2003-2013) was due to variation in the NZ\$/US\$ rate, and in fact the result was not statistically significant; however, the major decline in South Korean enrolments (2006-2013) was 75% attributable to a strengthening of the NZ\$ against the Korean Won, which was statistically significant.
- Polytechnics and ITPs had no significant correlation between enrolments and the NZ\$/US\$ rate, possibly because the main sources are India and China, who are less sensitive to price; access to work rights and post-study residence are known to be key attractions for Indian students.
- Universities had an R-squared of 0.37, meaning 37% of the variation in enrolments (2003-2013) was due to variation in the NZ\$/US\$ rate (and 63% due to other causes); however, university enrolments from China (2006-2013) showed a contrary result, with falling enrolments despite falls in the NZ\$ relative to the Chinese Yuan, but with a low Rsquared (0.26) and not statistically significant.
- Funded PTEs showed similar results to polytechnics and ITPs.

¹⁹ Martin Jenkins (2012)

²⁰ Ministry of Education (2014c) ²¹ Education New Zealand (2013b)

²² Ministry of Education (2014c)

 Unfunded PTEs had an R-squared of 0.71, meaning changes in the NZ\$/US\$ rate were the main driver (71%) of changes in enrolments (2003-2013); enrolments in English language schools (ELSs) in particular are reported to often be part of a New Zealand vacation, and so face strong price competition from competing destinations such as Australia and Canada; however, Chinese enrolments (2006-2013) were not significantly correlated to the NZ\$/Yuan rate, especially at ELSs, possibly because their main driver is to pass the fluency requirements to enter a MESDC university; Japanese enrolments have also fallen overall (2006-2013) despite falls in the NZ\$/Yen rate, possibly due to internal factors in Japan reducing demand for international education.

6 International education providers in Auckland²³

This section provides a brief overview of the supply side of the sector: the number of education providers, and how many students are enrolled at each (on average, by subsector). Some sub-sectors have a small number of large providers, and others have a larger number of smaller providers.

6.1 Auckland providers 2013

Auckland has 370 education providers that have international fee-paying students (IFPSs). The majority (61%) of these providers are primary (136) and secondary schools (90), and most of the rest are SDR (65) and non-SDR (60) private training establishments. Also important, but relatively few in number, are universities (4), polytechnics (8) and subsidiaries (7).

Figure 35: International education providers by sub-sector, number and %, Auckland 2013

6.2 International enrolments per provider by sub-sector

In Auckland, the number of international students enrolled per provider (that has any at all) varies greatly depending on the type of provider (sub-sector), as follows:

- Auckland universities each have on average over 2,300 IFPSs
- most primary schools have none; the ones that have any IFPSs, have on average only 12 each

²³ Source: Ministry of Education (2014b); providers with IFPSs

- in contrast, the majority of Auckland's secondary schools have international students, and the average is 83 IFPS each – but this is still a relatively small portion of their total students²⁴
- polytechnics each have over 500 IFPSs, on average, which is a moderate proportion of their total students
- subsidiary providers (English language schools) also have around 500 IFPSs each, and this tends to be a high proportion of their total students
- non-SDR PTE private providers are typically a bit smaller, at 348 IFPSs each, and are not permitted to enrol any domestic students who receive state funding support
- SDR PTE private providers have still fewer IFPSs (138 each), which is a moderate proportion of their total students.

Figure 36: International enrolments (IFPS) per provider by sub-sector, Auckland 2013

6.3 Auckland providers: trends since 2007

The total number of Auckland providers with IFPSs fell somewhat (by 10%) in the six years from 2007 (411) to 2013 (370). The number of primary schools with IFPSs fell more sharply, while secondary schools and universities barely changed. The number of polytechnics with IFPSs actually increased between 2007 (5) and 2013 (8), as did subsidiary providers (from 4 to 7). The numbers of private providers (PTEs) had small decreases, although less so for the unfunded (non-SDR) ones than for the state funded (SDR) ones.

²⁴ Typically 700 per school

Figure 37: International education providers by sub-sector, Auckland 2007–2013

7 Auckland tertiary IFPSs field of study²⁵

This section looks at the fields of study of international tertiary students in Auckland, and how it relates to the type of provider (sub-sector). Available data covers tertiary IFPSs only (totalling 46,493), i.e. excluding primary and secondary schools and also excluding PhD students, exchange students and NZ AID students.

7.1 Auckland tertiary IFPSs field of study

Most tertiary IFPSs in Auckland study either English (notably English for speakers of other languages (ESOL)) (41%) or Management and Commerce (28%). A smaller but still significant proportion study in STEM²⁶-related fields, notably Information Technology (6%), Engineering (4%) and Natural and Physical Sciences (2%). The other main fields of study are Food/Hospitality/Personal (6%) and Foundation/Personal Interest (6%).

Figure 38: Tertiary IFPSs by field of study, number and %, Auckland 2013

²⁵ Source: Ministry of Education (2014b); tertiary IFPSs

²⁶ STEM is an acronym for science, technology, engineering and mathematics

7.2 Auckland tertiary IFPSs sub-sector by field of study

The type of provider (i.e. sub-sector) for Auckland's tertiary IFPSs varies greatly depending on the field of study. Key differences between the main fields and the total for all fields (which is dominated by non-funded PTEs, and has very few students at subsidiaries) are as follows:

- natural and physical sciences are taken only at university
- information technology is taken relatively more at funded PTEs
- engineering is taken more at polytechnics and universities and hardly at all at nonfunded PTEs
- management and commerce is taken more at universities
- food/Hospitality/Personal is mostly taken at funded PTEs
- foundation/Personal Interest is taken more at universities and not at all at funded PTEs
- English (ESOL) is taken primarily at non-funded PTEs and at subsidiaries; at the New Zealand level, most (60%) ESOL enrolments are at English language schools, which are subsidiaries or PTEs where ESOL is the main or sole education provision.

Figure 39: Tertiary students (IFPS) by sub-sector, shares by field of study, Auckland 2013

7.3 Auckland tertiary IFPSs field of study by sub-sector

The combination of provider types (sub-sectors) and total IFPS student numbers for each field, determines the proportion of IFPSs in each field for each sub-sector. Key differences

between each sub-sector and the total for all providers (which is dominated by English (ESOL) and management and commerce) are as follows:

- polytechnics have more engineering and information technology and fewer English (ESOL)
- universities have (more) natural and physical sciences, management and commerce and foundation/personal interest
- funded PTEs have more information technology and food/hospitality/personal
- non-funded PTEs are dominated by English (ESOL) and have no engineering
- subsidiaries specialise solely in English (ESOL).

Figure 40: Tertiary students (IFPS) by field of study, shares by sub-sector, Auckland 2013

7.4 Auckland tertiary IFPSs sub-sector by field of study totals

The concentrations of fields of study and sub-sectors results in actual numbers of tertiary IFPSs in each field for each sub-sector being dominated by a small number of combinations, as follows:

- English (ESOL) at non-funded PTEs (12,933)
- management and commerce at non-funded PTEs (4,993)
- management and commerce at universities (3,773)
- English (ESOL) at subsidiaries (3,476)
- management and commerce at funded PTEs (2,794).

Figure 41: Tertiary students (IFPS) by sub-sector, numbers by field of study, Auckland 2013

8 Auckland IFPS EFTS by sub-sector²⁷

8.1 Auckland IFPS EFTS ratios by sub-sector

Many IFPSs are enrolled part-time rather than full-time, or do not complete a full year of study in Auckland. Total numbers of students are converted to EFTS based on how their course compares to a full-time course in terms of the amount of study or the workload involved. The average ratio of EFTS to students is 50% overall, but varies depending on the type of provider, as follows:

- the highest average EFTS ratios, over three fifths (60%+), are for universities, secondary schools and SDR PTEs
- the lowest EFTS ratio is for subsidiaries, at only a fifth (20%), due to relatively high turnover of students undertaking shorter duration courses in English (ESOL)
- primary schools, polytechnics and non-SDR PTEs have intermediate IFPS EFTS ratios, averaging around two fifths (40%) to a half (50%); many non-SDR PTE courses – especially English – tend to be relatively short duration.

Figure 42: EFTS per student (IFPS) by sub-sector, Auckland 2013

8.2 Auckland IFPS EFTS per enrolment trends

The number of EFTS per student (or per enrolment as a proxy) rose only slightly from 2007 to 2013 for the total of all Auckland IFPSs, but the ratio rose substantially for some subsectors and fell for others (particularly in 2009), as follows:

²⁷ Source: Ministry of Education (2014b); IFPS

- primary: the ratio had been quite high in 2007 but fell to 2009 then continued to fall resulting in a near-halving of the ratio; presumably this reflects a shortening of the average length of stay
- secondary: the ratio had been quite high in 2007 but fell to 2009, then stabilised
- polytechnics: modest fall to 2010, then recovery, around a half (45–50%)
- universities: a slight increase in 2009 and 2010 to around two thirds (65%), then stable
- SDR PTE providers: strong cyclic variations but no up or down trend: sharp rises to 2009, reversed to 2011, repeated in 2013
- non-SDR PTE providers: steady rises to 2012, slight drop in 2013
- subsidiaries: a sharp increase in 2009, reversed by a prolonged, gradual downtrend after that.

Figure 43: EFTS per enrolment (IFPS) by sub-sector, Auckland 2007–2013

8.3 Auckland total IFPS EFTS by sub-sector

Combining the EFTS/student ratio with the student numbers gives IFPS EFTS numbers for each sub-sector, which differs from the IFPS breakdown based on students (head-count) as follows:

- non-SDR PTEs (29%) are still the largest sub-sector, but less so than for pure student numbers
- public providers (which exclude SDR and non-SDR PTEs) now comprise half the total (52%)
- universities (23%) are now nearly a quarter of the total
- secondary schools (16%) are now a sixth of the total
- subsidiaries (3%) have halved in relative terms.

Figure 44: EFTS (IFPS) by sub-sector, Auckland 2013

8.4 Auckland IFPS EFTS proportions trends by sub-sector

The split of Auckland's IFPS EFTS between the various sub-sectors has varied over time due to the combination of changes in enrolment shares and relative changes in EFTS per enrolment. The changes in EFTS shares over time were as follows:

• primary schools' share fell sharply in 2008 and 2009 (to 3%) and stayed there

- secondary schools' share dropped in 2009 (to 16%) and has since remained around that level
- polytechnics share has largely stayed around a fifteenth (7%)
- universities share fell by 2009 (20%) but rose in 2013 (23%)
- SDR PTEs share grew continuously after 2007, including in particular 2012 and 2013 (unlike for enrolments)
- non-SDR PTEs share rose to 2009 but then were relatively flat to 2012 and fell only modestly in 2013
- subsidiaries share has remained around a thirtieth (3%).

Figure 46: EFTS (IFPS) shares by sub-sector, Auckland 2007–2013

9 Auckland IFPS tuition fees²⁸

9.1 Auckland tuition fees per IFPS EFTS by sub-sector

Tuition fees per student depend on a variety of factors, and one of the ways to standardise them is to convert to dollars per EFTS, on the assumption that a given course will cost more if it involves more study and more work. Tuition fees per EFTS in Auckland in 2013 averaged \$14,939, but vary depending on the type of provider as follows:

- universities are substantially more expensive (\$25,859); all others are below the average
- secondary schools, polytechnics and subsidiaries are all around \$14,000
- SDR PTEs are slightly cheaper (\$12,373), and non-SDR PTEs even cheaper still (\$9,070)
- primary schools (\$10,279) are cheaper than secondary, but above non-SDR PTEs.

Figure 47: Tuition fees per EFTS (IFPS) by sub-sector, Auckland 2013

9.2 Auckland tuition fees per student (IFPS) by sub-sector

Tuition fees per student (IFPS) are only half as much as per EFTS, but the average fee variability between sub-sectors is even greater per student than per EFTS, as follows:

- universities still have the highest average fee, and by an even greater margin
- secondary schools still have the second highest fee
- SDR PTEs and polytechnics are still behind secondary schools, with a slightly wider gap
- primary schools are now distinctly lower
- non-SDR PTEs trail by an even greater margin

²⁸ Source: Ministry of Education (2014b); IFPS only

• subsidiaries have shifted from near the average to having the lowest fees of all.

Figure 48: Tuition fees per student (IFPS) by sub-sector, Auckland 2013

9.3 Auckland tuition fees per IFPS EFTS by sub-sector trends

From 2007 to 2013, tuition fees per IFPS EFTS in Auckland grew by a fifth (22%) from \$12,239 to \$14,939, (3.4% per annum), which is greater than the rate of inflation, and so represents a modest increase in real terms. However, fees per IFPS EFTS grew at different rates for the different sub-sectors, namely:

- more rapidly for secondary schools (5.0% pa) and universities (4.9% pa)
- weakly for non-SDR PTEs (1.2% pa, a slight fall in real terms after allowing for inflation)
- around or slightly above the inflation rate for primary schools (2.7% pa), polytechnics (3.1% pa), SDR PTEs (1.8% pa) and subsidiaries (1.8% pa).

Figure 49: Tuition fees per EFTS (IFPS) by sub-sector, Auckland 2007–2013

9.4 Auckland total tuition fee income by sub-sector

Total tuition fee income is the product of fee per EFTS, EFTS per student and number of students (see Appendix Two). For IFPSs in Auckland in 2013, tuition fees totalled \$417 million and varied by provider type as follows:

- universities generated the most total fees, and their fee share was double their student share, due to a combination of high \$/EFTS and a high EFTS/student ratio, plus a fairly large share of students
- non-SDR PTEs are an important source of tuition fees, with a very large number of students, but low \$/EFTS and below-average EFTS/student
- SDR PTEs have fewer students, but below average \$/EFTS are balanced by higher EFTS/student
- secondary school fees are also important, boosted by a fairly high EFTS/student ratio.
- polytechnics have a similarly low share of fees as of students
- subsidiaries' fee income share is even lower than polytechnics' due to an extremely low EFTS/student
- primary schools have an even lower share of fees than their share of students.

Figure 50: Tuition fee total revenue by sub-sector, \$NZ million and %, Auckland 2013

9.5 Auckland tuition fee income by sub-sector

Total tuition fee income in Auckland (nominal) grew from \$290 million in 2007 to \$417 million in 2013 (+\$127 million, or 6.3% pa) but varied over that time for the various sub-sectors as follows:

- primary schools were the only sub-sector that fell continuously, but from a low base so little impact on the sector total
- secondary schools and polytechnics (both 4.5% pa) each grew significantly faster than inflation
- universities had strong growth after 2008 (and averaging 6.6% pa overall since 2007), for \$52 million overall growth – the main driver of the sector's growth
- SDR PTEs grew rapidly (14.9% pa), from a modest base but still a major contribution (+\$37 million)
- non-SDR PTEs grew rapidly until 2011 but then fell equally sharply, for an overall increase (4.8% pa) significantly faster than inflation
- subsidiaries grew rapidly (11.2% pa) but from a very low base so minimal impact in absolute terms.

Figure 51: Tuition fees total income by sub-sector, Auckland 2007–2013

10 Auckland total revenues from tuition fees and living costs²⁹

10.1 Total spending (fees and living costs) by sub-sector

Based on Infometrics' most recent international education survey report, in 2012, international students in Auckland spent \$462 million on tuition fees and \$997 million on living costs³⁰, for a total expenditure of \$1,458 million or three fifths (59%) of the total for international students in New Zealand (\$2,491 million). This is 2.0 per cent of the size of Auckland's GDP.

Language schools (16%) and other PTEs (OTEP) (32%) accounted for half of total expenditure, and IFPSs at universities (26%) accounted for a further quarter of the total. PhD students (2%) and other non-international fee paying students (2%) spent much less of the total.

Figure 52: International students' total expenditure by sub-sector, \$NZ million and %, Auckland 2012

10.2 Spending split (fees and living costs) by sub-sector

Fees comprise on average a third (31.6%) of total spending – or put another way, for every \$100 spent on fees in Auckland, another \$216 is spent on living costs. However, the proportion varies from a ninth (11.4%) for language schools to four ninths (44.4%) for universities. Secondary schools and polytechnics are near the upper end, while PhD students and primary schools are much lower. Fees will tend to be a lower proportion of total

²⁹ Source: Infometrics and NRB (2013), plus supplementary analysis and data from Schoefisch, U, (2013).

³⁰ Some Auckland data is not stated in their report, but is calculated here from their other data.

expenditure for students who are enrolled for only some of the weeks that they are here, and for students in part time courses.

Figure 53: Expenditure split fees versus living costs by sub-sector, Auckland 2012

10.3 Fees and living costs per student by sub-sector

On a per-student basis, the average expenditure for 2012 is \$24,270 (similar to the New Zealand average of \$25,370), but varying from under \$19,000 for primary schools and language schools, to \$42,900 for universities and \$32,200 for PhDs. Average fees were \$7,681 and average living costs were \$16,588.

Expenditure per student is the product of expenditure per week (per student), and number of weeks (per student). For the living cost component, living costs per week are likely to vary only modestly between provider types³¹, so the main driver of the variation in living costs per student (from other (OTEP) \$14,000 to PhD \$25,600) is presumably variation in number of weeks of duration of the different types of course. In addition to the course itself, duration may also include time spent here by the student before and after the course.

³¹ Not stated in the Infometrics report, but estimated by Covec (2012) "Figure 4 Average expenditure per tertiary FFP student on living expenses...spend per week" varies from \$394 (Polytechnics) to \$498 (ELS).

Figure 54: Fees and living costs per student by sub-sector, Auckland 2012

10.4 Living costs share by category

Nearly a third of living costs³² are for accommodation (31.6%), with a similar proportion split between communication (13.9%), groceries (11.3%) and domestic transport (10.7%). Only minor shares are reported for offshore travel (3.3%) and travel in NZ (2.6%). By comparison, tuition fees cost 45.4% as much as total living costs. (For Auckland, the tuition cost ratio is similar, at 46.3%.) For Auckland the accommodation share would presumably be higher, but this cannot be confirmed from the report.

Figure 55: Living costs by cost category, NZ 2012

³² In New Zealand; no split was given for Auckland.

11 Conclusions

New Zealand now has one of the highest ratios in the OECD of international to domestic students at all levels of tertiary education, and Auckland is a key driver for the country.

Auckland has been unusually successful at attracting international students, especially Chinese, Indians, South Koreans and Japanese, especially to study English and management and commerce, and especially at private training establishments.

The overall trend for Auckland's international enrolments depends on the time period: downward after 2003, upward overall since 2008, but falls in 2012 and 2013. At the sub-sector level, universities and subsidiaries have recovered to 2003 levels, and funded PTEs have grown, but at the expense of unfunded PTEs; secondary schools are on a sustained uptrend, since 2007, but still below 2003 levels.

Universities are the largest (and growing) source of fee income, due mainly to a combination of high fees per EFTS and high EFTS per student, plus robust student numbers despite fee increases, in contrast to declines in the rest of New Zealand. However, the sheer number of students at PTEs means they contribute the most total expenditure (including living costs), especially when language schools are included in that total.

Approximately a quarter of the total sector's expenditure is on accommodation, which stimulates the economy like any export earnings and helps generate wealth for Aucklanders both directly and indirectly, but could also put pressure on overall availability of housing and so be detrimental to housing affordability.

As well as the direct economic stimulus, having international students can offer a city other benefits, such as improving international linkages and facilitating access to an international talent pool of skilled workers and researchers who can help drive knowledge and innovation.

12 References

Auckland Council (2012). Auckland Economic Development Strategy 2012

Education New Zealand (2013a). *New Zealand International Education Snapshot: 2013 Full Year Report*, Education New Zealand, 2013.

Education New Zealand (2013b). *PTE Sector Engagement Plan 2013/2014*, Education New Zealand, 2013.

Education New Zealand (2013c). *School Sector Engagement Plan 2013/2014*, Education New Zealand, 2013.

Education New Zealand (2014). *English Language Sector Engagement Plan 2014*, Education New Zealand, 2014.

Infometrics and NRB (2013). *The Economic Impact of International Education 2012/2013*, for Education New Zealand, 2013.

Martin Jenkins (2012). *Sector Engagement Framework Draft Report* [custom report for Auckland Tourism, Events and Economic Development Limited].

Ministry of Education (2013), International Student Enrolments in New Zealand 2006–2012.

Ministry of Education (2014a). *Enrolments of International Fee-Paying Students by Region of Study by Sector* [custom data for Auckland Council].

Ministry of Education (2014b). *Export Education Levy Statistics for the Auckland Region* (custom data for Auckland Council).

Ministry of Education (2014c). *Exchange Rates and International Student Enrolments in New Zealand 2003–2013,* International Division, Ministry of Education, 2014.

OECD (2014), Indicator C4: Who studies abroad and where? in *Education at a Glance 2014: OECD Indicators,* OECD Publishing. Available at: <u>http://dx.doi.org/10.1787/888933118656</u>

Schoefisch, U (2013). *Economic Impact Analysis Framework for ATEED Economic Development Projects*, Strategas Consulting (custom report for Auckland Tourism Events and Economic Development).

13 Glossary and acronyms

Advanced Research Qualifications (ISCED6, renumbered ISCED8 "doctoral") – refer to tertiary programmes that lead directly to the award of an advanced research qualification, e.g., Ph.D. The theoretical duration of these programmes is three years full-time in most countries (for a cumulative total of at least seven years full-time at the tertiary level). See also Tertiary-Type A.

Auckland provider – includes several tertiary level providers from outside Auckland, who have campuses located in Auckland.

CAGR – compound annual growth rate.

China - data includes Hong Kong data (but not Taiwan data).

CoE – College of Education; see also University. Colleges of education have been progressively amalgamated with the universities.

Composite school – provides both primary and secondary education – see also **secondary**.

EER – external evaluation and review of TEOs by NZQA.

EFTS – Equivalent full-time student – usually much lower than enrolments and students.

ELP – English language provider.

ELS – English language school – subsidiaries or PTEs where ESOL is the main or sole education provision.

Enrolments – some students enrol at more than one provider, so the number of enrolments will always be more than the actual number of students in NZ; the difference varies by subsector, from 0% for subsidiaries and non-SDR PTEs to 4% for polytechnics and SDR PTEs; see also students and EFTS.

ENZ – Education New Zealand is a crown entity and is the lead organisation marketing New Zealand's education industry overseas and supporting its business development.

ESOL – English for speakers of other languages. The curriculum is tailored to their needs.

EU - European Union, currently 28 member states.

EU21 – The 21 EU countries that are members of both the European Union and the OECD.

FFP – Foreign fee paying students.

Field of study – is based on NZSCED.

Foreign students – are defined by the OECD as students who are not citizens of the countries in which they are enrolled, but may be long-term residents or were born in that country. In general, international students are a subset of foreign students.

Funded PTE – here is synonymous with SDR PTE.

HK – Hong Kong.

IFPS – International fee paying student; excludes international students who pay the same fee as domestic students (e.g. PhD students) see also student, international student and enrolments.

Incl – Including.

International students – ENZ defines these as students who are non-residents of New Zealand who have entered into New Zealand expressly with the intention to study. In some cases data is available only for the ones that pay international fees (IFPSs).

ISCED – International Standard Classification of Education. The 1997 system was revised in 2011: Level 5A is now 5 "Short-cycle tertiary"; 5B is now split into 6 (Bachelor) and 7 (Master); level 6 ("advanced") is now numbered 8 ("doctoral") See also Advanced Research Qualifications, Tertiary-Type A and Tertiary-Type B.

ITO – Industry Training Organisation; ITOs are not education providers, but have responsibility for setting standards and arranging the delivery of industry training.

ITP – Institutes of technology and polytechnics (government owned only).

MESDC – Main English-speaking Destination countries (United States, United Kingdom, Australia, Canada, New Zealand) for IFPSs.

Non-SDR PTEs/providers – PTEs that submit only summary data at the provider level.

NRB – National Research Bureau Ltd.

NZ – New Zealand.

NZQA – New Zealand Qualifications Authority.

NZSCED – New Zealand Standard Classification of Education is a subject-based classification system defining each subject or field of study for courses and qualifications at universities, polytechnics, colleges of education, wānanga and private training establishments in receipt of Government funding.

OTEPs – Other Tertiary Education Providers (now referred to as PTEs, but not a perfect match as OTEPs excluded ELSs).

Pa - per annum - here representing CAGR unless otherwise specified.

Polytechnics – may include all ITP depending on context; see also ITP and University.

Primary – includes primary schools and intermediate schools.

PTE – Private Training Establishment. A private organisation providing education/training (i.e. they are not state-owned). They are divided into SDR PTEs (funded) and non-SDR

PTEs (unfunded). Many companies and government training establishments register their staff training operations as training establishments.

Public – here refers to government owned educational institutions, namely primary and secondary schools, polytechnics, universities and their subsidiaries. It does not include funded PTEs or unfunded PTEs.

RONZ - Rest of New Zealand (i.e. excluding Auckland (and Canterbury as appropriate)).

SDR PTEs or Single Data Return providers – are funded PTEs that submit individual student data electronically, namely those who enrol domestic students who receive state funding support; the information is required to be completed by all providers that receive the EFTS based tuition subsidy or have students with student loans or allowances.

Secondary – includes secondary schools, composite schools and special schools.

STEM – science technology engineering mathematics; these fields of study are seen as underpinning technological innovations.

Students – refers to head count, and may be allocated based on the course with the highest qualification level and EFTS factor; for some years or sub-categories, only enrolment data is available, but the difference is usually very small; see also Enrolments, EFTS and IFPS.

Sub-sector – here is based on the type of provider; see also ELS and OTEP.

Subsidiary providers – are separate English language units at registered schools, universities and PTEs.

TEC – Tertiary Education Commission.

TEI - Tertiary education institutes (universities, ITPs and wananga).

TEO – Tertiary education organisation. Any educational organisation supplying [tertiary] education and/or training and/or assessment services to learners.

Tertiary-Type A programmes (ISCED 5A, renumbered ISCED 6 Bachelors and ISCED 7 Masters) – largely theory-based and are designed to provide sufficient qualifications for entry to advanced research programmes. They have a minimum cumulative theoretical duration of three years' full-time equivalent, but typically last four or more years.

Tertiary-Type B programmes (ISCED 5B, renumbered ISCED 5) – short cycle tertiary programmes, typically shorter than those of tertiary-type A and focus on practical, vocationally oriented technical or occupational skills for direct entry into the labour market. They have a minimum duration of two years full-time equivalent.

TVET – Technical and Vocational Education and Training

Unfunded PTE – here is synonymous with non-SDR PTE.

University – now includes CoEs (e.g. Auckland University of Technology, but not Unitec New Zealand (which is an ITP)).

Wānanga – are tertiary education institutes that assist the application of knowledge regarding Maori tradition according to Maori custom; however they have no international students attributed to them (except one at Waikato in 2013).

Appendix one: Students vs enrolments

Some international students enrol at more than one provider, so the total number of enrolments will always be more than the actual number of students in New Zealand. For some years or sub-categories, only enrolment data is available.

Student numbers are based on head count, and may be allocated based on the course with the highest qualification level and EFTS factor. The difference varies by sub-sector, from 0% for subsidiaries and non-SDR PTEs to 4% for polytechnics and SDR PTEs (see table).

The implication is that some international students take supplementary courses at polytechnics, universities or SDR PTEs, while their main study is at a different organisation (of the same or a different type), whereas if an international student enrols at a subsidiary or a non-SDR PTE then that will be counted as their main course. In the case of primary and secondary school students, presumably there are changes in school that show up as the additional enrolments for the given numbers of students.

	Enrolments	Students	Difference	Difference %
Primary	1,590	1,565	25	1.6%
Secondary	7,456	7,346	110	1.5%
Polytechnic	4,381	4,227	154	3.6%
University	9,482	9,253	229	2.5%
PTE – SDR	8,970	8,639	331	3.8%
PTE – non-SDR	20,892	20,892	0	0.0%
Subsidiaries	3,482	3,482	0	0.0%
Total enrolments	56,253	55,404	849	1.5%

Table 2: Students versus enrolments, Auckland 2013

Figure 56: Students versus enrolments, Auckland 2013

Appendix two: Sources of tuition fee variation by subsector

Total tuition fee income is the multiplication product of fee per EFTS, EFTS per student and number of students. Variation in total fees between the sub-sectors is therefore due to variations in each of those parameters, as follows:

- as a starting point, the sub-sector's share of total fees (summing to 100%) depends on the sub-sector's share of the total number of students (summing to 100%)
- a sub-sector's share of fees will be higher (lower), if it has a higher (lower) than average (100%) EFTS per student
- a sub-sector's share of fees will be higher(lower), if it charges a higher(lower) than average (100%) fee per EFTS.

	Students (#)	EFTS/Student	\$/EFTS	Fees \$m
Primary	1,565	0.41	10,279	7
Secondary	7,346	0.63	14,545	67
Polytechnic	4,227	0.51	14,182	30
University	9,253	0.68	25,859	163
PTE – SDR	8,639	0.62	12,373	66
PTE – non-SDR	20,892	0.39	9,070	74
Subsidiaries	3,482	0.21	14,001	10
Total all	55,404	0.50	14,939	417
Ratios				
	Share	Relativity	Relativity	Share
	Students (#)	EFTS/Student	\$/EFTS	Fees \$m
Primary	3%	82%	69%	2%
Secondary	13%	124%	97%	16%
Polytechnic	8%	101%	95%	7%
University	17%	135%	173%	39%
PTE – SDR	16%	122%	83%	16%
PTE – non-SDR	38%	78%	61%	18%
Subsidiaries	6%	42%	94%	2%
Total all	100%	100%	100%	100%

Table 3: Sources of tuition fee variation by sub-sector, Auckland 2013

Note: Ratios definitions: EFTS/student and \$/EFTS are relative to average for total all subsectors; Students and fees are shares of total all sub-sectors, summing to 100%.