

# International student education in Australia – is agriculture gaining its fair share?

Jim Pratley<sup>1, 2</sup>

<sup>1</sup>School of Agriculture and Wine Science, Charles Sturt University, Wagga Wagga NSW 2678 [jpratley@csu.edu.au](mailto:jpratley@csu.edu.au)

<sup>2</sup>Australian Council of Deans of Agriculture

## Abstract

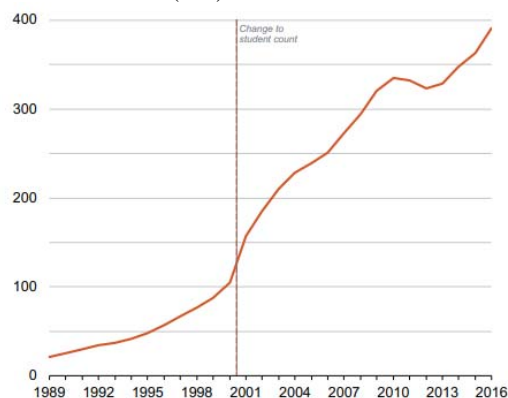
International student education arising from international students studying in Australia contributed \$30 billion to Australia's economy, ranking as the third largest export (Department of Education and Training 2018). Big winners are courses in Business Studies and Information Technology. Since Australian agriculture is considered amongst world's best practice, it might be expected that international students interested in agriculture might seek education in Australia. So, what are the opportunities for regional universities under this scenario and what is the current situation that might provide an indication of realising that opportunity? International students favour prestigious universities and the five Group of 8 (Go8) universities captured 83% of the international student market in agriculture over the 2001-2016 period. There is a considerable discrepancy in total income between the Go8 and regional universities from international fee-paying students, both overall and in agriculture. While there is little evidence for major differences in quality of course offerings between universities, it is clear that the capability to invest in research and other areas from international student income will be compromised for regional universities. The rhetoric offered by governments to international students to promote study in regional areas is likely to fail as the 'client' seeks to gain qualifications from higher-ranked metropolitan universities.

## Key words

Higher education, Group of Eight, regional universities

## Background

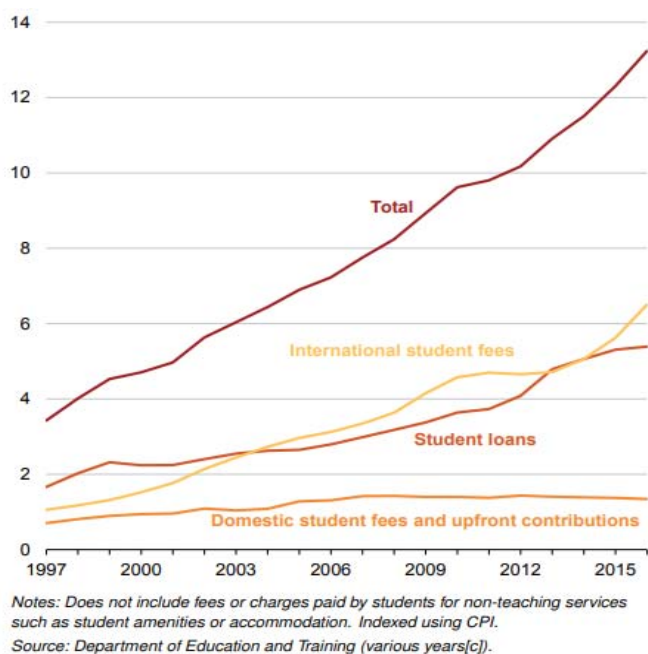
Higher education in Australia is strongly respected around the world for its high standards. Consequently, Australia is a favoured market for international students wanting an international education. The international student population has been increasing sharply since the early 1990s (Figure 1), numbering around 400,000 in 2016 (Charlton *et al.* 2018). China contributes nearly 130,000 students each year followed by India (~40,000), Singapore and Malaysia (each around 30,000) and Vietnam (20,000). Onshore international students now comprise one in five students across university campuses. There are also around 80,000 off-shore students enrolled in Australian universities (Charlton *et al.* 2018). Around half of all international students are enrolled in commerce courses, followed by engineering (12%), information technology (10%), society and culture (8%) and health courses (8%).



Note: Figures from 2001 onwards are based on full-year enrolments; prior years are based on enrolments as at 31 March.  
Sources: Department of Education and Training (2014) and Department of Education and Training (2018a).

**Figure 1. International students enrolled in Australian higher education, 1989-2016 (Charlton *et al.* 2018)**

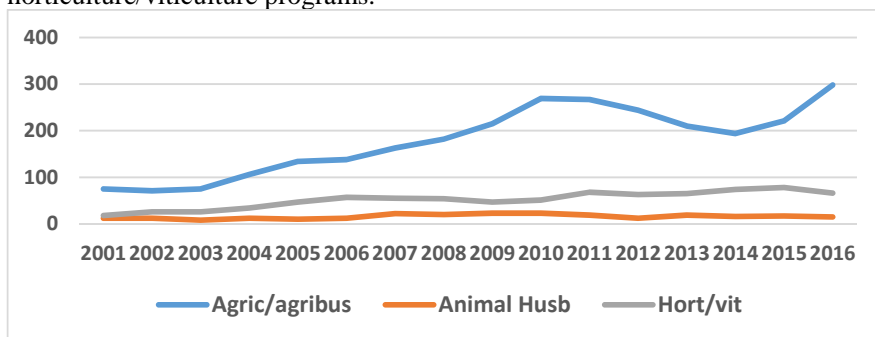
International student fees are the largest single source of university revenue nationally (Charlton *et al.* 2018). University teaching revenue from students has increased sharply in the last 20 years totalling over \$13 billion in 2016 (Figure 2). Of that, international fees account for around half the teaching income. The question arising from this is whether agriculture and related courses are sharing in this opportunity and if so, to what extent. Secondly, does regional Australia, through regional universities, benefit from this market?



**Figure 2. Teaching revenue (AUD\$ billion) from students, 1997-2016 (Charlton *et al.* 2018)**

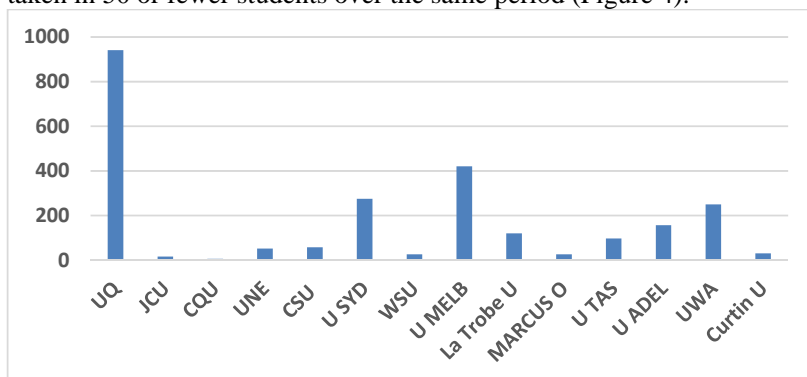
### Evaluation

Official data were sourced for the analysis from Higher Education Statistics, Australian Department of Education, for both undergraduate and postgraduate international student enrolments in agriculture and related programs. Data sets with totals <5 were not considered, since low numbers contravene privacy provisions. Undergraduate agriculture enrolments for the past 16 years (Figure 3) show a significant and consistent increase since 2003 for agriculture overall but the increase is relatively less so for animal husbandry and horticulture/viticulture programs.

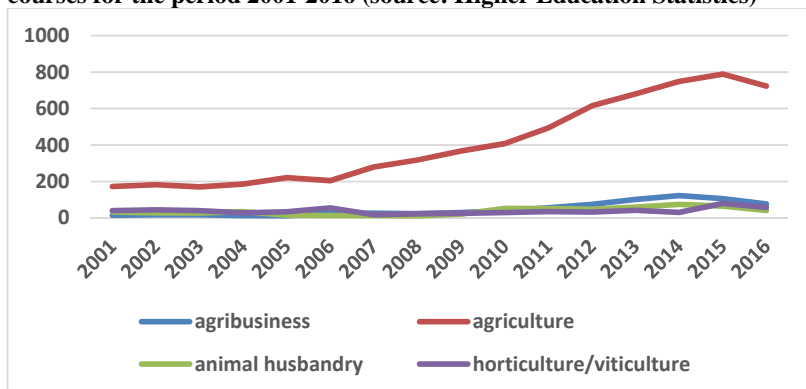


**Figure 3. Enrolments in Australian universities in undergraduate agriculture and related areas for the period 2001-2016 (source: Higher Education Statistics)**

The recipient universities are shown in Figure 4 for the 16-year period. The University of Queensland has taken in over 900 international students, more than double that of The University of Melbourne, followed by the Universities of Sydney, Western Australia and Adelaide. By comparison, regional universities have each taken in 50 or fewer students over the same period (Figure 4).

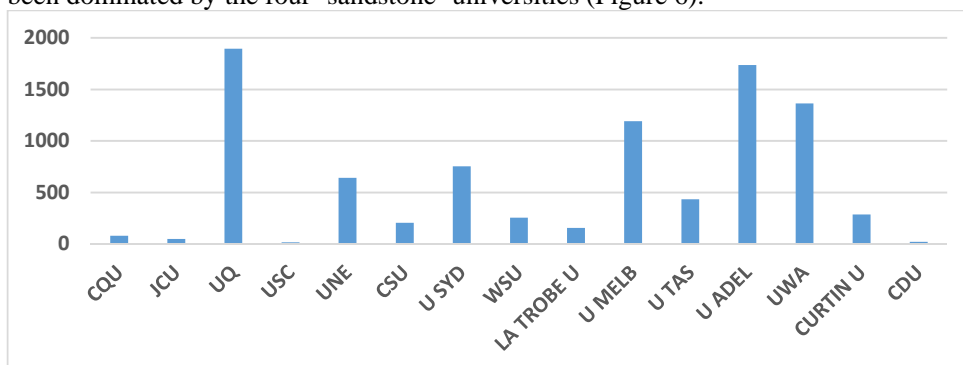


**Figure 4. Total international undergraduate coursework enrolments by university in agriculture and related courses for the period 2001-2016 (source: Higher Education Statistics)**



**Figure 5. International postgraduate enrolments in Australian universities in agriculture and related areas for the period 2001-2016 (source: Higher Education Statistics)**

International enrolments in postgraduate coursework programs show a similar pattern though the growth commenced later, in about 2007 (Figure 5), with just under 1000 enrolments in 2016. Again the market has been dominated by the four ‘sandstone’ universities (Figure 6).



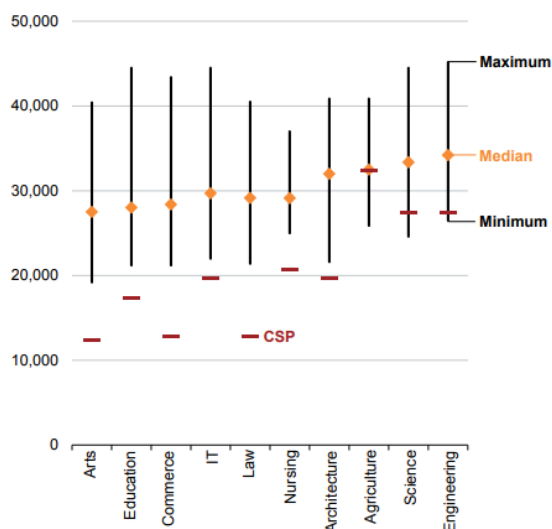
**Figure 6. International postgraduate coursework enrolments by university in agricultural and related studies for the total period 2001-2016**

### Discussion

Overall the five Group of 8 (Go8) universities captured 83% of the international student market in agriculture over the period of study. This is no accident since many overseas fee-paying students, notably in China, seek to have their degrees granted by world ranked institutions, preferably those in the top 100 globally. All five universities are high in the world rankings generally, and particularly so in agriculture (Table 1) although this does vary with different ranking systems. This dominance provides little comfort for the regional-based universities in their endeavours to improve access to international students

**Table 1. Top 7 Australian universities, Shanghai Jiao Tong global rankings overall and for agriculture, 2018**

University	University ranking	University	Agriculture ranking
U Melbourne	38	UWA	14
U Queensland	55	U Queensland	24
U Sydney	68	U Sydney	38
ANU	69	U Tasmania	39
Monash U	91	U Melbourne	40
UWA	93	U Adelaide	42
U Adelaide	101-150	ANU	51-75



**Figure 7. Indicative annual international undergraduate fees, \$2018 (Norton *et al.* 2018)**

Figure 7 shows the fees charged for various courses at their 2018 dollar value. Agriculture course charges are near the top of the range (around \$33K per student per year) but it should be noted that costs for expensive courses such as medicine are not provided.

The discrepancy in total income between the Go8 and the rest from such fee-paying students shows the benefit for the ‘sandstone’ universities and the meagre pickings for the rest. While there is little evidence for major differences in quality of course offerings, it is clear that the capability to invest in research and other areas from international student income will be compromised for regional universities. The push by governments to encourage international students to regional areas is likely to fail as the ‘client’ seeks to gain qualifications from highly ranked universities.

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