Export earnings from the overseas student industry: how much?

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Education is regularly publicised as Australia's third-largest export behind coal and iron ore. Although it cannot be disputed that education is a major export, the published figures are inflated because of three broad factors. First, estimates of student expenditure on goods and services in Australia are based on students with different demographic characteristics than the current stock of overseas students. Second, the value of on-shore earnings by overseas students is included in the total. Third, direct costs, such as off-shore agents' fees have not been deducted from the stated earnings. It is likely that the actual export value of education is about half the stated figure, which would bring Australia's education export earnings into line with those in the USA.

Introduction

By 2008 the Australian overseas student industry contributed \$15.0 billion in export income to the Australian economy from spending on fees and goods and services by overseas students in Australia. This, at least, is the claim of Australian Education International (AEI), which is responsible for overseeing and promoting the overseas student industry in Australia (AEI, 2009a). AEI is part of the Commonwealth government's Department of Education, Employment and Workplace Relations (DEEWR).

According to AEI, education services 'remains Australia's third largest export, behind coal and iron ore (\$46 billion and \$30.2 billion respectively) and the largest services export industry ahead of personal travel services (\$11.7 billion)' (AEI, 2009b). This assertion has been endorsed by other education authorities. Universities Australia, the peak body representing Australian universities, states that 'education exports' is the clear number one service export ahead of tourism (Universities Australia, 2009). The \$15 billion figure now routinely prefixes newspaper accounts of the overseas student industry.

These estimates are not generated by the education industry itself. They derive from the Australian Bureau of Statistics (ABS). The ABS prepares regular estimates of trade in services, which includes tourism and educational services, as part of its overall estimates of the contribution of international trade to Australia's balance of payments.

The estimates for the credit items in this trade in relation to education for goods and services (living expenses) and fees over the years 2005-06 to 2007-08 are shown in Table 1. They show credits of \$13.7 billion by 2007-08. The comparable figure for 2008, which is the basis for statements in the previous paragraph, was \$15.0 billion. The latest comparable ABS estimate, for the year 2008-09, is \$16.6 billion (ABS, 2009b). The reason for the continuous increases, as shown below, is that export revenue, as measured by the ABS, moves in tandem with the increasing enrolments of overseas students.

In this article, the focus is on the ABS estimates for 2007-08. This is because a wide range of data was needed to assess the ABS estimates, not all of which was available for 2008 at the time of writing. The choice of 2007-08 for analysis is not an issue, as our conclusions about the ABS estimates are not affected by the year chosen for scrutiny.

Why an independent assessment is needed

The ABS estimates have been accepted without query by the educational industry and by national and state governments. There has been no scholarly assessment of their validity. Yet there are good grounds for such an assessment.

One concerns the plausibility of the ABS estimates. The A\$13.7 billion figure for 2007-08 represents an average expenditure per overseas student in Australia

Table 1: International trade in services, credits and education-related travel, by educational sector by type of expenditure, 2005/06 to 2007/08, number of students and per capita expenditure 2007/08

	2005/06 \$000	2006/07 \$000	2007/08 \$000	Number of Stu- dents 2007/08	Average expendi- ture per student 2007-08	
Goods and services						
Higher education	3,927	4,428	5,195	161,186	32,223	
Vocational	714	995	1,681	60,139	27,952	
Schools	395	444	556	24,747	22,467	
ELICOS	312	374	418	15,462	27,034	
New Zealand	57	68	86	2,896	29,696	
Non-Award	227	233	272	9,160	29,694	
Total	5,633	6,541	8,207	273,591	29,997	
Fees						
Higher education	2,596	2,759	3,110	161,186	19,294	
Vocational	551	736	1,170	60,139	19,455	
Schools	284	302	360	24,747	14,547	
ELICOS	275	337	392	15,462	25,352	
New Zealand	26	27	31	2,896	10,704	
Non-Award	248	266	315	9,160	34,389	
Total	3981	4428	5378	273,591	19657	
Total expenditure						
Higher education	6,524	7,187	8,304	161,186	51,518	
Vocational	1,265	1,731	2,851	60,139	47,407	
Schools	679	746	916	24,747	37,015	
ELICOS	587	712	810	15,462	52,386	
New Zealand	83	95	116	2,896	40,055	
Non-Award	476	499	587	9,160	64,083	
Total	9,615	10,970	13,585	273,591	49,654	
AusAid/Defence	130	140	155			
Total	9,745	11,110	13,740			

Source: Australian Bureau of Statistics (ABS), 5368.0.55.004, International trade in services, Table 12.1 International Trade in Services, Credits, Education Related Travel, by Educational Sector, by Type of Expenditure; Number of students, ABS, 2009, unpublished.

of \$29,997 for goods and services and A\$19,657 on fees or a total of A\$49,654. These figures are derived by dividing the goods and services and fee estimates in Table 1 by the ABS estimate for the number of overseas students in Australia for the equivalent of a full year in 2007-08. The figure of A\$49,654 is very high. It is way beyond the financial capacity of most domestic students let alone recently-arrived overseas students, many of whom come from relatively low-income societies.

A second ground is that comparable analyses of the contribution of overseas students to export earnings are not consistent with the ABS estimates. In the case of the United States, NAESA: the Association of International Educators in the USA, concludes that in 2007-08 overseas students studying in the US, on average, spent US\$18,260 on living expenses and US\$16,189 on fees, or a total of US\$35,315 per student (or about A\$38,800) (NAFSA, 2008). This figure is well below the ABS estimate of A\$49,564 per student in Australia.

A third ground for scepticism about the A\$13.7 billion figure is that it has not been adjusted for overseas student earnings while in Australia. By contrast, NAFSA estimates that the total foreign funds transferred to the US that are attributable directly to the overseas student presence must exclude earnings in the US. NAFSA excludes 'any US funding or employment the international students may be receiving in an effort to best represent these export dollars flowing into the US economy' (Baumgartner, 2009). These earnings were estimated to be US\$10.415 in 2007-08 and thus the total contribution to export earnings of each overseas student on average was US\$24,900 (NAFSA, 2008).

The same logic should apply in Australia. Overseas student earnings while in Australia make a significant contribution to the expenditure on goods and services and fees of overseas students detailed in Table 1. These earnings cannot be counted as exports since they are earned in Australia. As explained below, the ABS does include a debit for these earnings elsewhere in the Balance of Payments figures, but this adjustment is not acknowledged by organisations like AEI or Universities Australia when they quote ABS figures on the export of educational services.

One of the reasons that the ABS estimates have not been subjected to critical analysis is that it is not easy to do so. Most of the data the ABS relies on are unpublished and the accounting conventions the ABS follows when reporting the debit side of the accounts are little understood. Nonetheless, our experience was that, on request, the ABS provided the required unpublished data, as did AEI, where that organisation held the required data. The ABS also advised on the international accounting conventions it follows when reporting its findings.

The student base in Australia

The starting point for any estimate of overseas student expenditure in Australia is the overseas student population. Public discussion of student numbers in Australia is based on AEI enrolment figures. AEI compiles enrolment data for all education sectors which provide their services to overseas students. AEI estimates that the numbers of overseas students studying in Australia on a student visa were 370,238 in 2007 and 435,263 in 2008 (AEI, 2009a).

The ABS does not use the AEI's figures. Instead, it relies on unpublished monthly Department of Immigration and Citizenship (DIAC) stock counts of the actual number of persons in Australia holding student visas in the higher education, VET, ELICOS, school and other education sectors. These counts are adjusted monthly to incorporate arrivals and departures on such visas as well as those visaed in Australia or who change their status from that of a student to some other visa category. For 2007-08, the average number of students present in Australia was 273,591. These are unpublished figures provided to the authors by the ABS. Table 1 indicates the numbers for each educational sector over the 12 months of 2007-08. These figures are well below the AEI estimates for enrolments cited above. The reason is that the stock counts take adjust for students who spent only part of the year in Australia or were absent for brief periods, perhaps for holidays at home. This measure of student numbers is appropriate for assessing the annual value of goods and services and fee expenditure on the part of overseas students in Australia.

Estimates of student expenditure on goods and services in Australia

As noted earlier, the average expenditure of each overseas student in 2007-08 according to the ABS estimates was \$29,997 on goods and services and \$19,657 for fees. The estimates for each of the individual education sectors are provided in Table 1. The highest expenditure is estimated to have occurred amongst students holding higher education visas (A\$51,518 in all). However, the ABS estimates that even those enrolled in the

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VET sector spent A\$47,407 for goods and services and fees in 2007-08.

The ABS relies on a 2004 survey commissioned by AEI for its estimates of expenditure on goods and services on the part of overseas students studying in Australia since 2004. This survey has not been updated since 2004, apparently because of the high costs of replicating it. Thus, the accuracy of the ABS estimates depends on whether the 2004 results are applicable to recently arrived overseas students.

The University of Queensland Social Research Centre prepared the 2004 survey. The Centre attempted a national sample of all overseas students in Australia at the time. The majority of the students who responded were higher education students (62 per cent) with the next largest group being VET students who constituted 18 per cent (Western et al. 2005). The largest country of origin group was students from mainland China, fol-

lowed by Malaysia, Singapore and Hong Kong. The Indian proportion was just 5 per cent. Almost all of the Indian students surveyed were enrolled in the higher education sector.

Massive changes to the countries of origin, motivation for studying in Australia and fields of study

have occurred since the arrival of the students surveyed in 2004. Prior to 2004, most overseas students were attracted to full-fee university courses in the expectation that they could earn good money once they returned home, particularly if they came from Hong Kong, Malaysia or Singapore. Most appear to have come from relatively affluent families. Only 32 per cent of the 3,186 students surveyed indicated that they were employed in Australia (Western et al. 2005, p.15). Of those that were employed, most (72 per cent) reported incomes of less than A\$200 per week. Yet, the Survey found that students spent, on average, some A\$539 per week or A\$28,028 per year on living expenses (Western et al. 2005, p.19). This was on top of course fees, for which the 2004 survey did not collect any information.

The ABS has used the 2004 expenditure record (adjusted for inflation) as the basis for its estimates of expenditure since 2004. Yet, as noted, the student cohorts are quite different. In the case of the higher education sector, there has been a significant decline in the share of enrolments from the more affluent source countries of Hong Kong, Malaysia and Singapore and a surge in enrolments from poorer countries, notably China and India. As Table 2 shows, there were almost as many Indian higher education students in Australia by 2008 as there were from Hong Kong, Malaysia and Singapore put together. Many of this new wave of Indian and Chinese students were enrolled in universities providing courses customised to appeal to students wanting the cheapest access to credentials (usually in accounting or information technology) which would lead to a successful permanent residence application (Birrell & Perry, 2009).

Another major change since the early years of this decade is a rise in the number of students enrolled in VET courses, particularly students coming from India. Table 2 shows that in 2004 most Indian students were enrolled in the higher education sector. They came

> from middle class, big city backgrounds and were usually educated in schools which taught in English (Baas, 2009 p. 30). By 2008 most Indian students were enrolled in the VET sector and they were being drawn from regional and rural backgrounds, particularly from the Punjab. For this

reason they often needed to take an ELICOS course before beginning their VET courses. This is despite the relatively low minimum English requirement for these VET courses. These students do not come from affluent backgrounds.

The figures in Table 2 come from AEI enrolment statistics. They have to be interpreted carefully, since the enrolment figures for the VET sector exaggerate the total student numbers enrolled in the sector. VET students typically enrol in a new course each year whereas university students usually stay in the same course from commencement to graduation. As a result, the VET figures have to be halved in order to approximate them with the higher education enrolment figures.

Table 2 is provided to illustrate the changes that have taken place in the make-up of the overseas population and the numbers are not used in the calculation of overseas student expenditure.

These changes in the make-up of the overseas student population mean that the 2004 survey data are

Table 2: Overseas student enrolments by selected sector by top 10 nationalities, December 2002 to 2008

Nationality	2002	2003	2004	2005	2006	2007	2008		
	Higber Education								
China	16,073	22,389	30,523	40,299	46,297	48,944	52,663		
India	8,834	12,232	17,716	22,070	24,939	26,157	27,482		
Malaysia	13,514	15,384	15,841	15,286	14,797	15,069	15,633		
Singapore	10,399	10,162	9,195	8,302	7,816	7,439	7,473		
Indonesia	11,362	11,314	10,498	9,506	8,605	7,826	7,430		
Hong Kong	8,280	10,006	10,657	10,159	8,775	7,687	7,265		
Korea, Republic of (South)	3,661	4,436	4,926	5,256	5,442	5,799	6,301		
Thailand	4,879	5,599	5,648	5,181	4,833	4,668	4,233		
Viet Nam	1,729	2,005	2,158	2,356	2,565	2,933	3,880		
Other	36,610	41,240	43,530	44,253	45,529	47,813	49,599		
Higher Education Total	115,341	134,767	150,692	162,668	169,598	174,335	181,959		
	VET								
India	2,223	1,441	1,616	3,840	10,307	26,952	52,236		
China	5,786	8,194	10,614	12,863	14,827	18,977	25,823		
Nepal	498	378	317	518	1,237	5,369	12,797		
Korea, Republic of (South)	4,650	3,803	3,601	4,523	6,031	7,604	9,358		
Thailand	3,694	4,412	4,347	4,857	5,622	6,900	8,621		
Brazil	1,228	1,302	1,591	2,327	3,496	4,380	5,354		
Indonesia	5,160	4,718	4,032	3,603	3,561	4,152	5,247		
Bangladesh	1,046	1,394	1,970	2,288	2,973	4,009	4,236		
Hong Kong	5,659	5,884	5,137	4,407	4,257	4,303	4,229		
Japan	3,925	4,641	4,809	4,892	4,705	4,273	3,787		
Other	19,804	20,749	20,188	21,447	25,502	32,843	42,950		
VET Total	53,673	56,916	58,222	65,565	82,518	119,762	174,638		
Grand Total	169,014	191,683	208,914	228,233	252,116	294,097	356,597		

Source: AEI, enrolments data, 2002 to 2008

no longer a reliable indicator of expenditure on goods and services in 2007-08. Not only has the country of origin of students changed sharply since 2004 but so too has the social base of the students coming from some major countries. Students from China and India may have had less family financial support than their counterparts from Hong Kong, Malaysia and Singapore even in 2004. It is not possible to know, because the 2004 survey report does not provide expenditure estimates for students by country of origin. This means that even if expenditure patterns in 2004 by country of birth were a reliable indicator of expenditure in 2007-08, the survey does not provide the data which would enable an adjustment for the changed national composition of the student population since 2004. The ABS has had to generalise the average expenditure of all students surveyed in 2004 (with upward adjustments for the cost of living) to all students enrolled in 2007-08. The use of this methodology helps explain why the estimates for expenditures on goods and services for overseas students in 2007-08 shown in Table 1 seem so high.

University students or their families from Hong Kong, Malaysia, Singapore and Indonesia may be able to afford expenditures of around A\$30,000 per student per year on living expenses while in Australia (as well as course fees - explored below), but few of the students or their families from the poorer backgrounds just described could afford such sums. In India and China, established professionals earn around A\$5,000 a year. These families, let alone families from regional and rural backgrounds, would struggle to raise anything like the average annual expenses estimated by the ABS.

Alternative estimates of overseas student expenditure on goods and services

Because there have been no further surveys of overseas student expenditure in Australia since the 2004 University of Queensland study, we have had to rely on contextual information in order to offer an alternative estimate.

On the assumption that most overseas students would struggle to find the finances necessary to meet the costs of living in Australia, the best way of estimating what they actually spend is to use expert assessments of the minimum required to live in Australia. As a recent study of the information provided by Australian universities indicated, the majority of Australian universities provide information to prospective students about the minimum costs they face in Australia (Rodan, 2009).

Here is a selection of these estimates taken from current university websites. The University of South Australia states that the yearly costs of living in Adelaide are between A\$14,300 and A\$22,880 a year. Much of the variation in this estimate, as with those to follow, is attributable to choices about type of rental accommodation. Deakin University in Melbourne, whose main campus is in the middle suburb of Burwood, estimates that a single international student would need approximately A\$13,000-A\$16,000 per year to live in Melbourne. Melbourne University states a higher figure. It says that assuming a shared rental (with two others) and a location within six kilometres of the Parkville campus, the annual cost of living would be between A\$19,500 and A\$25,800. In Sydney, Macquarie University tells overseas students that an international single student living in Sydney will require approximately A\$14,000-A\$18,000 a year. The University of Technology, Sydney, which is located near the Sydney CBD says that the figure is around A\$16,000 to A\$21,000 a year.

Overseas students can live cheaper than these figures imply if they accept shared accommodation in houses rented exclusively to students. There is plenty of anecdotal evidence that many do take up this option. Baas (2009, p. 55) provides some vivid evidence for the Indian students he studied in Melbourne, many of whom lived in rented houses in relatively cheap suburban areas such as Dandenong and parts of Footscray.

Another way to get at student living costs is to ask how much Australian students spend on living expenses. There is some relatively recent data on this amount, which derives from the 2006 Universities Australia study entitled Australian University Student Finances 2006. This survey reports that the median annual expenditure for full-time domestic undergraduate students in 2006 was A\$11,320 (James et al., 2007, p. 5).

Overseas students will generally need much more than A\$11,320, primarily because they do not have access to subsidised family assistance for board and lodging. Assuming rent of A\$150 per week or A\$8,000 per year on top of the A\$11,320 annual expenditure this would amount to some A\$20,000 per year by

This latter figure is similar to those calculated by the various Australian universities cited above. Though an amount of A\$20,000 does seem high in the light of incomes in the major countries of origin, it provides a plausible alternative expenditure figure to that used by the ABS.

Debits for income earned in Australia

As indicated, the commonly cited figures for the exports of educational services do not adjust for the earnings of students while in Australia. These are reported as a debit item in the ABS Balance of Payments estimates. The ABS follows international practice in its accounting for trade in exports of services. The International Monetary Fund sets the standards for this practice. The international practice is to treat the expenditures of non-resident overseas students while studying in Australia (including fees and living expenses) as exports, in the same manner as the expenditures of tourists.

However, the ABS makes an adjustment for the income earned in Australia by students, tourists, or other non-residents elsewhere to the balance of payments accounts. This comes in the form of a 'compensation for employees' item, which is recorded as a debit in the balance of payments accounts. For the year 2007-08, this amount was estimated at A\$2.3 billion (ABS, 2009a).

The ABS has advised the authors that between 50 and 60 per cent of the A\$2.3 billion of the 'compensation to employees' in 2007-08 was attributable to the earnings of overseas students. This means that the ABS estimate of overseas student earnings while in Australia in 2007-08 was about A\$1.2 billion.

Since this \$1.2 billion was used by students to defray expenses while studying in Australia it should be deducted from the total A\$13.7 billion figure quoted by educational industry representatives, in order to give a more accurate estimate of the value of exports of educational services for 2007-08.

A review of ABS estimates of overseas student earnings in Australia

This leads to the further question of how the ABS estimates student earnings in Australia. As with expenditure on living expenses, the source is the 2004 student survey. As noted, this reported that only 32 per cent of those surveyed received any income from employment (Western et al., 2005, p. 15) and that of those who did work the majority earned less that A\$200 per week. This explains why the ABS estimate for the average level of overseas student earnings in 2007-08 was so low. It amounted to just A\$4,386 (A\$1.2 billion divided by 273,591 overseas students).

Given the change in the make up of the overseas student population described above, it is doubtful that the employment patterns of students here in 2004 apply to more recent arrivals. The latter are far more likely to seek paid work.

Analysis of this issue is hampered by a paucity of research on the topic. As a recent review of the question noted, 'there is a serious deficiency of literature that can cast light on the state of international student finances' (Forbes-Mewett, ND). The few studies available, which are exclusively for university students, date to the early part of this decade. They are generally consistent with the low earnings estimates reported by the ABS (Nyland et al., 2009).

But things are changing as Nyland et al. report in their recent study of some 200 university students (which was weighted to the PhD and Masters end of the study spectrum). Some 70 per cent of their interviewees worked at some time during their stay in Australia. A substantial minority, particularly of those coming from China and India were under severe financial pressure, thus necessitating many hours of paid work (Nyland et al., 2009).

Overseas students are permitted to work for 20 hours per week (and full-time during holidays). A student earning at the low rate of A\$10 an hour for 20 hours work a week (cash in hand) for fifty weeks would earn around A\$10,000 a year. Many would work longer hours because they need more than A\$10,000

a year in order to pay back loans taken out to finance their fees and to pay for their living expenses in Australia. As noted, minimum living expenses are around A\$20,000 per year. It is difficult for educational institutions to enforce the 20 hours per week restrictions. Employers and VET colleges have little incentive to report excess work hours. For their part, the universities have only limited obligations to track the work record and class attendance of their overseas student enrolees.

One indication of overseas student earnings may be those of domestic full-time undergraduates. The median income of these students in 2006 was estimated to be A\$11,000. Of this, A\$8,270 came from earnings in the labour market (James et al., 2007, p. 5).

Overseas students face more pressing financial issues than domestic students because they cannot rely on their families for day-to-day food and lodging. Apart from the minority from affluent backgrounds, most have to obtain income from employment in Australia. These students now have an obvious presence across metropolitan service industries in Melbourne, Sydney and Brisbane. The anecdotal evidence is that VET students, in particular, start work almost from the day they arrive in Australia.

For these reasons, we have assumed that overseas students earned at least as much as their domestic full-time undergraduates, that is, around A\$9,000 by 2007-08. This means that the debit item in the Balance of Payments for 'compensation of employees' is likely to be at least double the \$1.2 billion level assumed by the ABS for the year 2007-08.

Estimates of fee income from overseas students

The fee income component of the export of educational services included in Table 1 amounted to A\$5.4 billion or A\$19,657 per student. This ABS estimate does not derive from the 2004 survey, but rather from data provided by AEI to the ABS. AEI bases its fee estimates on the fee levels stated on the CRICOS register for the course each student is enrolled in. These fee levels are multiplied by the total number of students enrolled in each course, adjusted to take account of the length of time of their enrolment.

This AEI estimate should provide a reasonable indication of fee income, with one qualification. Course providers usually use the services of education agents in countries of origin to recruit students to their On this analysis the export revenue from

the export of educational services in 2007-

08 was A\$7.91 billion. This is just over

half (58 per cent) the figure claimed by the

overseas education industry for 2007-08

of A\$13.7 billion.

courses. This fee is paid to agents in the home country. Therefore, it cannot be regarded as contributing to the export of educational services in Australia.

Agents' fees are not published. However, informants indicate that VET providers pay 25-30 per cent of the full course fee (however many years that the course runs) to overseas agents and that most VET students from Asia need an agent to manage the paper work for immigration purposes. Agent fees for university courses are between 10-15 per cent of the first year of

the course in question and nothing thereafter. Some 50 per cent of students apply via agents, though the proportion can vary with the academic standing of the university.

The implication is the A\$5.4 billion figure should be reduced to take account

of this leakage from the fee income estimated by AEI. If the agent fee averages around 10 per cent per enrolled student this implies that the export contribution of the average fee income of A\$19,657 should be reduced by 10 per cent or A\$1966 per student. With enrolments of 273,591 in 2007-08, a 10 per cent reduction in fee income implies a reduction of A\$538 million on the ABS estimate. On this accounting, fee income, attributable to export revenue in 2007-08, would have been about A\$4.86 billion rather than the A\$5.4 billion calculated by the ABS.

Export revenue attributable to the overseas student industry - the bottom line

Three sets of adjustments to the ABS estimates of the contribution of educational services in Australia to Australia's export revenue need to be made in order to incorporate the revisions argued for above.

The first is the adjustment to the average expenditure of overseas students in Australia. Our estimate was that the average student spends around A\$20,000 per year on expenses rather than the A\$29,997 estimated by ABS. If so, total expenditure in 2007-08 would have been A\$5.47 billion rather than A\$8.2 billion.

The second adjustment is to fee income. This was put at A\$4.86 billion rather than the A\$5.4 estimated by the ABS.

These adjustments mean that the export revenue from educational services for overseas students in

2007-08 would have been the total spent on living expenses, that is A\$5.47 billion, plus the A\$4.84 billion estimated to have been spent on fees, or A\$10.3 billion. This compares with the ABS estimate of A\$13.7 billion.

The third adjustment concerns the 'compensation for employees' item, that is, the amount overseas students earn while in Australia. We have estimated this to be at least A\$9,000 per student or A\$2.5 billion. As explained above, this figure is a debit in the Balance of Payments. It has to be subtracted from the estimates

> of expenditures on goods and services and on fees by overseas students to give a net figure for the export contribution of educational services deriving overseas students.

Thus, the A\$10.3 billion

adjusted figure must be further reduced by our esti-

mate for student earnings in Australia or the 'compensation for employees' item as it is termed by the ABS. We have estimated this figure to be A\$2.4 billion.

On this analysis the export revenue from the export of educational services in 2007-08 was A\$7.91 billion. This is just over half (58 per cent) the figure claimed by the overseas education industry for 2007-08 of A\$13.7 billion.

Conclusion

Our estimates will be challenged, since they are not based on scientifically formulated survey research. There is no recent survey research on overseas student expenditure on living expenses or income earned while in Australia. Since the 2004 survey on which the ABS bases its estimates is now dated and is not representative of the overseas students now enrolled in Australia, we have had no choice but to utilise alternative sources of evidence. These included Australian educational institutions' estimates of the minimum living costs students are faced with in Australia. As regards earnings in Australia, they included the earnings of local students and anecdotal evidence about the hours worked and the type of industries overseas students tend to work in.

The argument that the 'compensation of employees' item should be deducted from any estimates of overseas student expenditure in Australia has already been challenged by Glen Withers, the chief executive officer

of Universities Australia. In response to an earlier opinion piece in The Australian Higher Education Supplement by one of the authors, Withers acknowledged that the ABS does debit overseas student earnings in the Balance of Payments accounts. However, Withers says that if this is done for educational services it should be done for all other export items as well, since most would have included some imported components or inputs from non-residents in the production phases (Withers, 2009). Withers has a point, but it is a matter of degree. A bag of wheat sold overseas embodies next to no import components or payments to nonresident foreigners. The overseas student industry is at the other end of the spectrum. Most overseas students in Australia gain substantial income while incurring the expenditures counted on the credit side of the ledger as exports.

Our original interest in this issue was stimulated by the discovery that the figures for overseas student export revenue used by the overseas student industry and by federal and state governments did not adjust for income earned in Australia. Yet, it was obvious that overseas students are very active in the Australian labour market and that many rely heavily on this income to pay for their living expenses and fees.

Further inquiry showed that the ABS estimates used by the education industry imply that overseas students were spending, on average, A\$49,654 by 2007-08 on their living expenses and fees in Australia. This figure was not plausible, given the trend towards enrolments from relatively low-income countries, notably India and China. Our alternative estimate for living expenses of A\$20,000 rather than the ABS estimate of A\$29,997 are still high (relative to the expenditure of domestic students), but more plausible. At the current exchange rate (20 January 2009), this sum is almost identical to the average US\$18,260 NAFSA estimates that overseas students in the US spent on living expenses in 2007-08.

Our inquiry suggests that by 2007-08 the contribution of the expenditure of overseas students to export revenue (after subtracting students earnings in Australia) was \$7.91 billion, rather than the \$13.7 billion stated by the education industry.

There is nothing to be ashamed of in this revised estimate. The overseas student industry is a major and until recently a rapidly growing industry. It also has many positive economic spin-offs, including those flowing from the wages paid to Australian-based staff. This is another story. The focus here is on the export revenue allegedly generated from the provision of onshore educational services to overseas students. Our analysis puts the industry in a more realistic comparative setting relative to other export industries. It is not Australia's third largest export industry. Perhaps it is the sixth largest, after the export of iron ore, coal, gold, petroleum products and tourism services.

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