The Economic Impact of Export Education in 2011

report to
Education New Zealand

Prepared by Infometrics Ltd

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Contents

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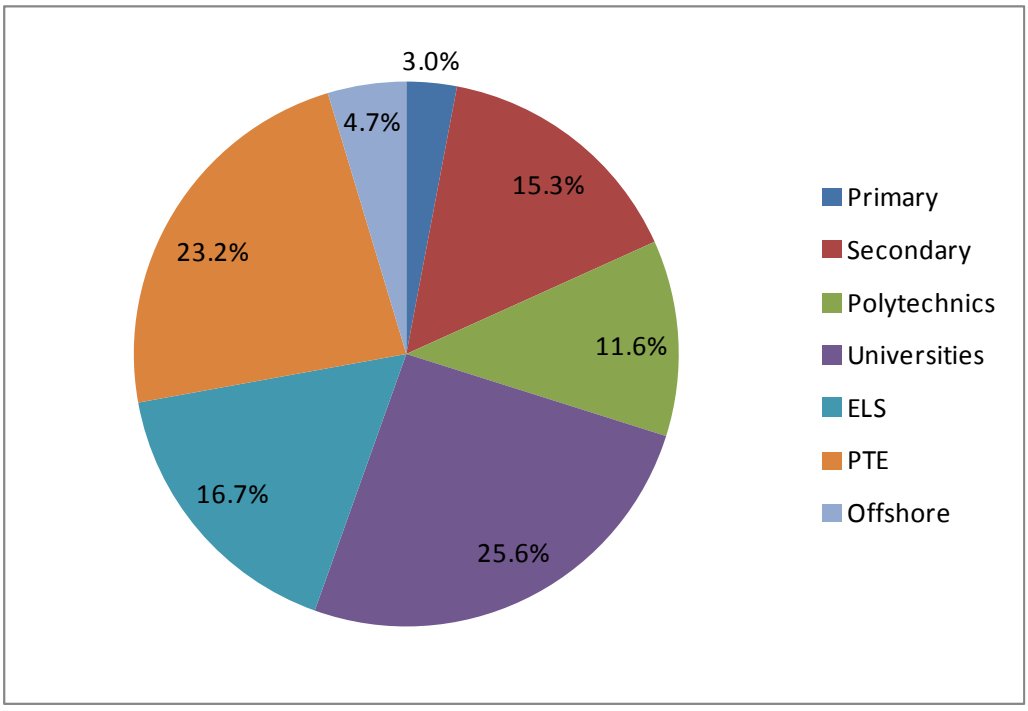
1. SUMMARY

This report provides an update to our 2008 report on the contribution of export education to the New Zealand economy.[1] In contrast to 2008 no new survey of student expenditure on living cost has been undertaken, although we do have the latest available data on student numbers and expenditure on tuition fees.

For 2007/08 we estimated the contribution to New Zealand's Gross Domestic Product (GDP) of the industry at $2.1 billion, based on foreign exchange earnings of $2.3 billion, of which about $70m was attributable to the offshore provision of a range educational services such as consulting and correspondence courses.

For 2011 we estimate that the contribution to GDP is $2.3 billion, based on almost $2.7 billion of foreign exchange earnings. As shown in Figure 1 below, over 95% of the contribution to GDP comes from fee-paying foreign students studying in New Zealand, with the rest coming from offshore provision.

Figure 1
Contributions to GDP by Export Education Sector



[1] Infometrics, National Research Bureau and Skinner Strategic (2008), *The economic Impact of Export Education,* report to Education New Zealand and Ministry of Education, October.

2. STUDENT EXPENDITURE IN NEW ZEALAND

Economic Impact by Type of Student

Table 1 shows the estimated value of exports of educational services delivered to foreign fee-paying students studying in New Zealand in 2011. The data on the number of students and their expenditure on tuition fees is sourced from the Ministry of Education,[2] while expenditure on living costs has been estimated by assuming the same expenditure per student for each of the six educational institution types, inflated by movements in the Consumers Price Index since 2008 using student expenditure weights.[3]

There are a number of different ways to measure the size of the industry. In terms of the number of students the industry has grown to 97,294, an increase of 6.5% on the 2007/08 figure of 91,321. Alternatively its direct foreign exchange earnings amounted to an estimated $2581m, comprising $732m in tuition fees and $1849m in living cost expenditure. In 2007/08 direct foreign exchange earnings were $2202m, implying an increase over the three years of 17.2%.

Universities are the largest contributor with an estimated $689m, but private tertiary providers (excluding English language schools) are close behind with $671m. Universities also have the highest average fees, but primary students have the highest average spend on living costs, presumably due to the presence of accompanying adults.

Looking at employment, the industry directly accounts for about 11,900 full time equivalent positions. Flow-on effects raise this to about 30,900.[4] Note that this should not be interpreted as meaning that employment in New Zealand would be lower by 30,900 FTE if the export education industry did not exist.

The contribution to Gross Domestic Product is estimated at $2232m. This is lower than the value of direct foreign exchange earnings as some of the export revenue leaks back out of New Zealand to pay for imported goods and services. Further, we do not apply economic activity multipliers to taxes and levies although arguably they could be recycled as government spending. The multipliers are not sophisticated enough to capture such effects. On the other hand we do not capture deadweight losses associated with taxation either.

Also omitted is any allowance for associated spending by visiting friends and relatives of students who may come for graduation ceremonies or to help students to set up at the start of the academic year. Such spending is counted in official statistics as revenue from foreign tourism, not from export education.

The reader is referred to the 2008 report for a complete description of the methodology and the error margins that are inherent in the analysis.

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[2] See Appendix A for the types of international students not included in the analysis.

[3] 2008 is the last year that a full survey occurred. A new survey is planned.

[4] Flow-on effects are calculated using the economic activity multipliers given in the 2008 report, updated only for changes in industry output prices. A thorough update of the multipliers depends on the release of new inter-industry tables by Statistics New Zealand.

Table 1: Economic Impact of Export Education

		Schools		Public Tertiary		English	Private	
		Primary	Secondary	Polytechnics	Universities	Language	Tertiary	Total
Number of Students	No.	2622	13068	11073	18918	25203	26410	97294
Tuition	$m	13.9	109.8	90.5	292.7	47.6	177.8	732.3
of which levies	$m	0.1	0.5	0.4	1.3	0.2	0.8	3.4
Average tuition (excl levy)	$/cap	5251	8362	8138	15403	1880	6700	7492
Average living costs	$/cap	23869	19660	19292	20966	16912	18663	
Second hand goods	$/cap	40	286	1165	1015	701	827	
Imports	$/cap	3947	3355	3203	3397	2471	2707	
Indirect tax	$/cap	2468	2012	1966	2183	1706	1949	
Net	$/cap	17414	14007	12957	14371	12034	13180	
Total living costs	$m	62.6	256.9	213.6	396.6	426.2	492.9	1848.9
Total Foreign Exchange	$m	76.5	366.7	304.1	689.4	473.9	670.6	2581.2
Expenditure (excl tax, levies & direct imports)								
Tuition	$m	13.8	109.3	90.1	291.4	47.4	176.9	728.9
Living Costs	$m	45.7	183.0	143.5	271.9	303.3	348.1	1295.4
		59.4	292.3	233.6	563.3	350.7	525.0	2024.3
Employment	No.	447	2659	1466	2951	1879	2460	11862
Value-Added	$m	28	151	108	238	147	206	878
Activity by Type I Multipliers								
Employment	No.	813	4584	2955	6648	4175	5477	24652
Value-Added	$m	48	248	188	427	267	382	1560
Activity by Type II Multipliers								
Employment	No.	1009	5665	3731	8408	5252	6878	30943
Value-Added	$m	63	330	250	556	347	491	2038
Indirect tax & levies	$m	7	27	22	43	43	52	194
Value-Added + tax & levies	**$m**	**70**	**357**	**272**	**599**	**391**	**543**	**2232**
	%	3.1%	16.0%	12.2%	26.8%	17.5%	24.3%	100.0%

Economic Impact by New Zealand Region

Table 2 presents estimates of how the impacts of export education are distributed over five New Zealand regions. As in previous years Auckland is by far the largest contributor, accounting for 61.5% of students and 63.1% of foreign exchange earnings.

The total flow-on effects do not sum to those in Table 1 primarily because the leakages from one region are not captured in the effects on other regions. For example some spending by students in Wellington may be on food and beverages that are manufactured in Auckland. This spending leaks out of the Wellington, but is not picked up in the Auckland figures, which capture only the effect of spending by students who study in Auckland.

Economic Impact by Country/Region of Origin

Table 3 presents estimates of how the impacts of export education are distributed over what were the five major source countries and regions in 2007/08. The ranking of major source countries has changed since and for 2011 is:

Rank	Country
1	China
2	India
3	South Korea
4	Japan
5	Saudi Arabia
6	USA
7	Vietnam
8	Thailand
9	Germany
10	Brazil

Unfortunately the expenditure data in the 2008 survey does not enable us to tabulate student expenditure by those origin countries.

In Table 3 there is again there is some inconsistency with Table 1 with regard to the total flow-on effects. This is caused by changes in the institutional mix of students between 2007/08 and 2011. For example the economic activity multipliers for students from China is not the same as is implied by weighting up the institution specific multipliers by the institutional mix of Chinese students, as those weights have changed between 2007/08 and 2011.

China is still the largest source of foreign students accounting for 23.7% of students and 26.5% of foreign exchange earnings.

Table 2: Economic Impact by New Zealand Region

No. Students		Auckland	Wellington	Other North Island	Canterbury	Other South Island	External	Total
Number of Students								
Primary Schools	No.	1644	51	503	357	67	0	2622
Secondary Schools	No.	6975	900	2237	1524	1432	0	13068
Polytechnics	No.	4049	663	3443	1195	1577	146	11073
Universities	No.	8696	2456	3663	2005	1943	155	18918
English Language Schools	No.	18241	1174	2059	2311	1418	0	25203
Private Tertiary	No.	20206	697	2514	1805	1126	62	26410
Total	No.	59811	5941	14419	9197	7563	363	97294
Tuition Fees excl levies	$m	415.0	58.0	115.0	72.3	65.2	3.3	728.9
Net Living Costs	$m	861.4	65.6	164.7	108.1	92.5	3.1	1295.4
	$m	1276.5	123.6	279.7	180.4	157.7	6.4	2024.3
Employment	No.	7287	836	1847	1083	988	39	12079
Value-Added	$m	518	57	126	75	66	3	845
Activity by Type I Multipliers								
Employment	No.	11186	1273	3120	1835	1624	61	19099
Value-Added	$m	783	82	187	120	99	4	1274
Activity by Type II Multipliers								
Employment	No.	13251	1487	3664	2201	1884	72	22560
Value-Added	$m	975	102	230	151	121	5	1584
Value-Added	%	61.6%	6.4%	14.5%	9.5%	7.6%	0.3%	100.0%

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Table 3: Economic Impact by Country/Region of Origin

No. Students		China	South Korea	Japan	Other top 10 Asia	Other	Total
Number of Students							
Primary Schools	No.	151	1889	174	74	334	2622
Secondary Schools	No.	2871	2485	1653	1677	4382	13068
Polytechnics	No.	3286	571	674	3271	3271	11073
Universities	No.	6199	1055	938	2075	8651	18918
English Language Schools	No.	2614	4173	4826	1278	12312	25203
Private Tertiary	No.	7950	2234	1162	9367	5697	26410
Total	No.	23071	12407	9427	17742	34647	97294
Tuition Fees excl levies	$m	225.0	79.5	39.6	143.1	241.6	728.9
Net Living Costs	$m	311.2	214.5	86.3	206.8	476.6	1295.4
	$m	536.2	294.0	125.9	349.9	718.3	2024.3
Employment	No.	3204	1625	746	2133	4459	12167
Value-Added	$m	240	125	56	151	316	887
Activity by Type I Multipliers							
Employment	No.	6632	3285	1465	4486	9453	25322
Value-Added	$m	425	224	98	272	566	1585
Activity by Type II Multipliers							
Employment	No.	8355	4122	1841	5634	11870	31822
Value-Added	$m	559	293	129	356	743	2081
Value-Added	%	26.9%	14.1%	6.2%	17.1%	35.7%	100.0%

3. OFFSHORE PROVISION

In our 2008 report we noted that the value of the offshore provision of educational services (consultancy services, correspondence courses, and New Zealand teachers temporarily abroad) was estimated by Statistics New Zealand at $25.5m for 2006/07 – the latest official estimate available at that time. We estimated a figure for 2007/08 of $70m, but subsequently Statistics New Zealand produced a figure of $57m. The difference is probably largely due to our estimate including $14m for education related software which Statistics New Zealand does not classify as educational services. However, even $70m is considered too low by some in the industry.

For 2010/11 Statistics New Zealand estimate the value of exports of education and training services delivered offshore at $78m, an estimate that is based on the first census of international trade in services and royalties since 2005. Thus we are reluctant to interpret this as an underestimate. However, it does exclude education related software. Until better information is available we assume unchanged software revenue of $14m, bringing the total value of offshore provision of educational services to $92m for 2010/11.

Using the same methodology as in the 2008 report, this $92m is associated with direct employment in New Zealand of 712 FTE jobs and value-added of $50m. Allowing for flow-on effects raises the employment to 1276 FTE and the contribution to GDP (value-added) to $109m.

As with the flow-on effects of fee paying students in New Zealand, these estimate should not be interpreted as portraying what would happen if there was no offshore provision of educational services.

APPENDIX A:
NON-FEE PAYING STUDENTS IN 2011

There are a number of types of international students that are not picked up in the foregoing economic impact analysis. Possible implications for the proposed 2012 survey and the follow-up economic impact analysis are discussed below.

Table A1: Non-fee Paying Students

Category	No.	Payment of Living Costs
NZAID students	294	NZAID
Exchange students	1465	Self?
Visiting armed forces/Diplomats/ Antarctic	71	Self?
International PhD students	2919	Self?
International off-job trainees	772	ITOs
Total	5521	

(Source: Ministry of Education)

There were 5521 non-fee paying international students in 2011. This compares with 97,294 fee paying students, so an extra 6% or so.

Of the 5521 students, 1066 have their living costs paid by New Zealand. Thus any foreign exchange earnings from this group would have to come from additional spending out of their own pockets or from visits by parents. This would be minor so this group could probably be ignored, as it has been in the past.

Exchange students seem likely to contribute to New Zealand's export earnings. However, in the past we have again ignored this group, so it may be best to continue that practice.

The number of visiting armed forces etc students is too small to bother about, so they could be ignored too.

This leaves PhD students, who constitute more than 50% of the fee-subsidised group. They were included in previous analyses because at that time they had to pay tuition fees. Accordingly we recommend including them in the definition of Export Education, although it probably would not be practical to identify them as a separate group in the proposed survey of international students. Little if any bias would occur from attributing to them the living cost expenditure of other university students.