



Student income support and education and training participation in Australia

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LONGITUDINAL SURVEYS
OF AUSTRALIAN YOUTH

RESEARCH REPORT 62

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This document should be attributed as Ryan, C 2013, *Student income support and education and training participation in Australia*, NCVER, Adelaide.

This work has been produced by NCVER through the Longitudinal Surveys of Australian Youth (LSAY) Program on behalf of the Australian Government and state and territory governments, with funding provided through the Australian Department of Education, Employment and Workplace Relations.

COVER IMAGE: GETTY IMAGES/THINKSTOCK

ISBN 978 1 922056 49 8

TD/TNC 111.12

Published by NCVER, ABN 87 007 967 311

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About the research

Student income support and education and training participation in Australia

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Youth Allowance provides financial assistance to young Australians who are studying full-time, undertaking a full-time apprenticeship or traineeship, or looking for work. Public commentary on the adequacy of student income support and the incidence of taking a 'gap' year to meet Youth Allowance eligibility criteria gave rise to this research report. It set out to examine the role and impact of Youth Allowance on participation in post-school education and training, course completion, 'gap' taking and the financial position of a sample of young Australians over the period 1999–2007.

Subsequent to this research, the Australian Government announced changes to the Youth Allowance policy, including changes to the parental income threshold for maximum payment, the taper rate arrangements for dependent students and independence criteria (workforce participation and age).¹

This research uses the Longitudinal Surveys of Australian Youth (LSAY). It employs a range of econometric techniques to address the fact that the targeted nature of Youth Allowance means that those eligible have different characteristics from those who are not (and we do not directly observe the eligibility status of non-students), and makes particular use of the equivalent national tertiary entrance rank (ENTER)² collected in the survey.

Key messages

- Based on carefully matched student characteristics (other than family income), full-time tertiary enrolment rates following Year 12 are similar regardless of whether or not students are eligible for Youth Allowance.
- Youth Allowance substantially improves course completion rates.
- The eligibility rules in operation at the time of the research did lead to more students undertaking a 'gap' year.
- Youth Allowance does not alleviate financial hardship totally – those on Youth Allowance are the least satisfied about their financial situation.

Tom Karmel
Managing Director, NCVET

¹ The initial changes commenced on 1 April 2010 and further information on the government's reforms is available at www.innovation.gov.au/HigherEducation/StudentSupport/Pages/default.aspx.

² Now referred to as Australian tertiary admittance rank (ATAR).

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Executive summary

This report uses data from the Longitudinal Surveys of Australian Youth (LSAY) to examine the role and impact of Youth Allowance, as it operated until 2010, on a number of important policy questions. These include whether receipt of Youth Allowance affects participation in post-school education and training and completion of courses, whether the eligibility rules encourage individuals to undertake gap years, and how receipt of Youth Allowance affects the financial position of young Australians. The participation and course completion analyses are conducted separately for both university and for full-time vocational education and training (VET), while the assessment of the financial position of Youth Allowance recipients involves a comparison with all young Australians.

Data from two LSAY cohorts are analysed here: the surveys of cohorts based on Year 9 students from 1995 and 1998, who were surveyed each year until their mid-20s. Students in these LSAY cohorts were asked about their own or their parents' receipt of Youth Allowance and the amount paid from the time of the third wave, when most were at school in Year 11, until they completed their school and other studies. These data form the basis of the analyses used to assess the role of Youth Allowance on the educational and financial outcomes of young Australians. The LSAY data also contain information on a rich set of demographic characteristics on individuals. This information is used here to provide other control variables that allow the Youth Allowance effects to be isolated in regression analysis of the four main sets of outcome variables: post-school education and training participation; gap year incidence; course completion; and differing dimensions of young people's financial positions. The analysis is restricted to the post-school experiences of young people, since some of the data (financial stress indicators) and the issues (gap year incidence) relate only to post-school outcomes and because some technical issues could not be overcome for any analysis of school outcomes, such as Year 12 completion. These technical issues reflected two factors: Youth Allowance eligibility was not observed for those who left school early (before the third wave of the data); and data limitations meant it was not possible to estimate the likely eligibility of such early leavers satisfactorily.

Youth allowance and participation in post-school education

As indicated, post-school students were asked in each wave of LSAY in which they reported being a student about their receipt of Youth Allowance and the amount they were paid. For individuals not studying, it was necessary here to estimate their potential eligibility, had they been students. It is possible to use historical information on Youth Allowance receipt for individuals, including while they were at school, to refine this estimation of potential eligibility. The requirement to estimate eligibility for some individuals limits the way the data here can be analysed and some of the conclusions that can be drawn from the analyses undertaken. Hence, estimates of the relationship between Youth Allowance and education participation presented here are not causal estimates. It was not possible to identify participation behaviour among marginal recipients of Youth Allowance to estimate such causal effects.

Rather, the estimates here are of participation among the Youth Allowance population compared with that of the ineligible group who were most like them, but who had family

income levels that pushed them above key income eligibility thresholds. Participation in university among those who obtained a Year 12 certificate does not appear to be significantly lower among the Youth Allowance-eligible population than among those most like them in the ineligible population. Participation in full-time VET may be lower, although the operation of the apprenticeship system, which was not incorporated in the analysis here, makes this difficult to judge.

Gap years and receipt of Youth Allowance

Eligibility rates for Youth Allowance are substantially higher among students who undertake gap years than students who proceed to university straight from secondary school. This is not wholly explained by gap year students being from a poorer part of the social background distribution. In fact, gap year students who are eligible for Youth Allowance come from higher in the social background distribution than those who proceed straight from secondary school to university.

The evidence suggests that many of those who undertake a gap year would have been much less likely to be eligible for Youth Allowance had they not done so, or would have received a smaller payment if eligible, given their parents' characteristics. This evidence supports the concerns expressed in the Bradley Review that the operation of the independence criteria for Youth Allowance encouraged some otherwise ineligible individuals to establish their eligibility by undertaking a gap year.

Youth Allowance and course completion

Receipt of Youth Allowance does appear to be positively associated with course completion among both university and full-time VET students. The estimates are of a substantial magnitude, with students who received Youth Allowance being somewhere between 4 and 10 percentage points more likely to complete their courses than other students. Where the amount of the allowance received was included in regression equations, the parameter was positive, suggesting that those in receipt of higher payments may be more likely to complete their courses. Hours of part-time work are negatively correlated with completion of university courses, but not full-time VET courses. Again, this may not be a causal estimate, but may merely represent an association between variables.

Youth Allowance and the financial position of young Australians

Respondents in these cohorts of LSAY were asked in each wave a series of questions about their satisfaction with their financial position and their life in general. In addition, they were asked about their experience of a series of financial stress indicators, such as having had to borrow money from family and friends. These data make it possible to see how the responses of the same individuals change as they move through various 'states' from year to year; that is, become full-time students, get or lose a job, become eligible for Youth Allowance, move out of home and so on.

These data suggest that full-time students in receipt of Youth Allowance tend to be the least satisfied about their financial position, even among students, and experience more incidents related to financial 'stress' than other young people. They are substantially more likely to have

had to borrow money from family or from others to live on than other individuals. They are less likely to view themselves as managing well financially.

Regression analysis confirms the poorer self-assessed financial position of full-time students in receipt of Youth Allowance. These differences do not, however, seem to translate into their having lower levels of life satisfaction, in the way that these measures of financial stress are associated with lower levels of life satisfaction for young people in receipt of other forms of government income support.

Introduction

How much does the availability and magnitude of government income support for students affect the education and training participation decisions of young people? Do the eligibility rules affect participation patterns differentially across the social background distribution? Is students' receipt of government income support associated with education and training course completion by young people? Do students who receive government income support view their financial position differently from those who do not receive it? This report uses data from the Longitudinal Surveys of Australian Youth (LSAY) to examine the effect of receipt of Youth Allowance on these questions.

There is a body of evidence that indicates that the existence of deferred income-contingent tuition charges for higher education in Australia has not deterred students from poor backgrounds from attending university (see Chapman 2006; Chapman & Ryan 2005; Cardak & Ryan 2006, for example). The role of living expenses on participation decisions and the extent to which their effect may be mitigated by government payments have received somewhat less scrutiny (Dearden & Heath 1996; Birrell & Dobson 1998; Birrell, Dobson & Smith. 1999 and James et al. 2007 are exceptions).

James et al. (2007) surveyed existing university students and found financial matters and the eligibility for Youth Allowance did affect participation patterns. However, studies of existing students do not help us address whether the existence and amount of the student income received affects the proportion who actually participate in post-school education. An evaluation of the implementation of Youth Allowance changes introduced in 1998 found that it did have a positive effect on education participation rates in both university and in vocational education (Department of Family and Community Services 2002a, 2002b). It adopted a similar approach to that of Dearden and Heath (1996), who had found an effect on secondary school participation rates of the 1987 AUSTUDY reforms.

It seems appropriate to revisit this issue and others surrounding the operation of Youth Allowance in light of public commentary on the adequacy of student income support and indications of substantial financial hardship among students reported in James et al. (2007), along with increased resort to repayable loans by university students to continue studying. The financial position of students undertaking courses or studies full-time in the VET sector also warrants attention, since it has been little studied to date.

Part of this public commentary was reflected in the Bradley Review released in December 2008. The report was critical of the operation of the independence criteria for Youth Allowance that operated at the time, which encouraged otherwise ineligible young people to establish their eligibility by working while undertaking a 'gap year'. To the extent that this occurs, it can be seen as diverting resources that may otherwise have been provided to more needy individuals in the form of higher payment rates or higher eligibility thresholds. In 2010, the Australian Government introduced changes to aspects of the operation of the independence criteria.

In addition to potentially influencing participation, receipt of a student allowance may be important at the margin in helping students to complete their studies. Some students may find the experience of financial hardship while studying is such that they fail to complete their

studies (for example, McMillan 2005 found that 10% of students cited financial difficulties as their principal reason for discontinuing university study). An important question is the extent to which receipt of student income support may mitigate these effects, although existing research using LSAY data does not point to such a positive effect from student income support on completion.

Finally, students exhibit high levels of dissatisfaction in general about their financial position. For example, almost one-half of the university students surveyed in James et al. (2007) indicated that they were worried about their financial situation. An important question is the role student income support arrangements have in mitigating or contributing to this overall financial dissatisfaction.

The LSAY Y95 and Y98 cohorts contain a series of questions for respondents about their own or their parents' receipt of AUSTUDY/Youth Allowance and, for those who do receive it, its magnitude. Individuals were first asked this question if they were studying in the third wave of the survey, when most were in Year 11, with the question repeated in all subsequent years for respondents who were studying. This creates a problem in assessing the potential eligibility of non-students in each wave, but one that can be dealt with through data imputation techniques.

The remainder of the report is organised in the following way. The next section contains a brief description of the eligibility criteria for the Youth Allowance scheme for students, as it operated until the 2010 and subsequent reforms. The following section contains a description of the LSAY data and the methodology pursued in this report to address the various research questions identified above. Thereafter, in four separate sections, the various effects of receipt of Youth Allowance on participation, the likelihood of undertaking a gap year, course completion and the financial position of students are addressed. A final section offers some conclusions and implications from the research.

How Youth Allowance works

The Youth Allowance system applicable during the period covered by this study was introduced on 1 July 1998 and operated until 2010. At the time when the analysis was conducted, the relevant eligibility and entitlement provisions were as described below. Amounts shown are those which applied in 2008, but would have differed when the data were collected.

The introduction of Youth Allowance was designed to redress perceived disincentives for young people to undertake education and training. It replaced a system that involved payment to individuals aged under 21 years a year of Newstart Allowance for those unemployed, Youth Training Allowance for those undertaking training, Sickness Allowance for those temporarily unable to work and AUSTUDY for students, (AUSTUDY was paid to students aged under 25 years.) The introduction of Youth Allowance meant that a common payment with similar eligibility criteria operated across all of these potential payment/activity categories, at least until age 21. Practically, the removal of the study disincentive involved an extension of parental means tests (income and asset tests) for eligibility for Youth Allowance among those looking for work. Previously, the parental means test was part of the eligibility criteria for AUSTUDY but not the other payment categories.

Youth Allowance payments received by individuals depend on the number of siblings they have (payments increase with the number of siblings), whether or not they live with their parents or guardians (those who live away from home receive higher payments), and whether they are treated as independent for Youth Allowance eligibility purposes. (Those classified as independent receive higher payments.) When Youth Allowance was introduced, it involved independence conditions for full-time students that were easier to satisfy than the arrangements under AUSTUDY. The key criteria that were relaxed involved individuals being able to demonstrate they had worked more than 30 hours per week in 18 of the previous 24 months; or had earned just over \$18 500 (the limit in 2008) in the preceding 18 months.³

Arrangements applicable in 2008 meant that students whose parents' income was below a threshold, given the number of siblings, and whose household wealth was sufficiently low received the maximum Youth Allowance payment. For those aged under 18 years, their parents normally received payments on their behalf. Individuals whose parents' income was above that threshold received a lower payment, reduced by \$1 per annum for every \$4 their parental income exceeded the threshold (ignoring the personal income test – described below – that is applied after the parental income test). These individuals received a partial allowance up to the parental income level at which their eligibility was exhausted. Such an eligibility regime is reflected in figure 1, where the 2008 Youth Allowance income eligibility parameters are used to show the income ranges within which varying levels of student income support are paid to a person aged under 18 years living at home. Such individuals living at home whose parental income is less than \$31 400 received the maximum payment of \$5057 per annum (segment A).

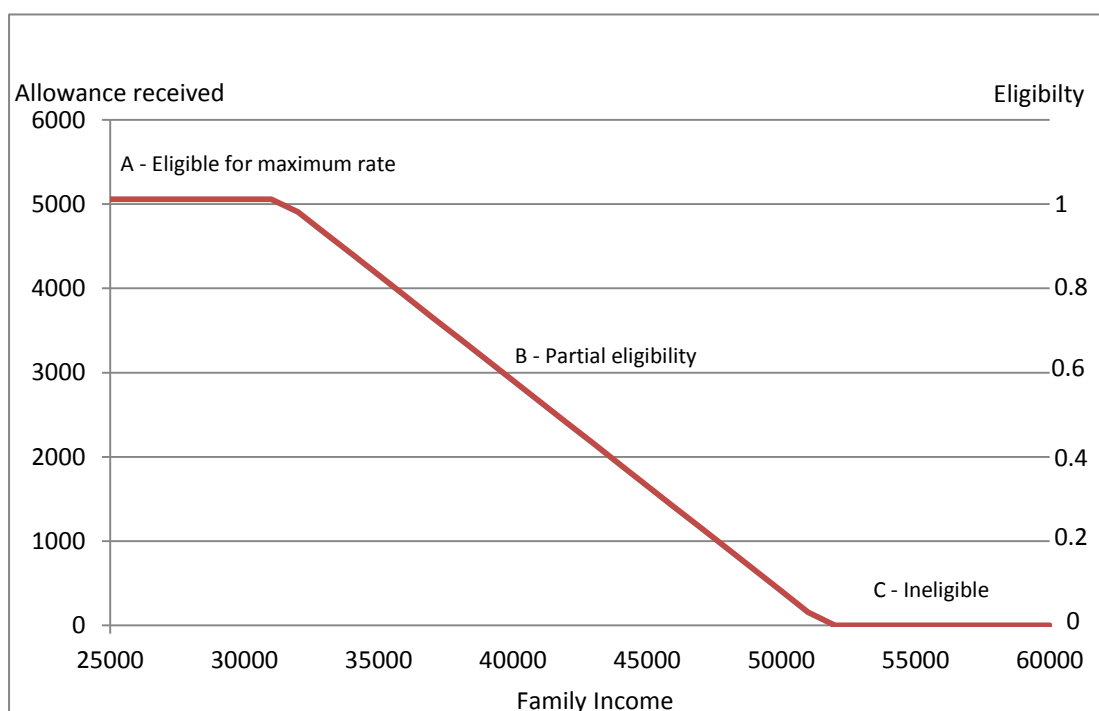
³ There are a number of other independence criteria, including criteria based on individual circumstances, spelled out in the Youth Allowance brochure available at <www.centrelink.gov.au>, but these are the main criteria that were relaxed with the introduction of the Youth Allowance in 1998. Individuals can also qualify for independence through workforce participation whereby they had worked part-time for at least 15 hours a week for at least two years after leaving school.

Those with parental incomes above that but less than \$51 628 received a lower payment (segment B), while those with parental incomes beyond \$51 628 were ineligible for student income support (segment C).⁴

In 2008, the annual payment for those aged 18 years or over and living at home was \$6080, while both the living away from home and independent rates were \$9240. Since these are larger amounts that also fall by \$1 per annum for every \$4 their parental income exceeded the same threshold as for those under 18 years, this meant the threshold at which partial eligibility ceases was higher for those over 18 years than that shown in figure 1. That is, students whose families were slightly higher up on the income-distribution scale were eligible for at least partial Youth Allowance once they reached 18 years of age, even in the absence of their satisfying independence criteria.

The parental income thresholds for Youth Allowance were affected by the number and type of siblings an applicant had. In 2008, the threshold increased by around \$1200 per annum for another dependent child aged under 16 years and \$2600 for subsequent young dependents. The threshold increased by \$3800 for dependents aged 16 to 24 years and almost \$7600 for another tertiary student receiving a living away from home Youth Allowance payment. The income-free area of the personal income test for students in 2008 was \$236 per fortnight. Any income above that up to \$316 reduced the Youth Allowance payment by 50% of each additional dollar of income, while income above \$316 reduced the payment by 60% of each additional dollar of income. Assets tests were applied to family income if the student received a dependent rate and to their personal assets if they were receiving the independent rate.

Figure 1 Eligibility thresholds for Youth Allowance: 2008 parameters for individuals living at home and aged under 18 years



⁴ Those aged 18 years or older receive just over \$6000 per annum, those living away from home over \$9200, with ineligibility parental income thresholds of around \$58 000 and \$68 000, respectively.

Data and descriptive statistics

This paper addresses the research questions outlined in the introduction using data from the Longitudinal Surveys of Australian Youth Y95, Y98 and Y03 cohorts. It utilises responses to questions about receipt of Youth Allowance (including the amount received) asked of students in the third wave (second wave for the Y03 cohort) and beyond for each of the cohorts. Most of the formal analysis in the report is undertaken using regression analysis, borrowing from the matching literature on program evaluation (see Heckman, LaLonde & Smith 1999 and Blundell & Costa-Dias 2000, for example) to ensure that comparisons are made only between those individuals who are as alike as possible in terms of their background characteristics, but who vary in their receipt of Youth Allowance.

The key features of the cohorts' experiences of the Youth Allowance payment regime are summarised in table 1. About one-quarter of school students reported that they or their family were eligible for Youth Allowance in the first year the cohort was asked about eligibility (at an average age of 16.7 [Y03] or 16.5 [Y98, Y95] years). The proportion of tertiary students who received Youth Allowance was higher, at closer to 30%. This was measured in the relevant year, when most members of the cohorts were able to commence post-school studies after completing Year 12, given the grade they were in when first surveyed.

The issue of data quality is also addressed in table 1. While at high school, a substantial proportion of the Youth Allowance recipient population in LSAY do not report the amount of Youth Allowance their parents receive. This is probably not surprising. The proportion who do not know the amount of Youth Allowance received drops substantially among tertiary students, presumably reflecting the fact that it is paid directly to them.

A substantial number of students, especially tertiary students, volunteer an amount for their receipt of Youth Allowance that appears 'high', given their circumstances. LSAY data contain information on the number of siblings an individual has, whether or not they live with their parents, a partner or children, and their age. Hence it is possible to estimate to some extent the potential maximum amount an individual might be paid and compare that to the amount they report. In a substantial number of cases this report appears 'high' relative to their theoretical maximum. Unfortunately, there is no way of knowing from the LSAY data whether individuals satisfy other Youth Allowance independence criteria. Hence, many individuals with 'high' values may be those classified as independent for the purpose of receipt of Youth Allowance.

Table 1 Education related activities and reports of Youth Allowance receipt, Y95, Y98 and Y03

Activity	Y95		Y98		Y03
	1997 school	1999 post-school	2000 school	2002 post-school	2004 school
Not studying	13.1	53.7	6.2	55.1	9.2
Studying, no YA receipt	64.9	31.8	71.9	32.8	68.0
Receipt, amount not provided	7.0	1.4	7.4	0.5	8.7
Valid YA value	8.1	9.8	13.1	7.4	12.1
High YA	6.9	3.2	1.4	4.3	2.0
Total	100.0	100.0	100.0	100.0	100
Percentage of total receiving YA	22.0	14.4	21.9	12.2	22.8
Percentage of students receiving YA	25.3	31.1	22.8	27.2	25.0
Observations	10 319	8 795	9 548	7 762	9 379

Note: YA = Youth Allowance.

Source: Estimated from LSAY Y95, Y98 and Y03 cohorts, based on unweighted data.

Tables 2 and 3 contain background information on individuals in the LSAY Y95 and Y98 cohorts, according to whether they were studying and whether or not they received Youth Allowance. The top panel in each table shows the characteristics of subjects observed in school in Year 11, while the lower panel shows the background characteristics of those who remained in the survey in the first year after most of those in the cohort would have undertaken their Year 12 studies. Definitions of the relevant background characteristics and other variables are provided in appendix A.

A number of well known phenomena are evident in the tables. Girls are more likely to stay in study than boys. Those studying but not in receipt of Youth Allowance tend to come from higher SES backgrounds than either those who do not remain in study or who receive Youth Allowance. The group who study post-school and who do not receive Youth Allowance are still a more select group, in terms of their socioeconomic status (SES) background (more of their parents have degrees and tend to work in higher-status occupations), than either the group not in education or in education and in receipt of Youth Allowance. Most of the characteristics of the Youth Allowance receipt group match those of the group who have left education, except that the group still studying are much more likely to come from non-English speaking backgrounds and have had higher levels of Year 9 achievement.

Table 2 Characteristics of students by receipt of Youth Allowance, compared with non-students, Y95 in 1997 and 1999

	Not studying	Studying	
		No YA	Receives YA
Y95 at school recipients in 1997			
Share who are male (%)	60.3	47.7	44.8
Has parent with degree (%)	10.6	32.1	15.4
Parental occupational SES in Year 11 (ANU3 scale)	29.5	40.4	28.1
Non-English speaking (%)	2.0	6.6	10.6
Metropolitan school (%)	40.4	58.9	54.1
Indigenous background (%)	5.8	1.2	3.6
Rank of postcode receipt of Commonwealth benefits	0.54	0.45	0.55
Percentage in top achievement quartile	9.4	30.6	20.3
Share of 1997 respondents (%)	14.5	62.8	22.6
Share of 1997 students (%)	-	73.5	26.5
Y95 post-school recipients in 1999			
Share who are male (%)	54.2	42.9	40.5
Has parent with degree (%)	17.2	43.4	21.0
Parental occupational SES in Year 11 (ANU3 scale)	33.0	44.9	31.1
Non-English speaking (%)	3.1	10.1	14.6
Metropolitan school (%)	49.2	67.4	53.0
Indigenous background (%)	3.0	0.7	2.6
Rank of postcode receipt of Commonwealth benefits	0.52	0.40	0.53
Percentage in top achievement quartile	16.7	40.4	26.8
Share of 1999 respondents (%)	55.8	29.5	14.6
Share of 1999 students (%)	-	66.9	33.1

Note: SES = socioeconomic status.

Source: Estimated from LSAY Y95 cohort, based on weighted data.

Table 3 Characteristics of students by receipt of Youth Allowance, compared with non-students, Y98 in 2000 and 2002

	Not studying	Studying	
		No YA	Receives YA
Y98 at school recipients in 2000			
Share who are male (%)	66.7	50.7	47.6
Has parent with degree (%)	13.4	34.4	17.3
Parental occupational SES in Year 11 (ANU3 scale)	28.6	40.0	28.0
Non-English speaking (%)	1.5	6.6	9.7
Metropolitan school (%)	38.2	56.2	50.5
Indigenous background (%)	7.0	1.6	3.4
Rank of postcode receipt of Commonwealth benefits	0.50	0.49	0.56
Percentage in top achievement quartile	5.4	27.7	18.2
Share of 2000 respondents (%)	7.5	68.8	23.7
Share of 2000 students (%)	-	74.4	25.6
Y98 post-school recipients in 2002			
Share who are male (%)	55.5	47.2	40.7
Has parent with degree (%)	21.0	46.5	24.9
Parental occupational SES in Year 11 (ANU3 scale)	33.7	44.2	32.2
Non-English speaking (%)	4.5	9.4	13.0
Metropolitan school (%)	47.5	65.5	54.0
Indigenous background (%)	3.2	0.6	2.5
Rank of postcode receipt of Commonwealth benefits	0.53	0.44	0.54
Percentage in top achievement quartile	14.4	39.7	29.4
Share of 2002 respondents (%)	57.8	29.4	12.8
Share of 2002 students (%)	-	69.7	30.3

Source: Estimated from LSAY Y98 cohort, based on weighted data.

Summary

The data related to receipt of Youth Allowance in LSAY are of variable quality. School students often do not know the amount of Youth Allowance their parents receive on their behalf. Post-school students do report this amount, but tend to report high values, given their apparent circumstances. This may reflect, in part, that the independence status of individuals is not reported in the data. Other features of the data are as expected: the group who continued studying beyond school had higher SES-related characteristics than those not studying. The same group also had higher levels of school achievement. Among students, those in receipt of Youth Allowance come from lower in the social background distribution than those not eligible.

Youth Allowance and participation in post-school education

The analysis of this section takes the work of Cardak and Ryan (2006) as its point of departure. Cardak and Ryan (2006), who also used LSAY data, found that, conditional on the ENTER score achieved by young Australians at the end of secondary school, university participation rates did not differ between groups defined according to their social background. The university participation rates of the 'rich' and 'poor' groups differed because the ENTER scores of the higher socioeconomic status group were substantially higher than that of the low SES group.⁵ In the paper by Cardak and Ryan (2006) these results were interpreted as indicating that the Higher Education Contribution Scheme (HECS) had not discouraged participation at university in Australia. However, the results actually implied that there were no systematic differences in or factors that got in the way of participation across the social background distribution. One possible interpretation is that the set of institutions in Australia, including HECS and Youth Allowance, had removed any disincentives to university participation.

Given the characteristics of the available data on receipt of Youth Allowance among tertiary students, the results in Cardak and Ryan (2006) are used to tailor the analysis of the effect of Youth Allowance on post-school participation. First, the effect of Youth Allowance on participation is estimated only among those who obtain an ENTER score. Whether individuals not at university would have been eligible for Youth Allowance is inferred from two sources of information: whether they or their family were ever eligible for Youth Allowance when they were at school; and whether they were eligible for Youth Allowance because they could not find a job. This approach seems likely to be biased towards finding little effect from the availability of Youth Allowance. The focus is on analysis of the Y95 and Y98 cohorts, since university attendance is observed for the entire cohorts for those groups.

Estimating eligibility where it is not observed

The major problem to be overcome in the analysis of post-school education and training participation among the LSAY cohorts is that the eligibility for Youth Allowance (under the eligibility applicable at the time) of those not in education is not perfectly observed. Those in education and training are asked whether they receive Youth Allowance and the amount received. Individuals are also asked if they receive Youth Allowance as jobseekers, among other forms of government payments. The key question, however, is whether those not in education would have been eligible for Youth Allowance if they had been studying. The problem, then, is to estimate potential Youth Allowance eligibility for those for whom this is not observed.

⁵ In that paper, there was no evidence that reverse causation (only those intending to go to university got high ENTER scores) or that other selection effects associated with who actually obtained ENTER scores affected these conclusions.

Since Youth Allowance involves application of common eligibility criteria for young people aged under 21 years, it seems reasonable to assume that anyone in receipt of Youth Allowance as a jobseeker would also receive it if they were students. For others not studying, it is less clear, but historical information from individuals about their receipt of Youth Allowance while at school can be used to estimate their likely receipt if they had instead chosen to study. The exact approach adopted here to do this and other alternative approaches are discussed in more detail in appendix B.

In aggregate, the outcome of the preferred method used here allocates close to 40% of the non-student population in both cohorts in their first year after completing school as potentially eligible for Youth Allowance had they undertaken further studies. For both cohorts, this estimate is about ten percentage points higher than the proportion of students actually receiving Youth Allowance, but a difference of this magnitude is not surprising since university students in general come from higher SES backgrounds than non-students. While the estimated effects of Youth Allowance receipt are reported only for the preferred allocation method in the body of the paper, the results for the other approaches are summarised in appendix B.

Participation effects

The relationship between university participation and ENTER scores for the Youth Allowance-eligible group and the ineligible group, as estimated using the preferred approach outlined above, is shown in figure 2. This relationship is shown in the first year after the cohort completed Year 12. The relationship between ENTER scores and full-time VET participation in the two cohorts is shown in figure 3. The two figures show a divergent pattern. University participation increases with student ENTER scores, while VET participation increases initially with higher ENTER scores but falls with ENTER scores of above 50 (individuals are more likely to go to university instead). In no case does the line for the eligible group lie noticeably above that of the ineligible group. Visually, participation rates among those in receipt of Youth Allowance appear no higher than is the case for the ineligible group.

Figure 2 ENTER scores and university participation among those eligible or ineligible for Youth Allowance, Y95 and Y98

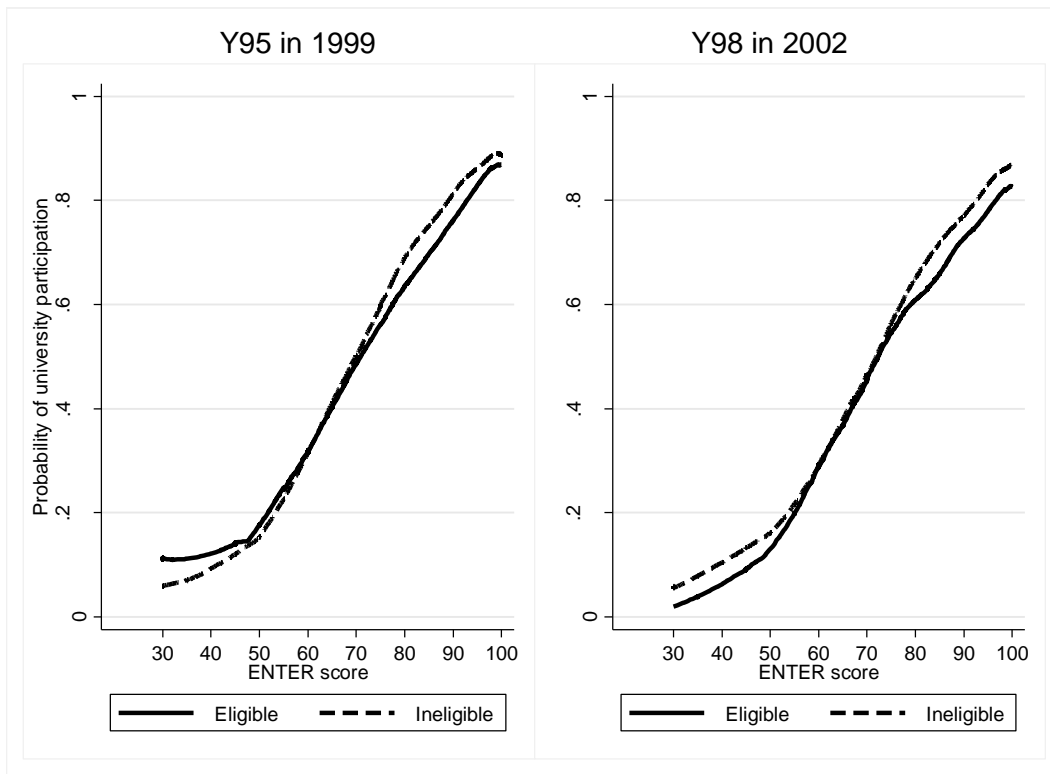
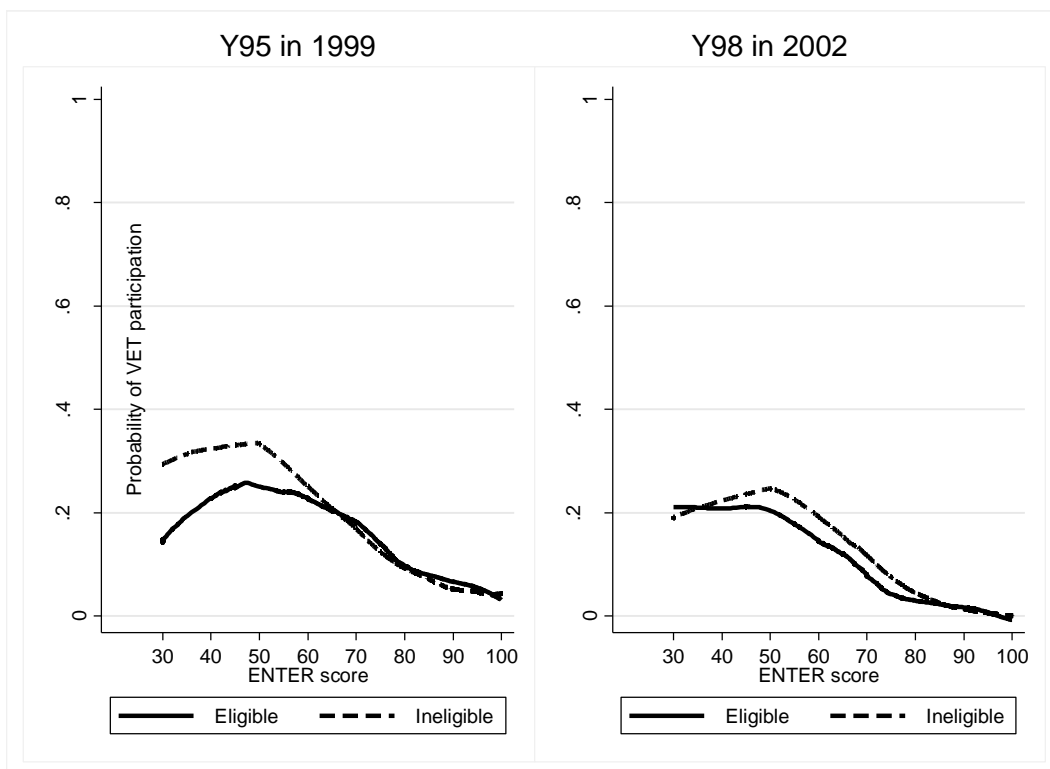


Figure 3 ENTER scores and full-time VET participation among those eligible or ineligible for Youth Allowance, Y95 and Y98



Regression results, summarised in table 4, confirm this impression. Table 4 contains estimates of the parameter on the Youth Allowance eligibility variable across a number of alternative regression specifications. The dependent variable takes the value 1 if individuals participate in university or full-time VET in the first possible year their cohort could do so (1999 for Y95 and 2002 for Y98) and zero otherwise. University students are excluded from the denominator of the full-time VET equation and vice versa. The equation is estimated only over those potentially eligible for university study, specifically those who obtained a Year 12 certificate from their state certification authority and reported a valid ENTER score in the LSAY data. The alternative specifications include estimation of least squares equations with weighted data, along with estimation of the same equation via probit analysis. The detailed results are provided in appendix C tables C.1 to C.4. The equations include a small set of other explanatory variables (following Cardak & Ryan 2006: gender, number of siblings, whether the student was born overseas in a non-English speaking country and whether the respondent's father had completed a university degree) and also allow for the relationship between participation and ENTER to differ for values above and below 50.

Table 4 Youth Allowance eligibility effects on university and VET participation (summary)

Equation	Y95	Y95	Y98	Y98
	Full cohort	Half cohort	Full cohort	Half cohort
University participation (weighted)	-0.039*** [0.014]	0.031 [0.019]	-0.027* [0.015]	-0.002 [0.019]
University participation (probit)	-0.052*** [0.019]	0.036 [0.023]	-0.018 [0.018]	0.023 [0.024]
University matching estimate	-0.017 [0.029]	-0.036 [0.029]	-0.064** [0.030]	0.014 [0.030]
VET participation (weighted)	-0.050*** [0.018]	-0.031 [0.024]	-0.039* [0.020]	-0.001 [0.027]
VET participation (probit)	-0.049*** [0.017]	-0.034 [0.022]	-0.024 [0.020]	0.026 [0.027]
VET matching estimate	-0.095*** [0.035]	-0.064 [0.040]	-0.051 [0.041]	-0.095*** [0.038]

Notes: Standard errors in brackets.

* indicates parameter estimate is significantly different from zero at 10%; ** significant at 5%; *** significant at 1%.

Source: Estimated from LSAY Y95 and Y98 cohort, based on weighted data where indicated.

For the full sample of individuals from the Y95 cohort, eligibility for Youth Allowance appears to be associated with lower participation in both university and full-time VET studies, across a variety of specifications reported in the first column. The magnitude of the effects is of the order of 4–5 percentage points lower participation in university and full-time VET studies for Y95. The regression estimates for Y98 for the full sample in column 3 of table 4 are smaller and not significantly different from zero for the Y98 cohort.

These results do not seem to be affected by the way gap year studies have been ignored here. When the analysis was re-estimated to treat gap year students as university students there was little substantive change in the results, since students change categories (an increase in the proportion of students) for both the eligible and ineligible group. Two of the other three approaches to allocating those not studying to eligibility categories provide similar results to those presented here. The exception is when potential eligibility is based solely on Youth Allowance receipt in Year 12, where the eligibility effects are positive. This approach is not very satisfactory, since the data indicate such an allocation is inadequate (see appendix B), and the threshold eligibility should move for those aged 18 years or more (figure 1).

However, it is far from clear that this equation should be estimated for all individuals in the cohort. Ideally, the best estimate of the impact of Youth Allowance on participation in education would come from comparing the behaviour of those either side of the eligibility thresholds in figure 1. Since these depend on family income, which is not available in LSAY, this is not possible. As analysis based on regression discontinuities makes clear, it is only those observations close to the eligibility thresholds that are informative about the impact of the program or intervention on behaviour. Similarly here, the participation behaviour of individuals from high SES-backgrounds would not appear to be very informative for the effect on education participation of those eligible for Youth Allowance. Ideally, the aim is to compare the participation behaviour of individuals who appear to be very similar except that one group is eligible for Youth Allowance while the other is not. Such a comparison is similar to the idea of 'matching'. Unfortunately, the situation here does not meet the key assumptions required for matching to provide valid estimates of the impact of some government program or intervention. Matching has heavy information requirements. Specifically, it is assumed that analysts have access to all information that determines subject participation or otherwise in the program and that conditional on all this information, those eligible are essentially similar to those who do not undertake the program. In this case, those eligible have levels of family income different from those who are marginally ineligible, but these differences are not observed here.

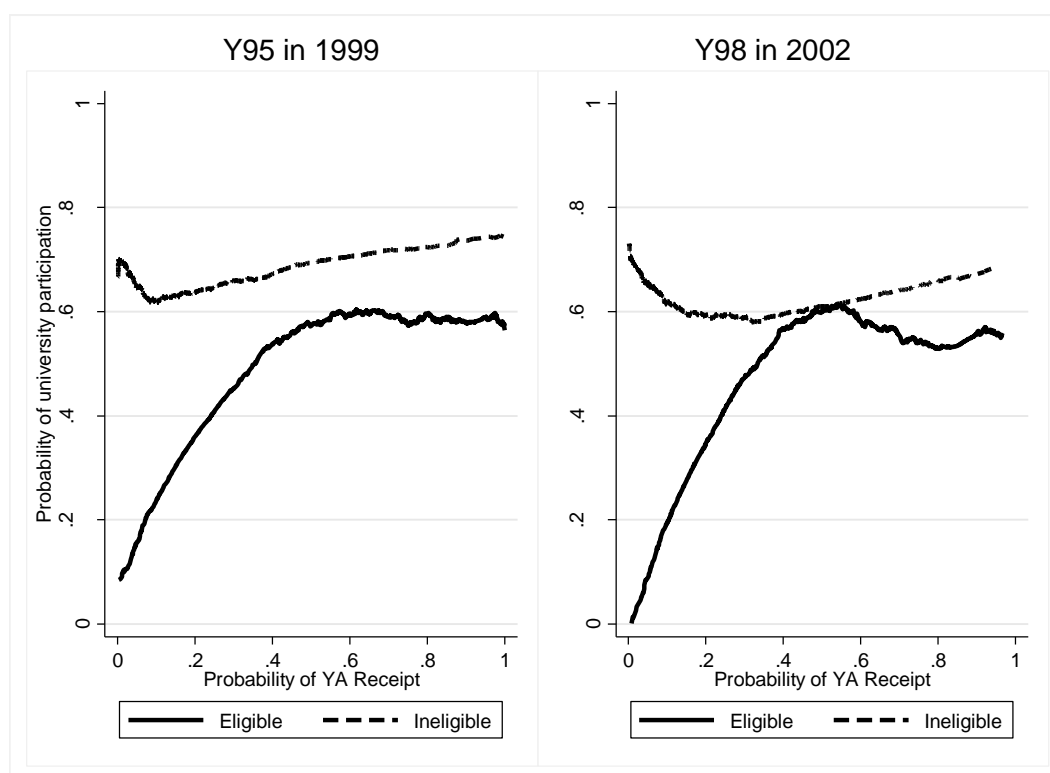
Matching estimates based on propensity score matching are also reported in table 4. The propensity score is based on estimates of whether individuals are eligible for Youth Allowance, including the estimates for those not currently studying. The relationship between university participation and this propensity to receive Youth Allowance is shown in figure 4 for the two cohorts. It points to participation being generally lower among the group eligible for Youth Allowance than the ineligible group, although there are relatively fewer observations in the ineligible group, whose propensity score value exceeds the eligible group by 0.2. Where people are matched on the basis of this propensity, along with their gender and ENTER scores, there are negative effects on participation in VET studies in Y95 and university studies in Y98. Since one of the key assumptions of matching is not met here, very little store should be placed in these estimates.

Instead, the propensity score is used to estimate the regression equation over the half of the sample seemingly most likely to be eligible for Youth Allowance. That is, the equations are re-estimated only with observations whose propensity score was above the median value in each of the two cohorts. This changes the composition of the estimation sample towards those who are eligible for Youth Allowance, from around one-third of the sample to almost one-half. This limits the analysis to those most alike in terms of their SES-background characteristics, even if their

family incomes are unknown, and assesses whether those who are eligible in the group have different participation rates from the rest of the group most like them. These results are also presented in table 4, in the second and fourth columns headed ‘Half cohort’ for the two cohorts. These results show no significant differences in participation.⁶

For participation in university studies, Youth Allowance parameters are typically positive, while the VET effects remain negative but are substantially smaller than for the full cohort results in table 4. Among the group most likely to be eligible for payment, those who actually were eligible did not have significantly lower university participation rates than those like them, but who had somewhat higher levels of family income.

Figure 4 Youth Allowance eligibility and probability of Youth Allowance receipt on probability of university participation, Y95 and Y98 (holding constant ENTER score)



The results for VET study are qualitatively similar, although the parameters are often negative. Interpretation of the results for VET participation is somewhat more problematic. Since the focus here is on full-time VET studies among those who have completed Year 12, no account is taken of the role of apprenticeships and traineeships in VET participation and how that form of participation among the potentially Youth Allowance-eligible population may affect other forms of participation. In the absence of a much more detailed analysis of VET participation across a range of potential forms of participation, not too much should be drawn from the Youth Allowance participation estimates in this paper.

⁶ A related approach involves weighting the data using a transformation of the propensity score (Nicholls 2008, 2009) to give greatest weight to those in the ineligible group most like those in the eligible group. The results are qualitatively similar to those presented.

Summary

The estimates of the relationship between Youth Allowance and education participation presented here are not causal estimates. It has not been possible to identify participation behaviour among marginal recipients of Youth Allowance to estimate such causal effects (as in van de Klaauw 2002). Rather, the estimates are of participation among the Youth Allowance population compared with that of the ineligible group. Participation in university among those who obtained a Year 12 certificate does not appear to be significantly lower among the Youth Allowance-eligible population than among those most like them in the ineligible population. Participation in full-time VET may be lower, though the operation of the apprenticeship system, excluded from the analysis here, makes this difficult to judge.

Gap years and receipt of Youth Allowance

Previous literature

James et al. (2007) surveyed existing university students and found that financial matters and the eligibility for Youth Allowance did affect participation patterns. For example, over 20% of undergraduate respondents indicated they had taken a gap year prior to commencing university, with 10% of them stating the main reason being to establish their independence for Youth Allowance eligibility purposes. Since about a quarter of undergraduate respondents received Youth Allowance, this means that the eligibility rules for Youth Allowance affected the participation patterns of almost 10% of undergraduate Youth Allowance recipients. The report further found that many Youth Allowance recipients supplemented their income via employment while studying. This research suggests that the availability and operation of Youth Allowance affects participation patterns among those who are currently students.

Analyses of the characteristics of those who undertake 'gap' years indicate that they tend to be among the poorer academic performers among those who attend university, have poorer attitudes towards education, are more likely to be from non-English speaking backgrounds and tend to come from more advantaged family backgrounds (those who received Youth Allowance while at school are less likely to undertake gap years) (Curtis, Mlotkowski & Lumsden 2012; Birch & Miller 2007).

Curtis, Mlotkowski and Lumsden (2012) found that receipt of Youth Allowance was greater among those who undertook gap years than those in the same SES quartiles who did not undertake gap years, where the SES quartiles were based on parental occupations. They also found that few students cited establishment of Youth Allowance eligibility as a reason for their undertaking a gap year. However, since most work during the year, about 15% of those who undertook a gap year earned enough to establish their independence for the purposes of Youth Allowance eligibility. Curtis, Mlotkowski and Lumsden (2012) found that undertaking a gap year was not associated with course non-completion. As noted earlier, the Bradley Review expressed concern about the operation of the independence criteria for Youth Allowance, in that they appear to encourage otherwise ineligible young people to establish their eligibility by working while undertaking a 'gap year'.

Birch and Miller (2007) found that those who undertook a gap year had better university grades at the University of Western Australia than those who did not, conditioning on their ENTER scores, although the relationship between undertaking a gap year and SES was unclear. (The SES measure was based on the postcodes of students' addresses, rather than family characteristics.)

Social background characteristics of gap year students

Table 5 contains the average values of a series of variables related to socioeconomic status for the Y95 and Y98 cohorts, according to whether individuals undertook a gap year and whether they were eligible for Youth Allowance (but not their independent status, given data

limitations). Here, 'gap year' means that an individual completed Year 12 three years after they were first surveyed in Year 9 (1998 for Y95 and 2001 for Y98), and did not commence their studies at university in the calendar year following their Year 12 studies, but did commence studies in the calendar year following that (2000 for Y95 and 2003 for Y98). The proportions of students undertaking a gap year so defined in the two cohorts were 10 and 13% of all students.

The first two columns of table 5 compare the average SES characteristics of those who did (column 2) and did not (column 1) undertake a gap year. The various SES variables are defined and summarised in appendix A. The differences between the two columns confirm a number of the results in the literature. The group who undertake a gap year come from lower socioeconomic status backgrounds. Their parents tend to work in lower-status jobs where they work, are less likely to work and are less likely themselves to have completed a degree. They are less likely to have attended private schools and they live in lower income and wealth suburbs. On average, gap year individuals who subsequently enrol at university have ENTER scores some six to eight points lower than those who proceed straight to university. Taken together, the average characteristics of gap year students and other students are jointly significantly different from one another.

The third and fourth columns of table 5 contain the comparison of the same variables, this time between gap year students and other students, where neither group was eligible for Youth Allowance. Not surprisingly, the average characteristics of both groups are higher than the corresponding characteristics in the first two columns. Once more, the gap year group in both cohorts comes from lower average SES background than the group who did not undertake a gap year. The difference in the ENTER scores of the two groups is more pronounced than between the second and third columns.

The fifth and sixth columns of table 5 contain the same set of comparisons, this time for students who were eligible for Youth Allowance. This time, the differences between the columns are largely in the other direction: those who are or become eligible for Youth Allowance and who undertake a gap year tend to come from higher SES backgrounds than those who proceed straight to university study from school. Further, the differences in their ENTER scores are quite small. Once more, the differences between the average characteristics are jointly significant. One consequence of this pattern is that the differences between the SES backgrounds of gap year students who are eligible for Youth Allowance and those who are not seem smaller than between those who are eligible for Youth Allowance and proceed straight to university studies and those who are not eligible. Nevertheless, a joint test between the two groups of gap year students indicates that their average characteristics are also jointly significantly different from one another. The contrast in the pattern of differences between gap year and non-gap year students eligible for the Youth Allowance is certainly consistent, with some students who would not otherwise be eligible for Youth Allowance taking the gap year route to establishing their independence. However, it is not proof that the number doing so is substantial.

Table 5 SES-related characteristics of Youth Allowance recipients and those undertaking a gap year

	All students		Ineligible for Youth Allowance		Eligible for Youth Allowance	
	No gap year	Gap year	No gap year	Gap year	No gap year	Gap year
Y95						
Father's occupation (ANU3 scale)	38.4	34.8	43.4	40.3	27.0	27.1
Mother's occupation (ANU3 scale)	32.3	32.6	35.1	37.0	25.8	26.3
Father employed (%)	0.81	0.81	0.89	0.89	0.63	0.69
Mother employed (%)	0.70	0.74	0.76	0.79	0.57	0.67
Father has degree (%)	0.33	0.27	0.38	0.34	0.23	0.18
Mother has degree (%)	0.28	0.26	0.33	0.30	0.18	0.19
Independent school (%)	0.20	0.19	0.24	0.25	0.10	0.12
Catholic school (%)	0.27	0.28	0.28	0.33	0.24	0.23
Wealth ranking of postcode (%)	0.55	0.52	0.58	0.55	0.48	0.49
Income ranking of postcode (%)	0.62	0.58	0.67	0.65	0.50	0.49
ENTER score	82.1	74.1	83.4	74.6	79.2	73.3
Number of observations	2346	283	1668	170	678	113
Hotelling test — joint test of equality of means (statistic and <i>p-value</i>)	5.17	0.00	4.00	0.00	2.23	0.00
Y98						
Father's occupation (ANU3 scale)	39.1	36.7	43.8	41.2	27.5	31.8
Mother's occupation (ANU3 scale)	36.8	37.5	39.8	37.5	29.3	37.6
Father employed (%)	0.83	0.83	0.91	0.85	0.63	0.80
Mother employed (%)	0.74	0.76	0.78	0.74	0.63	0.79
Father has degree (%)	0.37	0.29	0.43	0.33	0.25	0.25
Mother has degree (%)	0.33	0.31	0.38	0.34	0.24	0.28
Independent school (%)	0.20	0.21	0.25	0.22	0.09	0.21
Catholic school (%)	0.26	0.19	0.27	0.18	0.22	0.20
Wealth ranking of postcode (%)	0.52	0.51	0.55	0.52	0.43	0.51
Income ranking of postcode (%)	0.60	0.58	0.64	0.62	0.49	0.52
ENTER score	82.6	76.5	83.5	74.9	80.5	78.1
Number of observations	2311	337	1695	163	616	174
Hotelling test — joint test of equality of means (statistic and <i>p-value</i>)	3.99	0.00	3.27	0.00	3.73	0.00

Source: Estimated from LSAY Y95 and Y98 cohort, based on weighted data.

Another way of looking at this issue is to use some of the analysis of the previous section, in which the likelihood individuals would be eligible for Youth Allowance, given their family characteristics, was estimated. For Y98, the average value of this likelihood for those who commenced university directly after leaving school was 0.55, while for the group who undertook a gap year and were eligible in their first year of university the average of the likelihood was 0.46, a significantly lower number. This indicates that the average characteristics of the two groups were indeed different. The differences between the groups for the Y95 cohort were not significant, however.

Table 6 contains a summary of the results of regression equations that aim to identify some of the determinants of the characteristics of individuals who undertook a gap year in the two cohorts. (The detailed estimates are in appendix C, in table I.5.) The difference in the two specifications for each cohort lies in the treatment of Youth Allowance eligibility, discussed below. The dependent variable takes the value of one, where an individual undertook a gap year, and zero, if they were a student who proceeded straight from school to university studies.

The main feature of interest in the results lies in the last two rows of the table. In the first column of results for each cohort, a variable reflecting whether individuals were eligible for Youth Allowance in their first year at university was included in the regression equation. The variable is positive and significant in the relevant equation for each cohort. For Y98, the coefficient is 0.148, suggesting that receipt of Youth Allowance is associated with a 15% increase in the probability that a student undertook a gap year. For Y95 the parameter was 0.055. These results reflect the proportions of individuals who proceed to university in different ways already evident from table 6: in both cohorts receipt of Youth Allowance is much more prevalent among the group who undertake a gap year.

Table 6 Determinants of who undertakes a gap year (summary)

Explanatory variables	Y98		Y95	
	YA effect	Residual effect	YA effect	Residual effect
Male	0.004 [0.013]	-0.002 [0.013]	0.011 [0.012]	0.015 [0.013]
Value ENTER score	-0.003*** [0.001]	-0.003*** [0.001]	-0.004*** [0.000]	-0.004*** [0.000]
YA eligibility	0.148*** [0.015]	-0.050 [0.050]	0.055*** [0.015]	-0.082* [0.043]
Unexplained YA amount received		0.233*** [0.055]		0.176*** [0.048]
Observations	2560	2536	2541	2488
R-squared	0.06	0.07	0.04	0.05

Notes: Standard errors in brackets.

* significant at 10%; ** significant at 5%; *** significant at 1%.

Source: Estimated from LSAY Y95 and Y98 cohort, based on weighted data where indicated.

The second specification for each cohort includes an additional explanatory variable related to the receipt of income support. This variable is the residual from an equation explaining the proportion of the maximum Youth Allowance value individuals received in their first year of post-school study. It takes high positive values among individuals whose receipt of Youth Allowance was 'high' relative to the characteristics relating to their socioeconomic status and their history of income support receipt while at school. Those whose eligibility was obtained through their undertaking a gap year and becoming 'independent' for the purposes of Youth Allowance would have high positive values for this variable, while those ineligible would have small negative values. The parameter on this variable is positive and significant in both equations. This would not seem to pick up any causal relationship, but rather confirms earlier

discussion, that those who undertake a gap year include many individuals whose eligibility for Youth Allowance shows a different relationship between their SES background and that of the relationship between individuals who are eligible without undertaking a gap year. This result confirms the types of concerns expressed in the Bradley Review about the role of the independence rules encouraging individuals to use the gap rule provisions to become eligible for Youth Allowance.

Other aspects of the results that lie behind table 6 (reported in appendix C, table C.5) are similar to results already in the literature: relatively few variables capturing the demographic characteristics of individuals are significant in regression equations for either cohort. There appear to be some SES-related effects: mother's occupation and employment status are significant for Y95; the average income in the suburb where people live is significant in both cohorts; and there is a non-English speaking effect in one cohort. The ENTER score of individuals has a negative effect on their propensity to undertake a gap year and is significant in all equations, suggesting that individuals who undertake a gap year tend to be of below-average school performance among the group of students who proceed to university.

Summary

Eligibility rates for Youth Allowance are substantially higher among students who undertake gap years than students who proceed to university straight from secondary school. This is not wholly explained by gap year students being from a poorer part of the social background distribution. In fact, gap year students who are eligible for Youth Allowance come from higher up the social background distribution than those who proceed to university straight from secondary school. The evidence suggests that many of those who undertake a gap year would have been much less likely to be eligible for Youth Allowance had they not done so, given their parents' characteristics.

Youth Allowance and course completion

Previous literature

In addition to potentially influencing participation, receipt of a student allowance may be important at the margin in helping students complete their studies. Some students may find the experience of financial hardship while studying is such that they fail to complete their studies. For example, McMillan (2005) found that 10% of students cited financial difficulties as their principal reason for discontinuing university study. An important question is the extent to which receipt of student income support may mitigate these effects. However, existing research using LSAY data has not found such a positive effect from student income support on university course completion. For example, McMillan (2005) explicitly analysed receipt of Youth Allowance on attrition and found no effect, while Marks (2007) found little difference in attrition rates between students from different social backgrounds.

Course completion

To the extent that receipt of Youth Allowance might affect course completion, it is likely to play only a small role. Factors other researchers have found are important in determining course completion include ENTER scores, hours of part-time work and gender.

In this study course completion is analysed using the Y95 and Y98 cohorts. Individuals are treated as having completed a course if they report that since their last interview they have ceased studying and have completed the requirements of their course, rather than having deferred, withdrawn, or otherwise had dropped out of it. The determinants of course completion were analysed among those who had ever commenced a post-school course. Those who were still studying when last interviewed in available data (2006 for Y95 and 2007 for Y98) were not included in the analysis.

Since this analysis is conducted only on those individuals who commenced a course and whose eligibility for Youth Allowance was at least observed in relation to the course, there is no necessity to use data where the eligibility status of individuals had to be estimated. Imputation was required only for the relatively small number of individuals who did not report the actual amount of Youth Allowance they received.

Table 7 contains a summary of the main results from regression estimation of the determinants of course completion for both university and VET courses. The more detailed results appear in appendix table C.6. In aggregate, of those in the Y95 and Y98 cohorts who commenced university courses, some 61% and 56% respectively completed them. The proportions of those completing full-time VET studies were 45% and 59% respectively. There are two sets of estimates each for university and VET course completion. The difference in the two sets of estimates reflects how Youth Allowance eligibility is treated. In one set of estimates, an indicator variable for whether individuals ever received Youth Allowance while undertaking their course is included in the equation. In the other, the average proportion of the maximum rate an

individual received over the years of their course was included in the equation. Both specifications support a positive role for receipt of Youth Allowance on course completion, especially for university courses, where the Youth Allowance-related parameters are significant in all equations. The estimates are of a substantial magnitude, with students who ever received Youth Allowance being somewhere between 4 and 10 percentage points more likely to complete their courses than other students. The differences between those ineligible and those who receive the maximum payment in every year they studied are even more substantial, especially in the Y98 cohort, where they are in the order of 20 percentage points among university students.

From the regression estimates, males were between 5 and 10 percentage points less likely to complete university courses than females. The gender differences are not significant in the VET equations, although the size of the gender effect is estimated to be similar to that of the university equation results. Those with higher ENTER scores were much more likely to complete university courses in both cohorts, but the direction of the ENTER effects on VET course completion was less clear: negative in the Y95 cohort, but positive for the Y98 cohort.

Figures 6 and 7 depict the relationship between ENTER score and course completion for university and VET courses respectively, separately for males and females. For university courses, completion clearly increases with ENTER score and the female completion line lies above that of males throughout most or all of its range in both cohorts. VET course completion appears more complex. For females, it largely rises with ENTER scores, except at the very top of the distribution of ENTER scores, where there are very few observations. For males, completion rates are higher than female rates at low ENTER scores; then they fall below those of females over much of the remainder of the range of ENTER scores.

Those who were employed during their university course and worked more hours were less likely to complete their courses than others working fewer hours. Hours of work are here defined as the average hours an individual worked over all years they were studying towards their course. Hours of work were not strongly associated with VET course completion however. Figure 5 shows the relationship between hours of work and course completion for both cohorts for both types of post-school study. In the Y98 cohort, each additional two hours of work per week over the university course was associated with a reduction in the probability of completing of one percentage point. It is unclear the extent to which this might reflect any causal effect of hours of work on university student performance and consequent drop-out. It seems likely that students uncertain about the continuation of their course may well respond by working more in order to improve their foothold in the labour market. Consequently, in the absence of experimental evidence or better information on why students work, it seems unwise to make too much of the direction and magnitude of this effect.

Summary

Receipt of Youth Allowance does appear to be positively associated with course completion among both university and full-time VET students. The estimates are of a substantial magnitude, with students who ever received Youth Allowance being somewhere between 4 and 10 percentage points more likely to complete their courses than other students. Hours of part-time work are negatively correlated with completion of university courses, but not full-time VET courses.

Figure 5 Relationship between hours worked and the probability of completing VET and university courses, Y95 and Y98

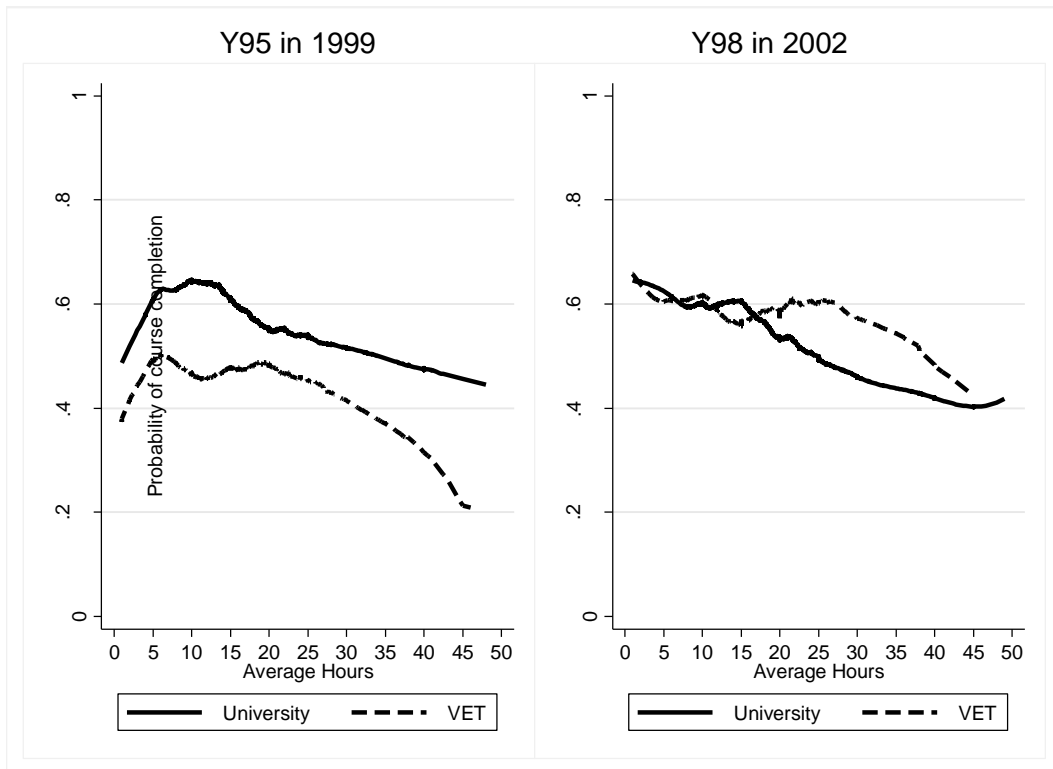


Table 7 Determinants of course completion (summary)

	University		Full-time VET	
	YA receipt	Amount of YA	YA receipt	Amount of YA
Y95				
Male	-0.093*** [0.021]	-0.093*** [0.021]	-0.086 [0.054]	-0.084 [0.054]
ENTER score	0.006*** [0.001]	0.006*** [0.001]	-0.003** [0.001]	-0.003* [0.001]
Hours worked	-0.003*** [0.001]	-0.003*** [0.001]	-0.003 [0.002]	-0.003 [0.002]
Ever received YA post-school	0.100*** [0.021]		0.093** [0.046]	
Amount of YA received		0.071** [0.035]		0.031 [0.070]
Observations	2417	2417	586	586
R-squared	0.06	0.05	0.05	0.04
Y98				
Male	-0.061*** [0.020]	-0.061*** [0.020]	-0.060 [0.043]	-0.057 [0.043]
Value of ENTER score	0.005*** [0.001]	0.005*** [0.001]	0.003* [0.002]	0.003* [0.002]
Hours worked	-0.005*** [0.001]	-0.005*** [0.001]	-0.002 [0.003]	-0.001 [0.003]
Ever received YA post-school	0.044** [0.022]		0.089 [0.056]	
Amount of YA received		0.202*** [0.055]		0.347** [0.159]
Observations	2343	2343	373	373
R-squared	0.05	0.05	0.06	0.06

Notes: Standard errors in brackets.

* significant at 10%; ** significant at 5%; *** significant at 1%.

Source: Estimated from LSAY Y95 and Y98 cohort, based on weighted data where indicated.

Figure 6 ENTER score effect on the probability of completing a university course, Y95 and Y98

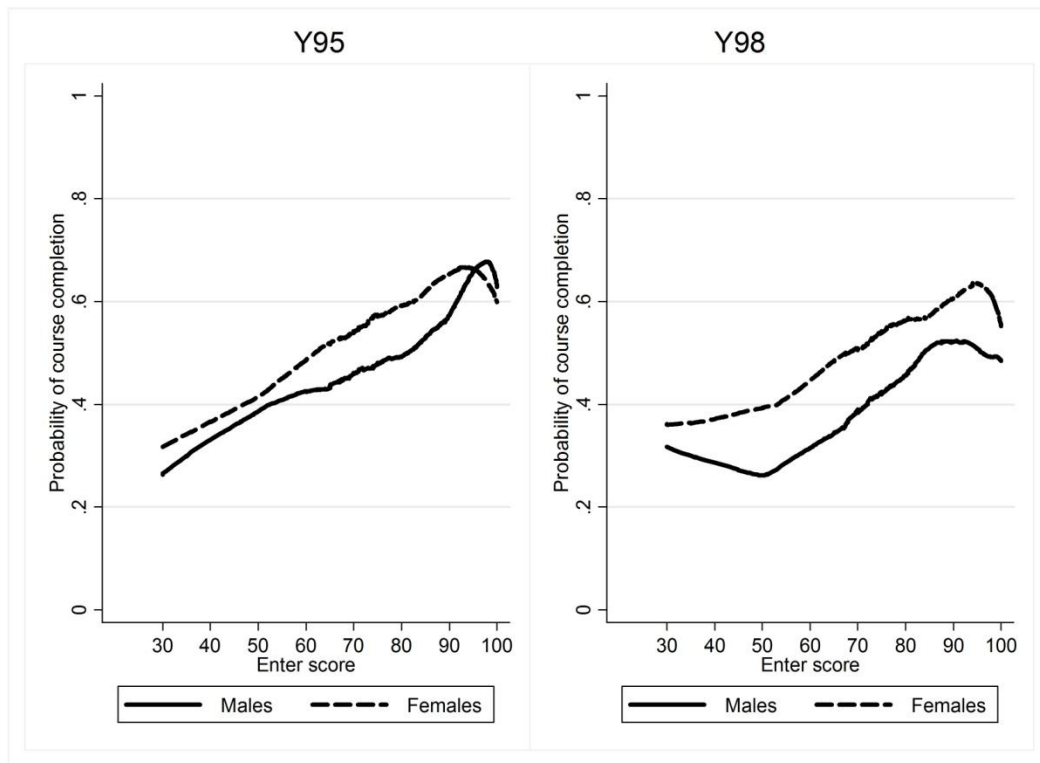
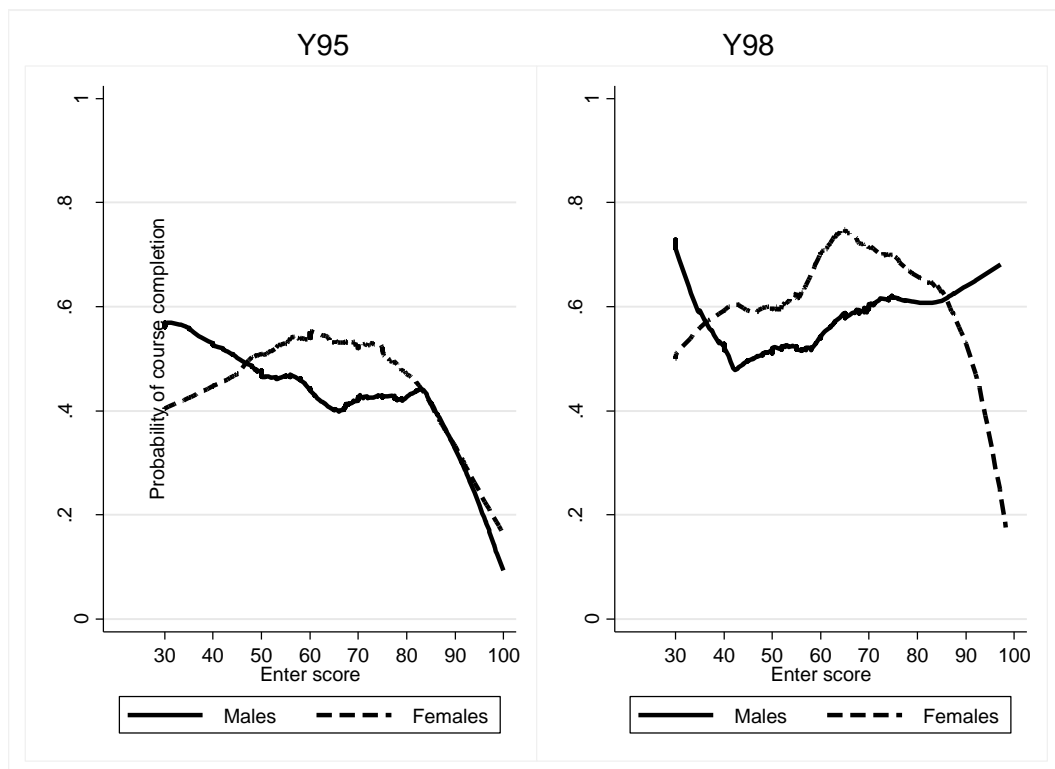


Figure 7 ENTER score effect on the probability of completing a full-time VET course, Y95 and Y98



Youth Allowance and the financial position of young Australians

Financial position of young Australians

As noted in the introduction, university students exhibit high levels of dissatisfaction in general about their financial position. For example, almost one half of the university students surveyed in James et al. (2007) agreed that their 'financial situation was often a source of worry to them' (p.44). A similar number felt that supporting their studies placed pressure on parents or partners. Student comments on the operation of government student income support focused on the complexity and unfairness of the rules and the inadequacy of the support. Despite this, an important question is the role student income support arrangements might have in mitigating or contributing to the overall financial dissatisfaction of students.

LSAY data on the financial position of young Australians

The purpose of this section is to utilise data from LSAY on the financial position of young Australians and how they view their situations and compare the responses of students in general, and those in receipt of Youth Allowance in particular, vis-a-vis other young people.

There are two sources of information on the financial positions of subjects in the LSAY Y95 and Y98 cohorts. First, all cohorts of LSAY subjects have been asked a series of questions about how they view their lives in every wave of the data. Subjects are asked to indicate whether they are 'very happy', 'happy', 'unhappy' or 'very unhappy' in relation to a set of 14 factors. Among these factors are:

- the money you get each week
- your standard of living
- your life as a whole.

The first two indicators will obviously capture some aspects of the financial position of respondents, while the last indicator is meant to provide a summary indicator of respondents' sense of wellbeing. In addition, it is possible to combine the set of 14 indicators into an overall 'life satisfaction' scale. In this scale, the response to the 'life as a whole' indicator receives the greatest weight.

In addition to these indicators, subjects in the Y95 and Y98 cohorts were asked a series of questions that address their financial position more directly, capturing elements of financial 'stress'. First, subjects were asked whether, in the past twelve months, because of a 'shortage of money' they had experienced any of a series of indicators of financial stress. These indicators included having to forego some necessary expenditure (not paying utility bills, being unable to go to the doctor), through to having to borrow money. Included among these financial stress indicators were:

- you had to ask family or friends for money
- you had to borrow money just to live on
- you couldn't buy text books or other study materials.

In addition, subjects were asked a summary question about how well they were managing financially, with allowable responses of 'very difficult', 'fairly difficult', 'neither difficult nor easy', 'fairly easy' and 'very easy'. Respondents in the Y98 cohort were asked these financial stress questions in all years from 2002 to 2007. This covers the period from the first year subjects might have been in university. Respondents in the Y95 cohort were asked these questions in all years from 2002 to 2006. This covers the period when many individuals would have been completing their university studies, but not commencing them. While results for both cohorts are reported, the data for the Y98 cohort may capture more effectively the experiences and views of university students about their financial position.

Analysis

These various financial and life satisfaction indicators are analysed according to the set of activities individuals might be observed as engaging in at the time they were interviewed in any year. Specifically, the interest is in how the responses to these indicators might differ according to the employment and study status of individuals.

Responses to the life satisfaction and financial stress indicators according to these employment and study status factors, pooled across all years, appear in tables 8 and 9 for the Y95 and Y98 cohorts respectively. In terms of the satisfaction indicators in the upper panel of each table, most people tend to be 'happy' or 'very happy' with their situations. Full-time students in receipt of Youth Allowance tend to be the least happy, even among other students. By comparison with other individuals, they are substantially more likely to have had to borrow money from family or from others to live on in the preceding 12 months. They have the lowest rates of responding that they are managing fairly or very easily financially. Those students who supplement their Youth Allowance through part-time work report higher levels of satisfaction but more incidence of financial stress. Of note is that the practice of borrowing money from family or from others to live on is quite widespread among young people, especially among those studying who also receive Youth Allowance.⁷

Some individuals may report consistently positive or negative views on their financial situation in all years of the data, and these individuals may be more likely to be in some of the situations identified in tables 8 and 9, so that the simple apparent relationships do not reflect the true relationships between the situations and the real views individuals have about their financial position. It is possible to exploit the longitudinal nature of the data to remove any individual fixed effects from the reported financial position of young people. The effects then estimated are the effects of changing the activity status of individuals on their financial position.

To round out the analysis, in addition to the employment and study status categories covered in tables 8 and 9, another set of factors principally involving the living arrangements of individuals

⁷ The question is explicit that the borrowing should be 'to live on'. To avoid any potential response error, those individuals in the process of purchasing their house are excluded from this calculation.

are included in the regression analysis reported in table 10 and appendix C. Specifically, the regression estimates identify how the responses to the financial satisfaction and stress indicators might differ depending on whether, when surveyed, individuals were: living with their parents; partnered; living with their children; employed in any job; employed full-time; buying a house; working as an apprentice; studying at university; studying full-time for a vocational education qualification; a part-time student; in receipt of government income support; or in receipt of Youth Allowance for post-school studies.

The fixed-effects parameters estimated indicate how the financial satisfaction or financial stress indicators change on average as subjects move into full-time employment, start or cease to be university students, move in with a partner, have a child, or start or stop receiving Youth Allowance for post-school studies. Results for the full set of fixed-effects estimates are presented in the appendix. The results for these indicators for the parameter on the variable reflecting receipt of Youth Allowance for post-school studies and for being a university student for each cohort are presented in table 10. These estimated effects take account of whether the individual has a part-time job or not, their living arrangements and other factors.

The estimates are based on fixed-effects least squares regression equations where the dependent variable in most cases is a dummy variable. That is, it takes the value 1 for an individual if a condition is met (the individual has experienced the financial stress or is 'happy' or 'very happy' with their financial position or life or they are managing easily financially) and zero otherwise. Only the life-satisfaction scale is a continuous variable. Therefore, for most of the equations, the estimated parameter in table 10 shows how the probability of meeting the condition changes if an individual changes state either to or from being a student Youth Allowance recipient. For example, in the Y95 cohort, student Youth Allowance recipients were 6.0 percentage points less likely to indicate they were 'happy' or 'very happy' with the money they received each week compared with others. Since there are more observations of university students in the Y98 cohort than in the Y95 one, and more transitions from university in the data, the estimates from the second cohort should be preferred over those from Y95.⁸

Being a university student is associated with experiencing some financial stress for both cohorts: students are less likely to believe they are managing well financially, are more likely to borrow money from their families and go without educational books, but are not much more likely to borrow money to live on from others.

Receipt of Youth Allowance is also clearly associated with reports of higher financial stress across the range of indicators. These effects are in addition to those experienced by other students, since being a student is included elsewhere in the regression equation. Youth Allowance recipients are more likely to borrow from family and friends, as well as others and go without educational books and materials than other university students. They are also less likely to believe they are managing well financially and are less satisfied with their financial position.⁹

⁸ Since the dependent variable is binary in a number of cases, it may be more appropriate to use the conditional logit model. Where this model was estimated for the relevant variables, the results were qualitatively similar to those presented here.

⁹ Having a part-time job may mitigate some of these effects, but does not completely remove them, as is evident from tables 8 and 9.

However, their responses about their financial position and the stresses they face do not translate into their having more negative views about their overall life satisfaction. These parameters are not significantly different from zero. This non-significance does not arise only because there is little variation in responses to the 'your life as a whole' question, since nearly everyone indicates they are 'happy' or 'very happy'. Where this equation is estimated in some cases where the indicator takes the value of 1 only for those very happy with their life as a whole, the parameter on the Youth Allowance variable is not significant in that case either. These responses contrast with those of general government income support recipients, who report less satisfied views about their financial position, more occurrences of financial stresses and lower levels of overall life satisfaction.

These regression results are not simply evidence that the eligibility rules for Youth Allowance pick out the most financially disadvantaged group among students. Rather, these effects are in addition to those experienced by other students. It may not be clear from these results what the reported levels of financial stress might have been had those in receipt of Youth Allowance received no allowance, but it is clear that, despite receipt of Youth Allowance, recipients report higher levels of financial stress than other students. They report the incidence of these stressors more than other students. Youth Allowance therefore is not operating to equalise the financial experience of students.

It is possible to include the personal income of individuals in the regression equations just discussed, whereby personal income is measured from the weekly wage and government payment levels reported by individuals. This makes it possible to estimate some kind of money equivalent of the level of disadvantage reported by individuals on student income support.¹⁰ This comparison works best for the question of how satisfied individuals are with the money they get each week. The estimates suggest that income support recipients in both cohorts would need substantially higher payments from Youth Allowance per week to remove their reported level of dissatisfaction, given the coefficient on income.¹¹

Summary

Full-time students in receipt of Youth Allowance tend to be the least satisfied about their financial position, even among other students, and experience more incidents related to financial 'stress' than other young people. They are substantially more likely to have had to borrow money from family or from others to live on than other individuals. They are less likely

¹⁰ Such calculations are undertaken commonly in the life satisfaction literature and are performed by dividing the parameter on the variable or characteristic of interest by that on the income variable. Since the former is often quite small, the resulting estimate of how many dollars would be required to offset the level of disadvantage associated with the variable or characteristic can be quite large. In this case, the calculation is made using the parameter on student Youth Allowance receipt in the satisfaction with 'money received each week' equation divided by the parameter on total income.

¹¹ The income variable is not always significant in all equations. For example, it is not significant in the 'standard of living', 'your life as a whole' or life satisfaction equations in either cohort. This is consistent with a common finding that income appears to have little impact on life satisfaction, although recent studies that use an 'unexpected' income shock do find a positive effect (see Frijters, Haisken-DeNew and Shields 2004, for example, who analysed the impact of German reunification on the life satisfaction of former East Germans). Inclusion of the income level typically has little impact on the other parameter estimates, with the exception of the full-time employment coefficient, which typically becomes substantially smaller. This might just reflect that it is the income concept reported most accurately in the data.

to view themselves as managing well financially. Regression analysis confirms the poorer self-assessed financial position of full-time students in receipt of Youth Allowance. These differences do not, however, seem to translate into their having lower levels of life satisfaction, in the way that these measures of financial stress are associated with lower levels of life satisfaction for young people in receipt of other forms of government income support.

Table 8 Life satisfaction and financial stress indicators, Y95 cohort

Activity	Life satisfaction indicator				Observations
	Money each week ^(a) %	Standard of living ^(a) %	Life as a whole ^(a) %	Life satisfaction scale	
Not working, not studying	65.8	94.7	97.4	-0.413	2 304
Working part-time	79.8	97.2	98.4	-0.061	4 234
Working full-time	85.9	98.4	99.1	0.112	14 442
Full-time VET, not working	66.4	98.7	98.1	-0.191	50
Full-time VET, part-time work	72.3	95.3	99.6	-0.185	123
Full-time VET, student allowance	49.2	92.6	96.4	-0.171	87
Full-time VET, student allowance part-time work	64.3	92.3	95.5	-0.321	84
At uni, not working	64.1	97.0	97.8	-0.200	346
At uni, part-time work	78.3	97.8	99.4	-0.038	1 264
At uni, student allowance	56.3	91.2	98.4	-0.345	473
At uni, student allowance part-time work	72.5	95.6	99.6	-0.082	849
Total	81.0	97.5	98.8	0.000	24 256

	Financial stress indicator				
	Asked family or friends for money ^(b) %	Borrowed money just to live on ^(b) %	Couldn't buy text books or other study materials ^(b) %	Managing financially ^(c) %	Ever borrowed money just to live on ^(d) %
Not working, not studying	42.6	23.0	5.9	51.4	44.3
Working part-time	33.8	14.7	6.2	65.2	37.1
Working full-time	20.2	8.1	2.2	76.6	21.2
Full-time VET, not working	32.2	10.5	21.8	52.5	42.7
Full-time VET, part-time work	30.2	18.6	8.2	58.8	39.8
Full-time VET, student allowance	46.1	18.2	18.2	42.0	26.0
Full-time VET, student allowance part-time work	51.3	26.9	25.6	46.8	38.1
At uni, not working	38.8	13.6	17.2	54.1	29.6
At uni, part-time work	40.5	15.6	13.9	62.2	31.1
At uni, student allowance	50.1	24.5	30.9	44.2	41.8
At uni, student allowance part-time work	52.1	27.1	30.9	53.8	42.4
Total	27.7	12.2	5.5	69.6	28.7

Notes: (a) Proportion 'happy' or 'very happy'.

(b) Proportion who experienced event.

(c) Proportion 'fairly easy' or 'very easy'.

(d) Proportion who borrowed money just to live on in any year of the survey.

Source: Estimated from Y95 waves 2002 to 2006.

Table 9 Life satisfaction and financial stress indicators, Y98 cohort

Activity	Life satisfaction indicator				Observations
	Money each week ^(a)	Standard of living ^(a)	Life as a whole ^(a)	Life satisfaction scale	
	%	%	%		
Not working, not studying	62.0	94.9	96.8	-0.478	2 881
Working part-time	82.8	97.7	98.3	-0.016	5 881
Working full-time	85.7	98.5	99.0	0.128	14 336
Full-time VET, not working	70.8	95.1	98.5	-0.293	255
Full-time VET, part-time work	82.0	98.2	98.5	0.085	638
Full-time VET, student allowance	63.9	96.1	97.4	-0.298	302
Full-time VET, student allowance part-time work	79.3	98.4	99.0	-0.022	289
At uni, not working	75.5	98.4	98.8	-0.207	1 446
At uni, part-time work	86.6	98.9	99.3	0.091	5 407
At uni, student allowance	68.5	96.6	98.5	-0.269	1 286
At uni, student allowance part-time work	79.5	97.6	99.4	0.009	2 220
Total	81.3	97.9	98.7	0.000	34 941

Activity	Financial stress indicator				
	Asked family or friends for money ^(b)	Borrowed money just to live on ^(b)	Couldn't buy text books or other study materials ^(b)	Managing financially ^(c)	Ever borrowed money just to live on ^(d)
	%	%	%	%	%
Not working, not studying	44.8	20.6	7.0	55.2	45.9
Working part-time	34.6	12.8	5.3	71.1	34.5
Working full-time	24.8	9.4	2.7	79.4	29.4
Full-time VET, not working	40.5	8.5	6.6	52.1	28.6
Full-time VET, part-time work	40.3	7.3	5.9	70.5	22.5
Full-time VET, student allowance	37.7	14.9	12.6	51.7	29.3
Full-time VET, student allowance part-time work	37.9	14.0	11.4	66.3	29.0
At uni, not working	36.5	7.6	8.7	67.7	26.5
At uni, part-time work	38.3	8.5	9.3	75.7	26.5
At uni, student allowance	46.7	16.2	18.9	51.9	37.2
At uni, student allowance part-time work	48.6	17.8	19.8	61.9	42.3
Total	33.2	11.6	6.4	72.1	32.0

Notes: (a) Proportion 'happy' or 'very happy'.

(b) Proportion who experienced event.

(c) Proportion 'fairly easy' or 'very easy'.

(d) Proportion who borrowed money just to live on in any year of the survey.

Source: Estimated from Y98 waves 2002 to 2007.

Table 10 Regression-based fixed effects of student Youth Allowance on financial satisfaction and stress indicators

Indicator	YA student recipient effect		University student effect	
	Parameter	Std error	Parameter	Std error
Y95 cohort				
Money each week	-0.060***	[0.013]	-0.017*	[0.010]
Standard of living	-0.008	[0.006]	0.006	[0.004]
Life as a whole	0.004	[0.004]	0.005	[0.003]
Life satisfaction scale	0.002	[0.028]	0.004	[0.022]
Ask family or friends for money	0.049***	[0.014]	0.074***	[0.011]
Borrowed money just to live on	0.070***	[0.011]	0.015*	[0.008]
Couldn't buy text books or other study materials	0.087***	[0.008]	0.085***	[0.006]
Managing financially	-0.069***	[0.015]	-0.077***	[0.012]
Y98 cohort				
Money each week	-0.022***	[0.008]	0.006	[0.007]
Standard of living	-0.007**	[0.003]	0.004	[0.003]
Life as a whole	0.003	[0.002]	0.004**	[0.002]
Life satisfaction scale	0.016	[0.017]	-0.023*	[0.014]
Ask family or friends for money	0.016*	[0.009]	0.075***	[0.008]
Borrowed money just to live on	0.042***	[0.007]	-0.007	[0.006]
Couldn't buy text books or other study materials	0.057***	[0.005]	0.041***	[0.005]
Managing financially	-0.063***	[0.009]	-0.053***	[0.008]

Notes: Full results for these regression equations appear in the Appendix. Standard errors in brackets.

* significant at 10%; ** significant at 5%; *** significant at 1%.

Source: Estimated from the Y95 cohort waves 2002 to 2006 and the Y98 cohort waves 2002 to 2007.

Conclusions and implications

The analysis in this report has been somewhat hampered by the nature of the available data. It has been possible to estimate how likely individuals whose receipt of Youth Allowance was not observed were to actually receive the payment. However, this has not allowed analysis of participation on the key dimension on which eligibility is based, namely, family income. Hence, the conclusions about the impact of receiving Youth Allowance on participation have been necessarily limited. Nevertheless, the best estimate is that those eligible to receive Youth Allowance go to university at about the same rate as those most like them in characteristics other than family income, but who happen not to be eligible to receive Youth Allowance.

This is a positive result. In conjunction with other government policies in Australia, such as the income-contingent deferred repayment of tuition fees, Youth Allowance appears to act to limit any disincentives that young people from disadvantaged backgrounds face in attending university. Not only are these disincentives limited by policy, they appear to have been largely removed.

Further, receipt of Youth Allowance appears to be positively associated with completion of both university and full-time VET courses. This does not make the act of undertaking post-secondary education and training a necessarily happy experience, however. Individuals undertaking post-secondary studies and who rely on Youth Allowance are more likely to report low levels of satisfaction with their financial position and more instances of financial distress than other young Australians. They are more likely to have to borrow money from their family and friends to cover their living costs. However, this does not lead to lower levels of reported life satisfaction. Although this does not suggest that individuals in receipt of Youth Allowance while studying are not facing significant hardship. The magnitudes of the effects on the financial stress indicators resemble those of other young people living on government income support. It does seem, however, that students receiving Youth Allowance both persevere to complete their courses and do not exhibit substantially poorer levels of life satisfaction. An important question for policy is the role an extension of eligibility for Youth Allowance might play in encouraging higher levels of course completion among the currently ineligible group.

Eligibility rules for independent status for the purposes of Youth Allowance during the period covered by this study clearly allowed some people from higher-status social backgrounds who undertook gap years to earn the required amount of income for later eligibility. It seems likely that many people who qualified via this route would not have otherwise been eligible for Youth Allowance, even if their purpose in undertaking the gap year was not principally to fulfil the eligibility requirements.

References

- Birch, ER & Miller, PW 2007, 'The characteristics of "gap-year" students and their tertiary academic outcomes', *Economic Record*, 83(262), 329–344.
- Birrell, R & Dobson, IR 1998, 'The equity implications of the new Youth Allowance legislation for higher education students', *People and Place*, vol.6, no.2, pp.61–70.
- Birrell, R, Dobson, IR & Smith, TF 1999, 'The new Youth Allowance and access to higher education', *People and Place*, vol.7, no.3, pp.19–30.
- Blundell, R & Costas-Dias, M 2000, 'Evaluation methods for non-experimental data', *Fiscal Studies*, vol.21 no.4, pp.427–68.
- Bradley Review 2008, *Review of Australian higher education: final report*, Department of Education, Employment and Workplace Relations, Canberra.
- Cardak, B & Ryan, C 2006, *Why are high ability individuals from poor backgrounds under-represented at university?*, La Trobe School of Business discussion paper A06.04, Melbourne.
- Chapman, B 2006, *Government managing risk: income contingent loans for social and economic progress*, Routledge, London.
- Chapman, B & Ryan, C 2005, 'The access implications of income contingent charges for higher education: lessons from Australia', *Economics of Education Review*, vol.24, no.5, pp.491–512.
- Curtis, D, Mlotkowski, P & Lumsden, M 2012, *Bridging the gap: who takes a gap year and why?*, LSAY research report, NCVER, Adelaide.
- Dearden, L & Heath, A 1996, 'Income support and staying in school: what can we learn from Australia's Austudy experiment?', *Fiscal Studies*, vol.17, no.4, pp.1–30.
- Department of Family and Community Services 2002a, *Youth Allowance evaluation, final report*, December 2001, Canberra.
- 2002b, *Youth Allowance evaluation, summary of survey findings*, Canberra.
- Frijters, P, Haisken-DeNew, JP & Shields, MA 2004, 'Money does matter! Evidence from increasing real income and life satisfaction in East Germany following reunification', *American Economic Review*, vol.94, no.3, pp.730–40.
- Heckman, JJ, LaLonde, RJ & Smith, JA 1999, 'The economics and econometrics of active labor market programs', in *Handbook of Labor Economics*, O Ashenfelter, and DE Card, (eds), vol.3a, pp.1865–2097, North-Holland, Amsterdam.
- James, R, Bexley, E, Devlin, M & Marginson, S 2007, *Australian university student finances 2006, Final report of a national survey of students in public universities*, Universities Australia, Canberra.
- Jones, FL 1989, 'Occupational prestige in Australia: a new scale', *Australian and New Zealand Journal of Sociology*, vol.25, pp.187–99.
- Jones, FL & McMillan, J 2001, 'Scoring occupational categories for social research: a review of current practice, with Australian examples', *Work, Employment & Society*, vol.15, pp.539–63.
- Marks, GN 2007, *Completing university: characteristics and outcomes of completing and non-completing students*, LSAY research report no.51, Melbourne.
- McMillan, J 2005, *Course change and attrition from higher education*, LSAY research report no.39, Australian Council for Education Research, Melbourne.
- Nicholls, A 2008, 'Causal inference with observational data', *The Stata Journal*, vol.7, no.4, pp.507–41.
- 2009) 'Erratum and discussion of propensity-score reweighting', *The Stata Journal*, vol.8, no.4, pp.532–39.
- van de Klaauw, W 2002, 'Estimating the effect of financial aid offers on college enrollment: a regression-discontinuity approach', *International Economic Review*, vol.43, pp.1249–87.

Appendix A: Variable description

Table A.1 Data and variable description

Background characteristics	Variable description	Y95 cohort		Y98 cohort	
		Mean	Std dev.	Mean	Std dev.
<i>Variables used in analysis of course completions, statistics for entire cohort</i>					
Male	A dummy variable taking the value 1 if the individual was male.	0.49	0.50	0.51	0.50
Parents' occupational status	Based on the father's reported current or past occupation in Wave 3 of both cohorts, or the mother's occupation where the father's was missing. This was then placed on the ANU 3 occupational status scale, which lies between 0 (farm labourers) and 100 (medical specialists). See Jones (1989) and McMillan and Jones (2000).	36.6	23.2	36.8	22.7
Father's occupational status	Based on the father's (mother's) reported current or past occupation in Wave 3 of both cohorts. This was then placed on the ANU 3 occupational status scale.	30.6	25.5	31.4	24.9
Mother's occupational status	Based on the father's (mother's) reported current or past occupation in Wave 3 of both cohorts. This was then placed on the ANU 3 occupational status scale.	27.3	21.7	30.0	21.9
Father's occupation missing	No report on the father's (mother's) current or past occupation in Wave 3 of both cohorts (=1).	0.18	0.39	0.17	0.37
Mother's occupation missing	No report on the father's (mother's) current or past occupation in Wave 3 of both cohorts (=1).	0.16	0.37	0.14	0.35
Father worked	Father worked when the student was in Year 11 (=1).	0.74	0.44	0.77	0.42
Mother worked	Mother worked when the student was in Year 11 (=1).	0.65	0.48	0.68	0.47
Mother single parent	Subject lived with single parent, mother headed household when in Year 11 (=1).	0.13	0.33	0.12	0.33
Father degree	Father completed a university degree (=1).	0.18	0.38	0.21	0.41
Mother degree	Mother completed a university degree (=1).	0.17	0.37	0.19	0.40
Both parents with degree	Both father or mother completed a university degree (=1).	0.09	0.29	0.12	0.32
Metropolitan	Student attended a school in a major metropolitan city (=1).	0.55	0.50	0.54	0.50
Indigenous	Student indicated they were from an Aboriginal or Torres Strait Island background, in which case the variable takes the value 1.	0.02	0.15	0.02	0.15
Number of siblings	Number of siblings reported by the individual.	2.1	1.4	2.1	2.3
Born overseas in English-speaking country	Student born overseas from Australia in a predominantly English-speaking country — specifically the British Isles, New Zealand, Canada and USA (=1).	0.03	0.17	0.02	0.15
Born overseas in non-English-speaking country	Student born overseas in a predominantly non-English-speaking country — specifically born overseas in a country other than those identified above (=1).	0.07	0.25	0.07	0.26
Independent school	Student attended an independent school in Year 9 (=1).	0.12	0.33	0.13	0.33
Catholic school	Student attended a Catholic school in Year 9 (=1).	0.20	0.40	0.20	0.40
Wealth rank of suburb/region	Ranking from 0 to 1 of postcode-based regions of average reported asset income in the postcode from Australian Taxation Office data. Data were averaged for 2001—2003 for the ranking of regions.	0.48	0.30	0.45	0.29

Background characteristics	Variable description	Y95 cohort		Y98 cohort	
		Mean	Std dev.	Mean	Std dev.
Income rank of suburb/region	Ranking from 0 to 1 of postcode-based regions of average reported total income in the postcode from Australian Taxation Office data. Data were averaged for 2001—2003 for the ranking of regions.	0.56	0.27	0.54	0.26
Rank of suburb/region of proportion receiving Commonwealth benefits	Ranking from 0 to 1 of postcode-based regions of proportion of tax payers who received Commonwealth benefits (welfare) in the postcode from Australian Taxation Office data. Data were averaged for 2001—2003 for the ranking.	0.50	0.30	0.52	0.29
Education outcomes					
Attended university	Attended university at the time of the survey when interviewed in first or second year after completion of Year 12.	0.31	0.46	0.31	0.46
Attended VET full-time	Attended VET full-time at the time of the survey when interviewed in first or second year after completion of Year 12.	0.14	0.34	0.10	0.30
ENTER score	Score reported by student in Wave 5 of the data for the value of their TER/UAI, transformed OP etc. score from state certification authority. Lies between 30—99.95.	75.5	17.0	76.8	16.8
YA eligibility	Individual ever reported they or their parents received Youth Allowance for their present studies, either for school or post-school studies (=1).	0.50	0.50	0.46	0.50
Amount of YA received	Amount reported by individuals who received post-school Youth Allowance as a proportion of maximum (averaged over all observations, including zeros).	0.29	0.37	0.14	0.20
Hours worked during course	Average hours individual reported themselves as working over the duration of their course of post-school study.	16.2	9.2	16.4	9.2
University course completion	Individual reported they had completed the requirements of a degree or VET course, rather than having deferred, withdrawn, or otherwise had dropped out of it (=1).	0.39	0.49	0.37	0.48
VET course completion	Individual reported they had completed the requirements of a VET course, rather than having deferred, withdrawn, or otherwise had dropped out of it (=1).	0.18	0.39	0.19	0.39
Student undertook a gap year	Individual completed Year 12 three years after they were first surveyed in Year 9 (1998 for Y95 and 2001 for Y98), and did not commence their studies at university in the calendar year following their Year 12 studies, but did commence studies in the calendar year following that (=1).	0.11	0.31	0.12	0.33

Background characteristics	Variable description	Y95 cohort		Y98 cohort	
		Mean	Std dev.	Mean	Std dev.
<i>Panel data variables: used in analysis of financial position (summary statistics based on pooled data across all years)</i>					
Living with kids	Individual living with own children when surveyed in relevant wave (=1).	0.094	0.291	0.043	0.203
Living with a partner	Individual living with a partner (married or de facto) when surveyed in relevant wave (=1).	0.315	0.464	0.141	0.348
Living with parents	Individual living with one or more parents when surveyed in relevant wave (=1).	0.456	0.498	0.640	0.480
Part-time student	Individual studying part-time when surveyed in relevant wave (=1).	0.042	0.201	0.035	0.183
Apprentice	Individual working as an apprentice when surveyed in relevant wave (=1).	0.042	0.200	0.109	0.312
Full-time job	Individual usually working 35 hours or more per week in current job when surveyed in relevant wave (=1).	0.628	0.483	0.472	0.499
Employed	Individual employed in current job when surveyed in relevant wave (=1).	0.864	0.343	0.883	0.322
At university when surveyed	Individual studying at university when surveyed in relevant wave (=1).	0.126	0.332	0.264	0.441
Full-time VET study	Individual indicated they studying towards a VET qualification full-time when surveyed in relevant wave (=1).	0.018	0.133	0.051	0.220
Other income support	Individual (or their partner) receiving government payments (other than Youth Allowance for study purposes) when surveyed in relevant wave (=1).	0.148	0.355	0.138	0.345
Buying a house	Individual owned outright or purchasing their own house when surveyed in relevant wave (=1).	0.126	0.332	0.029	0.168
<i>Financial satisfaction and occurrence of financial stress indicators</i>					
Money each week	Individual indicated they were happy or very happy with the money they got each week when surveyed in relevant wave (=1).	0.815	0.388	0.820	0.385
Standard of living	Individual indicated they were happy or very happy with their standard of living when surveyed in relevant wave (=1).	0.977	0.150	0.978	0.146
Life as a whole	Individual indicated they were happy or very happy with their life as a whole (=1).	0.989	0.103	0.988	0.111
Life satisfaction scale	First factor from factor analysis of 14 responses individuals gave to how satisfied they are with various aspects of their lives, combined into a 'standardised' overall 'life satisfaction' scale.	0.086	1.011	0.302	0.998
Asked family or friends for money	Individual indicated that in the previous 12 months they had, because of a shortage of money, asked family or friends for money when surveyed in relevant wave (=1).	0.278	0.448	0.335	0.472
Borrowed money just to live on	Individual indicated that in the previous 12 months they had, because of a shortage of money, borrowed money just to live on when surveyed in relevant wave (=1).	0.121	0.326	0.119	0.324
Couldn't buy text books or other study materials	Individual indicated that in the previous 12 months they had, because of a shortage of money, been unable buy text books or other study materials when surveyed in relevant wave (=1).	0.058	0.234	0.066	0.249
Managing financially	Individuals indicated at the time of the survey they were managing financially 'fairly' or 'very' easily (=1).	0.700	0.458	0.723	0.448

Appendix B: Estimating eligibility

A number of approaches could be used to estimate eligibility among individuals where this is not observed. First it might be assumed that any student eligible for receipt of Youth Allowance in either Year 11 or 12 would be eligible in the calendar year after they undertook Year 12. Alternatively, it might be assumed that only those who received Youth Allowance in Year 12 would be eligible. Third, it is possible to match non-students to those students whose background characteristics they most closely resemble, including their history of Youth Allowance receipt at school, and assign the non-students the Youth Allowance receipt status of the student to whom they are matched. The matching of subjects would be based on the propensity scores (predicted probabilities) of individuals estimated from a probit regression equation of Youth Allowance receipt among students, using a full set of background characteristics as regressors. Propensity scores for both students and non-students can be estimated from the parameters of this equation and the characteristics of individuals, whether they are students or not. The matching of non-students to students most like them can take place on the basis of this propensity score.

A final approach, which is adopted in this paper, is similar to this last exercise, but involves a more finely graded approach to the matching, where even more explicit account is taken of subjects' Youth Allowance receipt history. Specifically, non-students who had never received Youth Allowance while at school were matched to those post-school students most like them in terms of background characteristics who had also never received Youth Allowance while at school. Again non-students would be assigned the current Youth Allowance receipt status of those most like them in terms of their background characteristics within this group. This would be repeated for those individuals who received Youth Allowance in Year 11 but not Year 12; in Year 12 but not Year 11; and in both Years 11 and 12. The aggregate proportions of non-students assigned as being potentially eligible for Youth Allowance in any of these groups will reflect the probability of students in the same group receiving Youth Allowance, which would be expected to be largest for the last group and smallest in the first, and whether non-students in these groups were more like student Youth Allowance recipients than non-recipients in terms of their background characteristics.

The outcome of this matching exercise is summarised in table B.1. It shows how non-students with differing histories of Youth Allowance receipt were assigned to being potentially eligible or ineligible for Youth Allowance in the two cohorts, with the Y98 estimates appearing in the top panel and the Y95 estimates in the lower panel. In addition, the proportion of students who received Youth Allowance in the first year after the cohorts would have been in Year 12 are shown in the middle columns. Finally, the last two columns show the propensity scores for recipients and non-recipients and students and non-students.

In aggregate, the outcome of the approach allocates close to 40% of the non-student population in both cohorts in their first year after completing school as potentially eligible for Youth Allowance had they undertaken further studies. For both cohorts, this estimate is about ten percentage points higher than the proportion of students actually receiving Youth Allowance, but a difference of this magnitude is not surprising since university students in general come from higher SES backgrounds than non-students.

Suffice to say, this allocation is critical for the results that follow. Any estimate of the effect of receipt of Youth Allowance on participation in further education and training will depend on the proportion of students to non-students among the eligible group compared with the proportion of students to non-students among the ineligible group. Any overestimate of the size of the potential recipient group will lower the share of students among the potentially eligible group and raise it among the ineligible group. The respective percentages of the group estimated as potentially eligible among non-students in the Y95 (Y98) cohorts for each of the four possible allocation methods were 34 (35), 42 (49), 30 (31), and 36 (41). While the estimated effects of Youth Allowance receipt are reported only for the preferred allocation method in the body of the paper, the results for the other approaches are also summarised.

Table B.1 Youth Allowance effects on university and VET participation

	Assignment	YA assignment		Propensity scores	
		Assigned non-students	Actual students	Assigned non-students	Actual students
Y98		(%)	(%)		
Eligible both school years	0	21.7	21.2	0.835	0.799
	1	78.3	78.8	0.859	0.844
Eligible last school year only	0	27.5	30.7	0.606	0.543
	1	72.5	69.3	0.719	0.694
Eligible first school year only	0	36.7	48.9	0.450	0.409
	1	63.3	51.1	0.552	0.582
Ineligible both school years	0	82.8	81.9	0.252	0.195
	1	17.2	18.1	0.357	0.341
Proportion eligible for Youth Allowance		36.3	26.3		
Y95					
Eligible both school years	0	6.7	7.1	0.957	0.924
	1	93.3	92.9	0.961	0.949
Eligible last school year only	0	14.5	14.2	0.812	0.693
	1	85.5	85.8	0.819	0.825
Eligible first school year only	0	30.1	31.0	0.580	0.452
	1	69.9	69.0	0.740	0.727
Ineligible both school years	0	79.7	82.0	0.247	0.177
	1	20.3	18.0	0.433	0.406
Proportion eligible for Youth Allowance		41.4	30.2		

Source: Estimated from LSAY Y95 and Y98 cohorts, based on weighted data.

Appendix C: Regression tables

Table C.1 Participation regression equation results, Y98 full sample

Explanatory variables	University			VET	
	OLS weighted	Unweighted	Probit	OLS weighted	Probit
Number of siblings	-0.004*	-0.004	-0.005	0.001	0.002
	[0.003]	[0.003]	[0.003]	[0.003]	[0.003]
Male	-0.013	-0.016	-0.019	-0.032*	-0.022
	[0.013]	[0.013]	[0.016]	[0.018]	[0.016]
Respondent born overseas in non-English speaking country	0.103***	0.102***	0.140***	0.138***	0.097**
	[0.024]	[0.025]	[0.030]	[0.036]	[0.044]
Father has a degree	0.018	0.017	0.025	-0.001	-0.012
	[0.015]	[0.015]	[0.018]	[0.022]	[0.020]
YA eligibility	-0.039***	-0.041***	-0.052***	-0.050***	0.049***
	[0.014]	[0.015]	[0.019]	[0.018]	[0.017]
ENTER score	0.011***	0.008***	0.015***	0.004***	0.006***
	[0.002]	[0.002]	[0.003]	[0.002]	[0.002]
ENTER above 50 spline	0.003	0.005**	0.000	-0.011***	0.013***
	[0.002]	[0.002]	[0.004]	[0.002]	[0.002]
Observations	4319	4319	4319	2148	2148
R-squared	0.26	0.23		0.06	

Notes: Standard errors in brackets.

*significant at 10%; ** significant at 5%; *** significant at 1%.

OLS = ordinary least squares.

Table C.2 Participation regression equation results, Y98 half sample above median propensity

Explanatory variables	University			VET	
	OLS weighted	Unweighted	Probit	OLS weighted	Probit
Number of siblings	-0.003 [0.003]	-0.002 [0.003]	-0.003 [0.004]	0.000 [0.003]	0.000 [0.004]
Male	-0.011 [0.019]	-0.008 [0.019]	-0.01 [0.023]	-0.038 [0.024]	-0.025 [0.022]
Respondent born overseas in non-English speaking country	0.141*** [0.033]	0.139*** [0.035]	0.178*** [0.040]	0.150*** [0.049]	0.134** [0.057]
Father has a degree	0 [0.024]	-0.004 [0.023]	-0.001 [0.027]	-0.047 [0.034]	-0.031 [0.029]
YA eligibility	0.031 [0.019]	0.032* [0.019]	0.036 [0.023]	-0.031 [0.024]	-0.034 [0.022]
ENTER score	0.012*** [0.002]	0.010*** [0.003]	0.016*** [0.004]	0.004** [0.002]	0.007*** [0.002]
ENTER above 50 spline	0.001 [0.003]	0.003 [0.003]	-0.003 [0.004]	-0.011*** [0.003]	0.014*** [0.003]
Observations	2197	2197	2197	1225	1225
R-squared	0.24	0.2		0.06	

Notes: Standard errors in brackets.

* significant at 10%; ** significant at 5%; *** significant at 1%.

Table C.3 Participation regression equation results, Y95 full sample

Explanatory variables	University			VET	
	OLS weighted	Unweighted	Probit	OLS weighted	Probit
Number of siblings	-0.011** [0.005]	-0.009* [0.005]	-0.011* [0.006]	-0.004 [0.007]	-0.006 [0.007]
Male	-0.043*** [0.013]	-0.047*** [0.013]	-0.055*** [0.017]	-0.029 [0.019]	-0.024 [0.019]
Respondent born overseas in non-English speaking country	0.152*** [0.024]	0.151*** [0.025]	0.204*** [0.026]	0.252*** [0.040]	0.251*** [0.050]
Father has a degree	0.051*** [0.015]	0.066*** [0.015]	0.089*** [0.018]	0.016 [0.026]	0.017 [0.027]
YA eligibility	-0.027* [0.015]	-0.015 [0.015]	-0.018 [0.018]	-0.039* [0.020]	-0.024 [0.020]
ENTER score	0.009*** [0.002]	0.008*** [0.002]	0.010*** [0.003]	0.008*** [0.002]	0.009*** [0.002]
ENTER above 50 spline	0.005** [0.002]	0.005** [0.002]	0.004 [0.003]	-0.015*** [0.002]	-0.016*** [0.003]
Observations	4149	4149	4149	2141	2141
R-squared	0.27	0.25		0.06	

Notes: Standard errors in brackets.

* significant at 10%; ** significant at 5%; *** significant at 1%.

Table C.4 Participation regression equation results, Y95 half sample above median propensity

Explanatory variables	University			VET	
	OLS weighted	Unweighted	Probit	OLS weighted	Probit
Number of siblings	-0.017*** [0.006]	-0.016** [0.006]	-0.019** [0.008]	-0.003 [0.008]	-0.006 [0.008]
Male	-0.032* [0.019]	-0.047** [0.019]	-0.054** [0.024]	-0.021 [0.027]	-0.028 [0.027]
Respondent born overseas in non-English speaking country	0.118*** [0.031]	0.128*** [0.033]	0.167*** [0.036]	0.211*** [0.046]	0.219*** [0.056]
Father has a degree	0.069*** [0.026]	0.071*** [0.025]	0.092*** [0.030]	0.009 [0.044]	0.001 [0.044]
YA eligibility	-0.002 [0.019]	0.016 [0.019]	0.023 [0.024]	-0.001 [0.027]	0.026 [0.027]
ENTER score	0.013*** [0.002]	0.012*** [0.003]	0.015*** [0.004]	0.008*** [0.002]	0.008*** [0.003]
ENTER above 50 spline	0 [0.003]	0 [0.003]	-0.002 [0.004]	-0.014*** [0.003]	0.015*** [0.003]
Observations	2089	2089	2089	1176	1176
R-squared	0.25	0.22		0.05	

Notes: Standard errors in brackets.

* significant at 10%; ** significant at 5%; *** significant at 1%.

Table C.5 Determinants of who undertakes a gap year

Explanatory variables	Y98		Y95	
	YA effect	Residual effect	YA effect	Residual effect
Male	0.004 [0.013]	-0.002 [0.013]	0.011 [0.012]	0.015 [0.013]
Father's occupation	0.000 [0.000]	0.000 [0.000]	0.000 [0.000]	0.000 [0.000]
Father's occupation missing	0.055 [0.037]	0.039 [0.037]	0.036 [0.030]	0.031 [0.031]
Mother's occupation	0.001 [0.000]	0.001 [0.000]	0.001*** [0.000]	0.001*** [0.000]
Mother's occupation missing	0.012 [0.028]	0.022 [0.028]	0.066*** [0.023]	0.069*** [0.023]
Father employed	0.080*** [0.029]	0.048 [0.030]	0.036 [0.027]	0.015 [0.028]
Mother employed	0.023 [0.017]	0.015 [0.017]	0.048*** [0.015]	0.040** [0.016]
Single parent, mother headed household when student was in Year 11	0.018 [0.044]	0.029 [0.044]	-0.028 [0.038]	-0.027 [0.039]
Father has degree	-0.01 [0.020]	-0.016 [0.020]	0.001 [0.018]	-0.004 [0.019]
Mother has degree	0.007 [0.022]	-0.005 [0.023]	0.011 [0.021]	0.007 [0.022]
Both parents have attained degrees	-0.022 [0.030]	-0.009 [0.030]	-0.034 [0.029]	-0.033 [0.030]
Metropolitan school	-0.025 [0.016]	-0.030* [0.016]	-0.028* [0.015]	-0.038** [0.015]
Indigenous Australian	-0.006 [0.076]	0.03 [0.079]	0.001 [0.076]	-0.007 [0.077]
Number of siblings	-0.001 [0.006]	0.000 [0.006]	0.006 [0.005]	0.008 [0.005]
Respondent born overseas in English speaking country	0.000 [0.042]	-0.001 [0.042]	0.068** [0.034]	0.076** [0.035]
Respondent born overseas in non-English speaking country	-0.055** [0.023]	-0.044* [0.023]	-0.013 [0.020]	-0.007 [0.021]
Independent school	0.022 [0.017]	0.003 [0.018]	0.014 [0.016]	0.008 [0.016]
Catholic school	-0.024 [0.015]	-0.030* [0.016]	0.005 [0.015]	0.005 [0.015]
Postcode ranking of average non-labour income	0.002 [0.028]	0.016 [0.028]	-0.038 [0.027]	-0.033 [0.027]
Postcode ranking of average taxable income	0.073** [0.036]	0.037 [0.038]	0.095*** [0.033]	0.081** [0.033]
Value ENTER score	-0.003*** [0.001]	-0.003*** [0.001]	-0.004*** [0.000]	-0.004*** [0.000]

Explanatory variables	Y98		Y95	
	YA effect	Residual effect	YA effect	Residual effect
YA eligibility	0.148*** [0.015]	-0.05 [0.050]	0.055*** [0.015]	-0.082* [0.043]
Unexplained YA amount received		0.233*** [0.055]		0.176*** [0.048]
Observations	2560	2536	2541	2488
R-squared	0.06	0.07	0.04	0.05

Notes: Standard errors in brackets.

* significant at 10%; ** significant at 5%; *** significant at 1%.

Table C.6 Determinants of course completion, Y95

Explanatory variables	University		Full-time VET	
	YA receipt	Amount of YA	YA receipt	Amount of YA
Male	-0.061*** [0.020]	-0.061*** [0.020]	-0.06 [0.043]	-0.057 [0.043]
Father's occupation	0.000 [0.001]	0.000 [0.001]	0.001 [0.001]	0.001 [0.001]
Father's occupation missing	0.073 [0.050]	0.079 [0.050]	-0.085 [0.114]	-0.086 [0.114]
Mother's occupation	0.000 [0.001]	0.000 [0.001]	0.001 [0.001]	0.001 [0.001]
Mother's occupation missing	-0.027 [0.038]	-0.027 [0.038]	0.018 [0.084]	0.012 [0.084]
Father employed	0.055 [0.045]	0.049 [0.046]	0.124 [0.082]	0.111 [0.083]
Mother employed	-0.035 [0.025]	-0.035 [0.025]	0.024 [0.052]	0.009 [0.053]
Single parent, mother headed household when student was in Year 11	-0.099 [0.064]	-0.101 [0.065]	0.189 [0.139]	0.206 [0.140]
Father has degree	0.015 [0.030]	0.013 [0.030]	-0.003 [0.070]	-0.012 [0.070]
Mother has degree	-0.009 [0.034]	-0.008 [0.034]	0.044 [0.074]	0.033 [0.074]
Both parents have attained degrees	0.022 [0.047]	0.023 [0.047]	0.016 [0.116]	0.041 [0.116]
Metropolitan school	0.017 [0.024]	0.013 [0.024]	0.019 [0.049]	0.015 [0.049]
Indigenous Australian	-0.136 [0.121]	-0.126 [0.121]	0.056 [0.355]	0.083 [0.356]
Number of siblings	-0.009 [0.008]	-0.008 [0.009]	0.018 [0.016]	0.021 [0.016]
Respondent born overseas in English speaking country	-0.058 [0.054]	-0.05 [0.055]	-0.029 [0.121]	-0.027 [0.122]

Explanatory variables	University		Full-time VET	
	YA receipt	Amount of YA	YA receipt	Amount of YA
Respondent born overseas in non-English speaking country	-0.058*	-0.062*	-0.113	-0.117
	[0.035]	[0.035]	[0.073]	[0.073]
Independent school	-0.02	-0.025	-0.081	-0.086
	[0.026]	[0.026]	[0.062]	[0.062]
Catholic school	-0.037	-0.039	-0.005	-0.006
	[0.024]	[0.024]	[0.052]	[0.053]
Postcode ranking of average non-labour income	-0.018	-0.015	-0.108	-0.106
	[0.043]	[0.043]	[0.089]	[0.090]
Postcode ranking of average taxable income	-0.015	-0.029	-0.104	-0.107
	[0.053]	[0.054]	[0.112]	[0.112]
Value ENTER score	0.006***	0.006***	-0.003**	-0.003*
	[0.001]	[0.001]	[0.001]	[0.001]
YA eligibility	0.100***		0.093**	
	[0.021]		[0.046]	
Amount of YA received		0.071**		0.031
		[0.035]		[0.070]
Hours worked	-0.003***	-0.003***	-0.003	-0.003
	[0.001]	[0.001]	[0.002]	[0.002]
Observations	2417	2417	586	586
R-squared	0.06	0.05	0.05	0.04

Notes: Standard errors in brackets.

* significant at 10%; ** significant at 5%; *** significant at 1%.

Table C.7 Determinants of course completion, Y98

Explanatory variables	University		Full-time VET	
	YA receipt	Amount of YA	YA receipt	Amount of YA
Male	-0.093*** [0.021]	-0.093*** [0.021]	-0.086 [0.054]	-0.084 [0.054]
Father's occupation	0.000 [0.001]	0.000 [0.001]	-0.002 [0.001]	-0.001 [0.001]
Father's occupation missing	0.043 [0.060]	0.046 [0.060]	0.022 [0.139]	0.026 [0.139]
Mother's occupation	-0.001 [0.001]	-0.001 [0.001]	0 [0.002]	0 [0.002]
Mother's occupation missing	-0.094** [0.044]	-0.099** [0.044]	0.094 [0.098]	0.09 [0.098]
Father employed	0.048 [0.044]	0.065 [0.044]	-0.066 [0.097]	-0.047 [0.097]
Mother employed	-0.007 [0.027]	-0.002 [0.027]	0.094 [0.068]	0.1 [0.068]
Single parent, mother headed household when student was in Year 11	-0.023 [0.072]	-0.023 [0.072]	-0.176 [0.181]	-0.179 [0.181]
Father has degree	-0.016 [0.032]	-0.016 [0.032]	0.056 [0.086]	0.05 [0.086]
Mother has degree	0.015 [0.036]	0.017 [0.036]	0.028 [0.102]	0.028 [0.102]
Both parents have attained degrees	-0.038 [0.048]	-0.041 [0.048]	-0.084 [0.150]	-0.074 [0.150]
Metropolitan school	-0.015 [0.025]	-0.009 [0.025]	-0.045 [0.061]	-0.038 [0.061]
Indigenous Australian	0.023 [0.123]	0.019 [0.123]	0.325 [0.297]	0.371 [0.294]
Number of siblings	-0.019** [0.009]	-0.021** [0.009]	0.018 [0.020]	0.015 [0.020]
Respondent born overseas in English speaking country	-0.091 [0.066]	-0.095 [0.066]	-0.044 [0.163]	-0.061 [0.163]
Respondent born overseas in non-English speaking country	-0.008 [0.037]	-0.009 [0.037]	0.156 [0.109]	0.146 [0.109]
Independent school	-0.031 [0.028]	-0.026 [0.028]	0.027 [0.076]	0.021 [0.076]
Catholic school	0.002 [0.024]	0.007 [0.024]	-0.004 [0.062]	-0.001 [0.062]
Postcode ranking of average non-labour income	-0.01 [0.045]	-0.01 [0.045]	-0.073 [0.120]	-0.083 [0.120]
Postcode ranking of average taxable income	0.041 [0.059]	0.051 [0.058]	0.213 [0.147]	0.214 [0.145]

Explanatory variables	University		Full-time VET	
	YA receipt	Amount of YA	YA receipt	Amount of YA
Value ENTER score	0.005*** [0.001]	0.005*** [0.001]	0.003* [0.002]	0.003* [0.002]
YA eligibility	0.044** [0.022]		0.089 [0.056]	
Amount of YA received		0.202*** [0.055]		0.347** [0.159]
Hours worked during course	-0.005*** [0.001]	-0.005*** [0.001]	-0.002 [0.003]	-0.001 [0.003]
Observations	2343	2343	373	373
R-squared	0.05	0.05	0.06	0.06

Notes: Standard errors in brackets.

* significant at 10%; ** significant at 5%; *** significant at 1%.

Table C.8 Regression-based fixed effects of student youth allowance on financial satisfaction indicators, Y95

Indicator	Money each week	Standard of living	Life as a whole	Life satisfaction scale
Post-school Youth Allowance	-0.060*** [0.013]	-0.008 [0.006]	0.004 [0.004]	0.002 [0.028]
Living with kids	0.045*** [0.017]	0.012* [0.007]	-0.001 [0.005]	-0.065* [0.037]
Living with a partner	0.008 [0.008]	0.010*** [0.004]	0.005** [0.002]	0.042** [0.017]
Living with parents	0.029*** [0.008]	0.012*** [0.003]	-0.002 [0.002]	-0.005 [0.017]
Part-time student	-0.001 [0.014]	-0.004 [0.006]	-0.009** [0.004]	-0.012 [0.029]
Apprentice	0.064*** [0.020]	0 [0.009]	0.002 [0.006]	0.182*** [0.043]
Full-time job	0.054*** [0.008]	0.012*** [0.003]	0.004** [0.002]	0.055*** [0.016]
Employed	0.151*** [0.009]	0.010** [0.004]	0.001 [0.003]	0.102*** [0.020]
At university when surveyed	-0.017* [0.010]	0.006 [0.004]	0.005 [0.003]	0.004 [0.022]
Full-time VET study	-0.060*** [0.022]	0.006 [0.010]	0 [0.007]	0.063 [0.047]
Other income support	-0.059*** [0.011]	-0.022*** [0.005]	0 [0.003]	-0.116*** [0.023]
Buying a house	0.017 [0.011]	0.002 [0.005]	0.001 [0.003]	-0.006 [0.022]
Observations	24 256	24 256	24 256	24 256
Number of individuals	6 095	6 095	6 095	6 095
R-squared	0.04	0	0	0.01

Table C.9 Regression-based fixed effects of student Youth Allowance on financial stress indicators, Y95

Indicator	Asked family or friends for money	Borrowed money just to live on	Couldn't buy text books or other study materials	Managing financially
Post-school Youth Allowance	0.049*** [0.014]	0.070*** [0.011]	0.087*** [0.008]	-0.156*** [0.031]
Living with kids	-0.075*** [0.018]	-0.049*** [0.014]	-0.052*** [0.010]	-0.037 [0.041]
Living with a partner	-0.076*** [0.009]	-0.023*** [0.007]	-0.010** [0.005]	0.077*** [0.019]
Living with parents	-0.016* [0.008]	-0.024*** [0.006]	-0.012** [0.005]	0.184*** [0.018]
Part-time student	-0.042*** [0.015]	0.001 [0.011]	-0.001 [0.008]	0.110*** [0.032]
Apprentice	0.001 [0.022]	-0.015 [0.016]	-0.012 [0.012]	-0.063 [0.048]
Full-time job	-0.087*** [0.008]	-0.049*** [0.006]	-0.034*** [0.005]	0.176*** [0.018]
Employed	-0.040*** [0.010]	-0.018** [0.008]	-0.009 [0.006]	0.191*** [0.022]
At university when surveyed	0.074*** [0.011]	0.015* [0.008]	0.085*** [0.006]	-0.220*** [0.024]
Full-time VET study	0.014 [0.024]	0.003 [0.018]	0.044*** [0.013]	-0.168*** [0.053]
Other income support	0.053*** [0.012]	0.035*** [0.009]	0.045*** [0.007]	-0.184*** [0.026]
Buying a house	-0.021* [0.011]	-0.013 [0.009]	-0.015** [0.006]	-0.124*** [0.025]
Observations	24 256	24 256	24 256	24 256
Number of individuals	6 095	60 95	6 095	6 095
R-squared	0.04	0.02	0.05	0.05

Table C.10 Regression-based fixed effects of student Youth Allowance on financial satisfaction indicators, Y98

Indicator	Money each week	Standard of living	Life as a whole	Life satisfaction scale
Post-school Youth Allowance	-0.022*** [0.008]	-0.007** [0.003]	0.003 [0.002]	0.016 [0.017]
Living with kids	0.071*** [0.018]	-0.018** [0.007]	0.015*** [0.005]	-0.017 [0.037]
Living with a partner	0.005 [0.008]	0.007** [0.003]	0.005** [0.002]	0.050*** [0.016]
Living with parents	0.024*** [0.006]	0.016*** [0.002]	-0.001 [0.002]	-0.026** [0.012]
Part-time student	0.01 [0.012]	-0.011** [0.005]	-0.001 [0.004]	-0.01 [0.024]
Apprentice	-0.112*** [0.010]	-0.003 [0.004]	0.001 [0.003]	0.045** [0.020]
Full-time job	0.054*** [0.006]	0.005** [0.002]	0.003 [0.002]	0.083*** [0.012]
Employed	0.166*** [0.007]	0.008*** [0.003]	0.005*** [0.002]	0.167*** [0.014]
At university when surveyed	0.006 [0.007]	0.004 [0.003]	0.004** [0.002]	-0.023* [0.014]
Full-time VET study	0.004 [0.012]	0.007 [0.004]	0.010*** [0.003]	0.056** [0.023]
Other income support	-0.012 [0.009]	-0.012*** [0.003]	-0.005** [0.003]	-0.077*** [0.017]
Buying a house	0.032** [0.015]	0.013** [0.006]	0.004 [0.005]	0.052* [0.030]
Observations	34 941	34 941	34 941	34 941
Number of individuals	7 762	7 762	7 762	7 762
R-squared	0.04	0	0	0.02

Table C.11 Regression-based fixed effects of student Youth Allowance on financial stress indicators, Y98

Indicator	Asked family or friends for money	Borrowed money just to live on	Couldn't buy text books or other study materials	Managing financially
Post school Youth Allowance	0.016* [0.009]	0.042*** [0.007]	0.057*** [0.005]	-0.063*** [0.009]
Living with kids	-0.090*** [0.021]	-0.037** [0.015]	-0.049*** [0.012]	0.031 [0.021]
Living with a partner	-0.075*** [0.009]	-0.027*** [0.007]	-0.006 [0.005]	0.030*** [0.009]
Living with parents	-0.013* [0.007]	-0.055*** [0.005]	-0.021*** [0.004]	0.064*** [0.007]
Part-time student	-0.063*** [0.013]	0.014 [0.010]	0.006 [0.008]	0.040*** [0.013]
Apprentice	0.058*** [0.011]	0.020** [0.008]	0.020*** [0.006]	-0.078*** [0.011]
Full-time job	-0.088*** [0.007]	-0.025*** [0.005]	-0.028*** [0.004]	0.070*** [0.007]
Employed	-0.033*** [0.008]	-0.003 [0.006]	0.002 [0.005]	0.091*** [0.008]
At university when surveyed	0.075*** [0.008]	-0.007 [0.006]	0.041*** [0.005]	-0.053*** [0.008]
Full-time VET study	0.065*** [0.013]	0 [0.010]	0.016** [0.008]	-0.052*** [0.013]
Other income support	0.031*** [0.010]	0.025*** [0.007]	0.002 [0.006]	-0.081*** [0.010]
Buying a house	-0.036** [0.017]	-0.046*** [0.013]	-0.027*** [0.010]	-0.016 [0.017]
Observations	34 941	34 941	34 941	34 941
Number of individuals	7 762	7 762	7 762	7 762
R-squared	0.03	0.01	0.02	0.04



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