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# Expenditures by international university students

Darren McKay

*University of Wollongong*

Don Lewis

*University of Wollongong, donlew@uow.edu.au*

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## Recommended Citation

McKay, Darren and Lewis, Don, Expenditures by international university students, Department of Economics, University of Wollongong, Working Paper 93-11, 1993, 20.  
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THE UNIVERSITY  
OF WOLLONGONG



DEPARTMENT  
OF ECONOMICS

# Working Paper Series

1993

## **EXPENDITURES BY INTERNATIONAL UNIVERSITY STUDENTS**

Darren McKay  
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Donald E. Lewis

ISSN 1035 4581

**WP 93-11**

ISBN 0 86418 287 2

# **EXPENDITURES BY INTERNATIONAL UNIVERSITY STUDENTS**

**Darren McKay**

**and**

**Donald E. Lewis**

*Department of Economics  
University of Wollongong*

**Coordinated by Dr. C. Harvie & Associate Professor M.M. Metwally**

**Working Paper Production & Administration: Robert Hood**

**Department of Economics, University of Wollongong**

**Northfields Avenue, Wollongong NSW 2522 Australia**

EXPERIMENTAL BY  
INTERNATIONAL  
UNIVERSITY STUDENTS

James McLeay  
and  
Donald H. Lewis

Department of Economics  
University of Wollongong

Department of Economics  
University of Wollongong  
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## ABSTRACT

Although the growth of overseas students in Australia is well documented, little is known about their personal expenditure patterns. To help fill this important vacuum in our knowledge a census of spending by overseas students at the University of Wollongong was conducted in September 1992. Following is a presentation and analysis of the findings. The results provide estimates of spending by overseas students and are cross-classified by nationality, type of fee payment, residential status, level of study and gender. Inferences have been drawn from this data to estimate total expenditure within the Wollongong region and the greater Australian economy. It should be noted that the paper only addresses the impact of spending by overseas students attending universities. Other overseas students, such as those studying at high schools or English Language centres, and technical and further education institutes, are excluded.

1. AIDAB — Association International Development Studies.

2. DET — Department of Education, Employment and Training.

## Overseas university students in Australia

Table 1 illustrates the dynamic growth in overseas student numbers at the University of Wollongong and other Australian universities between 1986 and 1992. The growth has occurred entirely among full fee paying students. The numbers of Australian government supported students have experienced negative growth. However, within the Australian government supported category, there has been a strong trend towards AIDAB<sup>1</sup> sponsored students away from DEET<sup>2</sup> subsidised students. Both categories of overseas students represent an injection of income into local economies such as Wollongong. This occurs through students' payment of fees to the local university, and their expenditure on living and entertainment expenses.

### Survey of overseas students attending the University of Wollongong

Overseas student expenditure estimates presented in this article were compiled for a regional economic input/output study of the economic impact of overseas students studying at the University of Wollongong on the Wollongong economy (McKay, 1993). The study's spending estimates were derived from an overseas student census and University overseas fees data.

Average student spending on fees was obtained by dividing the number of total overseas students into Wollongong University's international fees revenue for 1992. Living and

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1 AIDAB — Australian International Development Bureau.

2 DEET — Department of Education, Employment and Training.



**Table 1** Overseas students at the University of Wollongong and all Australian Universities between 1986 and 1992

	1986	1987	1988	1989	1990	1991	1992
<b>University of Wollongong</b>							
Full fee <sup>a</sup>	0	7	86	240	502	854	1030
Sponsored by Australia <sup>b</sup>	692	680	587	424	373	241	209
<b>TOTAL</b>	<b>692</b>	<b>687</b>	<b>673</b>	<b>664</b>	<b>875</b>	<b>1,095</b>	<b>1,239</b>
<b>All Australian Universities</b>							
Full fee <sup>a</sup>	0	1,019	3,595	8,465	16,805	23,532	30,296
Sponsored by Australia <sup>b</sup>	16,782	16,229	14,613	16,982	12,188	10,876	9,199
<b>TOTAL</b>	<b>16,782</b>	<b>17,248</b>	<b>18,208</b>	<b>25,447</b>	<b>28,993</b>	<b>34,408</b>	<b>39,490</b>

<sup>a</sup> Includes private students, those sponsored by overseas governments and exchange students.

<sup>b</sup> Include students under the old subsidised scheme which is being phased out and the current sponsorship scheme.

Source: Planning and Marketing Branch, University of Wollongong and DEET (1992), *Selected Higher Education Statistics*, Higher Education Division, Canberra.

entertainment expenditure was obtained by surveying overseas students. Students were asked to estimate two different categories of expenditure in the questionnaire: goods and services usually purchased weekly (Category 1) and those generally purchased annually (Category 2).<sup>3</sup> A question on time spent annually at their place of residence and vacationing in and out of Australia was also included. Category 1, weekly expenditure estimates, was multiplied by time spent in an Australian residence. This provided yearly estimates for Category 1, which were added to Category 2 to derive total yearly spending on living and entertainment expenses for an individual student. Demographic questions in the questionnaire enabled the calculation of average expenditure levels by gender, place and type of residence and source of support.

The census of the 1,239 Wollongong University overseas students was conducted through questionnaires which were posted to students. A total of 413 (or 33.3 per cent) were returned. Each nationality's returns approximated the proportion of total returns (that is, 33.3 per cent). The proportion of overseas full fee funded students in the census was 83 per cent while 17 per cent were supported by the Australian government. For the total university overseas student population, the proportions were 84 per cent and 16

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3 Expenditure estimates in the overseas student questionnaire were each divided into expenditure within the Wollongong region and outside the region. This was necessary to isolate the economic impact of spending by students in the Wollongong economy. This article combines expenditure within and outside the Wollongong region for each item to provide a total Australian expenditure amount.



per cent respectively. Similarly, both the university overseas student population and the census had approximately 33 per cent postgraduate students. Consequently, the sample was representative with respect to these characteristics, and no weighting was needed by type of fee support, student status or nationality.

### Survey results

The results of the survey of overseas student expenditures are shown in Table 2 which summarises the mean expenditures in 1992 of the 413 students who returned their questionnaires. It also indicates mean weekly expenditures based on the fact that on average overseas students resided in Australia for 47.96 weeks during the year. Living expenses are divided into six major categories which are further subdivided into 33 minor categories.

The most important major category of expenses was accommodation which cost each student \$4784.90 for the year or \$99.77 weekly. Of this total, most was spent on rent (\$69.01 per week) with smaller amounts being spent on utilities and furniture. Somewhat surprisingly, was the annual expenditure on electrical goods which averaged more than \$770 per student.

Food items were the next largest major category and students reported spending an average of \$3491.16 for the year or \$72.79 weekly on meat and milk, other groceries and fast food.

Students reported an average spending of more than \$2800 on transport and travel in Australia during the year. The purchase and running expense of privately owned vehicles cost students on average \$886.53 or \$18.48 per week. The most

**Table 2** *Mean annual expenditure in Australia by overseas students at the University of Wollongong, \$*

<i>Type of expenditure</i>	<i>Annual expenditure in Australia<sup>a</sup></i>	<i>Weekly expenditure in Australia<sup>b</sup></i>	<i>% of total</i>
<b><i>Accommodation</i></b>			
Rent	3309.50	69.01	13.0
Electricity	434.88	9.07	1.7
Gas	31.82	0.66	0.1
Furniture	175.56	3.66	0.7
Kitchen utensils	62.17	1.30	0.2
Electrical goods	770.97	16.08	3.0
Sub-total	4,784.90	99.77	18.7
<b><i>Food</i></b>			
Groceries	1787.92	37.28	7.0
Meat and milk	856.48	17.86	3.4
Fast food	846.76	17.66	3.3
Sub-total	3,491.16	72.79	13.7
<b><i>Transport and travel</i></b>			
Vehicle purchase	217.46	4.53	0.9
Vehicle registration	82.10	1.71	0.3
Vehicle insurance	164.90	3.44	0.6
Vehicle maintenance	163.71	3.41	0.6
Petrol	258.36	5.39	1.0
Airline	1267.51	26.43	5.0
Other travel	428.95	8.94	1.7
Holidays	218.41	4.55	0.9
Sub-total	2,801.40	58.41	11.0
<b><i>Personal &amp; Entertainment</i></b>			
Expenses			
Health	253.56	5.29	1.0
Clothing	398.96	8.32	1.6
Toiletries	357.63	7.46	1.4
Gifts	224.67	4.68	0.9
Videos	112.65	2.35	0.4
Other entertainment	717.52	14.96	2.8
Sports equipment	76.90	1.60	0.3
Club membership	42.40	0.88	0.2
Sub-total	2,184.29	45.54	8.6

<i>Type of expenditure</i>	<i>Annual expenditure in Australia<sup>a</sup></i>	<i>Weekly expenditure in Australia<sup>b</sup></i>	<i>% of total</i>
<b>Communication &amp; other services</b>			
Telephone and postage	1128.52	23.53	4.4
Bank charges	23.63	0.49	0.1
Financial services	110.99	2.31	0.4
Sub-total	1,263.14	26.34	4.9
<b>Educational expenses</b>			
Textbooks	396.75	8.27	1.6
Tutoring	60.95	1.27	0.2
Photocopying	328.77	6.86	1.3
Stationery supplies	360.79	7.52	1.4
Children's education	37.85	0.79	0.1
Sub-total	1,185.11	24.71	4.6
<b>Total Living Expenses</b>	<b>15,710.00</b>	<b>327.56</b>	<b>61.5</b>
Student fees	9,816.38	204.68	38.5
<b>Total expenditure</b>	<b>25,526.38</b>	<b>532.24</b>	<b>100.0</b>

<sup>a</sup> Includes expenditures of family members who accompany students to Australia.

<sup>b</sup> Based on average of 47.96 weeks per year spent in Australia.

Source: Survey of 1,239 Overseas students at the University of Wollongong of whom 413 responded.

important component of the transport category was airline ticket purchases which averaged \$1267.51, reflecting the fact that many overseas students fly home during the year.

Overseas students also spent an average of \$2184.29 on personal and entertainment expenses of which \$253.56 was spent on health, including the mandatory health insurance fee of \$170.00 required by the federal government in 1992.

Another important category of expenditure was



communication and other services which totalled \$1263.14 for the average student. By far the largest component was telephone and postage which averaged \$1128.52, reflecting the willingness and high cost of students keeping in touch with family and friends at home.

Finally, the average student spent \$1185.11 on educational expenses including \$396.75 on textbooks.

Total living expenses for the average student was \$15,710 or \$327.56 per week. Combining living expenses with students fees, which averaged \$9816.38 per student, yields a total expenditure of \$25,526.38 per student. Based on these results obtaining a university degree in Australia is expensive for overseas students.

This study's findings can be compared to another conducted by the Centre for International Economics (CIE). The CIE report estimated weekly expenditure by overseas university students, which was reported in the Industry Commission (1991). The CIE report was conducted in 1990, however, its estimates have been adjusted to September 1992 prices, using the Consumer Price Index. The adjusted figures appear in Table 3 and are compared to the September 1992 Wollongong study. Only expenditures on living and entertainment expenses are compared. The Wollongong study estimate of \$327.56 weekly is noticeably higher than the CIE estimates of \$200.11 weekly. In consulting with the CIE and referring to their questionnaire, it appears that only questions relating to basic weekly expenditures were asked. If similar weekly expenditure items had been collected for the Wollongong study, the weekly amount would equal \$229.81 (refer to Table 3). It is the inclusion in the Wollongong study of more estimates on items which are generally purchased on an annual basis which differentiates this study from the CIE report. These annually purchased items accrue to \$97.75 per week and among other

items include car registration and insurance, furniture, electrical goods, and airline tickets.

**Table 3** *Comparison of surveys of overseas student average expenditures (weekly spending in September 1992 — (\$))*

<i>I</i> Category	Centre for International Economics (CIE) <sup>a</sup> survey	University Wollongong survey	Category
Accommodation	68.12	78.74	Rent, electricity and gas
Food	56.41	72.79	Meat, milk, groceries and fast food
Transport	11.71	14.33	Petrol, bus and train
Other	63.87	63.95	Entertainment, video, communications, toiletries, photocopying, tutoring and stationery
<b>Total</b>	<b>200.11</b>	<b>229.81</b>	
Other Wollongong expenditures		97.75 <sup>b</sup>	
<b>Grand total Wollongong</b>		<b>327.56</b>	

<sup>a</sup> The CIE data was updated from 1990 prices to September 1992 prices using the Consumer Price Index.

<sup>b</sup> All items not included above but included in Table 2.

Source: Table 2 and Industry Commission (1991).



Some information is available on income sources of overseas students which can be compared to their expenditures. For those students sponsored by the Australian government or by overseas governments/institutions, some data on scholarships is obtainable. The University of Wollongong had 209 Australian government sponsored students in 1992. Of these 169 were sponsored by AIDAB and 40 were subsidised by DEET. An unmarried AIDAB student received \$14,006 annually while a student with a family received \$18,980 annually in 1992. Estimates obtained from AIDAB showed the average AIDAB student attending the University of Wollongong received \$14,886 annually. This amount is within the limit of the Wollongong census estimate for living expenses for Australian government sponsored student. This estimate was \$15,224 annually.

Average expenditure for students sponsored by overseas governments/institutions was estimated at \$19,757 annually. Of the 413 student questionnaires, 41 were in this category, of which over half were Iranian students. Thus, Iranian students can be used as a proxy for this group. An Iranian government student in 1992 received \$750 if single, with an additional \$450 for a spouse and \$225 for each child per month. Through consultation with Iranian students it appears that the majority of Iranian students are married with children, and they are accompanied by their families while studying in Australia. If each Iranian student had a spouse and two children, they would receive \$1650 per month or \$19,800 annually. Additional finance is provided for air travel and some educational expenses by the Iranian government. If other overseas government/institutions students received similar financial assistance, it would explain the high annual expenditure for this group. Note that overseas

government/institutions sponsored students and Australian sponsored students had their university fees paid for by their respective sponsors. This is with the exception of the Australian sponsored students under the subsidised scheme, who pay a portion of their fees costs. However this group is being phased out.

Another source of income for both types of students discussed is accumulative savings and finance from relatives. These students are predominantly undertaking postgraduate work and many hold positions in the public service of their home country. Many also receive a continuance of their wages from their employer in their home country. Lastly, these students may receive wages from hours worked in Australia. From the Wollongong census, Australian government supported students worked an average 1.6 hours weekly while overseas government/institutions supported students worked 1.93 hours. These factors may allow these students expenditures to be greater than their scholarship income.

Limited information was available on privately funded overseas students of which there were 306 in the Wollongong census. These students appear to depend heavily on family and relatives for financial support. Many of these students originate from wealthier classes in their countries. These students were estimated to work an average of 1.51 hours weekly which would have only covered a small portion of their expenditures. However, it does appear that these students are very much aware of their yearly expenditure. The census questionnaire asked students to estimate their total yearly expenditure on living and entertainment expenses. For private funded students, the average estimate was \$16,370. After adding individual estimates over 33 items, the total was \$15,218. This provides some validation for private student spending estimates. The comparable figures for all student

groups were \$15,715 and \$15,710 respectively.

Expenditure on living expenses is broken down by nationality in Table 4. Mean expenditure ranged from a high of \$23,776 for students from Iran to a low of \$9624 for students who come from Pakistan. Reasons for the differences in expenditure by nationality may include the average number of family members accompanying students, whether or not they are sponsored by the Australian or an overseas government as well as the private financial status of the student. Care should be taken when reading this table for several reasons. Firstly, the sample size is small for students from some of the countries such as the Philippines and Singapore. Secondly, as pointed out earlier, the data reported in Table 4 include expenditures of family members who accompany overseas students to Australia. Finally, the distribution of government scholarships is not evenly distributed across the nationalities. For example 20 of the 21 Fijian and Papua New Guinea students were funded by the Australian government. As a consequence their expenditures were above average.

The mean weekly hours of employment is also shown in Table 4. The average number of hours worked is only 1.58 which, in part, reflects the difficulty of obtaining part-time employment in Wollongong. There is substantial variation, however, with 83 per cent of the students not working at all and one reporting having worked 38 hours per week. Students from China reported working the most, averaging 6.22 hours per week. This is expected as many students from China have little or no financial support from family members and are not on government scholarships. More surprising is the large number of hours worked reported by Japanese students. The



**Table 4** *Mean annual living expenses and weekly hours of employed by nationality*

<i>Nationality</i>	<i>Number of students in survey</i>	<i>Mean annual living expenses<sup>a</sup></i> \$	<i>Mean weekly hours of employment</i>
Hong Kong	84	14,074	0.64
Indonesia	61	17,474	0.89
Malaysia	34	14,363	1.09
China	32	13,153	6.22
Iran	26	23,776	0.62
Thailand	26	17,310	2.69
Taiwan	24	14,954	0.00
Korea	21	21,775	0.26
USA	19	13,215	1.89
India	18	11,129	2.44
Fiji	14	17,042	0.00
Pakistan	8	9,624	1.75
Japan	7	10,970	4.14
Papua New Guinea	7	15,963	0.00
Singapore	5	12,745	0.00
Philippines	4	12,118	0.00
Other	23	15,959	4.40
<i>Overall average</i>	413	15,710	1.58

<sup>a</sup> Includes expenditures of family members who accompany students to Australia.

Source: See Table 2.

4.14 hours of work reported by them was higher than any nationality except China. However, one may have expected Japanese students to be one of the more affluent groups, least needing to take up employment.

Further decomposition of the data is shown in Table 5 where expenditure and hours worked are shown by place and type of residence, gender, source of support and level of study.

**Table 5** *Mean annual living expenses and weekly hours of employment by place and type of residence, gender source of support and level of study*

<i>Category of Student</i>	<i>Number of students in survey</i>	<i>Mean weekly living expenses (\$)</i>	<i>Mean annual hours of employment</i>
<i>Place of residence</i>			
Wollongong	401	15,539	1.40
Sydney	12	21,415	7.42
<i>Type of residence</i>			
University halls	158	15,062	1.04
Private rental	255	16,112	1.91
<i>Gender</i>			
Female	170	14,695	1.07
Male	243	16,420	1.93
<i>Source of support</i>			
Australian government	65	15,224	1.61
Overseas government	41	19,757	1.93
Private	306	15,218	1.51
<i>Level of study</i>			
Undergraduate	275	15,185	1.40
Postgraduate	137	16,647	1.90

Source: See Table 2.

Although only 12 of the 413 overseas students completing the questionnaire live in Sydney, their living expenses and hours of work were significantly greater than those living in Wollongong. This is to be expected as rentals are more



expensive in Sydney and students living there have greater travel expenses. It is not clear whether students who choose to live in Sydney work more to cover their greater expenses or live in Sydney because of greater opportunities of part-time employment. The latter would allow for greater student expenditure.

Students in private rentals tend to spend more and work more than students in university halls of residence. Males and postgraduate students also tend to spend more and work more than females and undergraduates.

The source of support is an important determinant of spending. Private students and those sponsored by the Australian government spend almost identical amounts, \$15,218 and \$15,224 respectively. These amounts are far less than those sponsored by overseas governments. These students and their families spend, on average, \$19,757 per year. This results from the fact that some overseas governments, for example Iran, encourage scholarship holders to take their families with them and also provide them with relatively generous financial assistance.

### **Estimates of aggregate direct expenditures**

The analysis is now extended by estimating the aggregate expenditures of overseas students attending the University of Wollongong and all Australian universities. Only direct expenditures are estimated. The results are shown in Table 6.

There were 1239 overseas students attending the University of Wollongong in 1992 and 209 of these were sponsored by the Australian government. On average they generated \$15,665 of spending on living expenses and \$9816 on student fees. In aggregate this generated \$31,571,449 worth of direct expenditure. Most, but not all, of this would have been spent

**Table 6** *Estimated aggregate expenditure by overseas students studying at the University of Wollongong and other Australian Universities in 1992*

<i>Category</i>	<i>Mean annual living expenses (\$)</i>	<i>Mean student fees<sup>a</sup> (\$)</i>	<i>Total expendi- ture per student (\$)</i>	<i>No. of students</i>	<i>Total expenditure (\$)</i>
<b>University of Wollongong</b>					
Supported by Australian Government	15,224	9,816	25,040	209	5,233,381
Other source of support	15,755	9,816	25,571	1,030	26,338,068
<b>Total</b>	15,665 <sup>b</sup>	9,816	25,481	1,239	31,571,449
<b>All Australian Universities</b>					
Supported by Australian Government	15,224	9,816	25,040	9,194	230,218,679
Other source of support	15,755	9,816	25,571	30,296	774,697,198
<b>Total</b>	15,631 <sup>b</sup>	9,816	25,447	39,490	1,004,915,878

<sup>a</sup> Student fees are not known by category of student so the mean fee of all University of Wollongong overseas students is used throughout.

<sup>b</sup> Mean annual living expenses is calculated using the number of students in each category as weights. As there is a smaller proportion of overseas students sponsored by the Australian government attending the University of Wollongong (compared to all other Australian Universities) and because these students spend less (than those not supported by the Australian government) the estimated average expenditure by University of Wollongong overseas students (\$15,665) is slightly more than the estimate for all Australian overseas students (\$15,631).

Source: See Table 2 and DEET (1992) *Selected Higher Education Statistics 1992*, Higher Education Division, Canberra.

in the Wollongong area and the impact on the local economy is no doubt substantial, especially considering the decline in employment in the traditional sectors of importance, mining and steel manufacturing.

There were 39,490 overseas students attending Australian universities in 1992 including 9194 sponsored by the Australian government. Assuming their average levels of spending on living expenses and students fees were the same as the students in the Wollongong sample (specifically, \$25,040 per student sponsored by the Australian government and \$25,571 for other overseas students), the aggregate direct expenditure by overseas students is estimated as \$1,004,915,878. Some of this would have been recycled Australian dollars funded by Australian taxpayers. All of the fees and a substantial majority of the living expenses of students sponsored by the Australian government would fall in this category. This may be seen as an export assistance.<sup>4</sup> If we subtract all of the \$230,218,679 generated by students sponsored by the Australian government, we are still left with nearly three-quarters of a billion dollars (\$774,697,198) of spending which results from the export of university level educational services. This amount is attributed to full fee students financed by sources outside of Australia.

These estimates could be inaccurate if overseas students at the University of Wollongong who responded to the survey supplied inaccurate information or are not representative of

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<sup>4</sup> Expenditure by Australian government sponsored students is classified as a service export, under Travel Credits in the Australian Balance of Payments. Funding of these students by DEET and AIDAB is a debit under Unrequited Transfers. Note that not all of student expenditure is necessarily funded by the Australian government.



overseas students throughout Australia. There is no particular reason to suspect that students either over or underestimated their expenses or that students in other universities, on average, spend different amounts on students fees or living expenses. Rental prices in Wollongong, for example are lower than those in Sydney and some other cities but higher than those in most provincial centres.

If Australian sponsored students are treated as an export, total exports from University education services are estimated to be \$1004 million for 1992. Table 7 provides 1991/92 export data for various commodities, for which University education exports compare favourably. University education exports are modest when compared to coal and wool, being 14 per cent and 26 per cent of these groups respectively. However, they are 43 per cent of cereals, 60 per cent of transport equipment and 134 per cent of sugar. University education exports were 8 per cent of the current account deficit for 1991/92. Though these comparisons appear impressive, the reader should note that the national University export predictions are based on the average Wollongong students expenditure. Wollongong

**Table 7** *Comparison of major Australian merchandise exports*

<i>Export classification</i>	<i>1991/92 (\$ million)</i>
Coal, coke and Briquettes	6947
Wool and Sheepskins	3829
Cereal, grains and cereal preparations	2352
Transport equipment	1652
Sugar, sugar preparations and honey	747

Source: Australian Bureau of Statistics (1993), *Balance of Payments, Australia, 1991/92*, Table 7, page 24.

students make up only 3 per cent of the national population and so these estimates and comparisons should be seen as indicative.

### **Policy and further research**

As previously noted, overseas student spending estimates in this paper were incorporated into a Wollongong regional input/output model by McKay (1993). He found that each overseas student at Wollongong University created an average 0.57 full time equivalent jobs in Wollongong. A notable result, even given the limitations of input/output techniques. The implication for policy makers is that overseas student spending not only benefits Australia's balance of payments, it also generates employment in Australia. Before steps are taken to expand significantly overseas student intake in Australia, a thorough cost benefit analysis is warranted. Further research is required in the following areas:

- The extent to which overseas students absorb casual employment in Australia.
- The impact of student accommodation demands on local rental prices.
- The use of public services by overseas students while paying less than full cost. An example would be overseas students with families sending children to state schools.
- Are universities hoarding overseas student fees, or are they using the revenue to employ more staff and construct more buildings? Failure to do this would adversely effect Australian students with higher student/teacher ratios and overcrowded lecture theatres.
- Are lecturers and tutors having more of their time absorbed, helping students with poor English abilities in the area of



basic literacy?

Conversely:

- Do overseas students add to the national savings pool, generating funds for investment in Australia?
- Do overseas students returning home to influential commercial positions create future trade opportunities for Australia?
- Are Australians students culturally enriched through their contact with overseas students?

Overseas students spend sizeable sums of money in Australia, particularly in the region in which they study. The extent of this spending depends on the individual student and his/her nationality, family status etc. Nevertheless, the spending of overseas students is substantial and induces national production and employment, as well as benefiting the balance of payments. Though a more comprehensive cost benefit analysis is needed, this industry appears to have the potential to provide Australia with an important fillip for economic growth.

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Coordinated by Dr C. Harvie and Dr M.M. Metwally  
Working Paper Production and Administration: Robert Hood  
University of Wollongong  
Northfields Avenue, Wollongong, NSW 2522 AUSTRALIA  
Phone: (042) 213 666  
Fax: (042) 213 725