



Economic Impact of Charles Sturt University



Prepared for Charles Sturt University

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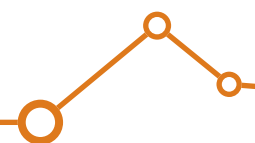
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CONTENTS



1. INTRODUCTION	05
2. METHODOLOGY	06
2.1 Constructing the Tables	06
2.2 Data Collection	06
2.3 Impact Analysis	08
ALBURY CAMPUS	11
BATHURST CAMPUS	15
DUBBO CAMPUS	19
GOULBURN CAMPUS	23
ORANGE CAMPUS	27
WAGGA WAGGA CAMPUS	31
OVERALL IMPACT	35
APPENDIX 1: Input-Output Analysis	38
APPENDIX 2: Glossary of Terms	40
APPENDIX 3: Detailed Tables	42
WRI	59

1. INTRODUCTION



Charles Sturt University (CSU) was formed progressively through the merger of the Mitchell College of Advanced Education and the Riverina-Murray Institute of Higher Education and was incorporated as a university in 1989. At that time it had campuses in Albury, Bathurst and Wagga Wagga. Subsequently the Goulburn College of Advanced Education was established as a CSU campus and new campuses were opened in Canberra and Dubbo. More recently, the Orange campus of the University of Sydney was transferred to CSU. The University also has a campus in Ontario and has established study centres for international students in Sydney and Melbourne.

In late 2010, CSU commissioned the Western Research Institute (WRI) to undertake an economic impact assessment of the University's operations and the associated expenditure by non-local students. Specifically, the study was to assess the economic impact of each of six CSU campuses on its respective Local Government Area (LGA) and the relevant statistical division as shown in Table 1.1 below.

Table 1.1: CSU campuses and relevant Local Government Areas and statistical divisions

Campus	Local Government Area	Statistical division
Albury	Albury (C)	Murray and Ovens-Murray combined
Bathurst	Bathurst Regional (A)	Central West
Dubbo	Dubbo (C)	North Western
Goulburn	Goulburn-Mulwaree (A)	South Eastern
Orange	Orange (C)	Central West
Wagga Wagga	Wagga Wagga (C)	Murrumbidgee

In addition, the economic impact of the six campuses in aggregate on the CSU footprint (i.e. the combined statistical divisions in which these campuses operate) and Sydney statistical division was also evaluated.

This study provides a major update to an earlier economic impact assessment of CSU, conducted by WRI in 2005. The results of this assessment cannot be compared directly with the earlier report however. Changes in the industry classification system adopted by the Australian Bureau of Statistics, combined with the use of inter-regional input-output tables in the current assessment and the expansion of CSU's operations, mean that direct comparison of results is not valid.

In the following report the economic impact of each campus on its LGA and statistical division is summarised. The impact on the economies of the CSU footprint and Sydney statistical division is then addressed. Details regarding the assumptions used and the methodology adopted, along with detailed tables providing indications of the economic impact by industry sector, are provided in the appendices to this report.

2. METHODOLOGY



Input-output analysis was used in this study to determine the economic impact of CSU and the expenditure of its students. Input-output analysis provides a detailed picture of the structure of a regional economy at a point in time and can be used to estimate the contribution or impact of a particular sector of the economy including flow-on or multiplier effects. The input-output tables constructed in this study are for the 2009 calendar year and so estimate the impact of CSU in that year.

Input-output tables were constructed for the following Local Government Areas (LGAs):

- Albury;
- Bathurst;
- Dubbo;
- Goulburn-Mulwaree;
- Orange; and
- Wagga Wagga.

Input-output tables were also constructed for the following statistical divisions:

- Central West;
- Murray / Ovens-Murray combined;
- Murrumbidgee;
- North Western;
- South Eastern; and
- Sydney.

In addition an input-output table was developed for the CSU footprint (i.e. the combined statistical divisions in which these campuses operate).

2.1 Constructing the Tables

The input-output table for this project was extracted from the Australian Bureau of Statistics (ABS) 2006-07 national input-output table using the Generation of Regional Input-Output Tables (GRIT) technique. The national table was adjusted to represent New South Wales and subsequently the various regions examined in this study, using detailed ABS data from the 2009-10 publication State Accounts (ABS cat no. 5220.0) as well as data from the Australian Taxation Office (ATO) combined with data on income by industry of employment from the 2006 Census, and quarterly data

on employment by industry sector (ABS cat. no. 6291.0.55.003). These adjustments provide base tables for the 2009 calendar year. The GRIT technique derives regional input-output tables from the national input-output table using location quotients and superior data (in this case, information regarding the operations of CSU as well as regional employment and income data) at various stages in the construction of the tables. The GRIT procedure was developed by Associate Professor Guy West and Professor Rod Jensen of the University of Queensland and is the most widely used method of constructing regional input-output tables in Australia. The GRIT method is also widely used in America and Europe. Appendix 1 provides more detail about input-output analysis.

2.2 Data Collection

2.2.1 CSU Operations

The national input-output table includes only one sector for all education and does not include a separate sector for university education. CSU provided WRI with detailed information about the University's expenditure, location of expenditure, employment and revenues. This information was used to construct a new sector row and column in the input-output table representing the operations of the University. This was then subtracted from the education sector.

The following assumptions were made regarding the income and expenditure resulting from the operations of CSU.

Income

Data on income received by CSU were provided by staff at the University. Income was allocated to the region from which it was paid.

Wages and Salaries

CSU supplied information on the number of full-time equivalent (FTE) employees and associated wages and salaries for the year 2009. The information was provided for both CSU and Charles Sturt Campus Services Ltd. (CSCS) staff. The number of FTE employees and associated remuneration was further disaggregated by residential address of the employees.

The initial impact of FTE employment and associated wages and salaries was allocated to the region of employment e.g. the initial impact of employees at the Bathurst campus was allocated to Bathurst or to Central West statistical division, irrespective of their residential address. However, a proportion of the flow-on impact derived from employees living outside the local area was allocated to the region in which they lived. For example, for an employee at the Bathurst campus who had a residential address in Orange LGA, a portion of the derived flow-on impact was subtracted from the Bathurst LGA and allocated instead to Orange LGA.

Other Expenditure

CSU supplied information regarding other expenditure during 2009 by industry category and the location where the purchase was made. It should be noted that, as with revenue estimates, this was again allocated to individual campuses. Local expenditure was defined as that made in the immediate local area e.g. only those purchases where the expenditure was made in Albury LGA were classed as local for the Albury table, with the balance being treated as imports to the region.

2.2.2 Student Expenditure

Information relating to student expenditure was derived from a number of sources including the Federal Government's website regarding studying in Australia and the 2003-04 ABS Household Expenditure Survey (Cat. 6535.0). The latter was inflated by the Consumer Price Index (ABS Cat. 6401.0) for the relevant categories, using the Sydney index as a surrogate for the study area. Average weekly expenditure for the lowest gross household income quintile was used as a proxy for student expenditure. The total annual expenditure calculated was checked for reasonableness against Federal government advice.

The Federal government's website for students intending to study in Australia states:

"An average international student in Australia¹ can expect to pay about A\$360 a week on:

- accommodation;
- food;
- clothing;
- entertainment;
- transport;
- international and domestic travel;
- telephone; and
- incidental costs."

¹ <http://studyinaustralia.gov.au/Sia/en/StudyCosts/LivingCosts> - accessed on 17 January 2011

The following assumptions were made regarding student expenditure:

- CSU provided data regarding the home address on enrolment and residential address during semester for all students studying on campus. It was noted, however, that many students do not change their address after enrolment and continue to maintain their home address as their mailing address. This was particularly evident with students whose home address was in Sydney statistical division. Almost 95 per cent of full-time undergraduate students at the Goulburn campus, who had a home address in Sydney statistical division, maintained a Sydney address during semester. Similarly, 80 per cent of full-time undergraduate students at the Bathurst campus, who had a home address in Sydney statistical division, maintained a Sydney address during semester. In order to assess student expenditure, it was assumed that those students who had not provided a change of address, exhibited the same distribution of residential address during semester as those who had given notification of a new address. Anecdotal evidence also suggest that a significant proportion of students originating in Sydney and studying at the Bathurst, Goulburn and Orange campuses travel back to Sydney on weekends. In order to account for this, average expenditure by these students was assessed on a five day week rather than for seven days.
- Only students whose home address on enrolment was outside the study area are classed as "non-local" for the purpose of assessing the impact of their expenditure. The definition of "non-local" for a particular LGA includes all students who had a home address outside that LGA, including those who had a home address in the wider statistical division in which that LGA is located. The definition of "non-local" for a particular statistical division includes all students who had a home address outside that statistical division. Therefore, for each campus, the number of "non-local" students in the LGA would be greater than the number of "non-local" students in the statistical division.
- The inclusion of expenditure by "non-local" students only as a net increase, is based on the premise that, had CSU not existed, local students would still have remained in the local area and studied elsewhere or found employment. It is however possible that students who originated in the area surrounding a CSU campus, and who are currently studying at that campus, might have left the region to study in the absence of CSU. This would result in a net loss of expenditure to the region if CSU did not have a presence locally. The conservative assessment of the total impact of CSU only includes expenditure by "non-local" students. However, an indication of the difference between total expenditure by "non-local" students and all students attending CSU campuses, is provided in the relevant sections of this report.

- A 15% margin was used for expenditure on retail goods (alcoholic beverages, tobacco products, clothing and footwear, household goods and personal care) and transport. It was assumed that those living in on-campus accommodation had no expenditure on household goods or utilities. In addition, accommodation rental payments by students living on-campus were excluded to avoid double-counting, as these payments are already included in CSU revenues. As a substantial proportion of the residential packages available at CSU include a catering component, the expenditure on food and beverage for those living on-campus was also reduced, when compared with those living in off-campus accommodation.
- Only students who lived overseas on enrolment have been assumed to make a net increase to expenditure on health insurance, as it is compulsory for overseas students to take up health insurance coverage for the duration of their stay.
- CSU provided information regarding the number of students attending graduation ceremonies at each campus and the number of guests in attendance. It was assumed that the origin of these guests was distributed in the same proportion as the distribution of student home addresses on enrolment. Based on travel distance to the respective campus, an assessment was made regarding the likelihood of guests having an overnight stay or making a day trip. Tourist expenditure data by LGA obtained from the Department of Resources, Energy and Tourism² was then used to estimate the likely additional expenditure in the relevant LGA or statistical division generated by guests attending graduation ceremonies. This expenditure is probably under-estimated as it does not include expenditure made by parents attending orientation on commencement. In addition, no allowance has been made for additional expenditure associated with attendance at residential schools.
- CSU provided information on capital expenditure for each campus in 2009. This was examined as a final demand impact and the results incorporated into the overall impact of each campus on its respective LGA or statistical division.

2.3 Impact Analysis

2.3.1 Industry Significance

Input-output tables are frequently used to provide estimates of the significance of a particular industry or organisation in terms of its contribution to the economy. This is done by examining the effects of the organisation shutting down and ceasing all economic activities. This method provides an estimate of the level of economic activity that can be attributed to that particular organisation, in this case CSU.

2.3.2 Final Demand Impacts

The impact of student expenditure was estimated as a final demand impact. Specifically, their expenditure was allocated to the relevant sectors to give the estimated impacts of this expenditure including both initial and flow-on effects. A similar approach was used for expenditure by visitors attending graduation and for capital expenditure impacts.

2.3.3 Total Impacts

The economic impact of CSU was estimated by adding the industry significance of the University, the final demand impacts of student expenditure, the estimated expenditure generated by family and friends from outside the local area attending graduation ceremonies and capital expenditure. The impact of CSU on the study area was estimated in terms of:

- **Output** which is the value of goods and services that are produced within an establishment that become available for use outside that establishment, plus any goods and services produced for the organisation's own final use. Output is equal to total revenue plus any internal consumption.
- **Value added** which is equal to gross output minus intermediate inputs. Value added is equivalent to the contribution to gross regional product (GRP) (the local equivalent of gross domestic product). That is, value added is the difference between the costs of production (excluding the compensation of employees, gross operating surplus, taxes and imports) and the value of sales turnover.
- **Household income** which measures the benefit received by regional households from economic activity. It typically refers to compensation of employees but can also include income in return for productive activity such as, the gross mixed income of unincorporated enterprises, gross operating surplus on dwellings owned by persons, and property income receivable and transfers receivable such as social assistance benefits and non-life insurance claims.
- **Employment** which refers to full-time equivalent (FTE) employment and is a measure of the total level of staff resources used. The FTE of a full-time staff member is equal to 1.0. The FTE of a part-time worker will be a fraction of this depending on the relative number of hours worked.

² <http://www.ret.gov.au/tourism/tra/regional/government/Pages/default.aspx> - accessed 10 January 2011

2.3.4 Use of Marginal Coefficients

WRI also applied marginal coefficients³ to the CSU tables to provide a more accurate representation of the flow-on effects of University related stimuli than would be possible using a linear model. Use of marginal coefficients largely overcomes the overestimation of impacts that can result from using the linear approach. A more detailed description of the marginal coefficients approach can be found in Appendix 1.

2.3.5 Inter-Regional Tables

The economic impact of CSU and its individual campuses has been measured for the relevant LGAs and the larger statistical divisions in which these LGAs are located. The impact on the statistical division has been measured using an inter-regional table which not only measures the impact of direct expenditure within the region but also the flow-on impact of the inter-regional flows.

For example, the assessment of the impact of the Albury campus on Albury LGA treats purchases from outside the LGA as imports. When examining the impact of the same campus on Murray / Ovens-Murray combined statistical division, purchases from the balance of Murray / Ovens-Murray (i.e. excluding Albury LGA) are no longer imports but generate an additional flow-on impact for the statistical divisions.

This has been undertaken by creating an inter-regional table which examines the flows between Albury LGA and the remainder of the Murray / Ovens-Murray combined statistical division. This provides a more realistic measure of the impacts incurred at the small area level on the surrounding larger area.

It should be noted that this assessment of the economic impact of CSU has been undertaken utilising conservative assumptions, including the following:

- No allowance has been made for additional economic impacts derived from visits to the region by family members, particularly those of overseas students. This would be expected to impact on the hospitality, transport and retail sectors in particular.
- No allowance has been made for expenditure by visiting academics which would also generate additional economic impacts.

- The economic impact of CSU measured in absolute values, would be higher if assessed against either New South Wales or Australia as a whole. If analysing Australia as a whole, expenditure which is treated as imports as far as the immediate local area is concerned would be categorised as local expenditure, with the associated flow-on effects.
- No allowance has been made for the present value of benefits derived from the education provided to students by CSU. This includes the higher earnings of university graduates compared to high school graduates over their lifetimes and the economic benefits to society of having these graduates in the workforce.
- No allowance has been made for the present value of economic and other benefits from research and knowledge generation undertaken at CSU and from knowledge transfer through collaboration with industry and governments.
- No allowance has been made for the contribution of the University to the social and cultural base of the regional community.

³ West, G. & Gamage, A. (1997). Differential Multipliers for Tourism in Victoria. *Tourism Economics*, 3 (1), 57-68.

Economic Impact of Charles Sturt University Albury Campus Report

This report examines the impact of the Albury campus on Albury LGA. It then examines the contribution to the broader statistical divisions of Murray and Ovens-Murray.

Impact on Albury LGA

CSU Operations

The impact of the operations of the Albury campus of CSU on Albury LGA is outlined in the table below.

	Employment FTE	Income \$m	Value Added \$m	Output \$m
Initial	338	24.9	35.9	45.7
Flow on	97	5.8	14.3	28.5
Total	435	30.6	50.3	74.2
Multiplier	1.29	1.23	1.40	1.62

Key features are as follows:

- The operations of Albury campus contribute 2.01% of gross regional product, 2.70% of household income and 2.43% of FTE employment in Albury LGA when flow-on effects are taken into account.
- The main industry sectors impacted by the operations of Albury campus in terms of FTE employment are retail trade, accommodation & food services and financial & insurance services.
- Overall, the operations of the Albury campus of CSU contribute \$50.3 million in gross regional product, \$30.6 million in household income and 435 FTE jobs to the Albury economy.

Non-Local Students

The economic impact on Albury of expenditure by non-local students at the Albury campus of CSU, defined as those who have a home address outside Albury LGA, is outlined in the table below. Of the 1,849 students at the Albury campus, 1,527 were classed as non-local for Albury LGA.

	Employment FTE	Income \$m	Value Added \$m	Output \$m
Initial	34	1.7	3.2	6.6
Flow on	29	1.9	4.6	9.5
Total	62	3.6	7.7	16.1
Multiplier	1.85	2.08	2.44	2.44

Key features are as follows:

- Expenditure by non-local students at the Albury campus of CSU contributes 0.31% of gross regional product, 0.32% of household income and 0.35% of FTE employment in Albury LGA, when flow-on effects are taken into account.
- The main industry sectors impacted by expenditure by non-local students attending Albury campus in terms of FTE employment are retail trade, health care & social assistance and arts & recreation services.



Albury Campus

- Overall, expenditure by non-local students at the Albury campus of CSU contributes \$7.7 million in gross regional product, \$3.6 million in household income and 62 FTE jobs to the Albury economy.
- The inclusion of expenditure by local students attending the Albury campus of CSU increases the contribution to \$10.4 million in gross regional product, \$4.9 million in household income and 83 FTE jobs to the Albury economy.

Total Impact

The total impact of the Albury campus of CSU on Albury LGA was calculated by aggregating the impact of campus operations, non-local student expenditure, the estimated expenditure generated by family and friends from outside the local area attending graduation ceremonies and capital expenditure. The table below summarises the total impact of the Albury campus of CSU on the economy of Albury LGA.

	Employment FTE	Income \$m	Value Added \$m	Output \$m
Initial	448	32.1	47.4	74.4
Flow on	236	14.8	36.0	75.0
Total	684	46.9	83.4	149.4
Multiplier	1.53	1.46	1.76	2.01

Key features are as follows:

- The Albury campus of CSU contributes 3.34% of gross regional product, 4.14% of household income and 3.83% of FTE employment in Albury when flow-on effects are taken into account.
- The main industry sectors impacted by the Albury campus in terms of FTE employment are retail trade, administrative services and construction.

Impact on Murray / Ovens-Murray combined statistical divisions

CSU Operations

The impact of the operations of the Albury campus of CSU on Murray / Ovens-Murray combined statistical divisions is outlined in the table below.

	Employment FTE	Income \$m	Value Added \$m	Output \$m
Initial	338	24.9	38.3	48.1
Flow on	143	8.5	21.2	42.2
Total	481	33.4	59.5	90.3
Multiplier	1.42	1.34	1.55	1.88

Key features are as follows:

- The operations of Albury campus contribute 0.60% of gross regional product, 0.83% of household income and 0.63% of FTE employment in Murray / Ovens-Murray combined statistical divisions when flow-on effects are taken into account.
- The main industry sectors impacted by the operations of the Albury campus in terms of FTE employment are retail trade, agriculture, forestry & fishing and health care & social assistance.
- Overall, the operations of the Albury campus of CSU contribute \$59.5 million in gross regional product, \$33.4 million in household income and 481 FTE jobs to the economy of the Murray / Ovens-Murray combined statistical divisions.



Overall, the Albury campus of CSU contributes \$83.4 million in gross regional product, \$46.9 million in household income and 684 FTE jobs to the Albury economy.

Non-Local Students

The economic impact on the Murray / Ovens-Murray combined statistical divisions of expenditure by non-local students at the Albury campus of CSU is outlined in the table below. Of the 1,849 students at the Albury campus, 1,032 were classed as non-local for the combined statistical divisions of Murray and Ovens-Murray.

	Employment FTE	Income \$m	Value Added \$m	Output \$m
Initial	29	1.5	3.0	5.9
Flow on	21	1.2	3.2	7.2
Total	50	2.6	6.2	13.1
Multiplier	1.72	1.78	2.07	2.21

Key features are as follows:

- Expenditure by non-local students at the Albury campus of CSU contribute 0.06% of gross regional product, 0.07% of household income and 0.07% of FTE employment in Murray / Ovens-Murray combined statistical divisions when flow-on effects are taken into account.
- The main industry sectors impacted by expenditure by non-local students attending Albury campus in terms of FTE employment are retail trade, health care & social assistance and arts & recreation services.
- Overall, expenditure by non-local students at the Albury campus of CSU contributes \$6.2 million in gross regional product, \$2.6 million in household income and 50 FTE jobs to the economy of the Murray / Ovens-Murray combined statistical divisions.
- The inclusion of expenditure by local students attending the Albury campus of CSU increases the contribution to \$11.2 million in gross regional product, \$4.7 million in household income and 90 FTE jobs to the economy of Murray / Ovens-Murray combined statistical divisions.

Total Impact

The total impact of the Albury campus of CSU on Murray / Ovens-Murray combined statistical divisions was calculated by aggregating the impact of campus operations, non-local student expenditure, the estimated expenditure generated by family and friends from outside the local area attending graduation ceremonies and capital expenditure. The table opposite

summarises the total impact of the Albury campus of CSU on the economy of Murray / Ovens-Murray combined statistical divisions.

	Employment FTE	Income \$m	Value Added \$m	Output \$m
Initial	444	31.8	49.6	76.1
Flow on	274	16.8	41.4	86.3
Total	718	48.6	91.0	162.4
Multiplier	1.62	1.53	1.84	2.14

Key features are as follows:

- The Albury campus of CSU contributes 0.92% of gross regional product, 1.20% of household income and 0.94% of FTE employment in the Murray / Ovens-Murray combined statistical divisions when flow-on effects are taken into account.
- The main industry sectors impacted by Albury campus in terms of FTE employment are retail trade, administrative services and construction.

Overall, the Albury campus of CSU contributes \$91.0 million in gross regional product, \$48.6 million in household income and 718 FTE jobs to the Murray / Ovens-Murray combined economy.

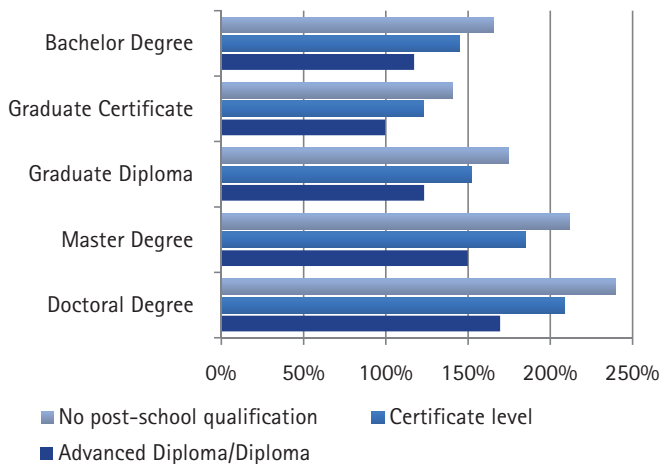
Contribution to Regional Income Levels

The economic impact of CSU is not limited to the direct and indirect impacts of its operations. In addition to these impacts, the presence of graduates in a region generally contributes higher wages and lower unemployment rates and, more importantly, provides an educated workforce, especially in regional areas.

Albury LGA

Data from the 2006 Census indicates that residents of Albury LGA in full-time employment, who hold a university qualification, generally earn substantially more than those with an Advanced Diploma / Diploma, Certificate or no post-school qualification. The graph below illustrates the comparison with various levels of university qualification.

Average income for persons with university qualification in Albury LGA as % of those with other or no post-school qualification



Key points are as follows:

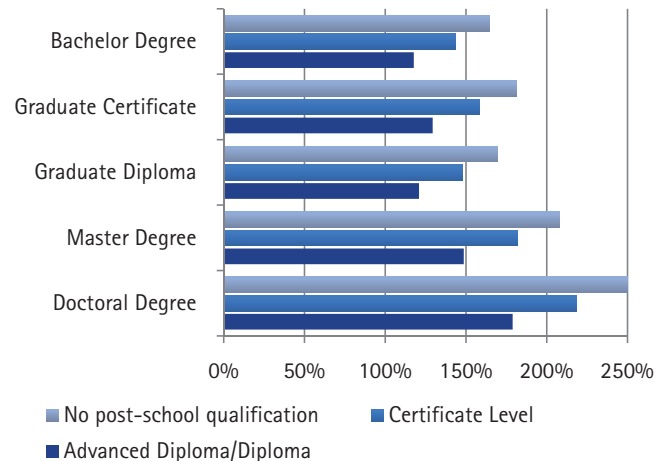
- Persons holding a doctorate have average incomes that are almost 2.5 times those with no post-school qualification, while for those with a Bachelor degree earnings are approximately two-thirds higher.
- On average, persons with a university qualification earn higher incomes than those with any other type of qualification.

In addition, persons holding a university qualification are considerably less likely to be unemployed – the average unemployment rate for those with no post-school qualification in 2006 in Albury was 8.6% compared with an average of 2.2% for those holding a Bachelor degree.

Murray / Ovens-Murray combined statistical divisions

Similarly, residents of Murray / Ovens-Murray combined statistical divisions in full-time employment who hold a university qualification generally earn substantially more than those with an Advanced Diploma / Diploma, Certificate or no post-school qualification. The graph below illustrates the comparison with various levels of university qualification.

Average income for persons with university qualification in Murray / Ovens-Murray combined statistical divisions as % of those with other or no post-school qualification



Key points are as follows:

- Persons holding a Doctoral degree have average incomes that are 2.5 times that earned by those with no post-school qualification, while for those with a Bachelor degree earnings are almost two-thirds higher.
- On average, persons with a university qualification earn higher incomes than those with any other type of qualification.

In addition, persons holding a university qualification are considerably less likely to be unemployed – the average unemployment rate for those with no post-school qualification in 2006 in Murray / Ovens-Murray combined statistical divisions was 6.7% compared with an average of 1.8% for those holding a Bachelor degree.

Economic Impact of Charles Sturt University Bathurst Campus Report

This report examines the impact of the Bathurst campus on Bathurst LGA. It then examines the contribution to the broader statistical division of Central West.

Impact on Bathurst LGA

CSU Operations

The impact of the operations of the Bathurst campus of CSU on Bathurst LGA is outlined in the table below.

	Employment FTE	Income \$m	Value Added \$m	Output \$m
Initial	777	56.9	62.5	95.0
Flow on	304	15.4	39.6	85.2
Total	1,081	72.3	102.1	180.2
Multiplier	1.39	1.27	1.63	1.90

Key features are as follows:

- The operations of Bathurst campus contribute 5.04% of gross regional product, 7.66% of household income and 6.73% of FTE employment in Bathurst LGA when flow-on effects are taken into account.
- The main industry sectors impacted by the operations of Bathurst campus in terms of FTE employment are retail trade, accommodation & food services and education & training.
- Overall, the operations of the Bathurst campus of CSU contribute \$102.1 million in gross regional product, \$72.3 million in household income and 1,081 FTE jobs to the Bathurst economy.

Non-Local Students

The economic impact on Bathurst of expenditure by non-local students at the Bathurst campus of CSU, defined as those who have a home address outside Bathurst LGA, is outlined in the table below. Of the 2,619 students at the Bathurst campus, 2,253 were classed as non-local for Bathurst LGA.

	Employment FTE	Income \$m	Value Added \$m	Output \$m
Initial	55	2.6	4.9	9.7
Flow on	41	2.3	5.6	12.3
Total	96	4.9	10.5	22.0
Multiplier	1.73	1.86	2.15	2.26

Key features are as follows:

- Expenditure by non-local students at the Bathurst campus of CSU contributes 0.52% of gross regional product, 0.52% of household income and 0.60% of FTE employment, in Bathurst LGA, when flow-on effects are taken into account.
- The main industry sectors impacted by expenditure by non-local students attending Bathurst campus in terms of FTE employment are retail trade, health care & social assistance and arts & recreation services.



Bathurst Campus

- Overall, expenditure by non-local students at the Bathurst campus of CSU contributes \$10.5 million in gross regional product, \$4.9 million in household income and 96 FTE jobs to the Bathurst economy.
- The inclusion of expenditure by local students attending the Bathurst campus of CSU increases the contribution to \$13.3 million in gross regional product, \$6.1 million in household income and 119 FTE jobs to the Bathurst economy.

Total Impact

The total impact of the Bathurst campus of CSU on Bathurst LGA was calculated by aggregating the impact of campus operations, non-local student expenditure, the estimated expenditure generated by family and friends from outside the local area attending graduation ceremonies and capital expenditure. The table below summarises the total impact of the Bathurst campus of CSU on the economy of Bathurst LGA.

	Employment FTE	Income \$m	Value Added \$m	Output \$m
Initial	885	62.9	72.9	118.8
Flow on	411	21.4	54.3	118.3
Total	1295	84.3	127.2	237.1
Multiplier	1.46	1.34	1.75	2.00

Key features are as follows:

- The Bathurst campus of CSU contributes 6.28% of gross regional product, 8.92% of household income and 8.07% of FTE employment in Bathurst when flow-on effects are taken into account.
- The main industry sectors impacted by the Bathurst campus in terms of FTE employment are retail trade, health care & social assistance and other services.

Impact on Central West statistical division

CSU Operations

The impact of the operations of the Bathurst campus of CSU on Central West statistical division is outlined in the table below.

	Employment FTE	Income \$m	Value Added \$m	Output \$m
Initial	777	56.9	62.5	95.0
Flow on	329	16.7	42.9	92.9
Total	1,106	73.6	105.4	187.8
Multiplier	1.42	1.29	1.69	1.98

Key features are as follows:

- The operations of Bathurst campus contribute 1.08% of gross regional product, 1.67% of household income and 1.45% of FTE employment in Central West statistical division when flow-on effects are taken into account.
- The main industry sectors impacted by the operations of the Bathurst campus in terms of FTE employment are retail trade, accommodation & food services and other services.
- Overall, the operations of the Bathurst campus of CSU contribute \$105.4 million in gross regional product, \$73.6 million in household income and 1,106 FTE jobs to the economy of the Central West.



Overall, the Bathurst campus of CSU contributes \$127.2 million in gross regional product, \$84.3 million in household income and 1,295 FTE jobs to the Bathurst economy.

Non-Local Students

The economic impact on the Central West statistical division of expenditure by non-local students at the Bathurst campus of CSU is outlined in the table below. Of the 2,619 students at the Bathurst campus, 1,714 were classed as non-local for the Central West statistical division.

	Employment FTE	Income \$m	Value Added \$m	Output \$m
Initial	51	2.5	4.4	9.1
Flow on	38	2.1	5.5	13.8
Total	89	4.7	9.9	23.0
Multiplier	1.74	1.85	2.24	2.51

Key features are as follows:

- Expenditure by non-local students at the Bathurst campus of CSU contributes 0.10% of gross regional product, 0.11% of household income and 0.12% of FTE employment in Central West statistical division when flow-on effects are taken into account.
- The main industry sectors impacted by expenditure by non-local students attending Bathurst campus in terms of FTE employment are health care & social assistance, arts & recreation services and retail trade.
- Overall, expenditure by non-local students at the Bathurst campus of CSU contributes \$9.9 million in gross regional product, \$4.7 million in household income and 89 FTE jobs to the economy of the Central West.
- The inclusion of expenditure by local students attending the Bathurst campus of CSU increases the contribution to \$14.6 million in gross regional product, \$6.8 million in household income and 129 FTE jobs to the economy of Central West statistical division.

Total Impact

The total impact of the Bathurst campus of CSU on Central West statistical division was calculated by aggregating the impact of campus operations, non-local student expenditure, the estimated expenditure generated by family and friends from outside the local area attending graduation ceremonies and capital expenditure. The table opposite summarises the total impact of the Bathurst campus of CSU on the economy of Central West statistical division.

	Employment FTE	Income \$m	Value Added \$m	Output \$m
Initial	880	62.7	72.3	118.1
Flow on	433	22.5	57.4	127.4
Total	1,313	85.3	129.7	245.5
Multiplier	1.49	1.36	1.79	2.08

Key features are as follows:

- The Bathurst campus of CSU contributes 1.33% of gross regional product, 1.93% of household income and 1.72% of FTE employment in the Central West when flow-on effects are taken into account.
- The main industry sectors impacted by Bathurst campus in terms of FTE employment are retail trade, accommodation & food services and health care & social assistance.



Overall, the Bathurst campus of CSU contributes \$129.7 million in gross regional product, \$85.3 million in household income and 1,313 FTE jobs to the Central West economy.

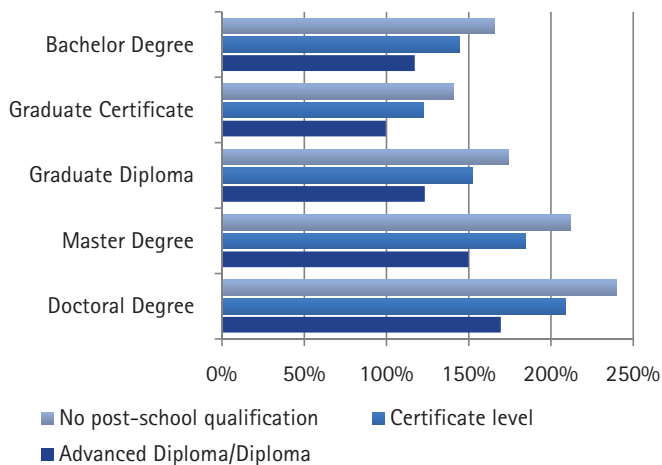
Contribution to Regional Income Levels

The economic impact of CSU is not limited to the direct and indirect impacts of its operations. In addition to these impacts, the presence of graduates in a region generally contributes higher wages and lower unemployment rates and, more importantly, provides an educated workforce, especially in regional areas.

Bathurst LGA

Data from the 2006 Census indicates that residents of Bathurst LGA in full-time employment, who hold a university qualification generally earn substantially more than those with an Advanced Diploma / Diploma, Certificate or no post-school qualification. The graph below illustrates the comparison with various levels of university qualification.

Average income for persons with university qualification in Bathurst LGA as % of those with other or no post-school qualification



Key points are as follows:

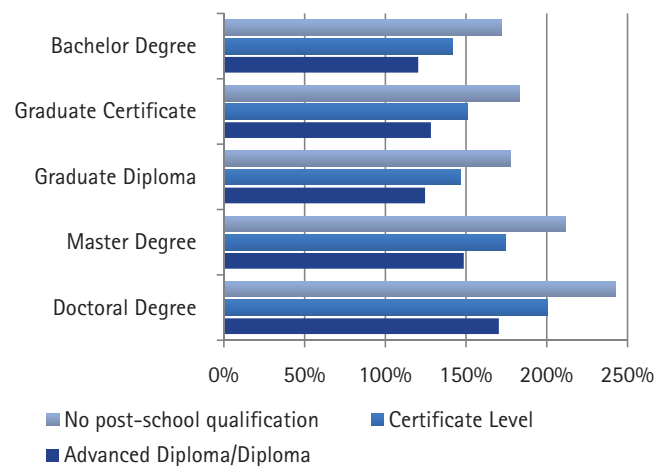
- Persons holding a doctorate have average incomes that are more than double those with no post-school qualification, while for those with a Bachelor degree earnings are more than 60% higher.
- On average, persons with a university qualification earn higher incomes than those with any other type of qualification.

In addition, persons holding a university qualification are considerably less likely to be unemployed – the average unemployment rate for those with no post-school qualification in 2006 in Bathurst was 9.4% compared with an average of 2.0% for those holding a Bachelor degree.

Central West statistical division

Similarly, residents of Central West statistical division in full-time employment who hold a university qualification generally earn substantially more than those with an Advanced Diploma / Diploma, Certificate or no post-school qualification. The graph below illustrates the comparison with various levels of university qualification.

Average income for persons with university qualification in Central West statistical division as % of those with other or no post-school qualification



Key points are as follows:

- Persons holding a Doctoral degree have average incomes that are almost 2.5 times higher than that earned by those with no post-school qualification, while for those with a Bachelor degree earnings are more than 70% higher.
- On average, persons with a university qualification earn higher incomes than those with any other type of qualification.

In addition, persons holding a university qualification are considerably less likely to be unemployed – the average unemployment rate for those with no post-school qualification in 2006 in Central West statistical division was 9.0% compared with an average of 1.7% for those holding a Bachelor degree.

Economic Impact of Charles Sturt University Dubbo Campus Report

This report examines the impact of the Dubbo campus on Dubbo LGA. It then examines the contribution to the broader statistical division of North Western.

Impact on Dubbo LGA

CSU Operations

The impact of the operations of the Dubbo campus of CSU on Dubbo LGA is outlined in the table below.

	Employment FTE	Income \$m	Value Added \$m	Output \$m
Initial	52	3.4	4.5	5.8
Flow on	19	1.1	2.6	5.4
Total	71	4.5	7.1	11.3
Multiplier	1.36	1.34	1.57	1.93

Key features are as follows:

- The operations of Dubbo campus contribute 0.31% of gross regional product, 0.40% of household income and 0.39% of FTE employment in Dubbo LGA when flow-on effects are taken into account.
- The main industry sectors impacted by the operations of Dubbo campus in terms of FTE employment are retail trade, financial & insurance services and accommodation & food services.
- Overall, the operations of the Dubbo campus of CSU contribute \$7.1 million in gross regional product, \$4.5 million in household income and 71 FTE jobs to the Dubbo economy.

Non-Local Students

The economic impact on Dubbo of expenditure by non-local students at the Dubbo campus of CSU, defined as those who have a home address outside Dubbo LGA, is outlined in the table below. Of the 291 students at the Dubbo campus, 141 were classed as non-local for Dubbo LGA.

	Employment FTE	Income \$m	Value Added \$m	Output \$m
Initial	3	0.1	0.2	0.5
Flow on	3	0.2	0.4	0.8
Total	5	0.3	0.6	1.3
Multiplier	1.99	2.19	2.55	2.61

Key features are as follows:

- Expenditure by non-local students at the Dubbo campus of CSU contributes 0.03% of gross regional product, 0.03% of household income and 0.03% of FTE employment, in Dubbo LGA, when flow-on effects are taken into account.
- The main industry sectors impacted by expenditure by non-local students attending Dubbo campus in terms of FTE employment are health care & social assistance, retail trade and arts & recreation services.



Dubbo Campus

- Overall, expenditure by non-local students at the Dubbo campus of CSU contributes \$0.6 million in gross regional product, \$0.3 million in household income and 5 FTE jobs to the Dubbo economy.
- The inclusion of expenditure by local students attending the Dubbo campus of CSU increases the contribution to \$1.8 million in gross regional product, \$0.9 million in household income and 14 FTE jobs to the Dubbo economy.

Total Impact

The total impact of the Dubbo campus of CSU on Dubbo LGA was calculated by aggregating the impact of campus operations, non-local student expenditure, the estimated expenditure generated by family and friends from outside the local area attending graduation ceremonies and capital expenditure. The table below summarises the total impact of the Dubbo campus of CSU on the economy of Dubbo LGA.

	Employment FTE	Income \$m	Value Added \$m	Output \$m
Initial	81	5.3	7.6	13.9
Flow on	66	4.2	9.3	20.2
Total	147	9.5	16.8	34.0
Multiplier	1.82	1.78	2.23	2.45

Key features are as follows:

- The Dubbo campus of CSU contributes 0.73% of gross regional product, 0.83% of household income and 0.80% of FTE employment in Dubbo when flow-on effects are taken into account.
- The main industry sectors impacted by the Dubbo campus in terms of FTE employment are administrative services, construction and retail trade.

Impact on North Western statistical division

CSU Operations

The impact of the operations of the Dubbo campus of CSU on North Western statistical division is outlined in the table below.

	Employment FTE	Income \$m	Value Added \$m	Output \$m
Initial	52	3.4	4.5	5.8
Flow on	21	1.2	2.8	5.9
Total	73	4.6	7.4	11.8
Multiplier	1.40	1.37	1.62	2.02

Key features are as follows:

- The operations of Dubbo campus contribute 0.12% of gross regional product, 0.17% of household income and 0.15% of FTE employment in North Western statistical division when flow-on effects are taken into account.
- The main industry sectors impacted by the operations of the Dubbo campus in terms of FTE employment are retail trade, accommodation & food services and agriculture, forestry & fishing.
- Overall, the operations of the Dubbo campus of CSU contribute \$7.4 million in gross regional product, \$4.6 million in household income and 73 FTE jobs to the economy of the North Western statistical division.



Overall, the Dubbo campus of CSU contributes \$16.8 million in gross regional product, \$9.5 million in household income and 147 FTE jobs to the Dubbo economy.

Non-Local Students

The economic impact on the North Western statistical division of expenditure by non-local students at the Dubbo campus of CSU is outlined in the table below. Of the 291 students at the Dubbo campus, 57 were classed as non-local for the North Western statistical division.

	Employment FTE	Income \$m	Value Added \$m	Output \$m
Initial	2	0.1	0.2	0.5
Flow on	2	0.1	0.3	0.6
Total	4	0.2	0.5	1.1
Multiplier	1.77	1.82	2.14	2.34

Key features are as follows:

- Expenditure by non-local students at the Dubbo campus of CSU contributes 0.01% of gross regional product, 0.01% of household income and 0.01% of FTE employment in North Western statistical division when flow-on effects are taken into account.
- The main industry sectors impacted by expenditure by non-local students attending Dubbo campus in terms of FTE employment are health care & social assistance, retail trade and arts & recreation services.
- Overall, expenditure by non-local students at the Dubbo campus of CSU contributes \$0.5 million in gross regional product, \$0.2 million in household income and 4 FTE jobs to the economy of the North Western statistical division.
- The inclusion of expenditure by local students attending the Dubbo campus of CSU increases the contribution to \$2.1 million in gross regional product, \$0.9 million in household income and 17 FTE jobs to the economy of North Western statistical division.

Total Impact

The total impact of the Dubbo campus of CSU on North Western statistical division was calculated by aggregating the impact of campus operations, non-local student expenditure, the estimated expenditure generated by family and friends from outside the local area attending graduation ceremonies and capital expenditure. The table opposite summarises the total impact of the Dubbo campus of CSU on the economy of North Western statistical division.

	Employment FTE	Income \$m	Value Added \$m	Output \$m
Initial	80	5.3	7.5	13.8
Flow on	67	4.2	9.4	20.5
Total	147	9.5	16.9	34.3
Multiplier	1.83	1.79	2.25	2.48

Key features are as follows:

- The Dubbo campus of CSU contributes 0.27% of gross regional product, 0.35% of household income and 0.30% of FTE employment in the North Western statistical division when flow-on effects are taken into account.
- The main industry sectors impacted by Dubbo campus in terms of FTE employment are administrative services, construction and retail trade.



Overall, the Dubbo campus of CSU contributes \$16.9 million in gross regional product, \$9.5 million in household income and 147 FTE jobs to the North Western economy.

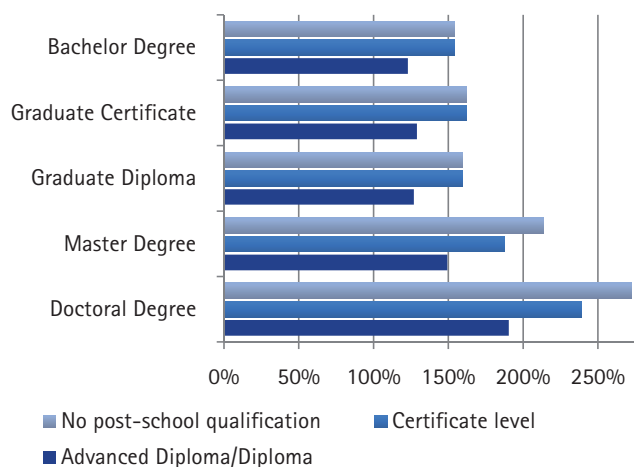
Contribution to Regional Income Levels

The economic impact of CSU is not limited to the direct and indirect impacts of its operations. In addition to these impacts, the presence of graduates in a region generally contributes higher wages and lower unemployment rates and, more importantly, provides an educated workforce, especially in regional areas.

Dubbo LGA

Data from the 2006 Census indicates that residents of Dubbo LGA in full-time employment, who hold a university qualification generally earn substantially more than those with an Advanced Diploma / Diploma, Certificate or no post-school qualification. The graph below illustrates the comparison with various levels of university qualification.

Average income for persons with university qualification in Dubbo LGA as % of those with other or no post-school qualification



Key points are as follows:

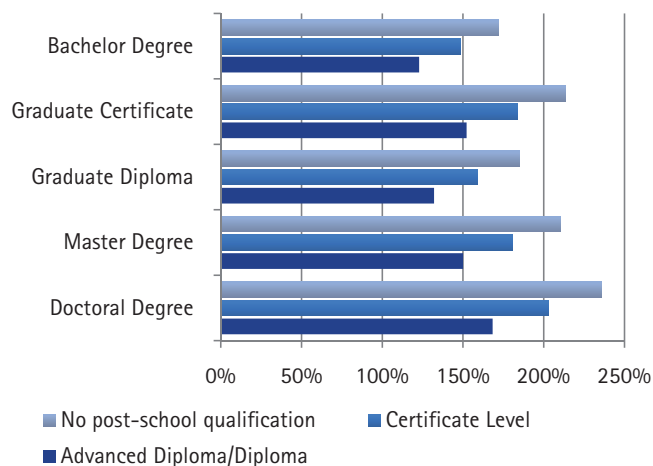
- Persons holding a doctorate have average incomes that are more than 2.5 times higher than those with no post-school qualification, while for those with a Bachelor degree earnings are more than 50% higher.
- On average, persons with a university qualification earn higher incomes than those with any other type of qualification.

In addition, persons holding a university qualification are considerably less likely to be unemployed – the average unemployment rate for those with no post-school qualification in 2006 in Dubbo was 7.8% compared with an average of 1.2% for those holding a Bachelor degree.

North Western statistical division

Similarly, residents of North Western statistical division in full-time employment who hold a university qualification generally earn substantially more than those with an Advanced Diploma / Diploma, Certificate or no post-school qualification. The graph below illustrates the comparison with various levels of university qualification.

Average income for persons with university qualification in North Western statistical division as % of those with other or no post-school qualification



Key points are as follows:

- Persons holding a Doctoral degree have average incomes that are more than double that earned by those with no post-school qualification, while for those with a Bachelor degree earnings are more than 70% higher.
- On average, persons with a university qualification earn higher incomes than those with any other type of qualification.

In addition, persons holding a university qualification are considerably less likely to be unemployed – the average unemployment rate for those with no post-school qualification in 2006 in North Western statistical division was 9.4% compared with an average of 1.5% for those holding a Bachelor degree.

Economic Impact of Charles Sturt University Goulburn Campus Report

This report examines the impact of the Goulburn campus on Goulburn-Mulwaree LGA. It then examines the contribution to the broader statistical division of South Eastern.

Impact on Goulburn-Mulwaree LGA

CSU Operations

The impact of the operations of the Goulburn campus of CSU on Goulburn-Mulwaree LGA is outlined in the table below.

	Employment FTE	Income \$m	Value Added \$m	Output \$m
Initial	51	4.0	8.1	12.0
Flow on	13	0.7	1.7	3.1
Total	64	4.7	9.8	15.1
Multiplier	1.26	1.17	1.21	1.25

Key features are as follows:

- The operations of Goulburn campus contribute 0.76% of gross regional product, 0.85% of household income and 0.66% of FTE employment in Goulburn-Mulwaree LGA when flow-on effects are taken into account.
- The main industry sectors impacted by the operations of Goulburn campus in terms of FTE employment are retail trade, health care & social assistance and accommodation & food services.
- Overall, the operations of the Goulburn campus of CSU contribute \$9.8 million in gross regional product, \$4.7 million in household income and 64 FTE jobs to the Goulburn economy.

Non-Local Students

The economic impact on Goulburn of expenditure by non-local students at the Goulburn campus of CSU, defined as those who have a home address outside Goulburn-Mulwaree LGA, is outlined in the table below. Of the 989 students at the Goulburn campus, 982 were classed as non-local for Goulburn-Mulwaree LGA.

	Employment FTE	Income \$m	Value Added \$m	Output \$m
Initial	23	1.1	2.5	4.8
Flow on	17	1.0	2.4	4.5
Total	40	2.1	4.8	9.3
Multiplier	1.76	1.83	1.95	1.94

Key features are as follows:

- Expenditure by non-local students at the Goulburn campus of CSU contributes 0.37% of gross regional product, 0.38% of household income and 0.41% of FTE employment, in Goulburn-Mulwaree LGA, when flow-on effects are taken into account.
- The main industry sectors impacted by expenditure by non-local students attending Goulburn campus in terms of FTE employment are health care & social assistance, retail trade and arts & recreation services.



Goulburn Campus

- Overall, expenditure by non-local students at the Goulburn campus of CSU contributes \$4.8 million in gross regional product, \$2.1 million in household income and 40 FTE jobs to the Goulburn economy.
- The inclusion of expenditure by local students attending the Goulburn campus of CSU increases the contribution to \$4.9 million in gross regional product, \$2.1 million in household income and 40 FTE jobs to the Goulburn economy.

Total Impact

The total impact of the Goulburn campus of CSU on Goulburn-Mulwaree LGA was calculated by aggregating the impact of campus operations, non-local student expenditure, the estimated expenditure generated by family and friends from outside the local area attending graduation ceremonies and capital expenditure. The table below summarises the total impact of the Goulburn campus of CSU on the economy of Goulburn-Mulwaree LGA.

	Employment FTE	Income \$m	Value Added \$m	Output \$m
Initial	74	5.2	10.6	16.9
Flow on	31	1.6	4.1	7.6
Total	105	6.8	14.7	24.5
Multiplier	1.42	1.32	1.39	1.45

Key features are as follows:

- The Goulburn campus of CSU contributes 1.13% of gross regional product, 1.23% of household income and 1.07% of FTE employment in Goulburn when flow-on effects are taken into account.
- The main industry sectors impacted by the Goulburn campus in terms of FTE employment are health care & social assistance, retail trade and accommodation & food services.

Impact on South Eastern statistical division

CSU Operations

The impact of the operations of the Goulburn campus of CSU on South Eastern statistical division is outlined in the table below.

	Employment FTE	Income \$m	Value Added \$m	Output \$m
Initial	51	4.0	8.1	12.0
Flow on	15	0.8	1.9	3.5
Total	66	4.8	10.0	15.5
Multiplier	1.30	1.19	1.24	1.29

Key features are as follows:

- The operations of Goulburn campus contribute 0.12% of gross regional product, 0.15% of household income and 0.10% of FTE employment in South Eastern statistical division when flow-on effects are taken into account.
- The main industry sectors impacted by the operations of the Goulburn campus in terms of FTE employment are retail trade, accommodation & food services and agriculture, forestry & fishing.
- Overall, the operations of the Goulburn campus of CSU contribute \$10.0 million in gross regional product, \$4.8 million in household income and 66 FTE jobs to the economy of the South Eastern statistical division.

Overall, the Goulburn campus of CSU contributes \$14.7 million in gross regional product, \$6.8 million in household income and 105 FTE jobs to the Goulburn economy.

Non-Local Students

The economic impact on the South Eastern statistical division of expenditure by non-local students at the Goulburn campus of CSU is outlined in the table below. Of the 989 students at the Goulburn campus, 972 were classed as non-local for the South Eastern statistical division.

	Employment FTE	Income \$m	Value Added \$m	Output \$m
Initial	23	1.2	2.6	4.8
Flow on	13	0.7	1.9	3.9
Total	36	1.9	4.5	8.7
Multiplier	1.58	1.58	1.76	1.81

Key features are as follows:

- Expenditure by non-local students at the Goulburn campus of CSU contributes 0.05% of gross regional product, 0.06% of household income and 0.06% of FTE employment in South Eastern statistical division when flow-on effects are taken into account.
- The main industry sectors impacted by expenditure by non-local students attending Goulburn campus in terms of FTE employment are health care & social assistance, retail trade and arts & recreation services.
- Overall, expenditure by non-local students at the Goulburn campus of CSU contributes \$4.5 million in gross regional product, \$1.9 million in household income and 36 FTE jobs to the economy of the South Eastern statistical division.
- The inclusion of expenditure by local students attending the Goulburn campus of CSU increases the contribution to \$4.6 million in gross regional product, \$1.9 million in household income and 37 FTE jobs to the economy of South Eastern statistical division.

Total Impact

The total impact of the Goulburn campus of CSU on South Eastern statistical division was calculated by aggregating the impact of campus operations, non-local student expenditure, the estimated expenditure generated by family and friends from outside the local area attending graduation ceremonies and capital expenditure. The table opposite summarises the total impact of the Goulburn campus of CSU on the economy of South Eastern statistical division.

	Employment FTE	Income \$m	Value Added \$m	Output \$m
Initial	74	5.2	10.7	16.8
Flow on	29	1.5	3.9	7.4
Total	103	6.7	14.6	24.2
Multiplier	1.38	1.28	1.36	1.44

Note: The total results for South Eastern statistical division are marginally lower than for Goulburn-Mulwaree LGA are as a result of the impact of non-local student expenditure.

Key features are as follows:

- The Goulburn campus of CSU contributes 0.17% of gross regional product, 0.21% of household income and 0.16% of FTE employment in the South Eastern statistical division when flow-on effects are taken into account.
- The main industry sectors impacted by Goulburn campus in terms of FTE employment are health care & social assistance, retail trade and accommodation & food services.

Overall, the Goulburn campus of CSU contributes \$14.6 million in gross regional product, \$6.7 million in household income and 103 FTE jobs to the South Eastern economy.

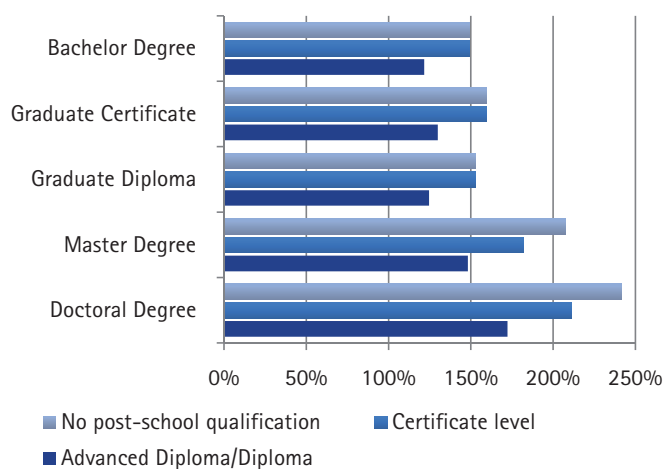
Contribution to Regional Income Levels

The economic impact of CSU is not limited to the direct and indirect impacts of its operations. In addition to these impacts, the presence of graduates in a region generally contributes higher wages and lower unemployment rates and, more importantly, provides an educated workforce, especially in regional areas.

Goulburn-Mulwaree LGA

Data from the 2006 Census indicates that residents of Goulburn-Mulwaree LGA in full-time employment, who hold a university qualification generally earn substantially more than those with an Advanced Diploma / Diploma, Certificate or no post-school qualification. The graph below illustrates the comparison with various levels of university qualification.

Average income for persons with university qualification in Goulburn-Mulwaree LGA as % of those with other or no post-school qualification



Key points are as follows:

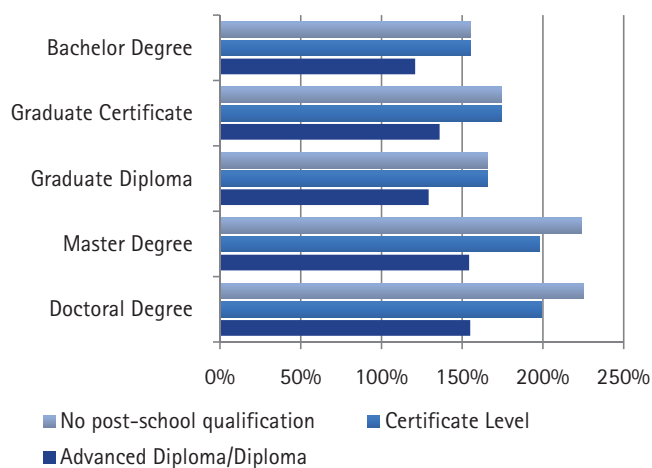
- Persons holding a doctorate have average incomes that are almost 2.5 times higher than those with no post-school qualification, while for those with a Bachelor degree earnings are almost 50% higher.
- On average, persons with a university qualification earn higher incomes than those with any other type of qualification.

In addition, persons holding a university qualification are considerably less likely to be unemployed – the average unemployment rate for those with no post-school qualification in 2006 in Goulburn was 8.8% compared with an average of 1.4% for those holding a Bachelor degree.

South Eastern statistical division

Similarly, residents of South Eastern statistical division in full-time employment who hold a university qualification generally earn substantially more than those with an Advanced Diploma / Diploma, Certificate or no post-school qualification. The graph below illustrates the comparison with various levels of university qualification.

Average income for persons with university qualification in South Eastern statistical division as % of those with other or no post-school qualification



Key points are as follows:

- Persons holding a Doctoral degree have average incomes that are more than double that earned by those with no post-school qualification, while for those with a Bachelor degree earnings are more than 50% higher.
- On average, persons with a university qualification earn higher incomes than those with any other type of qualification.

In addition, persons holding a university qualification are considerably less likely to be unemployed – the average unemployment rate for those with no post-school qualification in 2006 in South Eastern statistical division was 7.2% compared with an average of 2.1% for those holding a Bachelor degree.

Economic Impact of Charles Sturt University Orange Campus Report

This report examines the impact of the Orange campus on Orange LGA. It then examines the contribution to the broader statistical division of Central West.

Impact on Orange LGA

CSU Operations

The impact of the operations of the Orange campus of CSU on Orange LGA is outlined in the table below.

	Employment FTE	Income \$m	Value Added \$m	Output \$m
Initial	144	10.7	13.7	17.0
Flow on	70	4.0	8.7	18.3
Total	214	14.7	22.4	35.3
Multiplier	1.49	1.37	1.64	2.08

Key features are as follows:

- The operations of Orange campus contribute 0.97% of gross regional product, 1.27% of household income and 1.16% of FTE employment in Orange LGA when flow-on effects are taken into account.
- The main industry sectors impacted by the operations of Orange campus in terms of FTE employment are retail trade, health care & social assistance and other services.
- Overall, the operations of the Orange campus of CSU contribute \$22.4 million in gross regional product, \$14.7 million in household income and 214 FTE jobs to the Orange economy.

Non-Local Students

The economic impact on Orange of expenditure by non-local students at the Orange campus of CSU, defined as those who have a home address outside Orange LGA, is outlined in the table below. Of the 360 students at the Orange campus, 309 were classed as non-local for Orange LGA.

	Employment FTE	Income \$m	Value Added \$m	Output \$m
Initial	8	0.4	0.7	1.4
Flow on	8	0.5	1.0	2.2
Total	15	0.9	1.7	3.7
Multiplier	2.01	2.19	2.50	2.57

Key features are as follows:

- Expenditure by non-local students at the Orange campus of CSU contributes 0.07% of gross regional product, 0.08% of household income and 0.08% of FTE employment, in Orange LGA, when flow-on effects are taken into account.
- The main industry sectors impacted by expenditure by non-local students attending Orange campus in terms of FTE employment are health care & social assistance, retail trade and arts & recreation services.



- Overall, expenditure by non-local students at the Orange campus of CSU contributes \$1.7 million in gross regional product, \$0.9 million in household income and 15 FTE jobs to the Orange economy.
- The inclusion of expenditure by local students attending the Orange campus of CSU increases the contribution to \$2.1 million in gross regional product, \$1.1 million in household income and 19 FTE jobs to the Orange economy.

Total Impact

The total impact of the Orange campus of CSU on Orange LGA was calculated by aggregating the impact of campus operations, non-local student expenditure, the estimated expenditure generated by family and friends from outside the local area attending graduation ceremonies and capital expenditure. The table below summarises the total impact of the Orange campus of CSU on the economy of Orange LGA.

	Employment FTE	Income \$m	Value Added \$m	Output \$m
Initial	214	15.5	20.9	36.4
Flow on	187	11.1	24.0	53.2
Total	401	26.6	44.9	89.6
Multiplier	1.87	1.72	2.15	2.46

Key features are as follows:

- The Orange campus of CSU contributes 1.95% of gross regional product, 2.30% of household income and 2.17% of FTE employment in Orange when flow-on effects are taken into account.
- The main industry sectors impacted by the Orange campus in terms of FTE employment are administrative services, retail trade and construction.

Impact on Central West statistical division

CSU Operations

The impact of the operations of the Orange campus of CSU on Central West statistical division is outlined in the table below.

	Employment FTE	Income \$m	Value Added \$m	Output \$m
Initial	144	10.7	13.7	17.0
Flow on	80	4.6	10.0	21.2
Total	224	15.3	23.6	38.2
Multiplier	1.56	1.43	1.73	2.25

Key features are as follows:

- The operations of Orange campus contribute 0.24% of gross regional product, 0.35% of household income and 0.29% of FTE employment in Central West statistical division when flow-on effects are taken into account.
- The main industry sectors impacted by the operations of the Orange campus in terms of FTE employment are retail trade, accommodation & food services and education & training.
- Overall, the operations of the Orange campus of CSU contribute \$23.6 million in gross regional product, \$15.3 million in household income and 224 FTE jobs to the economy of the Central West statistical division.



Overall, the Orange campus of CSU contributes \$44.9 million in gross regional product, \$26.6 million in household income and 401 FTE jobs to the Orange economy.

Non-Local Students

The economic impact on the Central West statistical division of expenditure by non-local students at the Orange campus of CSU is outlined in the table below. Of the 360 students at the Orange campus, 256 were classed as non-local for the Central West statistical division.

	Employment FTE	Income \$m	Value Added \$m	Output \$m
Initial	8	0.4	0.7	1.4
Flow on	6	0.3	0.8	2.1
Total	13	0.7	1.5	3.5
Multiplier	1.76	1.87	2.25	2.51

Key features are as follows:

- Expenditure by non-local students at the Orange campus of CSU contributes 0.02% of gross regional product, 0.02% of household income and 0.02% of FTE employment in the Central West statistical division when flow-on effects are taken into account.
- The main industry sectors impacted by expenditure by non-local students attending Orange campus in terms of FTE employment are health care & social assistance, retail trade and arts & recreation services.
- Overall, expenditure by non-local students at the Orange campus of CSU contributes \$1.5 million in gross regional product, \$0.7 million in household income and 13 FTE jobs to the economy of the Central West statistical division.
- The inclusion of expenditure by local students attending the Orange campus of CSU increases the contribution to \$2.1 million in gross regional product, \$1.0 million in household income and 19 FTE jobs to the economy of Central West statistical division.

Total Impact

The total impact of the Orange campus of CSU on Central West statistical division was calculated by aggregating the impact of campus operations, non-local student expenditure, the estimated expenditure generated by family and friends from outside the local area attending graduation ceremonies and capital expenditure. The table opposite summarises the total impact of the Orange campus of CSU on the economy of the Central West statistical division.

	Employment FTE	Income \$m	Value Added \$m	Output \$m
Initial	214	15.4	20.8	36.3
Flow on	195	11.5	25.1	56.0
Total	409	27.0	45.9	92.3
Multiplier	1.91	1.75	2.20	2.54

Key features are as follows:

- The Orange campus of CSU contributes 0.47% of gross regional product, 0.61% of household income and 0.54% of FTE employment in the Central West statistical division when flow-on effects are taken into account.
- The main industry sectors impacted by Orange campus in terms of FTE employment are administrative services, retail trade and construction.



Overall, the Orange campus of CSU contributes \$45.9 million in gross regional product, \$27.0 million in household income and 409 FTE jobs to the Central West economy.

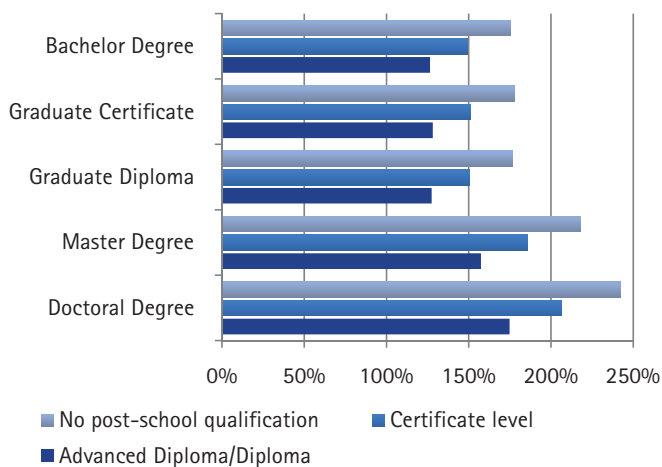
Contribution to Regional Income Levels

The economic impact of CSU is not limited to the direct and indirect impacts of its operations. In addition to these impacts, the presence of graduates in a region generally contributes higher wages and lower unemployment rates and, more importantly, provides an educated workforce, especially in regional areas.

Orange LGA

Data from the 2006 Census indicates that residents of Orange LGA in full-time employment, who hold a university qualification generally earn substantially more than those with an Advanced Diploma / Diploma, Certificate or no post-school qualification. The graph below illustrates the comparison with various levels of university qualification.

Average income for persons with university qualification in Orange LGA as % of those with other or no post-school qualification



Key points are as follows:

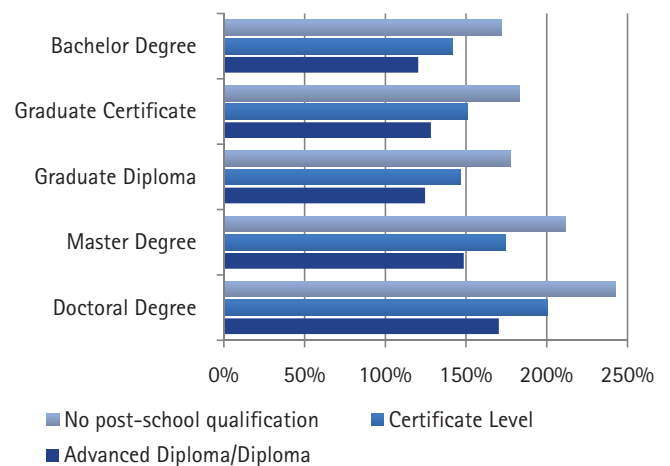
- Persons holding a doctorate have average incomes that are almost 2.5 times higher than those with no post-school qualification, while for those with a Bachelor degree earnings are more than 75% higher.
- On average, persons with a university qualification earn higher incomes than those with any other type of qualification.

In addition, persons holding a university qualification are considerably less likely to be unemployed – the average unemployment rate for those with no post-school qualification in 2006 in Orange was 8.7% compared with an average of 1.3% for those holding a Bachelor degree.

Central West statistical division

Similarly, residents of Central West statistical division in full-time employment who hold a university qualification generally earn substantially more than those with an Advanced Diploma / Diploma, Certificate or no post-school qualification. The graph below illustrates the comparison with various levels of university qualification.

Average income for persons with university qualification in Central West statistical division as % of those with other or no post-school qualification



Key points are as follows:

- Persons holding a Doctoral degree have average incomes that are almost 2.5 times higher than that earned by those with no post-school qualification, while for those with a Bachelor degree earnings are more than 70% higher.
- On average, persons with a university qualification earn higher incomes than those with any other type of qualification.

In addition, persons holding a university qualification are considerably less likely to be unemployed – the average unemployment rate for those with no post-school qualification in 2006 in Central West statistical division was 9.0% compared with an average of 1.7% for those holding a Bachelor degree.

Economic Impact of Charles Sturt University Wagga Wagga Campus Report

This report examines the impact of the Wagga Wagga campus on Wagga Wagga LGA. It then examines the contribution to the broader statistical division of Murrumbidgee.

Impact on Wagga Wagga LGA

CSU Operations

The impact of the operations of the Wagga Wagga campus of CSU on Wagga Wagga LGA is outlined in the table below.

	Employment FTE	Income \$m	Value Added \$m	Output \$m
Initial	1,247	91.4	88.2	135.4
Flow on	528	30.2	71.7	147.6
Total	1,775	121.6	159.9	283.0
Multiplier	1.42	1.33	1.81	2.09

Key features are as follows:

- The operations of Wagga Wagga campus contribute 4.88% of gross regional product, 7.69% of household income and 6.85% of FTE employment in Wagga Wagga LGA when flow-on effects are taken into account.
- The main industry sectors impacted by the operations of Wagga Wagga campus in terms of FTE employment are retail trade, accommodation & food services and financial & insurance services.
- Overall, the operations of the Wagga Wagga campus of CSU contribute \$159.9 million in gross regional product, \$121.6 million in household income and 1,775 FTE jobs to the Wagga Wagga economy.

Non-Local Students

The economic impact on Wagga Wagga of expenditure by non-local students at the Wagga Wagga campus of CSU, defined as those who have a home address outside Wagga Wagga LGA, is outlined in the table below. Of the 2,947 students at the Wagga Wagga campus, 2,339 were classed as non-local for Wagga Wagga LGA.

	Employment FTE	Income \$m	Value Added \$m	Output \$m
Initial	60	3.0	5.3	10.9
Flow on	51	3.2	7.3	15.2
Total	111	6.2	12.6	26.0
Multiplier	1.85	2.07	2.37	2.40

Key features are as follows:

- Expenditure by non-local students at the Wagga Wagga campus of CSU contributes 0.38% of gross regional product, 0.39% of household income and 0.43% of FTE employment, in Wagga Wagga LGA, when flow-on effects are taken into account.
- The main industry sectors impacted by expenditure by non-local students attending Wagga Wagga campus in terms of FTE employment are health care & social assistance, retail trade and arts & recreation services.



Wagga Wagga
Campus

- Overall, expenditure by non-local students at the Wagga Wagga campus of CSU contributes \$12.6 million in gross regional product, \$6.2 million in household income and 111 FTE jobs to the Wagga Wagga economy.
- The inclusion of expenditure by local students attending the Wagga Wagga campus of CSU increases the contribution to \$17.0 million in gross regional product, \$8.3 million in household income and 146 FTE jobs to the Wagga Wagga economy.

Total Impact

The total impact of the Wagga Wagga campus of CSU on Wagga Wagga LGA was calculated by aggregating the impact of campus operations, non-local student expenditure, the estimated expenditure generated by family and friends from outside the local area attending graduation ceremonies and capital expenditure. The table below summarises the total impact of the Wagga Wagga campus of CSU on the economy of Wagga Wagga LGA.

	Employment FTE	Income \$m	Value Added \$m	Output \$m
Initial	1,412	101.3	104.3	175.5
Flow on	730	42.9	100.6	209.5
Total	2,142	144.2	204.9	385.0
Multiplier	1.52	1.42	1.96	2.19

Key features are as follows:

- The Wagga Wagga campus of CSU contributes 6.25% of gross regional product, 9.12% of household income and 8.27% of FTE employment in Wagga Wagga when flow-on effects are taken into account.
- The main industry sectors impacted by the Wagga Wagga campus in terms of FTE employment are retail trade, accommodation & food services and administrative services.

Impact on Murrumbidgee statistical division

CSU Operations

The impact of the operations of the Wagga Wagga campus of CSU on Murrumbidgee statistical division is outlined in the table below.

	Employment FTE	Income \$m	Value Added \$m	Output \$m
Initial	1,247	91.4	88.2	135.4
Flow on	579	33.1	78.7	162.0
Total	1,826	124.5	166.8	297.4
Multiplier	1.46	1.36	1.89	2.20

Key features are as follows:

- The operations of Wagga Wagga campus contribute 2.12% of gross regional product, 3.54% of household income and 2.88% of FTE employment in Murrumbidgee statistical division when flow-on effects are taken into account.
- The main industry sectors impacted by the operations of the Wagga Wagga campus in terms of FTE employment are retail trade, accommodation & food services and financial & insurance services.
- Overall, the operations of the Wagga Wagga campus of CSU contribute \$166.8 million in gross regional product, \$124.5 million in household income and 1,826 FTE jobs to the economy of the Murrumbidgee statistical division.



Overall, the Wagga Wagga campus of CSU contributes \$204.9 million in gross regional product, \$144.2 million in household income and 2,142 FTE jobs to the Wagga Wagga economy.

Non-Local Students

The economic impact on the Murrumbidgee statistical division of expenditure by non-local students at the Wagga Wagga campus of CSU is outlined in the table below. Of the 2,947 students at the Wagga Wagga campus, 1,939 were classed as non-local for the Murrumbidgee statistical division.

	Employment FTE	Income \$m	Value Added \$m	Output \$m
Initial	59	2.9	5.0	10.6
Flow on	42	2.4	6.4	15.6
Total	101	5.3	11.5	26.2
Multiplier	1.71	1.83	2.28	2.47

Key features are as follows:

- Expenditure by non-local students at the Wagga Wagga campus of CSU contributes 0.15% of gross regional product, 0.15% of household income and 0.16% of FTE employment in Murrumbidgee statistical division when flow-on effects are taken into account.
- The main industry sectors impacted by expenditure by non-local students attending Wagga Wagga campus in terms of FTE employment are health care & social assistance, arts & recreation services and retail trade.
- Overall, expenditure by non-local students at the Wagga Wagga campus of CSU contributes \$11.5 million in gross regional product, \$5.3 million in household income and 101 FTE jobs to the economy of the Murrumbidgee statistical division.
- The inclusion of expenditure by local students attending the Wagga Wagga campus of CSU increases the contribution to \$17.3 million in gross regional product, \$7.9 million in household income and 148 FTE jobs to the economy of Murrumbidgee statistical division.

Total Impact

The total impact of the Wagga Wagga campus of CSU on Murrumbidgee statistical division was calculated by aggregating the impact of campus operations, non-local student expenditure, the estimated expenditure generated by family and friends from outside the local area attending graduation ceremonies and capital expenditure. The table opposite summarises the total impact

of the Wagga Wagga campus of CSU on the economy of Murrumbidgee statistical division.

	Employment FTE	Income \$m	Value Added \$m	Output \$m
Initial	1,410	101.2	103.9	175.2
Flow on	772	45.0	106.7	224.2
Total	2,182	146.2	210.6	399.4
Multiplier	1.55	1.44	2.03	2.28

Key features are as follows:

- The Wagga Wagga campus of CSU contributes 2.68% of gross regional product, 4.16% of household income and 3.44% of FTE employment in the Murrumbidgee statistical division when flow-on effects are taken into account.
- The main industry sectors impacted by Wagga Wagga campus in terms of FTE employment are retail trade, accommodation & food services and health care & social assistance.

Overall, the Wagga Wagga campus of CSU contributes \$210.6 million in gross regional product, \$146.2 million in household income and 2,182 FTE jobs to the Murrumbidgee economy.

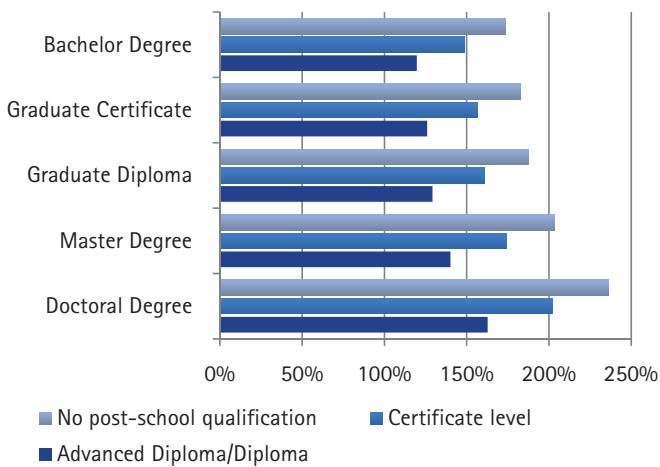
Regional Income Contribution

The economic impact of CSU is not limited to the direct and indirect impacts of its operations. The presence of graduates in a region generally contributes higher wages and lower unemployment rates and, more importantly, provides an educated workforce, especially in regional areas.

Wagga Wagga LGA

Data from the 2006 Census indicates that residents of Wagga Wagga LGA in full-time employment, who hold a university qualification generally earn substantially more than those with an Advanced Diploma / Diploma, Certificate or no post-school qualification. The graph below illustrates the comparison with various levels of university qualification.

Average income for persons with university qualification in Wagga Wagga LGA as % of those with other or no post-school qualification



Key points are as follows:

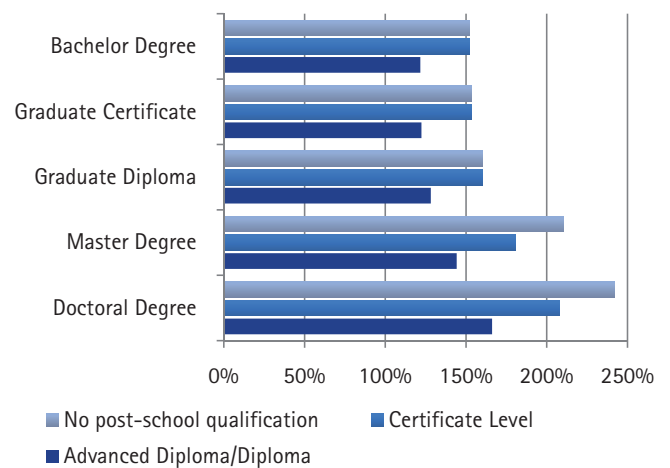
- Persons holding a doctorate have average incomes that are more than double those with no post-school qualification, while for those with a Bachelor degree earnings are more than 70% higher.
- On average, persons with a university qualification earn higher incomes than those with any other type of qualification.

In addition, persons holding a university qualification are considerably less likely to be unemployed – the average unemployment rate for those with no post-school qualification in 2006 in Wagga Wagga was 8.3% compared with an average of 2.3% for those holding a Bachelor degree.

Murrumbidgee statistical division

Similarly, residents of Murrumbidgee statistical division in full-time employment who hold a university qualification generally earn substantially more than those with an Advanced Diploma / Diploma, Certificate or no post-school qualification. The graph below illustrates the comparison with various levels of university qualification.

Average income for persons with university qualification in Murrumbidgee statistical division as % of those with other or no post-school qualification



Key points are as follows:

- Persons holding a Doctoral degree have average incomes that are almost 2.5 times higher than that earned by those with no post-school qualification, while for those with a Bachelor degree earnings are more than 50% higher.
- On average, persons with a university qualification earn higher incomes than those with any other type of qualification.

In addition, persons holding a university qualification are considerably less likely to be unemployed – the average unemployment rate for those with no post-school qualification in 2006 in Murrumbidgee statistical division was 7.5% compared with an average of 1.9% for those holding a Bachelor degree.

Economic Impact of Charles Sturt University

Overall Impact

This report examines the impact of the combined campuses of CSU on its Regional Footprint. It then examines the contribution of the combined campuses on the individual LGAs and statistical divisions in which it operates.

Impact of CSU on CSU's Regional Footprint

The CSU Regional Footprint is defined as the combined statistical divisions in which CSU operates a campus (ie Central West, Murray / Ovens-Murray, Murrumbidgee, North Western and South Eastern).

CSU Operations

The impact of the operations of the CSU on CSU Regional Footprint is outlined in the table below.

	Employment FTE	Income \$m	Value Added \$m	Output \$m
Initial	2,609	191.2	215.3	313.3
Flow on	1,212	67.3	163.3	339.8
Total	3,821	258.6	378.6	653.1
Multiplier	1.46	1.35	1.76	2.08

Key features are as follows:

- The operations of CSU contribute 0.85% of gross regional product, 1.45% of household income and 1.16% of FTE employment in the CSU Regional Footprint when flow-on effects are taken into account.
- The main industry sectors impacted by the operations of CSU in terms of FTE employment are retail trade, accommodation & food services and agriculture, forestry & fishing.

- Overall, the operations of CSU contributes \$378.6 million in gross regional product, \$258.6 million in household income and 3,821 FTE jobs to the CSU Regional Footprint economy.

Non-Local Students

The economic impact on the CSU Regional Footprint of expenditure by non-local students at all campuses of CSU, defined as those who have a home address outside the CSU Regional Footprint, is outlined in the table below. Of the 9,055 students over all campuses, 4,507 were classed as non-local for the CSU Regional Footprint.

	Employment FTE	Income \$m	Value Added \$m	Output \$m
Initial	182	9	17	34
Flow on	148	9	21	45
Total	330	18.0	38.0	78.4
Multiplier	1.81	1.99	2.27	2.31

Key features are as follows:

- Expenditure by non-local students at CSU contributes 0.09% of gross regional product, 0.10% of household income and 0.10% of FTE employment, in the CSU Regional Footprint, when flow-on effects are taken into account.
- The main industry sectors impacted by expenditure by non-local students attending CSU in terms of FTE employment are retail trade, health care & social assistance and arts & recreation services.



Overall Impact

- Overall, expenditure by non-local students at CSU contributes \$38.0 million in gross regional product, \$ 18.0 million in household income and 330 FTE jobs to the CSU Regional Footprint economy.
- The inclusion of expenditure by local students attending all campuses of CSU increases the contribution to \$49.3 million in gross regional product, \$23.3 million in household income and 422 FTE jobs to the CSU Regional Footprint economy.

Total Impact

The total impact of CSU on the CSU Regional Footprint was calculated by aggregating the impact of campus operations, non-local student expenditure, the estimated expenditure generated by family and friends from outside the local area attending graduation ceremonies and capital expenditure. The table below summarises the total impact of CSU on the economy of the Regional Footprint.

	Employment FTE	Income \$m	Value Added \$m	Output \$m
Initial	3,132	223	268	443
Flow on	1,864	107	256	542
Total	4,996	331	524	985
Multiplier	1.59	1.48	1.96	2.22

Key features are as follows:

- CSU contributes 1.18% of gross regional product, 1.85% of household income and 1.52% of FTE employment in the CSU Regional Footprint when flow-on effects are taken into account.
- The main industry sectors impacted by CSU in terms of FTE employment are retail trade, accommodation & food services and administrative services.

Impact of combined campuses of CSU by Local Government Area and statistical division

The individual campus reports prepared for this economic impact study provide estimates of the total impact of each campus on its respective LGA or statistical division. However, the total impact on each LGA or statistical division may, in some cases, be larger.

For example, the Bathurst campus of CSU may make purchases in Wagga Wagga, thus impacting on the economy of Wagga Wagga LGA and Murrumbidgee statistical division.

In addition, a proportion of the flow-on impact derived from employees who live outside the immediate area of the campus has been allocated to the region in which they lived.

For example, for an employee at the Bathurst campus who had a residential address in Orange LGA, a portion of the derived flow-on impact was subtracted from the Bathurst LGA and allocated instead to Orange LGA.

Local Government Areas

The table below summarises the total impact of CSU on the economy of each LGA in the CSU footprint.

	Employment FTE	Income \$m	Value Added \$m	Output \$m
Albury	695	47.6	84.9	152.6
Bathurst	1,305	84.4	127.6	238.1
Dubbo	149	9.7	17.2	34.9
Goulburn	108	7.0	15.1	25.3
Orange	416	28.7	50.0	100.3
Wagga Wagga	2,174	146.6	210.3	397.1

Overall, CSU contributes \$524 million in gross regional product, \$331 million in household income and 4,996 FTE jobs to the CSU Regional Footprint economy.

Statistical divisions

The table below summarises the total impact of CSU on the economy of each statistical division in the CSU footprint.

	Employment FTE	Income \$m	Value Added \$m	Output \$m
Central West	1,784	115.8	184.9	362.7
Murray / Ovens-Murray	740	49.8	93.8	168.4
Murrumbidgee	2,215	148.0	214.9	410.0
North Western	152	9.5	17.5	35.5
South Eastern	112	7.1	15.7	26.7

CSU Impact on Sydney

The regional campuses of CSU make purchases in Sydney statistical division and thus have an impact on the economy of Sydney statistical division. In addition, a proportion of employees at the regional campuses of CSU reside in Sydney statistical division. A proportion of the flow-on impact derived from these employees has been allocated to Sydney statistical division. The resultant impact on the economy of Sydney statistical division of these combined effects is shown in the table below.

	Employment FTE	Income \$m	Value Added \$m	Output \$m
Total Impact	326	25.7	50.1	109.7

Key features are as follows:

- Overall, the combined campuses of CSU contribute \$50.1 million in gross regional product, \$25.7 million in household income and 326 FTE jobs in Sydney statistical division.
- This equates to a contribution of 0.02% to each of gross regional product, household income and FTE employment.

Return on Federal Government funding

In 2009, the six campuses of CSU attracted approximately \$195 million in Federal government funding. When the overall impact of CSU on the Australian economy is examined, the total output generated is approximately \$928 million when flow-on effects are taken into account.

CSU is therefore returning approximately \$4.75 to the Australian economy for every \$1.00 of Federal government funding received. This does not take into account the longer term impacts of national productivity gain associated with a university education.

CSU is returning approximately \$4.75 to the Australian economy for every \$1.00 of Federal government funding received.

APPENDIX 1: INPUT-OUTPUT ANALYSIS



Input-output tables are part of the Australian national accounts. An input-output model provides a very detailed picture of the structure of an economy at a particular point in time. It includes all the transactions that occur during a specific period, usually one year.

- The rows of an input-output table show the disposal of the output of an industry to itself and to other industries as well as final demand categories (e.g. exports and household consumption); and
- The columns show the origin of inputs into production, whether they are intermediate inputs (i.e. intra- and inter-industry purchases) or primary inputs (e.g. labour and capital).

The main use of input-output tables is economic impact analysis, where the tables are used to estimate the benefits generated by new initiatives on each and every sector of an economy. For example, if there is a change in the purchasing or sales pattern of any industry, the flow on, or multiplier, effects on upstream industries can be calculated. An input-output table is also very useful for estimating the direct and indirect contribution of a specific industry, such as CSU, to the economy, as well as estimating the direct and indirect contribution of final demand, as with the expenditure of students.

One of the main attractions of input-output models is their relative ease of use and the level of detail obtained concerning the structure of the economy. The Australian Bureau of Statistics (ABS) notes the usefulness of input-output tables:

"Input-output tables provide detailed information about the supply and disposition of commodities in the Australian economy and about the structure of, and inter-relationships between, Australian industries. Detailed data on supply and use of commodities, inter-industry flows and a range of derived data, such as input-output multipliers, are provided for economic planning and analysis, and construction of models for forecasting purposes." (ABS Introduction to Input-Output Multipliers, Cat. 5246.0)

The application of input-output analysis to estimate the contribution of CSU to the economy involves four basic steps:

- Construction of appropriate national, state and regional input-output tables;

- Analysis of the value of the sales and purchases of CSU using data supplied by the university;
- Insertion of separate sectors representing the economic activities of CSU; and
- Balancing of the input-output tables using the RAS method.

The input-output tables used in this study were constructed using the Generation of Regional Input-Output Tables (GRIT) system.

GRIT uses a series of non-survey steps to produce a prototype regional table from the national table, but provides the opportunity at various stages for the insertion of "superior data". The system is "variable interference" in that the analyst is able to determine the extent to which they interfere with the mechanical processes by introducing primary or other superior data.

The GRIT system is designed to produce regional tables that are:

- Consistent in accounting terms with each other and with the national table;
- Capable of calculations to a reasonable degree of holistic accuracy; and
- Capable of being updated with a minimum effort as new data becomes available.

The GRIT technique is basically a hybrid method of deriving state and regional input-output tables from the national input-output table while at the same time allowing for the insertion of superior data (i.e. information collected from CSU) at various stages in the construction of the tables. The GRIT procedure was developed by Associate Professor Guy West and Professor Rod Jensen of the University of Queensland and is the most widely used method of constructing input-output tables in Australia. The GRIT method is also widely used in America and Europe.

In its original form the national input-output table constructed by the ABS contains a single education sector. However, this sector is not sufficiently differentiated to encompass the specific operations of CSU. Therefore the ABS table does not provide a satisfactory representation of the higher education sector, and specifically CSU, in its original form. To account for this deficiency the information collected from CSU was used to create a new sector in the ABS input-output table.

The final input-output tables were balanced using the RAS technique. The RAS technique is a bi-proportional iterative adjustment method designed to modify a base input-output matrix to fit new row and column totals. The rows and columns are simply adjusted proportionally to the new row and column totals in turn, and the cycle repeated until the actual row and column totals converge to the specified values. After the tables are balanced they are checked to ensure that the final tables are consistent and to identify any large discrepancies.

One of the main limitations of input-output tables is the assumption of linear coefficients. To address this problem and the associated problem of overestimation, the input-output analysis undertaken for CSU incorporates the marginal coefficients model.

The marginal income coefficients model attempts to overcome the limitations of traditional input-output analysis by removing the assumption of linear coefficients for the household sector. As is well documented in the literature, the household sector is the dominant component of multiplier effects in an input-output table so using marginal income coefficients for the household sector only provides a more accurate estimate of the multiplier effects and provides results closer to those of a computable general equilibrium (CGE) model. This results in a more accurate estimate of the significance of the CSU value chain than would be possible with traditional input-output analysis.

APPENDIX 2: GLOSSARY OF TERMS



Gross fixed capital expenditure is the purchases of durable investment goods such as dwellings, plant and equipment.

COE Compensation of Employees (COE) is equal to the wages and salaries of employees plus on-costs (e.g. superannuation and payroll tax). Compensation of Employees is the basis of the Household Income multiplier.

Employment Employment is measured as full-time equivalent (FTE) jobs.

Exports At the national level exports are goods and services sold to non-residents. Note that non-residents are defined as consumers, firms and governments from outside a given area. To illustrate the difference, the sale of education fees from the Albury campus of CSU to a purchaser elsewhere in Murray statistical division is an export with respect to the Albury LGA input-output table, but is not classified as an export in the Murray / Ovens-Murray input-output table.

Final Consumption Final consumption expenditure includes the current expenditure of households, industry and government. It includes purchases of durable and non-durable commodities, except the purchase of dwellings and equipment that are capital in nature. There are two types of final consumption: private final consumption expenditure (PFCE) and government final consumption expenditure (GFCE).

Final Demand Final demand is the demand for goods and services not used up during the production process. Final demand is the sum of household and government consumption expenditure, capital investment, exports and increases in inventories.

Intermediate Inputs An intermediate input is a good or service that is used in the production process.

Imports Imports are goods and services purchased from non-residents and may include: competing imports, where there is a domestically produced substitute; and complementary imports, where there is no domestically produced substitute. Note that non-residents are defined as consumers, firms and governments from outside a given area. To illustrate the difference, a purchase of computing equipment from Orange LGA by the Bathurst campus of CSU is an import with respect to the Bathurst input-output table, but is not classified as an import in the input-output table for the Central West statistical division.

GOS Gross Operating Surplus (GOS) is the excess of gross output over the costs of production, before deducting depreciation, interest and company taxes.

Multiplier A multiplier is a summary measure used for estimating the economic impact on an economy caused by a change in the demand for the output of a particular industry or group of industries. A multiplier indicates the relative magnitude of the flow-on effects of CSU compared to the direct effect of the University. As an example, the employment multiplier for the total impact of CSU on the CSU Regional Footprint is 1.59, indicating that for every FTE employee at CSU, an additional 0.59 FTE jobs are created in the economy.

The multipliers in this report are for output, value added, household income (i.e. compensation of employees) and employment.

Output

Output is equal to total sales (i.e. quantity sold multiplied by price per unit).

Primary Inputs

A primary input is an input into the production process that is not a good or service. Examples of primary inputs are compensation of employees, gross operating surplus, imports and indirect taxes on products and production.

Value Added

Value-added is equal to the value of output minus the value of intermediate inputs. That is value added is the difference between the costs of production (excluding the Compensation of Employees, Gross Operating Surplus, Taxes and Imports) and the value of sales turnover. In a national accounts context, Gross Domestic Product (GDP) consists of the sum of value-added by all industries. Value-added also pertains to differences between the value of production at various stages of the supply chain.

APPENDIX 3: DETAILED TABLES

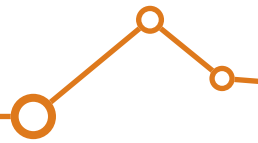


Table 1: Distribution of economic impacts by industry sector – Albury Campus on Albury LGA

	Industry Value Added			Household Income			FTE Employment		
	\$m	% of total impact	% of total in Albury	\$m	% of total impact	% of total in Albury	No.	% of total impact	% of total in Albury
Agriculture	0.1	0.2%	1.2%	0.0	0.1%	0.7%	1	0.2%	0.7%
Mining	0.0	0.0%	0.5%	0.0	0.0%	0.0%	0	0.0%	0.2%
Food & Beverage Manufacturing	0.2	0.2%	1.2%	0.0	0.1%	0.4%	1	0.1%	0.4%
Textile Manufacturing	0.2	0.2%	0.8%	0.0	0.1%	0.4%	1	0.1%	0.4%
Wood Product Manufacturing	0.1	0.1%	1.6%	0.0	0.0%	0.8%	1	0.1%	0.8%
Paper Manufacturing	0.3	0.4%	1.0%	0.1	0.3%	0.7%	2	0.3%	0.7%
Printing	0.1	0.1%	1.4%	0.0	0.1%	0.8%	1	0.1%	0.8%
Chemical Product Manufacturing	0.2	0.2%	1.2%	0.0	0.1%	0.6%	1	0.1%	0.6%
Non-metallic Mineral Product Manufacturing	0.1	0.2%	2.2%	0.0	0.1%	1.4%	1	0.1%	1.4%
Primary Metal Product Manufacturing	0.3	0.3%	0.7%	0.1	0.2%	0.7%	1	0.2%	0.7%
Fabricated Metal Product Manufacturing	0.6	0.7%	2.0%	0.3	0.7%	2.0%	7	1.0%	2.0%
Transport Equipment Manufacturing	0.9	1.1%	1.0%	0.6	1.2%	0.9%	5	0.7%	0.9%
Other Machinery & Equipment Manufacturing	0.4	0.5%	1.9%	0.2	0.4%	1.7%	4	0.6%	1.7%
Other Manufacturing	0.0	0.0%	0.9%	0.0	0.0%	0.6%	0	0.0%	0.5%
Utilities	0.7	0.8%	1.6%	0.1	0.1%	0.4%	1	0.1%	0.4%
Construction	4.8	5.8%	3.8%	2.4	5.1%	3.3%	36	5.3%	3.3%
Wholesale	2.2	2.6%	2.5%	1.2	2.6%	2.5%	18	2.6%	2.5%
Retail	2.9	3.5%	2.4%	1.9	4.1%	2.4%	51	7.4%	2.4%
Hospitality	2.0	2.4%	2.5%	1.2	2.5%	2.5%	32	4.7%	2.5%
Transport & Storage	1.3	1.5%	1.5%	0.5	1.1%	1.2%	9	1.3%	1.2%
Information Media & Telecommunications	3.2	3.9%	1.8%	0.6	1.2%	1.3%	9	1.3%	1.3%
Finance & Insurance Services	8.8	10.6%	2.2%	3.7	7.8%	2.0%	27	4.0%	2.0%
Real Estate & Rental Services	2.5	3.0%	3.7%	1.0	2.1%	3.5%	11	1.6%	3.5%
Ownership of Dwellings	5.0	6.0%	2.1%	0.0	0.0%	-	0	0.0%	-
Professional & Scientific Services	1.9	2.3%	1.9%	1.1	2.3%	1.8%	15	2.3%	1.8%
Administrative Services	4.2	5.0%	14.2%	3.5	7.5%	14.1%	45	6.6%	14.1%

	Industry Value Added			Household Income			FTE Employment		
	\$m	% of total impact	% of total in Albury	\$m	% of total impact	% of total in Albury	No.	% of total impact	% of total in Albury
Public Administration & Defence	0.9	1.0%	0.6%	0.7	1.4%	0.6%	9	1.4%	0.6%
Education	0.6	0.8%	0.7%	0.6	1.2%	0.7%	9	1.3%	0.7%
Health Care & Social Assistance	1.4	1.7%	1.2%	1.1	2.3%	1.1%	22	3.2%	1.1%
Arts & Recreation Services	0.8	0.9%	6.7%	0.4	0.9%	6.7%	9	1.4%	6.7%
Other Services	0.9	1.1%	2.5%	0.7	1.4%	2.5%	18	2.6%	2.5%
CSU Albury Campus	35.9	43.1%	100.0%	24.9	53.0%	100.0%	338	49.4%	100.0%
Total	83.4	100.0%	3.7%	46.9	100.0%	4.1%	684	100.0%	3.8%

Table2: Distribution of economic impacts by industry sector – Albury Campus on Murray and Ovens–Murray statistical divisions

	Industry Value Added			Household Income			FTE Employment		
	\$m	% of total impact	% of total in Murray / Ovens–Murray	\$m	% of total impact	% of total in Murray / Ovens–Murray	No.	% of total impact	% of total in Murray
Agriculture	0.3	0.4%	0.1%	0.1	0.1%	0.0%	3	0.4%	0.0%
Mining	0.0	0.0%	0.1%	0.0	0.0%	0.0%	0	0.0%	0.0%
Food & Beverage Manufacturing	0.3	0.3%	0.1%	0.1	0.1%	0.0%	1	0.2%	0.0%
Textile Manufacturing	0.2	0.2%	0.3%	0.1	0.1%	0.1%	1	0.2%	0.1%
Wood Product Manufacturing	0.1	0.1%	0.1%	0.0	0.1%	0.1%	1	0.1%	0.1%
Paper Manufacturing	0.4	0.4%	0.6%	0.2	0.3%	0.4%	2	0.3%	0.4%
Printing	0.1	0.1%	0.5%	0.0	0.1%	0.3%	1	0.1%	0.3%
Chemical Product Manufacturing	0.2	0.2%	0.3%	0.0	0.1%	0.1%	1	0.1%	0.1%
Non-metallic Mineral Product Manufacturing	0.1	0.2%	0.4%	0.0	0.1%	0.2%	1	0.1%	0.2%
Primary Metal Product Manufacturing	0.3	0.3%	0.2%	0.1	0.2%	0.2%	1	0.2%	0.2%
Fabricated Metal Product Manufacturing	0.6	0.6%	0.8%	0.3	0.7%	0.9%	7	0.9%	0.9%
Transport Equipment Manufacturing	1.0	1.1%	0.7%	0.6	1.3%	0.7%	5	0.8%	0.7%
Other Machinery & Equipment Manufacturing	0.5	0.5%	0.6%	0.2	0.5%	0.6%	4	0.6%	0.6%
Other Manufacturing	0.0	0.1%	0.3%	0.0	0.0%	0.2%	0	0.0%	0.2%
Utilities	0.8	0.9%	0.3%	0.1	0.1%	0.1%	1	0.1%	0.1%
Construction	4.8	5.3%	0.9%	2.4	4.9%	0.9%	37	5.1%	0.8%
Wholesale	2.3	2.6%	0.8%	1.3	2.7%	0.9%	19	2.6%	0.8%
Retail	3.4	3.8%	0.8%	2.3	4.7%	0.8%	60	8.3%	0.8%
Hospitality	2.4	2.7%	0.6%	1.4	2.9%	0.6%	39	5.5%	0.6%
Transport & Storage	1.5	1.6%	0.3%	0.6	1.2%	0.3%	11	1.5%	0.3%
Information Media & Telecommunications	3.6	3.9%	0.8%	0.6	1.3%	0.7%	10	1.4%	0.6%
Finance & Insurance Services	9.9	10.9%	1.0%	4.1	8.5%	1.2%	31	4.3%	1.1%
Real Estate & Rental Services	2.6	2.9%	1.3%	1.0	2.0%	1.3%	11	1.6%	1.3%
Ownership of Dwellings	6.2	6.8%	0.6%	0.0	0.0%	-	0	0.0%	-
Professional & Scientific Services	2.0	2.2%	0.7%	1.1	2.3%	0.8%	16	2.2%	0.7%
Administrative Services	4.2	4.6%	2.6%	3.6	7.3%	2.7%	45	6.3%	2.7%
Public Administration & Defence	0.9	1.0%	0.1%	0.7	1.4%	0.2%	9	1.3%	0.2%

	Industry Value Added			Household Income			FTE Employment		
	\$m	% of total impact	% of total in Murray / Ovens-Murray	\$m	% of total impact	% of total in Murray / Ovens-Murray	No.	% of total impact	% of total in Murray
Education	0.6	0.7%	0.2%	0.6	1.3%	0.2%	10	1.4%	0.2%
Health Care & Social Assistance	1.5	1.7%	0.3%	1.2	2.4%	0.3%	23	3.3%	0.3%
Arts & Recreation Services	0.7	0.8%	1.4%	0.4	0.8%	1.4%	9	1.2%	1.5%
Other Services	1.0	1.1%	0.8%	0.7	1.5%	0.8%	20	2.8%	0.8%
CSU Albury Campus	38.3	42.1%	100.0%	24.9	51.1%	100.0%	338	47.1%	100.0%
Total	91.0	100.0%	1.0%	48.6	100.0%	1.2%	718	100.0%	0.9%

Table 3: Distribution of economic impacts by industry sector – Bathurst Campus on Bathurst LGA

	Industry Value Added			Household Income			FTE Employment		
	\$m	% of total impact	% of total in Bathurst	\$m	% of total impact	% of total in Bathurst	No.	% of total impact	% of total in Bathurst
Agriculture	0.8	0.7%	2.7%	0.2	0.2%	1.6%	8	0.6%	1.6%
Mining	0.1	0.1%	0.8%	0.0	0.0%	0.3%	0	0.0%	0.4%
Food & Beverage Manufacturing	2.7	2.1%	1.8%	0.9	1.1%	1.0%	11	0.9%	1.0%
Textile Manufacturing	0.0	0.0%	1.6%	0.0	0.0%	0.8%	0	0.0%	0.8%
Wood Product Manufacturing	0.3	0.2%	1.7%	0.1	0.1%	1.0%	2	0.2%	1.0%
Paper Manufacturing	0.0	0.0%	-	0.0	0.0%	-	0	0.0%	-
Printing	0.1	0.1%	3.4%	0.0	0.0%	1.9%	1	0.1%	2.0%
Chemical Product Manufacturing	0.2	0.1%	2.2%	0.0	0.0%	1.1%	1	0.1%	1.1%
Non-metallic Mineral Product Manufacturing	0.3	0.3%	2.4%	0.1	0.1%	1.6%	2	0.1%	1.6%
Primary Metal Product Manufacturing	0.1	0.1%	0.8%	0.0	0.0%	0.7%	0	0.0%	0.7%
Fabricated Metal Product Manufacturing	0.2	0.2%	2.7%	0.1	0.1%	2.7%	2	0.2%	2.7%
Transport Equipment Manufacturing	0.5	0.4%	2.0%	0.3	0.3%	1.8%	2	0.2%	1.8%
Other Machinery & Equipment Manufacturing	0.4	0.3%	6.1%	0.2	0.2%	5.5%	3	0.2%	5.5%
Other Manufacturing	0.0	0.0%	1.7%	0.0	0.0%	1.0%	0	0.0%	1.0%
Utilities	2.1	1.7%	2.9%	0.2	0.2%	0.7%	3	0.2%	0.7%
Construction	3.6	2.8%	3.3%	1.5	1.8%	2.9%	27	2.1%	2.9%
Wholesale	2.8	2.2%	5.3%	1.4	1.7%	5.3%	22	1.7%	5.3%
Retail	5.4	4.2%	6.3%	3.5	4.2%	6.3%	94	7.3%	6.3%
Hospitality	2.7	2.1%	6.3%	1.7	2.0%	6.3%	52	4.0%	6.3%
Transport & Storage	2.5	1.9%	2.6%	0.9	1.1%	2.2%	17	1.3%	2.2%
Information Media & Telecommunications	2.2	1.7%	3.6%	0.3	0.4%	2.5%	6	0.4%	2.5%
Finance & Insurance Services	8.0	6.3%	4.5%	2.6	3.1%	4.2%	23	1.8%	4.2%
Real Estate & Rental Services	2.1	1.6%	6.8%	0.6	0.8%	6.3%	9	0.7%	6.3%
Ownership of Dwellings	10.6	8.3%	5.3%	0.0	0.0%	-	0	0.0%	-
Professional & Scientific Services	1.4	1.1%	2.9%	0.8	0.9%	2.8%	12	0.9%	2.8%
Administrative Services	3.5	2.7%	9.9%	2.9	3.4%	9.8%	40	3.1%	9.8%
Public Administration & Defence	1.3	1.1%	0.8%	1.0	1.2%	0.8%	13	1.0%	0.8%
Education	2.6	2.1%	1.5%	2.4	2.8%	1.6%	40	3.1%	1.7%
Health Care & Social Assistance	3.3	2.6%	3.2%	2.5	3.0%	3.2%	52	4.0%	3.2%
Arts & Recreation Services	1.7	1.3%	12.1%	0.9	1.0%	12.1%	20	1.6%	12.1%
Other Services	3.1	2.4%	5.1%	2.1	2.5%	5.0%	56	4.3%	5.0%
CSU Bathurst Campus	62.5	49.2%	100.0%	56.9	67.6%	100.0%	777	60.0%	100.0%
Total	127.2	100.0%	6.9%	84.3	100.0%	8.9%	1,295	100.0%	8.1%

Table 4: Distribution of economic impacts by industry sector – Bathurst Campus on Central West statistical division

	Industry Value Added			Household Income			FTE Employment		
	\$m	% of total impact	% of total in Central West	\$m	% of total impact	% of total in Central West	No.	% of total impact	% of total in Central West
Agriculture	1.1	0.8%	0.3%	0.2	0.2%	0.2%	11	0.8%	0.2%
Mining	0.6	0.5%	0.0%	0.1	0.1%	0.0%	1	0.1%	0.0%
Food & Beverage Manufacturing	2.7	2.1%	0.8%	0.9	1.1%	0.4%	12	0.9%	0.3%
Textile Manufacturing	0.0	0.0%	0.4%	0.0	0.0%	0.2%	0	0.0%	0.2%
Wood Product Manufacturing	0.3	0.2%	0.3%	0.1	0.1%	0.1%	2	0.2%	0.2%
Paper Manufacturing	0.0	0.0%	0.1%	0.0	0.0%	0.0%	0	0.0%	0.0%
Printing	0.1	0.1%	0.9%	0.0	0.0%	0.5%	1	0.1%	0.5%
Chemical Product Manufacturing	0.2	0.1%	0.6%	0.0	0.0%	0.2%	1	0.1%	0.2%
Non-metallic Mineral Product Manufacturing	0.3	0.2%	0.6%	0.1	0.1%	0.4%	2	0.1%	0.4%
Primary Metal Product Manufacturing	0.1	0.1%	0.3%	0.1	0.1%	0.2%	1	0.1%	0.1%
Fabricated Metal Product Manufacturing	0.2	0.2%	0.6%	0.1	0.1%	0.5%	3	0.2%	0.5%
Transport Equipment Manufacturing	0.5	0.4%	0.9%	0.3	0.3%	0.9%	2	0.2%	0.7%
Other Machinery & Equipment Manufacturing	0.5	0.4%	0.4%	0.2	0.3%	0.3%	4	0.3%	0.3%
Other Manufacturing	0.1	0.0%	0.2%	0.0	0.0%	0.1%	0	0.0%	0.1%
Utilities	2.1	1.6%	0.9%	0.2	0.2%	0.2%	3	0.2%	0.2%
Construction	3.6	2.8%	0.6%	1.6	1.8%	0.5%	28	2.1%	0.5%
Wholesale	3.1	2.4%	0.9%	1.7	1.9%	0.8%	25	1.9%	0.8%
Retail	5.6	4.3%	1.5%	3.7	4.3%	1.5%	98	7.5%	1.5%
Hospitality	2.8	2.2%	1.6%	1.7	2.0%	1.6%	53	4.1%	1.6%
Transport & Storage	2.5	2.0%	0.7%	1.0	1.1%	0.6%	18	1.4%	0.6%
Information Media & Telecommunications	2.1	1.6%	1.4%	0.3	0.4%	0.9%	6	0.4%	0.9%
Finance & Insurance Services	8.5	6.5%	0.9%	2.8	3.2%	0.8%	25	1.9%	0.8%
Real Estate & Rental Services	2.1	1.6%	1.2%	0.7	0.8%	1.1%	9	0.7%	1.1%
Ownership of Dwellings	11.2	8.6%	1.3%	0.0	0.0%	-	0	0.0%	-
Professional & Scientific Services	1.5	1.1%	0.7%	0.8	1.0%	0.6%	12	0.9%	0.6%
Administrative Services	3.6	2.7%	2.1%	2.9	3.4%	2.0%	40	3.1%	2.1%
Public Administration & Defence	1.3	1.0%	0.2%	1.0	1.2%	0.2%	13	1.0%	0.2%
Education	2.5	2.0%	0.5%	2.3	2.7%	0.5%	39	3.0%	0.5%
Health Care & Social Assistance	3.3	2.5%	0.8%	2.5	3.0%	0.8%	52	4.0%	0.8%
Arts & Recreation Services	1.6	1.2%	3.8%	0.9	1.0%	3.7%	19	1.5%	3.8%
Other Services	3.1	2.4%	1.6%	2.1	2.5%	1.6%	57	4.3%	1.6%
CSU Bathurst Campus	62.5	48.2%	100.0%	56.9	66.8%	100.0%	777	59.2%	100.0%
Total	129.7	100.0%	1.4%	85.3	100.0%	1.9%	1,313	100.0%	1.7%

Table 5: Distribution of economic impacts by industry sector – Dubbo Campus on Dubbo LGA

	Industry Value Added			Household Income			FTE Employment		
	\$m	% of total impact	% of total in Dubbo	\$m	% of total impact	% of total in Dubbo	No.	% of total impact	% of total in Dubbo
Agriculture	0.1	0.6%	0.3%	0.0	0.2%	0.2%	1	0.6%	0.2%
Mining	0.0	0.1%	0.1%	0.0	0.0%	0.0%	0	0.0%	0.1%
Food & Beverage Manufacturing	0.2	1.2%	0.2%	0.0	0.5%	0.1%	1	0.6%	0.1%
Textile Manufacturing	0.0	0.0%	0.2%	0.0	0.0%	0.1%	0	0.0%	0.1%
Wood Product Manufacturing	0.0	0.2%	0.4%	0.0	0.1%	0.2%	0	0.2%	0.2%
Paper Manufacturing	0.0	0.0%	0.3%	0.0	0.0%	0.0%	0	0.0%	0.2%
Printing	0.0	0.1%	0.5%	0.0	0.0%	0.3%	0	0.1%	0.2%
Chemical Product Manufacturing	0.0	0.2%	0.3%	0.0	0.1%	0.2%	0	0.1%	0.2%
Non-metallic Mineral Product Manufacturing	0.1	0.4%	0.7%	0.0	0.2%	0.4%	0	0.3%	0.4%
Primary Metal Product Manufacturing	0.0	0.2%	0.2%	0.0	0.1%	0.2%	0	0.1%	0.2%
Fabricated Metal Product Manufacturing	0.1	0.3%	0.6%	0.0	0.3%	0.6%	1	0.4%	0.6%
Transport Equipment Manufacturing	0.0	0.2%	0.3%	0.0	0.1%	0.3%	0	0.1%	0.2%
Other Machinery & Equipment Manufacturing	0.1	0.6%	0.9%	0.0	0.5%	0.9%	1	0.7%	0.8%
Other Manufacturing	0.0	0.0%	0.2%	0.0	0.0%	0.2%	0	0.0%	0.1%
Utilities	0.2	1.3%	0.4%	0.0	0.2%	0.1%	0	0.2%	0.1%
Construction	1.6	9.5%	1.1%	0.8	8.0%	0.9%	13	9.1%	0.9%
Wholesale	0.9	5.4%	0.5%	0.5	5.3%	0.5%	7	4.9%	0.5%
Retail	0.7	4.1%	0.6%	0.5	5.1%	0.6%	11	7.7%	0.6%
Hospitality	0.3	1.7%	0.6%	0.2	1.9%	0.6%	5	3.6%	0.6%
Transport & Storage	0.4	2.2%	0.4%	0.2	1.6%	0.3%	3	1.8%	0.3%
Information Media & Telecommunications	0.3	1.6%	0.5%	0.0	0.5%	0.3%	1	0.5%	0.3%
Finance & Insurance Services	2.2	13.3%	0.6%	1.0	10.2%	0.6%	7	4.7%	0.6%
Real Estate & Rental Services	0.4	2.6%	0.8%	0.2	1.8%	0.7%	2	1.3%	0.7%
Ownership of Dwellings	1.2	6.8%	0.6%	0.0	0.0%	-	0	0.0%	-
Professional & Scientific Services	0.4	2.3%	0.5%	0.2	2.4%	0.5%	3	2.2%	0.5%
Administrative Services	1.5	9.0%	3.1%	1.3	13.5%	3.1%	17	11.4%	3.1%
Public Administration & Defence	0.3	1.9%	0.2%	0.3	2.7%	0.2%	3	2.3%	0.2%
Education	0.3	2.0%	0.2%	0.3	3.0%	0.2%	4	3.0%	0.2%
Health Care & Social Assistance	0.3	1.9%	0.2%	0.3	2.6%	0.2%	5	3.3%	0.2%
Arts & Recreation Services	0.1	0.8%	0.8%	0.1	0.9%	0.8%	1	1.0%	0.8%
Other Services	0.4	2.2%	0.6%	0.3	2.7%	0.6%	7	4.5%	0.6%
CSU Dubbo Campus	4.5	27.0%	100.0%	3.4	35.4%	100.0%	52	35.4%	100.0%
Total	16.8	100.0%	0.8%	9.5	100.0%	0.8%	147	100.0%	0.8%

Table 6: Distribution of economic impacts by industry sector – Dubbo Campus on North Western statistical division

	Industry Value Added			Household Income			FTE Employment		
	\$m	% of total	% of total in North Western	\$m	% of total	% of total in North Western	No.	% of total	% of total in North Western
		impact			impact			impact	
Agriculture	0.1	0.6%	0.0%	0.0	0.2%	0.0%	1	0.8%	0.0%
Mining	0.0	0.3%	0.0%	0.0	0.1%	0.0%	0	0.0%	0.0%
Food & Beverage Manufacturing	0.2	1.2%	0.2%	0.0	0.5%	0.1%	1	0.6%	0.1%
Textile Manufacturing	0.0	0.0%	0.1%	0.0	0.0%	0.0%	0	0.0%	0.0%
Wood Product Manufacturing	0.0	0.2%	0.3%	0.0	0.1%	0.1%	0	0.2%	0.1%
Paper Manufacturing	0.0	0.0%	0.1%	0.0	0.0%	0.0%	0	0.0%	0.1%
Printing	0.0	0.1%	0.3%	0.0	0.0%	0.2%	0	0.1%	0.1%
Chemical Product Manufacturing	0.0	0.2%	0.1%	0.0	0.1%	0.1%	0	0.1%	0.1%
Non-metallic Mineral Product Manufacturing	0.1	0.4%	0.4%	0.0	0.2%	0.2%	0	0.3%	0.2%
Primary Metal Product Manufacturing	0.0	0.2%	0.2%	0.0	0.1%	0.1%	0	0.1%	0.1%
Fabricated Metal Product Manufacturing	0.1	0.3%	0.3%	0.0	0.3%	0.3%	1	0.4%	0.3%
Transport Equipment Manufacturing	0.0	0.2%	0.2%	0.0	0.1%	0.1%	0	0.1%	0.2%
Other Machinery & Equipment Manufacturing	0.1	0.6%	0.4%	0.0	0.5%	0.4%	1	0.7%	0.4%
Other Manufacturing	0.0	0.0%	0.1%	0.0	0.0%	0.1%	0	0.0%	0.0%
Utilities	0.2	1.3%	0.2%	0.0	0.2%	0.0%	0	0.2%	0.0%
Construction	1.6	9.5%	0.4%	0.8	8.0%	0.3%	13	8.9%	0.3%
Wholesale	0.9	5.4%	0.3%	0.5	5.3%	0.3%	7	5.0%	0.3%
Retail	0.7	4.1%	0.3%	0.5	5.1%	0.3%	11	7.8%	0.3%
Hospitality	0.3	1.7%	0.2%	0.2	1.9%	0.2%	5	3.6%	0.2%
Transport & Storage	0.4	2.2%	0.2%	0.1	1.6%	0.2%	3	1.8%	0.1%
Information Media & Telecommunications	0.3	1.6%	0.3%	0.0	0.5%	0.2%	1	0.5%	0.2%
Finance & Insurance Services	2.2	13.3%	0.4%	1.0	10.2%	0.4%	7	4.7%	0.4%
Real Estate & Rental Services	0.4	2.6%	0.4%	0.2	1.8%	0.4%	2	1.4%	0.4%
Ownership of Dwellings	1.2	7.0%	0.2%	0.0	0.0%	-	0	0.0%	-
Professional & Scientific Services	0.4	2.3%	0.3%	0.2	2.4%	0.3%	3	2.2%	0.3%
Administrative Services	1.5	9.0%	1.5%	1.3	13.5%	1.5%	17	11.2%	1.3%
Public Administration & Defence	0.3	1.9%	0.1%	0.3	2.7%	0.1%	3	2.2%	0.1%
Education	0.3	2.0%	0.1%	0.3	3.1%	0.1%	4	3.0%	0.1%
Health Care & Social Assistance	0.3	1.8%	0.1%	0.2	2.6%	0.1%	5	3.3%	0.1%
Arts & Recreation Services	0.1	0.8%	0.3%	0.1	0.8%	0.3%	1	1.0%	0.3%
Other Services	0.4	2.2%	0.3%	0.3	2.7%	0.3%	7	4.5%	0.3%
CSU Dubbo Campus	4.5	26.8%	100.0%	3.4	35.4%	100.0%	52	35.3%	100.0%
Total	16.9	100.0%	0.3%	9.5	100.0%	0.4%	147	100.0%	0.3%

Table 7: Distribution of economic impacts by industry sector – Goulburn Campus on Goulburn–Mulwaree LGA

	Industry Value Added			Household Income			FTE Employment		
	\$m	% of total impact	% of total in Goulburn	\$m	% of total impact	% of total in Goulburn	No.	% of total impact	% of total in Goulburn
Agriculture	0.1	0.8%	0.3%	0.0	0.3%	0.2%	1	1.1%	0.2%
Mining	0.0	0.2%	0.1%	0.0	0.0%	0.1%	0	0.0%	0.0%
Food & Beverage Manufacturing	0.0	0.3%	0.3%	0.0	0.2%	0.1%	0	0.2%	0.1%
Textile Manufacturing	0.0	0.0%	0.2%	0.0	0.0%	0.0%	0	0.0%	0.1%
Wood Product Manufacturing	0.0	0.0%	0.2%	0.0	0.0%	0.1%	0	0.0%	0.1%
Paper Manufacturing	0.0	0.0%	0.0%	0.0	0.0%	0.0%	0	0.0%	0.2%
Printing	0.0	0.1%	0.6%	0.0	0.0%	0.3%	0	0.1%	0.3%
Chemical Product Manufacturing	0.0	0.0%	0.2%	0.0	0.0%	0.0%	0	0.0%	0.1%
Non-metallic Mineral Product Manufacturing	0.0	0.2%	0.3%	0.0	0.2%	0.2%	0	0.2%	0.2%
Primary Metal Product Manufacturing	0.0	0.1%	0.1%	0.0	0.0%	0.1%	0	0.0%	0.1%
Fabricated Metal Product Manufacturing	0.0	0.1%	0.4%	0.0	0.1%	0.3%	0	0.1%	0.3%
Transport Equipment Manufacturing	0.0	0.1%	0.2%	0.0	0.1%	0.2%	0	0.1%	0.2%
Other Machinery & Equipment Manufacturing	0.0	0.1%	0.5%	0.0	0.1%	0.4%	0	0.1%	0.4%
Other Manufacturing	0.0	0.0%	0.2%	0.0	0.0%	0.2%	0	0.0%	0.1%
Utilities	0.2	1.1%	1.0%	0.0	0.1%	0.2%	0	0.1%	0.2%
Construction	0.2	1.5%	0.5%	0.1	1.2%	0.4%	1	1.4%	0.4%
Wholesale	0.4	3.0%	0.8%	0.2	3.3%	0.8%	3	3.3%	0.8%
Retail	0.6	3.8%	0.9%	0.4	5.2%	0.9%	9	8.2%	0.8%
Hospitality	0.4	2.4%	0.7%	0.2	2.7%	0.7%	6	5.7%	0.7%
Transport & Storage	0.4	2.5%	0.4%	0.1	2.1%	0.3%	2	2.3%	0.3%
Information Media & Telecommunications	0.2	1.0%	0.5%	0.0	0.3%	0.3%	0	0.4%	0.3%
Finance & Insurance Services	0.4	2.8%	0.5%	0.1	1.9%	0.5%	1	1.0%	0.5%
Real Estate & Rental Services	1.0	6.9%	3.6%	0.3	4.7%	3.3%	4	4.0%	3.3%
Ownership of Dwellings	0.7	5.1%	0.5%	0.0	0.0%	-	0	0.0%	-
Professional & Scientific Services	0.2	1.3%	0.5%	0.1	1.4%	0.5%	2	1.5%	0.5%
Administrative Services	0.1	0.4%	0.7%	0.0	0.7%	0.7%	1	0.7%	0.7%
Public Administration & Defence	0.2	1.4%	0.1%	0.2	2.4%	0.1%	2	1.9%	0.1%
Education	0.2	1.4%	0.3%	0.2	2.6%	0.3%	3	2.6%	0.3%
Health Care & Social Assistance	0.7	4.4%	0.7%	0.5	7.2%	0.7%	10	9.3%	0.7%
Arts & Recreation Services	0.4	2.7%	7.6%	0.2	2.9%	7.6%	5	4.4%	7.6%
Other Services	0.2	1.0%	0.9%	0.1	1.4%	0.9%	3	2.8%	0.9%
CSU Goulburn Campus	8.1	55.2%	100.0%	4.0	58.9%	100.0%	51	48.5%	100.0%
Total	14.7	100.0%	1.3%	6.8	100.0%	1.2%	105	100.0%	1.1%

Table 8: Distribution of economic impacts by industry sector – Goulburn Campus on South Eastern statistical division

	Industry Value Added			Household Income			FTE Employment		
	\$m	% of total impact	% of total in South Eastern	\$m	% of total impact	% of total in South Eastern	No.	% of total impact	% of total in South Eastern
Agriculture	0.2	1.1%	0.0%	0.0	0.5%	0.0%	2	1.7%	0.0%
Mining	0.0	0.1%	0.0%	0.0	0.0%	0.0%	0	0.0%	0.0%
Food & Beverage Manufacturing	0.0	0.3%	0.0%	0.0	0.1%	0.0%	0	0.2%	0.0%
Textile Manufacturing	0.0	0.0%	0.0%	0.0	0.0%	0.0%	0	0.0%	0.0%
Wood Product Manufacturing	0.0	0.1%	0.0%	0.0	0.0%	0.0%	0	0.1%	0.0%
Paper Manufacturing	0.0	0.0%	0.0%	0.0	0.0%	0.0%	0	0.0%	0.0%
Printing	0.0	0.1%	0.2%	0.0	0.1%	0.1%	0	0.1%	0.1%
Chemical Product Manufacturing	0.0	0.0%	0.0%	0.0	0.0%	0.0%	0	0.0%	0.0%
Non-metallic Mineral Product Manufacturing	0.0	0.1%	0.1%	0.0	0.1%	0.0%	0	0.1%	0.0%
Primary Metal Product Manufacturing	0.0	0.1%	0.0%	0.0	0.0%	0.0%	0	0.0%	0.0%
Fabricated Metal Product Manufacturing	0.0	0.1%	0.0%	0.0	0.1%	0.0%	0	0.1%	0.0%
Transport Equipment Manufacturing	0.0	0.1%	0.0%	0.0	0.1%	0.0%	0	0.1%	0.0%
Other Machinery & Equipment Manufacturing	0.0	0.1%	0.1%	0.0	0.1%	0.1%	0	0.1%	0.1%
Other Manufacturing	0.0	0.0%	0.0%	0.0	0.0%	0.0%	0	0.0%	0.0%
Utilities	0.2	1.2%	0.1%	0.0	0.2%	0.0%	0	0.2%	0.0%
Construction	0.3	1.8%	0.0%	0.1	1.6%	0.0%	2	1.7%	0.0%
Wholesale	0.4	3.0%	0.1%	0.2	3.2%	0.1%	3	3.2%	0.1%
Retail	0.5	3.7%	0.1%	0.3	5.0%	0.1%	8	8.2%	0.1%
Hospitality	0.4	2.6%	0.1%	0.2	3.1%	0.1%	6	5.8%	0.1%
Transport & Storage	0.3	2.0%	0.1%	0.1	1.5%	0.1%	2	1.9%	0.1%
Information Media & Telecommunications	0.1	0.9%	0.1%	0.0	0.2%	0.0%	0	0.3%	0.0%
Finance & Insurance Services	0.3	2.4%	0.1%	0.1	1.6%	0.1%	1	0.9%	0.1%
Real Estate & Rental Services	1.1	7.3%	0.5%	0.3	4.9%	0.4%	4	4.2%	0.4%
Ownership of Dwellings	0.8	5.2%	0.1%	0.0	0.0%	-	0	0.0%	-
Professional & Scientific Services	0.2	1.4%	0.1%	0.1	1.5%	0.1%	2	1.5%	0.1%
Administrative Services	0.1	0.5%	0.1%	0.1	0.9%	0.1%	1	0.9%	0.1%
Public Administration & Defence	0.1	0.6%	0.0%	0.1	1.0%	0.0%	1	0.8%	0.0%
Education	0.2	1.1%	0.0%	0.1	2.1%	0.0%	2	2.2%	0.0%
Health Care & Social Assistance	0.6	4.1%	0.1%	0.4	6.5%	0.1%	9	8.8%	0.1%
Arts & Recreation Services	0.4	3.1%	0.5%	0.2	3.6%	0.5%	5	4.4%	0.5%
Other Services	0.2	1.0%	0.1%	0.1	1.4%	0.1%	3	2.8%	0.1%
CSU Goulburn Campus	8.1	55.6%	100.0%	4.0	60.3%	100.0%	51	49.7%	100.0%
Total	14.6	100.0%	0.2%	6.6	100.0%	0.2%	103	100.0%	0.2%

Table 9: Distribution of economic impacts by industry sector – Orange Campus on Orange LGA

	Industry Value Added			Household Income			FTE Employment		
	\$m	% of total impact	% of total in Orange	\$m	% of total impact	% of total in Orange	No.	% of total impact	% of total in Orange
Agriculture	0.2	0.5%	1.3%	0.0	0.2%	0.7%	2	0.5%	0.7%
Mining	1.2	2.6%	0.4%	0.2	0.8%	0.2%	2	0.5%	0.2%
Food & Beverage Manufacturing	0.3	0.6%	0.9%	0.1	0.2%	0.4%	1	0.3%	0.4%
Textile Manufacturing	0.0	0.0%	0.7%	0.0	0.0%	0.3%	0	0.0%	0.3%
Wood Product Manufacturing	0.1	0.3%	1.3%	0.1	0.2%	0.8%	1	0.3%	0.8%
Paper Manufacturing	0.0	0.0%	0.8%	0.0	0.0%	0.5%	0	0.0%	0.5%
Printing	0.0	0.1%	1.1%	0.0	0.1%	0.6%	0	0.1%	0.6%
Chemical Product Manufacturing	0.1	0.2%	0.8%	0.0	0.1%	0.5%	0	0.1%	0.5%
Non-metallic Mineral Product Manufacturing	0.1	0.2%	1.7%	0.0	0.2%	1.2%	1	0.2%	1.2%
Primary Metal Product Manufacturing	0.1	0.3%	0.8%	0.1	0.3%	0.8%	1	0.2%	0.8%
Fabricated Metal Product Manufacturing	0.1	0.2%	1.5%	0.1	0.2%	1.5%	1	0.3%	1.5%
Transport Equipment Manufacturing	0.1	0.2%	0.9%	0.0	0.2%	0.8%	1	0.1%	0.8%
Other Machinery & Equipment Manufacturing	0.8	1.8%	1.0%	0.5	1.7%	0.9%	8	2.0%	0.9%
Other Manufacturing	0.0	0.1%	0.7%	0.0	0.0%	0.4%	0	0.1%	0.4%
Utilities	0.3	0.6%	0.9%	0.0	0.1%	0.2%	1	0.1%	0.2%
Construction	3.5	7.8%	3.2%	1.7	6.3%	2.8%	29	7.3%	2.8%
Wholesale	1.5	3.2%	1.9%	0.9	3.2%	1.9%	12	3.1%	1.9%
Retail	1.9	4.1%	1.7%	1.3	4.8%	1.7%	31	7.7%	1.7%
Hospitality	0.9	2.1%	2.1%	0.5	2.1%	2.1%	16	4.0%	2.1%
Transport & Storage	1.1	2.5%	1.2%	0.5	1.8%	1.0%	8	2.1%	1.0%
Information Media & Telecommunications	0.6	1.3%	1.4%	0.1	0.4%	1.0%	2	0.4%	1.0%
Finance & Insurance Services	4.5	10.0%	1.7%	1.8	6.9%	1.6%	13	3.3%	1.6%
Real Estate & Rental Services	0.7	1.5%	2.3%	0.3	1.0%	2.1%	3	0.8%	2.1%
Ownership of Dwellings	3.4	7.5%	1.8%	0.0	0.0%	-	0	0.0%	-
Professional & Scientific Services	1.0	2.3%	1.4%	0.6	2.3%	1.3%	8	2.1%	1.3%
Administrative Services	3.5	7.8%	10.1%	3.0	11.3%	10.0%	37	9.4%	10.0%
Public Administration & Defence	0.9	2.1%	0.5%	0.7	2.8%	0.5%	9	2.3%	0.5%
Education	1.2	2.6%	0.8%	1.0	3.8%	0.8%	16	3.9%	0.8%
Health Care & Social Assistance	1.5	3.3%	0.8%	1.2	4.5%	0.8%	22	5.5%	0.8%
Arts & Recreation Services	0.3	0.7%	2.9%	0.2	0.6%	2.9%	4	1.0%	2.9%
Other Services	1.3	3.0%	1.8%	1.0	3.7%	1.8%	25	6.3%	1.8%
CSU Orange Campus	13.7	30.5%	100.0%	10.7	40.2%	100.0%	144	35.9%	100.0%
Total	44.9	100.0%	2.1%	26.6	100.0%	2.3%	401	100.0%	4.1%

Table 10: Distribution of economic impacts by industry sector – Orange Campus on Central West statistical division

	Industry Value Added			Household Income			FTE Employment		
	\$m	% of total impact	% of total in Central West	\$m	% of total impact	% of total in Central West	No.	% of total impact	% of total in Central West
Agriculture	0.3	0.6%	0.1%	0.1	0.2%	0.0%	3	0.6%	0.0%
Mining	1.2	2.7%	0.1%	0.2	0.8%	0.0%	2	0.6%	0.0%
Food & Beverage Manufacturing	0.3	0.7%	0.1%	0.1	0.3%	0.0%	1	0.3%	0.0%
Textile Manufacturing	0.0	0.0%	0.2%	0.0	0.0%	0.1%	0	0.0%	0.1%
Wood Product Manufacturing	0.2	0.3%	0.1%	0.1	0.2%	0.1%	1	0.3%	0.1%
Paper Manufacturing	0.0	0.0%	0.2%	0.0	0.0%	0.1%	0	0.0%	0.1%
Printing	0.0	0.1%	0.3%	0.0	0.1%	0.2%	0	0.1%	0.2%
Chemical Product Manufacturing	0.1	0.2%	0.2%	0.0	0.1%	0.1%	0	0.1%	0.1%
Non-metallic Mineral Product Manufacturing	0.1	0.2%	0.2%	0.0	0.2%	0.1%	1	0.2%	0.1%
Primary Metal Product Manufacturing	0.1	0.3%	0.3%	0.1	0.3%	0.3%	1	0.3%	0.2%
Fabricated Metal Product Manufacturing	0.1	0.2%	0.2%	0.1	0.2%	0.2%	1	0.3%	0.2%
Transport Equipment Manufacturing	0.1	0.2%	0.2%	0.0	0.2%	0.2%	1	0.1%	0.2%
Other Machinery & Equipment Manufacturing	0.8	1.8%	0.7%	0.5	1.7%	0.7%	8	2.1%	0.7%
Other Manufacturing	0.0	0.1%	0.1%	0.0	0.0%	0.1%	0	0.1%	0.1%
Utilities	0.3	0.7%	0.2%	0.0	0.2%	0.0%	1	0.2%	0.0%
Construction	3.5	7.7%	0.6%	1.7	6.3%	0.5%	29	7.2%	0.5%
Wholesale	1.5	3.3%	0.4%	0.9	3.3%	0.4%	13	3.2%	0.4%
Retail	1.9	4.2%	0.5%	1.3	4.9%	0.5%	32	7.9%	0.5%
Hospitality	1.0	2.1%	0.6%	0.6	2.1%	0.5%	17	4.1%	0.5%
Transport & Storage	1.2	2.5%	0.3%	0.5	1.8%	0.3%	9	2.1%	0.3%
Information Media & Telecommunications	0.6	1.3%	0.4%	0.1	0.4%	0.3%	2	0.4%	0.3%
Finance & Insurance Services	4.6	10.1%	0.5%	1.9	7.0%	0.5%	14	3.4%	0.5%
Real Estate & Rental Services	0.7	1.6%	0.4%	0.3	1.0%	0.4%	3	0.8%	0.4%
Ownership of Dwellings	3.5	7.7%	0.4%	0.0	0.0%	-	0	0.0%	-
Professional & Scientific Services	1.0	2.3%	0.5%	0.6	2.3%	0.5%	8	2.1%	0.4%
Administrative Services	3.5	7.6%	2.0%	3.0	11.2%	2.1%	38	9.2%	1.9%
Public Administration & Defence	0.9	2.0%	0.2%	0.7	2.8%	0.2%	9	2.3%	0.1%
Education	1.3	2.7%	0.2%	1.1	4.1%	0.2%	17	4.1%	0.2%
Health Care & Social Assistance	1.5	3.3%	0.4%	1.2	4.5%	0.4%	23	5.6%	0.4%
Arts & Recreation Services	0.3	0.7%	0.7%	0.2	0.6%	0.7%	4	0.9%	0.8%
Other Services	1.4	3.0%	0.7%	1.0	3.7%	0.8%	26	6.3%	0.7%
CSU Orange Campus	13.7	29.8%	99.9%	10.7	39.6%	100.0%	144	35.3%	100.0%
Total	45.9	100.0%	0.5%	27.0	100.0%	0.6%	408	100.0%	0.5%

Table 11: Distribution of economic impacts by industry sector – Wagga Wagga Campus on Wagga Wagga LGA

	Industry Value Added			Household Income			FTE Employment		
	\$m	% of total impact	% of total in Wagga Wagga	\$m	% of total impact	% of total in Wagga Wagga	No.	% of total impact	% of total in Wagga Wagga
Agriculture	1.7	0.8%	2.9%	0.3	0.2%	1.7%	16	0.7%	1.7%
Mining	0.0	0.0%	0.7%	0.0	0.0%	0.4%	0	0.0%	0.3%
Food & Beverage Manufacturing	2.4	1.2%	2.3%	0.6	0.4%	1.0%	10	0.5%	1.0%
Textile Manufacturing	0.1	0.1%	1.7%	0.0	0.0%	0.8%	1	0.0%	0.8%
Wood Product Manufacturing	0.3	0.2%	1.9%	0.1	0.1%	1.1%	2	0.1%	1.1%
Paper Manufacturing	0.0	0.0%	3.4%	0.0	0.0%	0.0%	0	0.0%	1.3%
Printing	0.2	0.1%	3.2%	0.0	0.0%	1.7%	1	0.1%	1.7%
Chemical Product Manufacturing	0.5	0.2%	2.2%	0.1	0.1%	1.2%	2	0.1%	1.2%
Non-metallic Mineral Product Manufacturing	0.2	0.1%	2.8%	0.1	0.0%	1.8%	1	0.1%	1.8%
Primary Metal Product Manufacturing	0.2	0.1%	0.9%	0.1	0.0%	0.8%	1	0.1%	0.8%
Fabricated Metal Product Manufacturing	0.4	0.2%	3.0%	0.2	0.1%	3.0%	4	0.2%	3.0%
Transport Equipment Manufacturing	0.9	0.4%	2.1%	0.5	0.3%	1.9%	5	0.2%	1.9%
Other Machinery & Equipment Manufacturing	0.7	0.4%	6.2%	0.3	0.2%	5.4%	7	0.3%	5.4%
Other Manufacturing	0.2	0.1%	1.7%	0.1	0.1%	1.1%	1	0.1%	1.1%
Utilities	2.4	1.2%	2.9%	0.2	0.1%	0.7%	3	0.2%	0.7%
Construction	7.3	3.6%	3.8%	3.4	2.3%	3.3%	57	2.7%	3.3%
Wholesale	3.6	1.8%	6.3%	2.0	1.4%	6.3%	28	1.3%	6.3%
Retail	10.1	4.9%	5.9%	6.8	4.7%	5.9%	173	8.1%	5.9%
Hospitality	5.5	2.7%	6.2%	3.3	2.3%	6.2%	99	4.6%	6.3%
Transport & Storage	3.8	1.8%	2.9%	1.6	1.1%	2.4%	27	1.3%	2.4%
Information Media & Telecommunications	4.1	2.0%	3.8%	0.6	0.4%	2.6%	11	0.5%	2.6%
Finance & Insurance Services	26.9	13.1%	4.7%	11.8	8.2%	4.5%	85	4.0%	4.5%
Real Estate & Rental Services	3.0	1.5%	6.1%	1.2	0.8%	5.7%	13	0.6%	5.7%
Ownership of Dwellings	16.5	8.0%	5.7%	0.0	0.0%	-	0	0.0%	-
Professional & Scientific Services	2.3	1.1%	3.0%	1.4	1.0%	3.0%	19	0.9%	3.0%
Administrative Services	6.4	3.1%	13.7%	5.3	3.7%	13.6%	74	3.4%	13.7%
Public Administration & Defence	4.1	2.0%	1.0%	3.2	2.2%	1.0%	48	2.2%	1.0%
Education	2.1	1.0%	1.2%	2.1	1.5%	1.4%	34	1.6%	1.5%
Health Care & Social Assistance	5.6	2.8%	3.7%	4.4	3.1%	3.7%	86	4.0%	3.7%
Arts & Recreation Services	2.1	1.0%	10.3%	1.1	0.8%	10.3%	27	1.2%	10.3%
Other Services	3.1	1.5%	5.5%	2.2	1.5%	5.5%	57	2.7%	5.5%
CSU Wagga Wagga Campus	88.2	43.0%	100.0%	91.4	63.4%	100.0%	1,247	58.2%	100.0%
Total	204.9	100.0%	6.8%	144.2	100.0%	9.1%	2,142	100.0%	8.3%

Table 12: Distribution of economic impacts by industry sector – Wagga Wagga Campus on Murrumbidgee statistical divisions

	Industry Value Added			Household Income			FTE Employment		
	\$m	% of total impact	% of total in Murrumbidgee	\$m	% of total impact	% of total in Murrumbidgee	No.	% of total impact	% of total in Murrumbidgee
Agriculture	2.0	0.9%	0.6%	0.4	0.3%	0.3%	20	0.9%	0.3%
Mining	0.0	0.0%	0.2%	0.0	0.0%	0.1%	0	0.0%	0.1%
Food & Beverage Manufacturing	2.6	1.2%	0.6%	0.6	0.4%	0.2%	11	0.5%	0.3%
Textile Manufacturing	0.1	0.1%	1.4%	0.0	0.0%	0.6%	1	0.0%	0.6%
Wood Product Manufacturing	0.3	0.2%	0.7%	0.1	0.1%	0.3%	2	0.1%	0.4%
Paper Manufacturing	0.0	0.0%	0.1%	0.0	0.0%	0.1%	0	0.0%	0.1%
Printing	0.2	0.1%	2.0%	0.0	0.0%	1.0%	1	0.1%	1.1%
Chemical Product Manufacturing	0.5	0.2%	1.8%	0.1	0.1%	0.9%	2	0.1%	0.9%
Non-metallic Mineral Product Manufacturing	0.2	0.1%	1.3%	0.1	0.0%	0.8%	1	0.1%	0.8%
Primary Metal Product Manufacturing	0.2	0.1%	0.4%	0.1	0.0%	0.3%	1	0.1%	0.4%
Fabricated Metal Product Manufacturing	0.4	0.2%	1.5%	0.2	0.1%	1.4%	4	0.2%	1.4%
Transport Equipment Manufacturing	0.9	0.4%	1.7%	0.5	0.3%	1.5%	5	0.2%	1.6%
Other Machinery & Equipment Manufacturing	0.8	0.4%	2.3%	0.3	0.2%	1.8%	7	0.3%	2.0%
Other Manufacturing	0.2	0.1%	1.4%	0.1	0.1%	0.9%	2	0.1%	0.8%
Utilities	2.7	1.3%	0.8%	0.2	0.2%	0.2%	4	0.2%	0.2%
Construction	7.4	3.5%	1.8%	3.4	2.3%	1.6%	58	2.7%	1.5%
Wholesale	3.7	1.7%	2.9%	2.1	1.4%	2.8%	29	1.3%	2.7%
Retail	10.7	5.1%	4.3%	7.2	4.9%	4.1%	184	8.4%	4.0%
Hospitality	5.8	2.8%	3.1%	3.5	2.4%	2.8%	105	4.8%	2.9%
Transport & Storage	4.1	2.0%	0.9%	1.7	1.2%	0.7%	30	1.4%	0.7%
Information Media & Telecommunications	4.7	2.2%	0.9%	0.7	0.5%	0.6%	13	0.6%	0.6%
Finance & Insurance Services	28.1	13.4%	2.4%	12.3	8.4%	2.5%	89	4.1%	2.3%
Real Estate & Rental Services	3.0	1.4%	2.6%	1.2	0.8%	2.5%	14	0.6%	2.3%
Ownership of Dwellings	17.6	8.4%	2.4%	0.0	0.0%	-	0	0.0%	-
Professional & Scientific Services	2.4	1.1%	1.4%	1.4	1.0%	1.4%	20	0.9%	1.4%
Administrative Services	6.4	3.1%	5.4%	5.4	3.7%	5.3%	75	3.4%	5.2%
Public Administration & Defence	4.0	1.9%	0.7%	3.2	2.2%	0.7%	47	2.1%	0.7%

	Industry Value Added			Household Income			FTE Employment		
	\$m	% of total impact	% of total in Murrumbidgee	\$m	% of total impact	% of total in Murrumbidgee	No.	% of total impact	% of total in Murrumbidgee
Education	2.1	1.0%	0.6%	2.1	1.4%	0.7%	34	1.5%	0.7%
Health Care & Social Assistance	5.7	2.7%	2.1%	4.5	3.1%	2.1%	89	4.1%	2.0%
Arts & Recreation Services	2.1	1.0%	4.7%	1.2	0.8%	4.5%	26	1.2%	4.8%
Other Services	3.3	1.6%	2.0%	2.3	1.6%	2.0%	61	2.8%	1.9%
CSU Wagga Wagga Campus	88.2	41.9%	100.0%	91.4	62.5%	100.0%	1247	57.2%	100.0%
Total	210.6	100.0%	2.9%	146.2	100.0%	4.2%	2,182	100.0%	3.4%

Table 13: Distribution of economic impacts by industry sector – CSU Campuses on CSU Regional Footprint

	Industry Value Added			Household Income			FTE Employment		
	\$m	% of total impact	% of total in Murray / Ovens-Murray	\$m	% of total impact	% of total in Murray / Ovens-Murray	No.	% of total impact	% of total in Murray
Agriculture	4.1	0.8%	0.2%	0.8	0.2%	0.1%	41	0.8%	0.1%
Mining	2.1	0.4%	0.1%	0.4	0.1%	0.0%	4	0.1%	0.0%
Food & Beverage Manufacturing	6.5	1.2%	0.5%	1.9	0.6%	0.2%	27	0.5%	0.2%
Textile Manufacturing	0.4	0.1%	0.4%	0.1	0.0%	0.2%	3	0.1%	0.2%
Wood Product Manufacturing	1.0	0.2%	0.3%	0.3	0.1%	0.2%	7	0.1%	0.2%
Paper Manufacturing	0.4	0.1%	0.4%	0.2	0.1%	0.3%	2	0.0%	0.3%
Printing	0.5	0.1%	0.9%	0.2	0.0%	0.5%	3	0.1%	0.5%
Chemical Product Manufacturing	1.0	0.2%	0.6%	0.3	0.1%	0.3%	4	0.1%	0.3%
Non-metallic Mineral Product Manufacturing	0.9	0.2%	0.5%	0.3	0.1%	0.4%	6	0.1%	0.4%
Primary Metal Product Manufacturing	0.9	0.2%	0.3%	0.3	0.1%	0.3%	5	0.1%	0.3%
Fabricated Metal Product Manufacturing	1.4	0.3%	0.7%	0.8	0.2%	0.8%	16	0.3%	0.8%
Transport Equipment Manufacturing	2.6	0.5%	0.9%	1.5	0.5%	0.9%	14	0.3%	0.8%
Other Machinery & Equipment Manufacturing	2.8	0.5%	0.9%	1.4	0.4%	0.9%	26	0.5%	0.9%
Other Manufacturing	0.4	0.1%	0.5%	0.2	0.0%	0.3%	3	0.1%	0.3%
Utilities	6.6	1.3%	0.6%	0.6	0.2%	0.1%	9	0.2%	0.1%
Construction	22.4	4.3%	0.9%	10.4	3.2%	0.8%	176	3.5%	0.8%
Wholesale	12.6	2.4%	0.9%	7.0	2.1%	0.9%	102	2.0%	0.9%
Retail	24.0	4.6%	1.4%	16.1	4.9%	1.4%	416	8.3%	1.4%
Hospitality	13.3	2.5%	1.1%	8.0	2.4%	1.0%	238	4.8%	1.1%
Transport & Storage	10.5	2.0%	0.5%	4.3	1.3%	0.5%	75	1.5%	0.5%
Information Media & Telecommunications	12.0	2.3%	0.8%	1.9	0.6%	0.6%	33	0.7%	0.6%
Finance & Insurance Services	56.6	10.8%	1.3%	23.4	7.1%	1.5%	175	3.5%	1.4%
Real Estate & Rental Services	10.5	2.0%	1.2%	3.8	1.1%	1.3%	47	0.9%	1.2%
Ownership of Dwellings	42.6	8.1%	0.9%	0.0	0.0%	-	0	0.0%	-
Professional & Scientific Services	7.9	1.5%	0.7%	4.6	1.4%	0.7%	65	1.3%	0.7%
Administrative Services	20.3	3.9%	3.1%	17.2	5.2%	3.2%	227	4.5%	3.1%

	Industry Value Added			Household Income			FTE Employment		
	\$m	% of total impact	% of total in Murray	\$m	% of total impact	% of total in Murray	No.	% of total impact	% of total in Murray
			/ Ovens-Murray			/ Ovens-Murray			/ Ovens-Murray
Public Administration & Defence	7.9	1.5%	0.3%	6.2	1.9%	0.3%	87	1.7%	0.3%
Education	7.4	1.4%	0.4%	7.0	2.1%	0.4%	112	2.2%	0.4%
Health Care & Social Assistance	13.6	2.6%	0.7%	10.6	3.2%	0.8%	212	4.2%	0.7%
Arts & Recreation Services	5.6	1.1%	2.0%	3.1	0.9%	2.0%	67	1.4%	2.2%
Other Services	9.8	1.9%	1.3%	6.9	2.1%	1.4%	183	3.7%	1.3%
CSU Regional Campuses	215.3	41.1%	100.0%	191.2	57.8%	100.0%	2,609	52.2%	100.0%
Total	524.0	100.0%	1.3%	330.7	100.0%	1.9%	4,996	100.0%	1.5%

WRI

The WRI is a non-profit economic, business and social research organisation located on the Bathurst campus of Charles Sturt University. The WRI holds a wealth of knowledge on employment, business development and investment issues affecting regional Australia. It has worked with Commonwealth, State and Local Governments and industry groups on numerous investment and development programmes in regional areas. The WRI has strong credentials in business and commercial market consulting and applied economic modelling including input-output analysis, shift-share, agribusiness and regional socio-economic surveys and analysis.

The Research Team

WRI has built a dedicated team of professional research staff and associates with the expertise necessary to provide our clients with robust and reliable research solutions. All staff at WRI have extensive experience in data collection, analysis and reporting. WRI has a team approach to its projects and allocates work to members of the research staff as appropriate.

Mr Tom Murphy – Chief Executive Officer

B.Ec. (Hons I) M.Sc. (Econ) Lancaster

Tom is currently Chief Executive Officer of WRI and has held this position since its inception in February 1999. Under Tom's leadership WRI has completed over 300

projects for all levels of government and government departments, industry groups such as Australian Pork and the Tourism Taskforce, businesses such as Delta Electricity and V8 Supercars, financial institutions such as Westpac and Perpetual Regional Infrastructure Fund, regional development boards and community groups, and educational institutions including universities, TAFE and schools in NSW, Victoria and Queensland.

Tom has previously held academic positions as senior lecturer in Economics and Director of the Regional Economics Research Unit in the Faculty of Commerce, Charles Sturt University, Bathurst and positions at the University of New England and Macquarie University. He has also held the positions of Economic Analyst with



the Office of National Assessments in Canberra, with responsibility for the ASEAN economies and Senior Consultant with KPMG Peat Marwick Management Consultants.

Tom's particular expertise is in regional economics and labour markets, and he has published in a wide range of economic subject areas in refereed and non-refereed articles, books and textbooks. Tom has a high local media profile in Western NSW for economic and social commentary and also features regularly on national radio particularly in connection to the quarterly agribusiness survey conducted for Westpac Australia wide.

Ms Kathy Sloan – Research Manager

B.AppSc (Geography) UC, GDip InfoSys CSU

Kathy is responsible for the overall management of projects for WRI, which includes allocating resources, ensuring timeframes and budgets are met and monitoring compliance with the quality

assurance system. Kathy has extensive experience in designing and conducting surveys most recently developing the national Westpac / CSU Agribusiness Index. She has a background in data analysis and research working with the ACT Government and Charles Sturt University and has developed and delivered a wide range of training for TAFENSW – Western Institute and the local community college.



Ms Lesley Arthur – Senior Research Officer

B.Sc. Bio Sc (Hons), M.Sc Tech Ec.

Lesley is an experienced researcher with particular expertise in the areas of inter-industry modelling, including input-output analysis, statistical analysis, market analysis

and forecasting. Since joining WRI Lesley has been involved in a diverse range of projects encompassing a variety of industry sectors. Her strengths are in strong analytical skills and in the preparation of concise reports. Prior to joining WRI, Lesley was a Director with KPMG Peat Marwick Management Consultants in Australia and Malaysia.



Ms Danielle Ranshaw – Senior Research Officer

BEC&Fin NSW

Danielle's experience in project management in the information technology sector combined with qualifications in economics and finance provides a solid background for WRI projects. With skills in systems design and development, Danielle has been able to extend WRI's capability in developing robust and increasingly complex systems to support research fieldwork. Additionally, Danielle has extensive experience in business process analysis, performance planning and review, report writing and project planning.



Ms Dale Curran – Executive Officer

BA ANU

Dale is responsible for all administrative processes at WRI including executive support, finance, management of the Board of Directors and maintenance of policies. She has worked in a variety of roles at WRI, including Fieldwork Supervisor and Research Assistant, and has worked on several community and business surveys. Dale brings a high level of organisational skill to her role as Executive Officer.





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