Submission on priority student funding policy issues for the Universities Accord – December 2022

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This is a personal submission that should not be taken to represent the views of the Australian National University.

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Overview

This submission focuses on the coursework funding system: overall funding rates, student contributions, Commonwealth contributions and different ways of distributing resources to higher education providers. It therefore relates primarily to 'key areas' one to three in the Accord's terms of reference.

The goal of the submission is to outline issues and potential policy responses to them. It recommends ruling out early some policy ideas that are less effective than their alternatives or are not politically viable. This will focus analytical resources over the limited time available to the Accord panel on considering the relative merits of realistic options.

Overall funding rates

Current overall funding rates by discipline are based on average teaching and scholarship costs. The submission provides reasons why the funding rates should include a margin above the average.

Student contributions

Student contribution reform is more urgent than other issues because some students are already incurring HELP debts that impose an unreasonable burden on them and unnecessary costs on taxpayers.

The submission suggests considering the following in a student contribution system: the financial burden on students, taking into account how long it will take them to repay as well as the total dollar amount charged; the cost to taxpayers through the HELP loan scheme as well as the Commonwealth Grant Scheme; and the marginal cost of providing additional student places, when these are 'over-enrolments' funded on the student contribution rate only.

Two student contribution systems, the Job-ready Graduates system of incentives and disincentives, and systems which charge students according to courses costs, should be ruled out early as failing policy and political tests. Two credible contender systems are a flat rate across all disciplines and one linked to earnings prospects. Both these systems have been used before.

Commonwealth contributions

Commonwealth contributions affect the system in different ways depending on student contribution levels and the system of allocating total Commonwealth resources (discussed below).

The Job-ready Graduates Commonwealth contributions combined with fixed total allocations of funding per university create the following issues:

- Job-ready Graduates mostly uses dollars rather than student places as the unit of allocation in providing resources to higher education providers. As Commonwealth contributions vary according to discipline, the same total Commonwealth grant can produce high or low numbers of student places. Inherently, this reduces certainty about the number of higher education opportunities for students compared to systems which allocate according to student places or set minimum numbers of student places.
- Job-ready Graduates increased this uncertainty by significantly increasing the ratio between the lowest and highest Commonwealth contributions.
- Job-ready Graduates created different indexation systems for university grants (inflation estimated over three years, with grants increased annually by the estimate) and Commonwealth contributions (indexed automatically each year according to actual but lagged CPI). High indexation of Commonwealth contributions will reduce how many student places higher education providers need to deliver to get their maximum funding. This will occur at the same time as demand for places increases.

A new Commonwealth contribution system should narrow the differences between Commonwealth contribution levels.

Models of allocating public resources to higher education providers

The submission sets out four broad models of allocating resources to higher education providers: technocratic, block grant, demand driven, and capped voucher. Which system or systems are chosen will affect how, and how well, the Accord's attainment, equity and skills objectives are met.

Technocratic systems are (ideally) characterised by expert input to achieve the government's goals. Block grant systems let higher education providers decide how to allocate fixed resources across courses and students. Demand driven systems remove both system and provider-level caps, letting supply move to meet demand by institution and course. Capped voucher systems also allow these movements between institutions, but vouchers may be restricted by course and are limited in total. The first three models are in use now for different purposes.

The current system is primarily a block grant, but with a small demand driven system for regional Indigenous students and a technocratic system for allocating medical places. The current and previous governments have put technocratic overlays on block grant systems: the COVID-19 short courses, the recent 20,000 new places for equity students, and proposed allocations of teacher education places.

For all its other faults, Job-ready Graduates recognised a problem with the technocratic approach: every condition added to funding reduces the chance that a student can be found that meets all the criteria. Micro-allocations risk stranded funding, money unused

because too few students match all the criteria while elsewhere in the system needs go unmet due to a lack of funding. What looks like problem solving can turn out to be problem creating.

Block and technocratic systems typically grow by adding incrementally to historical allocations to universities. Job-ready Graduates provides 'growth' funding based on campus location: 3.5 per cent annually for regional campuses, 2.5 per cent for metropolitan campuses in high growth areas, and 1 per cent for other campuses. Based on the current location of the young people who will go to university from the mid-2020s most growth capacity will be needed in the outer suburbs of capital cities. As most school leaver university students live at home misallocation of funding will further reduce the system's effective capacity to meet demand. Failure to meet demand would disproportionately affect urban lower SES students.

Demand driven funding offers the most flexibility in meeting the attainment, skills and equity objectives of the Accord. Its drawback from the government's perspective is less predictable cost. The submission also warns that a second demand driven system may not operate in the same way as the first. The first demand driven system relied on a list of universities that was unchanged since the late 1990s. No new public higher education institution has been created this century. New institutions may be necessary to meet growth objectives.

Research projects that could assist the Accord panel

- Future demand for higher education by geographic area, mapped against existing university catchment areas.
- Estimates of median time to repay HELP debt by course taken.
- Increased understanding of how providers respond to total funding rates, student contributions for over-enrolments, and whether they see themselves as responsible for meeting student demand.

1. Student funding rates – what should they include?

The current student funding system is principally based on a subject's field of education and not student or university characteristics. Relatively small supplementary programs have a student (equity group) or campus (regional loading) basis.

Each field of education is allocated to one of four funding clusters – for the public subsidy Commonwealth contribution – and one of four student contribution bands – for the private payment student contribution.¹ The Commonwealth and student contribution combined is the funding rate.

Job-ready Graduates changed total funding rates based on a study of teaching and scholarship costs. It assumed that funding rates should reflect average teaching and scholarship costs. This included on-costs but excluded expenditure on other university activities, such as research that is not also scholarship and engagement activities that are not closely related to teaching and scholarship.

Average teaching and scholarship costs are descriptive of current expenditure. They are not based on a normative view of what is required to deliver a course of specified quality on an efficient basis.

Job-ready Graduates increased funding rates for some fields but decreased them for many other fields, including those shown in Figure 1. In some cases a costing error is likely. Allied health, for example, was cut due to its aggregation into a field of education that includes public health subjects that are primarily social science rather than clinical courses. But for other courses the cut removed implied research funding.

¹ DofE, Allocation of units of study to funding clusters and student contribution bands according to field of education codes for 2023, Department of Education (2022).



Figure 1: Fields with reduced funding rates under Job-ready Graduates

Note: Annual funding rate for a full-time student.

An important issue for the Accord is the conceptual basis of overall student-driven funding rates.

Should the costing exercise be normative or descriptive? In either case, should it include a surplus above efficient or average teaching and scholarship costs? The arguments that it should include:

- Under current rules for being a university, universities are required by TEQSAadministered regulation to have research activity in at least half the fields in which they teach by 2031 (up from three).² Yet the university funding system has broken the link between teaching and research. On varying definitions, funding for research is based on past research performance, which means Group of Eight institutions dominate. How are other universities supposed to fund their required research activity? Policy coherence requires either that the research requirement be relaxed or a funding link between teaching and research be established.
- Relatedly, poor employment conditions for a large percentage of university academic staff are partly driven by a cultural and industrial preference for teaching and research positions that is no longer supported by the funding system. Funding that is specialised into teaching and research separately requires specialised staffing, since the money to finance joint positions cannot be aligned easily at the university, faculty, department or individual academic level. This in turn has led to growth in fixed term and casual employment which is specialised but insecure. While continuing teaching-focused positions need to expand as a proportion of the

² Higher Education Standards Framework (Threshold Standards) 2021.

academic workforce, better support for teaching and research employment would help move towards a new status quo.

- An Australian university must also demonstrate 'strong civic leadership, engagement with its local and regional communities, and a commitment to social responsibility.'³ This requirement has no direct funding source although related activities may be incidental to some funded programs. Policy coherence requires a means of financing this regulatory requirement. Financial support through student funding is not the only possible method of support, but it would link engagement revenue to university scale.
- A margin above average teaching and scholarship costs would create scope for more variation around the costing estimates used to set the rates. This recognises the inherent limits of costing methodologies.⁴ It would also reflect the differing circumstances of universities, especially in potential economies of scale. The local populations of regional universities especially may be too small to create the economies of scale assumed by the funding rate.
- A profit margin gives universities a financial incentive to recruit domestic students. Historically existing universities have increased domestic enrolments broadly in line with demand. But nothing in the policy framework requires them to do this, an issue explored in chapter 5. The abolition of the profit margins in 2021 reduced the incentive to supply student places. Unusual market conditions since make it hard to assess whether this is a factor in falling domestic enrolments. Commonwealth supported enrolments in 2022 appear down on preceding years, as indicated by reduced HECS-HELP lending and the ABS labour force survey reporting significantly fewer tertiary students (which includes vocational students).⁵ However, there are other possible explanations including a strong labour market reducing domestic demand.

Arguments against reincorporating a surplus in the student funding rates:

- It would add to public and/or student cost at a time when there are significant pressures to control both.
- While the policy would be agnostic on use of the added money in practice research is the primary goal of most academics and universities. Student numbers are not an

³ Higher Education Standards Framework (Threshold Standards) 2021.

⁴ As noted in the costing analysis: Deloitte Access Economics, *Transparency in higher education expenditure: 2022*, Deloitte Access Economics/Department of Education and Training (2022), p. viii.

⁵ The 'short course' funding and associated student contributions are washing out of the system. Nevertheless estimated student contribution liabilities for 2022 are down 1.3 per cent on 2021, despite all student contributions receiving 0.9 per cent indexation and the ongoing transition to higher student contributions in humanities, business and law. ABS, *Labour Force, Australia, Detailed*, Australian Bureau of Statistics (2022), table 25b.

indicator of research quality. However significant incentives to maintain research quality would remain through the discipline-level indicators of quality and status that drive academic and institutional behaviour (through promotions and rankings) and through exercises such as the ERA (if retained).

2. Objectives for the student contribution system

Student contributions are a politically sensitive part of the Accord process. This chapter outlines current features of the student contribution system and proposes factors to take into account when designing a student contribution system.

Student contributions under Job-ready Graduates

The student contribution system changed significantly under Job-ready Graduates. Previously it was not intended to influence student choices, with student contribution levels roughly linked to relative expected earnings after graduation.⁶ Job-ready Graduates uses price incentives to steer students towards courses the government prefers and away from lower priority courses.⁷

Job-ready Graduates significantly increased the price differences between disciplines. Before Job-ready Graduates the top student contribution band was 1.7 times the level of the lowest student contribution band, a difference of \$4,500. In 2023 the top student contribution band will be 3.7 times the lowest student contribution band, a difference of \$11,000.



Figure 2: Relative student contribution bands, 2020 and 2023

⁶ A. Norton, *From private to public benefit: The shifting rationales for setting student contributions*, Centre for the Study of Higher Education/University of Melbourne (2022), pp. 11-16.

⁷ Ibid., pp. 24-30.

Job-ready Graduates student contributions were never likely to achieve their goals in a cost-effective way. The range of courses most prospective students will consider are limited by their interests. Within the range set by prospective student interests, job prospects and salaries are larger financial considerations than student contributions.⁸ To be cost effective, policy needs to target the prospective students who might change their course preferences without delivering windfall gains (financed by taxpayers and other students) to students who would have done the target course anyway. This suggests course/careers advice and marketing rather than price changes.

Delays in releasing 2021 enrolment data mean that the most important source of data on Job-ready Graduates, which affected supply as well as demand incentives, is not yet available. Applications data is however consistent with the policy having no or only small effects on demand.⁹

Whether the Job-ready Graduates student contributions changed demand, they cause other problems in students with high HELP debts and consequent costs to the Commonwealth, and distort university 'over-enrolment' incentives and finances. Minimising high HELP debts

Reform of the student contribution system is needed urgently to minimise the number of students accumulating large HELP debts (the 'affordability' part of the terms of reference)

Students in the highest student contribution band – \$15,142 per full-time equivalent year in 2023 for law, business and most arts fields – pay or incur HELP debts of around \$45,000 for a three-year bachelor degree. For humanities graduates high rates of further study, of around a quarter of completing students, mean final debts significantly exceeding \$45,000.¹⁰ Undergraduate law courses are often combined with arts or commerce degrees, again substantially increasing total debt.

⁸ A. Norton, 'Jobs, interests, and course choices', *Andrew Norton: Higher education commentary from Carlton (blog)*, 20 June 2020; A. Norton, 'Financial influences on job seeking university applicants', *Andrew Norton: Higher education commentary from Carlton (blog)*, 28 June 2020. See also Figure 16 on patterns of course interests.

⁹ M Yong, Job-ready Graduates economic analysis: presentation at the Centre for the Study of Higher Education, University of Melbourne, Author supplied (2022); A. Norton, 'The first Job-ready Graduates university applications data', Andrew Norton: Higher education commentary from Carlton (blog), 25 October 2021.

¹⁰ Social Research Centre, *2021 Graduate Outcomes Survey*, Social Research Centre (2021), p. 23-24. In 2021 the rate of continuing study for humanities was 29 per cent, however this is likely to be a temporary spike due to COVID-19 labour market effects in late 2020 and early 2021. Business graduate further study rates are around 10 per cent. Law is higher, but this is likely to be due to professional admission courses.

Humanities graduates have, by the standards of people with higher education qualifications, relatively low incomes.¹¹ With the income contingent HELP repayment system the number of years they will take to repay their HELP debt will increase significantly compared to the pre-Job-ready Graduates system, under which they were charged student contributions in the lowest band.

While an income contingent loan system assumes that some borrowers will never repay in full, putting large debt burdens on students with relatively weak earnings prospects unnecessarily increases the risk of non-repayment. This is a cost to government that could be avoided.

Substantial HECS-HELP debts for an initial qualification also reduce how much students can borrow under FEE-HELP for future postgraduate study or VET Student Loans for a vocational qualification (the 'lifelong learning' and 'alignment with VET' parts of the terms of reference). For most students, their maximum amount of combined tuition fee borrowing is \$113,028, unless they first pay off some debt.

I understand Accord implementation is likely to be in 2025 or 2026. I would strongly advocate for an earlier change to the student contribution system, with recommended changes in the June 2023 interim report for legislation in the second half of 2023 and commencement in 2024. Every year of delay adds to the number of students affected by policy errors made in the Job-ready Graduates policy and how significantly they are affected.

Designing a new student contribution system

In the run-up to the Accord panel commencing its work several organisations floated ideas for new student contribution systems. These are briefly discussed later in this chapter. In designing a new student contribution system I recommend judging them against three empirical considerations with practical consequences for students, the government and universities respectively:

- Estimated HELP repayment times for graduates in each discipline (with around median debts and earnings);
- Estimated HELP costs to government for graduates in each discipline; mainly debt not expected to be repaid but also interest subsidies;
- The marginal cost of additional students in each field compared to the student contribution (which is the income universities receive for an 'over-enrolment' not funded by Commonwealth contributions due to the university reaching is maximum grant amount).

¹¹ P Aungles, H Hodgson, and S Parbery, *Graduate incomes: insights from administrative data*, Department of Education, Skills and Employment (2021), p. 29. A. Norton, I. Cherastidtham, and W. Mackey, *Mapping Australian higher education 2018*, Grattan Institute (2018), chapter 10.

The focus is on the discipline as the basis of the current student funding system and because course taken is the single most important influence on subsequent income.

Time to repay

The normative reason for estimating time to repay is the idea that there should be some equivalency of effort in repayment despite varying total dollar amounts to repay. The goal would be to cluster course-based repayment times around some mid-point.

For example, under the 'private benefits' based HECS and student contribution system from 1996 to 2020 law and medical students always had the highest annual student charges.¹² However, because law and medical graduates typically have relatively high incomes, HELP's income contingent repayment system speeds up their clearing of debt.¹³

Time to repay estimates could also be useful information for prospective students. It could help them decide whether a course was likely to be worthwhile and how their HELP debt might affect other future financial commitments.

The Department of Education has commissioned NATSEM at the University of Canberra to do some work on HELP but declined to disclose the project topic. However, it may include similar work on repayment times. If not, such work could be commissioned.

Other less legally sensitive datasets such as the Census can also be used to estimate repayment times, but lack information on whether a person has a HELP debt and do not capture moves in and out of the labour force that affect repayment times.

HELP costs to government at a discipline level

HELP's costs to government should be included in decisions around student contributions. Policymakers have always considered how student contributions affect Commonwealth contributions and therefore the Commonwealth Grant Scheme, but savings from increasing student contributions and decreasing Commonwealth contributions are over-stated, because HELP costs are not factored in.

HELP has two main costs. The largest is debt not expected to be repaid, sometimes known as doubtful debt. The most recent estimate, based on tax data analysis by the Australian Government Actuary (AGA), is 12 per cent of new lending for the 2021-22 financial year.¹⁴

¹² For the history of student contribution levels see Norton, *From private to public benefit: The shifting rationales for setting student contributions*

¹³ There is no high-quality, cohort-based analysis of repayment speeds. However one analysis based on people who borrowed between 2005-06 and 2018-19 and were not current student found that law and medical HELP debtors had relatively high rates of having fully repaid and relatively low rates or never having made any repayment: DofE, *HELP data extract 2018-19*, Department of Education (2021), table 4.

¹⁴ DofE, *Portfolio Budget Statements 2022-23*, Department of Education (2022), p. 65. This is lower than previous estimates, which have been around 15% in recent years, possibly because

The other main cost is an interest subsidy, normally understood as the difference between CPI indexation on HELP debt and the government's 10-year bond rate. The CPI is currently high relative to bond rates making the HELP debt profitable for the government, but this will reverse itself over time. Through a rather convoluted method, the interest subsidy element is currently incorporated into estimates of HELP's costs for new lending.

The AGA's HELP model does not currently include discipline-based information.¹⁵ This is a significant omission, implying that the new student contributions introduced by Job-ready Graduates were not fully costed. Prolonged repayment times for humanities graduates imply high interest subsidies.

Non-AGA analysis of non-repayment by discipline is limited by not specifying the age of the debt. But it shows strong parallels with income data. HELP debtors from disciplines that typically have lower average earnings are more likely to have never made a HELP repayment. In Job-ready Graduates debt burdens were transferred from nursing and teaching students, who have below average rates of never having made a repayment, to humanities graduates who have above average rates of never having made a repayment.¹⁶ Nursing and teaching graduates rarely earn very high salaries, but their high rates of professional employment make them relatively low risk for non-repayment of HELP debt.¹⁷

Over-enrolments and marginal cost students

Assuming that the Accord does not result in demand driven funding, universities will have 'over-enrolments' – enrolled students who cannot be supported within the university's maximum allocation of Commonwealth Grant Scheme funding.

Over-enrolment can be accidental or by design. The inherent difficulties in estimating what proportion of offers to potential new students will be accepted, the mix of full- and part-time students, and varying attrition rates make hitting precise targets for full-time equivalent student numbers difficult. If universities end up with more students than predicted they will be over-enrolled. For the surplus students universities receive the relevant student contribution but no Commonwealth contribution.

the strong labour market is flowing through to the ATO data on which the Australian Government Actuary's HELP costs model is based.

¹⁵ AGA, *Reporting of the HELP receivable at 30 June 2021*, Australian Government Actuary (2021).

¹⁶ DofE, *HELP data extract 2018-19*, table 4.

¹⁷ For example at the time of the 2021 census, in the 25 to 44 year age range, rates of managerial and professional employment never fall below 85 per cent for nursing graduates and 74 per cent for teaching graduates (citizens only). By contrast for humanities and social science graduates professional and managerial employment in these age groups never exceeds 54 per cent: Calculated from: ABS, *Census of population and housing, 2021, TableBuilder Pro*, Australian Bureau of Statistics (2022)

The economics of over-enrolments are driven by their 'marginal cost', the cost of adding an additional student. Generally the marginal cost of extra students in already-offered courses should be below the average cost. Overheads in infrastructure, administration and course design and delivery do not necessarily vary greatly with student numbers, and so extra students may add only modestly to total costs.

Under the Job-ready Graduates policy the principal over-enrolment concern is with courses in the lowest student contribution band, \$4,124 in 2023. This may cover marginal costs in some courses, such as those taught entirely online. In courses with significant practical components – including the teaching, nursing and agriculture courses on this lowest rate – it may not be enough. Universities therefore lose money with additional students, creating financial difficulties. This encourages universities to err on the side of under- rather than over-enrolment, reducing student opportunities.

Under the Job-ready Graduates funding system student contributions in business, law and most humanities subjects cover more than 90 per cent of the total funding rate. This may have created a de facto demand driven system and deliberate over-enrolment in these fields. This may encourage enrolments in these fields that are not consistent with meeting student first-preference course choices.

Two research projects have investigated average teaching and scholarship costs.¹⁸ However, there is no research on marginal costs. Such research would fill a gap in understanding of the implications of student contribution levels for universities.

However, any feasible new student contribution system will narrow the price gap between the cheapest and most expensive student contributions. It should therefore help universities manage the financial implications of over-enrolments without additional empirical research.

¹⁸ Deloitte Access Economics, *Transparency in higher education expenditure: 2022*; G. Croucher et al., *What does it cost to educate a university student in Australia?*. Centre for the Study of Higher Education (University of Melbourne) /Pilbara Group (2021).

Options for new student contribution systems

Accord workload could be managed by ruling out possible student contribution systems that cannot meet practical policy goals and/or are unlikely to win political support.

Job-ready Graduates has significant problems and no policy benefits compared to other systems, except for those accruing to students on the lowest student contribution. It should be ruled out rather than tinkered with.

Three other main systems have been proposed for consideration in 2022, each versions of ideas with histories in Australian higher education policy: a flat rate, course costs, and private benefits. A flat HECS rate applied between 1989 and 1996. Private benefit was the approximate basis of the student contribution system between 1997 and 2020, with courses costs also influencing fields of education were allocated to student contribution bands.¹⁹

The Innovative Research Universities and Group of Eight lobby groups have suggested flat rate student contributions as options.²⁰ The IRU and the Productivity Commission have suggested varying versions of a course costs-based student contribution system, so that students in courses that cost more to deliver would pay more.²¹ While somewhat reframed, the time-to-repay criterion discussed above is similar to the private benefits based approach of student contribution policy between 1997-2020, so that students who are likely to earn more also pay higher student contributions. While time-to-repay would not produce a flat student contribution rate, arguably it shares some of the normative appeal of the flat rate proposal in narrowing the differences in burdens placed on students.

The Productivity Commission included this on its list of options.

Table 1 ranks these systems against the criteria set out in this submission.

¹⁹ For this history see Norton, *From private to public benefit: The shifting rationales for setting student contributions*.

²⁰ Gof8, *Productivity Commission 5-year productivity inquiry: Group of Eight submission*, Group of Eight (2022), p. 83. IRU, *Job-ready Graduates: principles and options for reform*, Innovative Research Universities (2022).

²¹ IRU, Job-ready Graduates: principles and options for reform; PC, 5-year Productivity Inquiry: From learning to growth - Interim report, Productivity Commission (2022), p. 60.

	Affordability/ repayment burden	Minimise HELP bad debt	Over-enrolment management
JRG	3	4	4
Flat rate	2	2	2
Private benefits	1	1	3
Course cost	4	3	1

Table 1: Ranked student contribution systems against submission criteria

Different systems on the affordability test

On the affordability/repayment criterion Job-ready Graduates and course cost systems lead to lower repayment burdens for some students but much greater burdens than the other systems for a subset of students on higher student contributions.

The course costs approach brings the 'nurse and lawyers problem' – that any system that leads to nursing students paying more than law students due to their higher course costs is politically unattractive. This is a major reason why the Howard government did not pursue a pure course costs model when legislating differential HECS in 1996. It was probably also a factor in the Rudd-Gillard government's rejection of the 2011 base funding review recommendation that public subsidies and student contributions be fixed proportions of discipline-based funding rates.²²

The relative ranking of Job-ready Graduates or courses as three or four on affordability depends on an empirical assessment of what proportion of students end up with debts that will take a long time to repay.

A flat rate system avoids the extremes of Job-ready Graduates or course costs systems but makes no adjustment for courses that typically lead to lower earnings, leading to more work effort to clear debts and longer repayment times. Given fiscal constraints, a new student contribution system will probably increase charges for disciplines currently in the \$4,124 band, but a flat rate system would require larger increases than a private benefit/time to repay approach. The IRU estimated than a budget neutral flat rate

²² Norton, From private to public benefit: The shifting rationales for setting student contributions.

student contribution would be around \$10,000 a year. That counts against it politically, but it is not impossible.

The private benefits/time-to-repay approach does best on affordability since it creates the strongest relationship between earnings and repayment times. All student contribution systems are formally gender neutral, but the private benefits/time-to-repay approach adjusts better than the others to different gender earnings profiles. The lowerearning graduate fields tend to be female-dominated. The historical private benefits approach has meant that on average women borrow less per year through HELP and on average have lower HELP balances.²³ The alternative student contribution systems would redistribute costs towards women.

The private benefits/time-to-repay approach can, however, only achieve its goals on average. Some graduates in fields allocated to higher student contribution bands will, inevitably, earn low incomes and be financially disadvantaged compared to other systems.

An issue with the time-to-repay approach is that the underlying calculations are affected by general labour market conditions and HELP thresholds and repayment rates. Changes to these can retrospectively affect the time estimates, and possibly the relative rankings of disciplines. These factors affect the economics of all student contribution systems, but the other systems are not directly concerned with repayment times.

Whichever system is eventually chosen, considering repayment time projections would be a useful when designing HELP repayment systems. While the 2019-20 changes to thresholds and repayment rates brought many previously exempt debtors into repayment, the overall effect of these reforms may be to slow repayment down as most debtors earning between \$50,000 and \$90,000 a year repaid less per year under the new system.²⁴ As this is a typical early career graduate salary range these debtors make less annual progress towards clearing their debt, extending years spent in the repayment system.

Minimise HELP bad debt

As with time-to-repay measures, the minimisation of HELP bad debt depends heavily on general economic conditions and HELP thresholds and repayment rates. These are more important to HELP bad debt levels than the student contribution system.

However Job-ready Graduates ranks last of the four systems on this criterion in Table 1 because, unlike a course costs model, it put humanities in a high student contribution

²³ Calculated from DofE, *Student load time series, PowerBI*, Department of Education (2022) And ATO, *Higher Education Loan Program: HELP statistics, 2005-06 to 2021-22 financial years*, Australian Taxation Office (2022). Because women have been a majority of students since before HECS began in 1989 they collectively hold more HELP debt than men.

²⁴ A. Norton, 'More than a million people are now repaying HELP debt, but the average repayment is down', *Andrew Norton: Higher education commentary from Carlton (blog)*, 10 August 2022.

band. The longer it takes to repay a debt the greater the chance that life circumstances will leave debtors with zero annual repayment or repayment amounts that are too low to fully repay.

Over-enrolment management

As total course costs are likely to be related to the marginal cost of an additional student the course cost model performs best on managing the finances of over-enrolments. Any model, like Job-ready Graduates, that heavily discounts student contributions for moderate or high cost courses does badly. The private benefits approach could underperform a flat rate on moderate cost but lower income courses such as performing arts, nursing and teaching.

Conclusion

The flat rate or time-to-repay/private benefits models do best against the criteria.

3. The Commonwealth contribution system

Narrowing the differences between Commonwealth contributions

Prior to Job-ready Graduates Commonwealth contributions varied between fields of education more than student contributions (Figure 3 compared to Figure 2). In the old system the highest Commonwealth contribution was nearly 11 times the lowest. Job-ready Graduates extended this ratio to more than 24 to 1.



Figure 3: Relative Commonwealth contribution bands, 2020 and 2023

Commonwealth contributions varying by field of education is a by-product of setting them according to assumed public return value (Job-ready Graduates²⁵) or previously through a (Funding rate – Student contribution) = Commonwealth contribution formula. If funding rates are based on costs (chapter 1) that vary by course and student contributions are not based on costs (chapter 2) then Commonwealth contributions must vary to produce the total funding rate.

When combined with fixed funding allocations variations in Commonwealth contributions create difficult trade-offs for institutions and make it harder to predict how many student places will be delivered.

The trade-off for institutions is how many student places in one field it will cost to create a student place in another field. Under Job-ready Graduates, for example, one

²⁵ DESE, *Job-ready Graduates: Higher Education Reform Package 2020 (discussion paper)*, Department of Education, Skills and Employment (2020), p. 24.

additional place in a funding cluster 4 course (for example, agriculture) would 'cost' 24.6 places in a funding cluster 1 course (for example law, business or most humanities). Other transfers are less extreme. It would 'cost' two funding cluster 2 (for example, teaching) and 1.6 funding cluster 3 (for example, engineering) places to create the additional agriculture place. These trade-offs may deter universities with participation missions from expanding enrolments in fields with high Commonwealth contributions, with implications for skills supply (chapter 6).

When student load does move towards the higher funding cluster disciplines, a goal of Job-ready Graduates, the system's capacity to deliver student places is reduced. The risk of unintended under-enrolment (delivering student places valued at less than the university's maximum basic grant amount) also goes up, since a missed enrolment target in a high funding cluster course leaves larger amounts of funding unused compared to a missed enrolment target in a low funding cluster course.

Wide gaps between Commonwealth contributions therefore complicate two goals of the overall funding system, to deliver sufficient student places to meet demand and to adapt to movements in demand between courses. These goals are discussed in more detail in chapters 5 and 6. While flat Commonwealth contributions are inconsistent with recommended student contribution systems (chapter 2), a new funding system should narrow Commonwealth contribution differences.

Student contributions must be the political focus

In all implemented student contribution systems except Job-ready Graduates the Commonwealth contribution is a residual item, what is left after the student contribution is deducted from the overall funding rate. Job-ready Graduates gave the Commonwealth contribution its own rationale, rewarding students/graduates for 'higher public returns' as defined by the government. The Productivity Commission also sees tuition subsidies as needing their own justification.²⁶

Previous policymakers did not seek separate political justifications for Commonwealth contributions. Indeed, until 2005 Commonwealth contributions were not specified by discipline in the funding legislation. Political debates were about HECS rates and total public funding amounts.

Within a fixed funding rate system student and Commonwealth contributions cannot have their own separate rationales, since their practical implications can be contradictory. Job-ready Graduates recognised this – for example the humanities cannot be penalised on the Commonwealth contribution side for low public returns within a private benefits based student contributions system. One rationale leads to high student contributions for humanities and the other to low student contributions. Job-ready Graduates abolished the private benefits rationale to maintain coherence.

²⁶ PC, 5-year Productivity Inquiry: From learning to growth - Interim report, chapter 3.

Politically, the focus must be on student rather than Commonwealth contributions. Few people know the detail of how the Commonwealth contribution/subsidy system works, with their debates only occasionally spilling over into broader public discussion. But student contributions are known, debated and have significant effects on personal finances. These are the issues that government must handle in higher education, especially during periods of policy change. The government needs reasons for student contributions that can be clearly explained to the general public.

4. Systems of allocating public funding to higher education institutions

The Accord terms of reference include lifting higher education attainment rates, increasing enrolments from equity students, and meeting skills needs. Different method of allocating resources to higher education institutions have varying strengths and weaknesses in achieving these goals.

Technocratic, block, demand driven and capped voucher models

Historically Australia has used three broad systems of distributing public resources to universities, course and students, what Table 2 calls technocratic, block and demand driven. They are not mutually exclusive at a total funding system level – all three are used now, although block funding is dominant as it has been historically except for the bachelor-degree demand driven system of 2012 to 2017. Table 2 also includes a capped voucher system, which can be designed as a hybrid of the technocratic and demand driven models. In practice the models are not pure, but the distinctions usefully highlight different decision points, decision makers, incentives, and information sources.

Table 2: Systems	s of allocating	higher education	public funding
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Decision	Technocratic	Block	Demand driven	Capped voucher
Total number of places/dollars	Government decision	Government decision	University and student decision.	Government decision
Total number of places /dollars for each university	Government decision	Government decision	University and student decision.	University and student decision.
Total number of places/dollars for each course or discipline	Government decision	University and student decision.	University and student decision.	Either government or university/student depending on model.
Student-level allocative criteria, such as academic results or equity group.	Government decision	University and student decision.	University and student decision.	Government decision

Technocratic model

In a technocratic model, the government determines detailed priorities and directs activity accordingly. Ideally these decisions are based on evidence and guided by expert input (the meaning of technocracy). Government decisions can favour specific higher education providers, disciplines, courses, or types of students. Technocratic allocation gives governments relative certainty about how its money is used and limits the range of potential outcomes.

The only long-running technocratic allocation in Australian higher education is medical student places. To regulate doctor numbers student places are strictly limited in total and by institution. However, governments sometimes use technocratic methods for new funding grafted onto block grant systems. For example, the current government's 20,000 new places specifies types of students (from equity groups) as well as institution, qualification level and courses or disciplines.²⁷ The government plans micro-allocations of teacher education student places, possibly based on the 'performance' of higher

²⁷ In my view the government exceeded its statutory authority in adding these conditions: A. Norton, 'The legal and bureaucratic problems of the government's 20,000 additional student places policy', *Andrew Norton: Higher education commentary from Carlton (blog)*, 24 August 2022.

education providers.²⁸ Targets for attainment and equity participation used in the demand driven system (and mentioned in the Accord's terms of reference), and the previous government's performance penalty scheme, are technocratic overlays on systems that otherwise do not determine detail from the centre.

A technocratic central agency potentially has a better national or system-level overview than decision makers in decentralised funding models. The government plans to use the Australian Institute for Teaching and School Leadership to better understand the potential supply of teachers, which could feed back into how resources are allocated to teacher education courses.²⁹

Although a central agency can coordinate use of data collections, it lacks detailed knowledge of students, academics, courses or local employment markets. Historically the Department of Education has made little use of enrolment data other than to determine funding. With long time lags summary data is published, but with no analysis of its implications. In principle, however, data use could be improved. The Jobs and Skills Australia agency could improve the flow of labour market information into the higher education sector.

A key weakness of detailed technocratic allocation of resources is the risk of stranded funding, money that is available but cannot be used. The more conditions are attached, for example the four layers of conditions in the 20,000 places policy, the lower the chance that a student can be found that meets all the criteria. Meanwhile other preferences or needs go unmet.

The previous funding system illustrates the problem. The capping of bachelor degree funding from 2018 created three grants for coursework places, for each of sub-bachelor, bachelor and postgraduate coursework places (there were also funding cluster allocations in sub-bachelor and postgraduate coursework). Table 3 shows that in 2018 22 of the 37 public universities would have benefited from more flexibility in their allocated Commonwealth Grant Scheme funding allocated. They were under-enrolled in one or more qualification levels, and so received no funding for places not delivered, while over-enrolled in one or more qualification level and not paid for the additional student places. This does not count student opportunity losses from universities not accepting applicants whose enrolments would have been student contribution only. Correcting this inflexibility was one strength of Job-ready Graduates.

 ²⁸ See EMG, *The National Teacher Workforce Action Plan December 2022*, Education Ministers Meeting (2022), pp. 8 & 14. This proposal also exceeds current statutory authority.
²⁹ Ibid., p. 27.

Table 3: Universities with under-used resources due to qualification level allocations, 2018

	No under- enrolled levels	Under- enrolled level(s), no over- enrolled level	One under- enrolled level, one over- enrolled	One under- enrolled levels, two over- enrolled	Two under- enrolled levels, one over- enrolled
Number of universities	12	3	6	10	6

Note: A university was considered on-target if it was less than 20 places or \$200,000 from a target.

Sources: University funding agreements, DESE funding determinations, DESE, uCube

Another weakness of technocratic systems is timing. The need to allocate resources in advance, potentially over multi-year periods, limits adaptation to new information. Faster responses can have their own issues, such as allocating new resources so close to the start of the academic year that universities may not be able to use them effectively. This was an issue with the previous government's COVID-19 short courses and is a problem with the current government's 20,000 places.

The block grant model

In a block grant model, the government allocates funding to higher education providers, typically with broad but not detailed guidelines as to its use. The government's big decisions in a block model are total spending and how to distribute that money between higher education providers. The block grant for higher education courses is the dominant source of teaching funding in 2022, at more than 90 per cent of money distributed under the Commonwealth Grant Scheme.

Compared to technocratic systems, block grants give universities significant flexibility. Within their fixed funding envelope and the system's rules, universities decide how to spend block grant money, moving resources internally according to local demand and their own strengths and priorities. Both technocratic and block grant models, however, are weak at reallocating resources between institutions. A university funding allocation is usually only reduced after a sustained failure to use it.

Technocratic and block grant models both give governments certainty about their maximum expenditure – an issue not flagged in the Accord terms of reference but a major consideration for policymakers. For students and universities this certainty is a weakness, tying public funding to the government's budgetary situation and political priorities. This close budget tie can put higher education systems out of sync with cycles of increased demand, caused by population growth, increased school completion rates, and labour market changes, including the recessions that typically increase interest in higher education.

The demand driven model

The demand driven model avoids these problems. The government sets no specific limits on student numbers or funding, overall or at the institution level – if it needs to save money, it does this by trying to reduce Commonwealth contributions. Higher education providers decide what courses to offer students. This model gives universities the highest level of autonomy, and the most flexibility in responding to student preferences. Demand driven funding is effective in moving resources between universities, which are only paid according to their enrolments.

While the bachelor degree demand driven system ended in late 2017, a small demand driven system exists for Indigenous students from regional and remote areas. Arguably too a de facto demand driven system exists for business, law and most humanities fields with \$15,142 student contributions.

Partial demand driven funding, however, cannot achieve the system-level benefit of moving resources between courses. The \$15,142 student contributions may instead distort course provision away from student first-preference course choices. Similarly, calls to extend demand driven funding to all Indigenous students may be counter-productive. The policy would be funded initially by reducing block grants by the expected uptake by Indigenous students, which will create stranded funding if Indigenous demand proves to be lower than expected. Funding determinations show that actual outlays on the regional Indigenous demand driven system are below original expectations.

The capped voucher model

A capped voucher system has elements of the technocratic and demand driven models.³⁰ The government would award vouchers or scholarships to people interested in higher education, who could then take them to a higher education institution of their choice. As compared to a demand driven system the government's control of the number of scholarships limits the potential cost. As compared to a technocratic system it would encourage universities to respond to student demand and efficiently move resources between institutions, including potentially higher education providers that are not currently within the public funding system.

A capped voucher system could also be used to give priority to specific courses or types of student. This could replicate the problems of other technocratic models of stranded resources, with vouchers that could not be allocated or vouchers allocated but not used. A partial remedy would be multiple rounds of scholarship allocations, with surpluses left from early offer rounds used more flexibly in subsequent rounds.

³⁰ In his later years the leading policy thinker and vice-chancellor Peter Karmel called for such a system, see P. Karmel, 'Funding universities', in *Why universities matter*, ed. T. Coady (Melbourne University Press, 2000).

A capped voucher system, compared to how existing allocative models operate, would need a (technocratic) system of allocating vouchers or scholarships to prospective students. This would require a significant bureaucratic investment and skills not currently held within the Department of Education. It would struggle with or lose an important part of the current admission system, which is more about an applicant's suitability for a specific course than higher education in general. The process of allocating vouchers/scholarships would involve the Commonwealth in controversies over selection criteria, such as use of ATAR. Prospective students would need to clear an additional admission hurdle, for a voucher/scholarship and for their specific course(s) of interest.

Allocation by places or dollars?

Allocations of higher education resources can be expressed in dollars, the total amount of money allocated or spent, and students or full-time equivalent student places, how many enrolment opportunities were allocated or delivered. The metric used to allocate resources affects how the system operates.

If the policy focus is total enrolments – limiting them, expanding them, meeting a target – then a student place-based system is the best choice. Student places are not the same as enrolments, since they are full-time equivalent measures that can include more than one individual. But there is a relationship between them that varies by university within a limited range. In 2020 Commonwealth students ranged by institution between 1.16 and 1.97 per place, with a sector average of 1.38.³¹ For reasons described in chapter 3, a dollars-based system can result in a wide range of student places depending on discipline choice, which in turn creates high potential variability in enrolments.

If the policy focus is institutional flexibility within a fixed funding envelope then a dollars-based system is the best choice, allowing moves between disciplines even if these come at a cost to total enrolments. This is the system for 'higher education courses' (coursework places from sub-bachelor to postgraduate except for medical places and remote and regional Indigenous bachelor degree students.) In a capped system, certainty about student numbers can come at the price of adaptability to course priorities. To meet number targets universities may need to focus on funding cluster 1 courses, since these generate the greatest number of places. Reportedly this happened with the 20,000 places policy, with universities being offered cluster 1 places they did not request to boost numbers to match the government's election promise.

The demand driven system of 2012 to 2017 had a student places unit of allocation; universities were paid according to how many student places they delivered. As Commonwealth contributions varied by discipline the same number of student places could convert into many different dollar amounts. The total amount of money received by the university was not fixed in advance.

³¹ Calculated from DESE, *Students: Selected higher education statistics 2020*, Department of Education, Skills and Employment (2022), tables 5.4 and 5.6.

A block model could be organised along similar lines, specifying minimum student places without specifying funding clusters. Funding would be based on a weighted average funding rate, based on the Commonwealth contributions of student places actually delivered. The government would have less certainty about maximum expenditure compared to a fixed dollar amount, but it would have more certainty on the number of student opportunities. The system would be more adaptable at the university level in moving resources between disciplines, because the trade-offs described in chapter 3 would not exist.

Technocratic models (such as designated places for medicine) allocate student places to funding clusters, making both the number of places and the number of dollars predictable but also inflexible.

5. Allocative models and meeting student demand

The Accord terms of reference suggest that new targets should be set for participation in higher education and subsequent levels of degree attainment. This chapter discusses potential demand for higher education and how it might be met.

Increases in higher education participation rates

Both demand driven and block grant models have histories of increasing participation rates. Figure 4 shows a strong surge in participation rates at age 19 under the demand driven system from the early 2010s, but with a few temporary exceptions previous block grant systems also produced long-term participation rate increases.

Figure 4: Domestic student higher education participation rates at age 19, 1975 to 2017



Notes: Age 19 chosen as the modal age of university students. The 19-year-old participation rate is the number of Australian citizen and permanent resident, and NZ citizen, 19-year-olds who are enrolled in higher education as a proportion of total 19-year-old residents in a given year less onshore international students (temporary visa holders). Offshore international students are excluded from the calculation from 1989. Series 1 is from an earlier published time series that includes international students and in some years has estimated part-time enrolment numbers. Sources: ABS demographic data and Department of Education enrolment data.

Increased demand is the product of economic and social change. A degree is required or preferred in larger proportions of jobs over time, increasing the career need for higher education. Most secondary students and their parents aspire to or expect to continue to higher education, despite sometimes lacking clear career objectives.³² Higher education

³² For student preferences see the references at Norton, Cherastidtham, and Mackey, *Mapping Australian higher education 2018*, p. 18. For parental expectations, see R Wikins et al., *The*

is a social expectation in many families. Economics and aspiration drive policy change. New policies to increase student places typically coincide with demographic growth (Figure 5), as governments grasp the practical and political challenges of more school leavers wanting higher education. The baby boom children of the late 2000s will reach university age from the mid-2020s. Job-ready Graduates was the first policy response to this new baby boom cohort and the Accord review now inherits this issue.



Figure 5: Demographic change and higher education policy

Source: ABS, Historical population statistics Estimating future demand

As a rough guide to additional demand Figure 6 takes as a base year the Census number of higher education students aged 17 to 25 years who are also citizens in 2021.³³ Younger citizens are then aged through the Census to estimate numbers in the 17 to 25 age group in each year from 2022 to 2030. Actual higher education participation rates for each age in 2021 are then used to estimate citizen student demand for the 2022 to 2030 period. By 2030 this model estimates that the higher education system will need to

Household, Income and Labour Dynamics in Australia Survey: Selected findings from waves 1 to 20, the 17th annual statistical report of the HILDA survey, Melbourne Institute of Applied Economic and Social Research (2022), p. 131. Economic incentives for education are important but under-explain demand for higher education. See: Norton, 'Jobs, interests, and course choices'; A. Norton, 'Prospective university students who might be influenced by student contributions', Andrew Norton's Blog: Higher Education Commentary from Carlton, 30 June 2020.

³³ This underestimates Commonwealth supported students, due to Census non-response overall or to the citizen question, and because permanent residents and New Zealand citizens are also entitled to a CSP.

accommodate 68,000 more students in this age group than in 2021, an increase of 11 per cent.



Figure 6: Growth in Australian citizen students aged 17 to 25 years, assuming 2021 agebased participation rates

Source: Calculations based on ABS, Census 2021, TableBuilder Pro The total number of places under Job-ready Graduates

A core growth strategy of Job-ready Graduates is to reduce average Commonwealth contributions. With a lower average rate universities must deliver more student places to earn the same Commonwealth Grant Scheme amount as before. But the design of Job-ready Graduates creates uncertainty about how many places it will produce.

The first source of uncertainty is the Commonwealth contribution rates discussed in chapter 3. With Commonwealth contributions varying much more than previously, the average can also vary – on 2018 weighted average enrolment patterns it was about 15 per cent lower, but an enrolment shift to high Commonwealth contribution courses could increase the average and reduce places. As noted in chapter 4, Job-ready Graduates allocates most CGS resources in dollars rather than student places, with no minimum or target number of student places.

Recent high inflation produces a second source of uncertainty. While the previous government claimed that maximum basic grant amount (MBGA) for higher education courses was indexed, there is no automatic indexation of the MBGA. Instead, the previous government included an allowance based on estimated future CPI rates in maximum basic grant amounts set out in university funding agreements for 2021 to 2023. For 2022 and 2023 the CPI estimates were wrong for each year but add up to about

the right level over a two-year period (Table 4). Estimates of indexation for 2024 and 2025, however, significantly exceed the CPI rates originally predicted and budgeted.

Table 4: Indexation, actual and estimated

	2022	2023	2024	2025
CPI - in funding agreements to				
2023/future expectations	2.30%	2.30%	2.10%	2.30%
CPI indexation - actual 2022 and 2023,				
2024 and 2025 based on RBA CPI forecast	0.90%	3.50%	8.00%	4.70%

Sources: Spreadsheet sent to universities with their Job-ready Graduates funding; DoE, Funding clusters and indexed rates web page; RBA, *Forecast table – November 2022*.

While the maximum basic grant amount for higher education courses is not indexed unless the government decides to do this through the funding agreements, Commonwealth contribution rates are automatically indexed each year under section 198-5 of the *Higher Education Support Act 2003*. Because student places are the funding basis for medical places and the regional Indigenous demand driven system their total funding will increase automatically (indexation is based on a lagging CPI indicator, a timing issue that should be fixed³⁴). For higher education courses, however, Commonwealth contribution rates will increase without necessarily any corresponding increase in the maximum basic grant amount. If inflation is higher than anticipated each university can deliver fewer student places and still receive its maximum funding entitlement.

Figure 7 takes \$1 million in CGS funding and calculates how many student places it can deliver from different funding clusters. The original \$1 million is indexed according to the top line of Table 4, the CPI levels estimated during the Job-ready Graduates transition. It reaches \$1.119 million by 2025. The Commonwealth contribution rates are indexed according to the actual or estimated rates, the second line in Table 4. The loss of student places between 2021 and 2025 varies significantly in absolute terms according to funding cluster; in percentage terms it is 9 to 10 per cent. This contrasts with an estimated 4 per cent increase in demand from the 17-to-25-year-old population in the same time period (Figure 6). Misaligned indexation methods create a structural risk that the system will fund fewer student places than anticipated. As 2022 shows, over-estimated indexation can deliver more places than expected.

³⁴ A. Norton, 'Inflation and higher education', *Andrew Norton: Higher education commentary from Carlton (blog)*, 13 July 2022.

Figure 7: Potential changes in student places delivered per \$1 million of CGS funding due to indexation misalignment



The funding agreements for 2024, to be negotiated before the Accord panel's final report is due, are crucial to short-term system capacity. If they do not include aligned indexation, the system's capacity to deliver student places will fall when a large birth cohort require increased capacity (Figure 5).

If the Accord panel recommends a block grant system with a dollar unit of allocation its indexation must be aligned with indexation of Commonwealth contributions. The distribution of student places under Job-ready Graduates

Under Job-ready Graduates each university's Commonwealth Grant Scheme funding is based on its pre-Job-ready Graduates enrolments. Technocratic and block grant systems typically use historical funding levels with adjustments for future years. 'Growth' funding under Job-ready Graduates is based on campus location: 3.5 per cent annually for regional campuses, 2.5 per cent for metropolitan campuses in high growth areas, and 1 per cent for other campuses.³⁵

³⁵ DESE, *Job-ready Graduates: Higher Education Reform Package 2020 (discussion paper)*, p. 15. This is however 'growth' off a lower base. The funding model assumes that 'grandfathered' students on pre-Job-ready Graduates Commonwealth leave university and are replaced by new students on lower Commonwealth contribution rates (this is a formula-driven withdrawal of resources, it may not accurately reflect actual changes). Many universities will still receive less CGS funding in 2023 than 2021 for their core funding grant (not counting temporary programs).

Regional areas will not see the greatest growth in school leaver demand

Higher growth rates for regional campuses reflect a policy intent to increase participation in regional areas, which are lower than in metropolitan areas. Regional areas, however, are not generally going to be the areas of greatest population growth in the second half of the 2020s. Full regional classifications are not yet included in the publicly available 2021 Census data, so Figure 8 uses a greater capital city/rest of state classification to cover the geographic location of the age groups that will be the school leaver university entrants through to 2030. Overall the population of 9 to 16 year olds was in 2021 13.5 per cent higher than in 2016 in the greater capital city areas and 7.8 per cent higher in rest of state areas. Figure 8 also shows variations by specific year of age, with growth rates most aligned in the 11-to-14-years age groups.



Figure 8: Growth rates by capital city/rest of state location, population aged 9 to 16 years

Source: ABS, Census, TableBuilder Pro Note: Australian citizens only

Narrowing the analysis down to labour market areas, the ABS SA4 category which covers areas with populations between 100,000 and 500,000, predictably shows similar patterns (Figure 9). The largest absolute growth areas are mostly major city outer suburbs, although some inner regional areas also show significant growth. Melbourne looks set for substantial increases in its school leaver population. As many residents of the regions move to major cities to study, this analysis understates the likely increase in demand for campuses in major metropolitan areas.

Figure 9: Population growth by region, 2016 to 2021



Source: ABS, Census, TableBuilder Pro Note: Australian citizens only

While regional university students often move to study, most school leaver students live with a relative, usually a parent or parents, as seen in Figure 10. With no need to live near a closed campus some students moved back in with their parents during COVID-19 restrictions. Figure 10 therefore uses Census 2016 figures as probably more closely representing non-COVID practices, with the 2021 figure for living with relatives included for reference. Students living with relatives may contribute to household expenses, but generally this option is cheaper than moving out. It helps keep higher education affordable – with increasing rents even more so now than historically.

A system of allocating resources to higher education institutions that does not adapt to where people live therefore increases the effective cost of higher education to students and, for some, will render it impractical or unaffordable. This is clearly contrary to goals set out in the Accord's terms of reference.

The Job-Ready Graduates policy on new places, therefore, again marks the system out as high risk for not meeting student demand. Even if theoretical maximum student places were sufficient to meet demand in the aggregate, their location may lead to capacity in the regions being unused while city universities have demand they cannot meet.



Figure 10: School leaver students tend to live with relatives, usually parents

Most indicators needed for equity analysis are not yet included in the publicly available 2021 Census data. But many areas showing high population growth rates in Figure 9 were lower SES at the time of the 2016 Census.³⁶

Urban low SES enrolment shares could decline in the mid-2020s under current policy settings. Universities within commuting distance of the homes of potential low SES students will increase their ATARs and other selection requirements as demand increases. Low SES students are less likely to get high ATARs (Figure 11), and so academic selection will reduce their numbers.³⁷ While in theory students with lower ATARs could move to regional universities with excess capacity, in practice the costs would be prohibitive for many.

³⁶ ABS, Census of Population and Housing: Socio-Economic Indexes for Areas (SEIFA), Australia, 2016, Interactive maps, Australian Bureau of Statistics (2018)

Source: ABS, Census, TableBuilder Pro Notes: Australian citizens only, place of enumeration Equity students

³⁷ The role of ATAR by SES can also be seen in the national applications data, although without information on the underlying Year 12 population: DESE, *Undergraduate applications, offers and acceptances 2021*, Department of Education, Skills and Employment (2021), table A9.1.



Figure 11: ATAR distribution of NSW Year 12 students, 2017

Proportion of NSW Year 12 students by SES and ATAR, 2017

Source: Universities Admission Centre, Socio-economic status and the ATAR

Figure 12 shows how this dynamic has played out in the past. In the early 2000s the then minister threatened and then imposed penalties for what he saw as excessive overenrolment. The number of commencing undergraduate places fell, with low SES enrolments falling at a greater rate than other SES groups. When the demand driven system pushed up commencing numbers in the 2010s low SES enrolments grew at a faster rate than other SES groups. Low SES numbers again fell more than other SES groups after the demand driven system ended, although as noted earlier applications also fell in this period.





Note: Postcode measure of low SES which is less accurate than smaller statistical areas but has a time series going back to 2001.

Source: Department of Education, Enrolment time series PowerBI, Ucube, Selected student statistics.

Alternatives to Job-ready Graduates allocations

A return to demand driven funding would remove the supply-side constraints of Jobready Graduates or other block grant models. Demand driven funding delivered strong growth in participation rates during the 2010s, but circumstances have changed in ways that make a late 2020s repeat uncertain. Despite the term 'demand driven' there is no requirement to respond to demand, just funding support to do so.

Risks of a second demand driven system include:

- The geographic location of increased population (Figure 9) could lead existing universities to think these prospective students are outside their area of responsibility.
- School leaver numbers will increase more quickly in the second half of the 2020s than during the demand driven funding period (Figure 5), leaving universities less time to respond, although that period saw a larger increase in participation rates than seems likely in the 2020s (Figure 4). There is now a smaller proportion of Year 12 students who are potentially interested in higher education who are not already applying and enrolling.

- The decision to cut total student funding rates for many courses (chapter 1). This supply-side risk affected a shorter list of disciplines in the first demand driven system.³⁸
- For various practical, strategic or mission reasons universities may decide not to meet demand.

An example of mission changes to enrolment strategy was the 2018 ANU announcement that it would not increase its enrolments further, citing quality concerns from too much growth (although offers to domestic undergraduate applicants and total domestic undergraduate enrolments have not fallen subsequently).³⁹ If the University of Canberra made a similar decision affecting domestic undergraduates it could create issues for ACT prospective students who are unable or unwilling to move.

A technocratic or block grant system can set target minimum numbers of student places for each university. When student places were the unit of allocation their number had a quasi-normative status, although the financial penalty for enrolments not matching the allocation was just not being paid their full funding entitlement. Penalties could be increased, although these would need to be contextualised, such as taking levels of demand and the regulatory requirements around student admissions into account.

While allocating resources to institutions that cannot use them is an inherent risk of block or technocratic models, it would not be difficult to bring the risk below that created by Job-ready Graduates. A more sophisticated version of the analysis above on student location could use enrolment data to identify campus catchment areas (rather than just campus location). It could model the probability of people wanting to go to university. It could then use the higher education data collection, the Census and other population data to estimate likely future population movements.

Demand driven funding has risks if institutions decide not to grow, but it has high flexibility in moving resources between institutions according to student demand. Along with the capped voucher system model, this is a strength of demand driven models compared to block or technocratic models of allocating resources (Table 2).

A major consequence of the first demand driven system was a change in the relative size of universities in the Commonwealth supported place market. The overall number of CSPs in Table A institutions increased by 38 per cent between 2008 and 2017 (2008 was the last year of enrolment stability before relaxed funding caps began increasing intakes in the lead up to full demand driven funding). Some universities grew their CSP numbers

³⁸ D. Kemp and A. Norton, *Review of the demand driven system: final report*, Department of Education (Department of Education, 2014), p. 72-74.

³⁹ J. Gothe-Snape, 'Australian National University to halt student enrolment growth', *ABC News website*, 24 July 2018. ANU offers to domestic undergraduate applicants increased over 2019-2021 while total domestic undergraduate enrolments were slightly higher in 2019 and 2020: DESE, *Undergraduate applications, offers and acceptances 2021*, table A10; DESE, *Student enrolment pivot table*, Department of Education, Skills and Employment (2022).

only slightly, while three more than doubled in size and another eight expanded by more than 50 per cent.⁴⁰ The more conservative and political systems of allocation used in the technocratic and block models would not have produced such large movements in relative scale.

Additional institutions to meet demand

One way of alleviating the risks of current Table A institutions not responding to new student demand would be greater use of non-university providers. In 2020 these providers enrolled 4.4 per cent of domestic undergraduates. A proposal to extend demand driven funding to other higher education providers reached Parliament in 2014 but never became law. Most students in non-university higher education providers pay full fees, and if undergraduates also pay a 20 per cent loan fee. These charges create a significant financial disincentive for students to enrol in these providers.

The TAFEs, which have a wide geographic reach, would have been beneficiaries of the 2014 policy. Nine TAFEs are currently registered with TEQSA to provide higher education (excluding dual sector universities), although in 2020 enrolled only 2,500 domestic students between them.⁴¹ Universities also use TAFEs as third-party providers. These enrolments are not reported separately. Greater use of TAFEs to deliver higher education would also promote engagement between higher education and vocational education.

Demand for non-university providers would increase if their students did not incur a large financial penalty compared to their CSP peers. Realistically, however, extending CSP eligibility to more higher education providers and students will not quickly lead to significant increases in enrolments. Most existing non-university higher education providers are specialised in the courses they teach, located in the same areas as existing universities, and do not necessarily want to grow significantly – their smaller scale is important to the more personal experience they offer. Only some non-university providers of scale.

The Accord panel could consider recommending new public tertiary education institutions in growth areas. No new public higher education institutions have opened this century, although an existing private university, the University of Notre Dame, was added to Table A of the *Higher Education Support Act 2003* in 2021. Ninety-seven per cent of the additional 235,000 CSPs created between 2000 and 2020 were delivered by institutions that were already on Table A in 2000.

Regulatory changes in the 2000s made setting up new universities more difficult and expensive, but new public higher education institutions do not need to be universities. Non-university institutions can have a clear focus on teaching, without the conflicting objectives and organisational tensions of the teaching-research university.

 ⁴⁰ A. Norton, After demand driven funding in Australia: Competing models for distributing student places to universities, courses and students, Higher Education Policy Institute (2020), p. 22.

⁴¹ DESE, *Students: Selected higher education statistics 2020*, table 13.3.

Policy action is needed by the mid-2020s

The combined effects of increased demand (Figure 6) and reduced supply (Figure 7) make policy change on student places necessary by the mid-2020s, although in the short term this could just be an increase to CGS funding. History suggests that cohorts with reduced participation in higher education after leaving school never fully catch up.

Figure 13 shows the proportion of the population with a bachelor degree or above or currently enrolled in higher education, by the year they turned 18 to capture policy and other contemporary events (the analysis is only people born in Australia, as the citizen figures include people with degrees from universities overseas). The fall in participation rates in the late 1970s (Figure 4) is still visible more than 40 years on in 2021 (Figure 13), despite subsequent mature-age education (14 per cent participation in the 1970s, 22 per cent attainment in 2021). An early 2000s dip in participation rates, when a fall in commencing bachelor degree enrolments coincided with population growth, can still be seen in attainment figures 15 or more years later. Figure 13 shows another recent decline.

Participation and attainment declines are not only due to higher education policy. Higher education funding stagnated in the late 1970s, but demand-side factors were also influential.⁴² The end of the demand driven system in December 2017 constrained the supply of student places, but school leaver applicant numbers declined over the same period.⁴³ However the school leaver cohort will increase so much from the mid-2020s that school leaver application rates below their previous peak would still lead to significantly more applicants than in the early 2020s. The question is whether supply will be sufficient under current policy settings, or whether future versions of Figure 4 and Figure 13 will show declining participation and attainment for people who turned 18 in the mid- and late 2020s.

⁴² A. Norton, 'The rise and then slight fall of school completion and university participation rates in Australia and Britain, 1870s to 1970s', *Andrew Norton: Higher education commentary from Carlton (blog)*, 4 November 2020.

⁴³ DofE, *Student applications time series, PowerBI*, Department of Education (2022).



Figure 13: Lifetime bachelor or above attainment plus enrolment rates, by the year the person turned 18

Source: ABS, Census 2021, TableBuilder Pro Note: Enrolment only recorded for people who did not already have a bachelor degree or above.

6. Allocative models and meeting skills needs

The Accord terms of reference require a system that 'develops the skills needed now, and in the future'. This requires methods of deciding what skills will be needed and systems of organising education to produce those skills.

As is widely understood, neither predicting skills needs nor forecasting skill supply are straightforward. Jobs and Skills Australia will build on the work of the National Skills Commission in exploiting the available data resources on labour market trends. Forecasts are based on extrapolations forward of recent trends. Even when the aggregates are roughly right, complex flows in and out of employment, and between industries, occupations, and firms affect demand for new graduates and their opportunities for advancement.

Government policy steering international students towards courses related to skills shortage occupations complicates domestic student links between enrolments and skills needs. The Accord panel needs to consider the implications for domestic students of creating further temporary graduate 485 visa incentives for international students to study courses the government deems to be in skill shortage.⁴⁴ In undergraduate IT courses, for example, international student completions already outnumber domestic student completions.⁴⁵

While students, universities and government can make informed predictions about the labour market, much can happen on both the demand and supply sides of the forecast – included students not completing courses – in the three or more years between applying for a course and graduating.

Demand constraints

All the systems of allocating higher education resources described in Table 2 are demand constrained – none force students to enrol in university or take specific courses. Persuasion is a key policy tool, including financial incentives (student contributions in Job-ready Graduates, scholarships, discounts on HELP payments), careers advice, and marketing. For the reasons described in chapter 2, pricing courses differently is unlikely to make a cost-effective difference to student course choices.

Prospective students are interested in employment outcomes.⁴⁶ Students need to know about job prospects for this interest to flow through to demand. Only the Graduate Outcomes Survey focuses on recent graduates and is easily available to interested prospective students, but other relevant labour market data is collected and publicised to varying extents. Government careers websites such as myfuture summarise salary data

⁴⁴ J. Clare and C. O'Neill, 'Post-study work rights for international students to boost skills', *Minister's media centre: Department of Education*, 2 September 2022.

⁴⁵ Calculated from DESE, Award course completions pivot table 2020, Department of Education, Skills and Employment (2022).

⁴⁶ Norton, 'Jobs, interests, and course choices'.

and employment forecasts by occupation. At least for high-profile occupational fields relevant information seems to flow into prospective student decision making.



Figure 14: Index of job advertisements and course applications for nursing

Note: The vacancy index is the three-month rolling average recorded for September in the year prior to the academic year for which applicants are seeking entry. Nurses includes registered nurses and midwives.

Sources: Department of Education, *Undergraduate applications, offers and acceptances*. National Skills Commission, *Internet vacancy detailed occupation data*

Figure 14, for example, shows a strong relationship between trends in advertised job vacancies and course applications for nursing. Other fields such as IT, however, have no clear relationship between these indicators. IT course applications have increased most years over the last decade, irrespective of fluctuations in job advertisements. Job advertisements for IT professionals, however, always exceed those of any other professional occupation, supporting a perception that job opportunities are relatively plentiful.

Information flows are weaker for fields of education that lead to multiple occupations, such as arts or science. A decline in enrolments for arts-related fields coincided with a period of poor employment outcomes, possibly due to concern about future careers.⁴⁷

 ⁴⁷ A. Norton, 'A farewell to arts', *Andrew Norton: Higher education commentary from Carlton (blog)*, 19 November 2020. Graduate outcomes were worse in the mid-2010s than at any previous time: Norton, Cherastidtham, and Mackey, *Mapping Australian higher education 2018*, p. 77.

Enrolments in science-related fields, however, were resilient despite poor graduate outcomes, possibly because of campaigns to promote 'STEM'.⁴⁸

Different skill supply systems across allocative systems

Table 5 summarises how different higher education resource allocation systems meet skills needs. They differ in how they identify skills needs and their strengths and weaknesses in meeting those needs.

The technocratic model can draw on detailed national data to predict what skills are needed and in which location. The Jobs and Skills Australia agency will perform this role. A current obstacle to designing a technocratic system for the supply of graduate skills is higher education data, although the TCSI system should eventually remedy this problem. Enrolment data could be used to model future graduations in different areas. If the Panel is considering a technocratic model it needs to also think about how to ensure this function will be carried out. The Department has no statutory duty to analyse or publish the data it collects, encouraging it to give data tasks a low priority. It is normal for first semester enrolments in a given year not to be reflected in published data until late the following year, or more recently nearly two years after first enrolment. While technical issues are a factor in recent delays, long time lags also reflect a focus on data being final and accurate for funding purposes over all other purposes of data collection.

Decision	Technocratic	Block	Demand driven	Capped voucher
Predicting	Government	University	University	Government
demand for	responsible. Can	responsible.	responsible.	responsible if
specific	invest in	Varying	Varying	vouchers
courses	sophisticated	investment in	investment in	linked to
	national analysis	monitoring	monitoring	courses or
	(eg Jobs and	general trends.	general trends.	disciplines.
	Skills Australia).			
		Aware of student	Sensitive to	Weak on
		applications,	student	detailed
	Weak on	which tend to	applications,	knowledge of
	detailed	move in line with	which tend to	students and
	knowledge of	the labour	move in line	courses.
	students and	market.	with the labour	
	courses.		market.	Risk of national
		Relationships		judgments on
	Risk of national	with local	Relationships	skill needs that
	judgments on	employers.	with local	are wrong.
			employers.	

Table 5: Meeting skills needs under different allocative systems

⁴⁸ A. Norton and B. Cakitaki, *Mapping Australian higher education 2016*, Grattan Institute (2016), chapter 10.

	skill needs that are wrong.	Can manage risk by pursuing multiple hypotheses about future needs. But students have goals other than labour market outcomes.	Can manage risk by pursuing multiple hypotheses about future needs. But students have goals other than labour market outcomes.	
Moving	Requires	Requires	Happens	Students take
resources to	government	government	through market	vouchers to
required	decision that	decision that	transfers.	institution of
institutions	may be slow.	may be slow.	No soussesses	choice.
	Delitically	Delitically	No government	No
	difficult to	difficult to	required	NO
			requireu.	docision
	sum trade-offs	sum trade-offs		required
Moving	Can specifically	Can move	Can move	If youchers tied
resources to	allocate places	resources	resources	to courses or
required	to target	without	without	disciplines
courses/	courses.	government	government	annual awards
disciplines		approval.	approval.	to new
	Requires			students faster
	government	But university	Funding by	than multi-vear
	decision that	may decide not	places without	university
	may be slow.	to expand in	cap avoids loss	funding
		areas where skills	of student	agreements.
	Politically	needs exist.	places.	_
	difficult to			No institution-
	announce zero-	Varying	Within-	level caps on
	sum trade-offs.	Commonwealth	institution	places or
		contributions	political issues	funding,
	But students	mean some	easier to	minimising
	have goals other	transfers of	manage	trade-offs on
	than labour	resources cost	without zero-	places and
	market	significant	sum trade-offs.	between
	outcomes so	numbers of		departments
		student places.		and faculties.

may not follow supply. But locked in allocations may prevent moving resources to meet other/not predicted skill needs.	Within- institution political issues in zero-sum trade- offs. But students have goals other than labour market outcomes so may not follow supply.	But university mission more than just skills. But students have goals other than labour market outcomes so may not follow supply. But university may decide not to expand in areas where skills needs exist.	But students have goals other than labour market outcomes so may not accept vouchers.
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Job and enrolment data could be made available to higher education providers in systems built on more decentralised decision making. Decentralised models of information collection have greater access to local information about students and local needs than a central technocratic agency. Centralised or decentralised models can both produce wrong analysis or have circumstances change, but decentralised models support pursuit of multiple hypotheses about how the future might turn out. For example, higher education providers can offer new courses related to emerging occupations or industries. This manages the risk of error by a central agency or by some higher education providers.

A relative strength of demand driven and capped voucher models is their capacity to efficiently move resources between institutions free of bureaucratic or political constraints. When students are reluctant to move to study (Figure 10) the system must bring courses to them. With technocratic and block grant methods the system in the aggregate might have the capacity to deliver on skills needs but lack the ability to deliver the courses where they are needed. The Job-ready Graduates method of distributing growth funding runs a high risk of not taking courses to the students who want them (chapter 5).

Demand driven, block grant and some versions of capped voucher systems give universities significant flexibility in moving their resources to areas of skills need. As student demand flows to courses with in-demand skills and qualifications, universities follow these trends to maintain or increase their enrolments and funding. A full analysis of provider responses requires more detailed applications and offers data than the Department of Education routinely publishes, as well as broader contextual factors such as the constraints imposed by clinical and other practical training bottlenecks. Figure 15, however, provides an example of how at a field of education level applications and offers usually move in the same direction under both block and demand driven funding.⁴⁹





Changes in applications and offers by field, block grant system, 2020 to 2021 8,000 Change in applications 6,000 Change in offers 4,000 2,000 0 -2,000 -4,000 una and provide Sciences NUTSING Society and Cultu HealthOthe ecture and Buil Engine and con Management Archite

Source: Department of Education, Undergraduate applications, offers and acceptances

⁴⁹ Applications are all first-preference applications. Offers can increase by more than applications because the offer may be in response to a second or lower preference course, as well as because offer rates have increased.

A technocratic system that engineered supply by course or discipline would lack this flexibility in responding to demand. Generally, technocratic systems are better at stopping students doing courses than facilitating students doing courses. Capped medical places have successfully kept medical student numbers well below the likely counter-factual number in demand driven or block models.

Supply constraints can however prompt students to consider another course aligned with their interests. Figure 16 uses second and later preferences to investigate what other courses university applicants are interested in if they do not receive their first preference offer. It identifies several clusters of interests, of relatively high rates of preferencing between courses.



Figure 16: Preference clusters by field of education (2014 and 2015 applications)

Source: Grattan Institute analysis based on Department of Education data.

Demand for teacher education courses is a topic of policy interest. At least as of the mid-2010s we can see, in the right-hand column of Figure 16, that applicants for a range of other courses had a teaching course on their preference list. Applicants with a first preference for teaching expressed relatively little interest in other courses except humanities. Figure 16 show that humanities, commerce and science are all popular back-up courses, and a potential source of transfers back into preferred courses at a later date. But meeting first preference choices on initial application would be more efficient.

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