HECS-HELP: Setting Prices for Student Charges

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Abstract and Conclusion

The clarification and explanation of pricing principles, in comparison to the actual experience, promotes the very significant point that HECS-HELP price setting policies over the last 35 years have been erroneous: misplaced, not based on well-defined principles, and conceptually ill-founded. Part of the difficulty in an understanding of the issue is that for a very long-time governments have inadequately distinguished the EFTSL revenue provided to universities based on fields of study from the charges imposed on students. This has confused public debate in the area, and it is well past time to make explicit the critically different conceptual bases of the revenues paid to universities and the charges imposed on students.

There have been many disparate approaches suggested and tried with respect to the setting of charges in the HECS-HELP system. The problems and errors associated with previous policy experience and proposals, including an improper focus on costs, the promotion of ill-advised complete price discretion in 2014/15, and the most egregious of all, the Jobs-ready Graduate package (JRG) introduced in 2021, need to be analysed thoroughly, and this is a main contribution of what follows. From this discussion the analysis establishes that the right approach to the setting of HECS-HELP prices and HECS-HELP collection procedures, in terms of both the economics of the matter and distributional equity, is to base field of study prices on lifetime incomes.

The successful application of this simple principle needs to take two forms involving: the prices set, and the financial bases of collection of student loan debt. The first of these approaches can be labelled the *ex-ante* and the second the *ex-post* approaches to charging. The *ex-ante* decisions are concerned with the setting of prices by field of study with this requiring rigorous examination of the lifetime occupational incomes typically associated with broad educational areas, such as nursing and law. The second, *ex-post,* challenge is to find ways to maximise the likelihood that the collection processes of HECS-HELP debts ensure that the most/least financially successful graduates repay the highest/lowest present value of their loans.

With respect to the setting of prices the paper relies heavily on the compelling analysis provided in Higgins and Khemka (in progress). This research is based very firmly on the *ex-ante* principle in which prices on paper are set with reference only to the expected future incomes of graduates in given fields of study. Their study provides an exemplary methodological basis from which to address the issue of how to best set HECS-HELP prices and how to do so with reference to the overall costs to taxpayers.

To this end the paper presents an example from Higgins and Khemka of the institution of a new set of HECS-HELP prices that ensures students enrolled in the prospectively lowest earning fields of study in terms of likely occupational outcomes are charged the lowest prices, and those enrolled in the prospectively highest earning fields of study in terms of likely occupational outcomes are charged the highest prices. This example, like all the other potential pricing reforms following the Higgins and Khemka approach, is of considerable interest because in budgetary terms the new prices set are neutral; that is, it is illustrated that the right set of prices can be delivered without additional pressures for the Commonwealth's higher education budget. This has the key implication that the existing JRG system can be replaced, equitably and fairly, at no extra costs to taxpayers.

There are many possible approaches to the collection circumstances of HECS-HELP debts that can address the basic equity criterion promoted in this paper. They include: the maintenance of real interest rate subsidies through CPI only indexation; the institution of debt forgiveness after a (longish) period since a student was last enrolled; possible reductions of outstanding debt depending on the occupational outcomes of graduates; and measures aimed at requiring small additions to the repayment obligations of the highest earning graduates. These *ex-post* policy suggestions require further thought and modelling by the government.

Recommendations

That the government examines and models the financial implications associated with the adoption of:

(i) Very different prices for students by field of study which are based on expectations of future lifetime incomes and using the Higgins and Khemka (in progress) methods;

(ii) HELP debt forgiveness after a period of, for example, 30 since years the last period of a student's university enrolment;

(iii) Reductions in HELP debts in periods in which graduates are employed as nurses and teachers in the public sector, and asks for State/Territory governments to contribute to the costs of these arrangements; and

(iv) Mechanisms to increase HELP debt repayments periods of the most financially advantaged graduates repaying HELP quickly, with a range of different methods of so doing.

1 Introduction

In 1989 the Australian government implemented the world's first national student loans system with debt repayments based on a student's future income. It was known then as the Higher Education Contribution Scheme (HECS) and is known now as HECS-HELP for undergraduate students enrolled in the public university system. HECS-HELP signalled the birth of "income-contingent loans" (ICL), in which no student is required to pay university/college tuition fees on enrolment. Unlike other financing approaches, ICL provide significant repayment insurance benefits which ensure that in the event of a debtor experiencing future low incomes, there will be neither repayment hardships nor default, the latter of which in other systems results in the highly adverse consequence of credit reputation damage or loss.

Over several decades HECS-HELP has been associated with a quiet international revolution in higher education financing, leading to very similar student loan reforms in other countries (such as New Zealand in 1992, Hungary in 2002 and the UK, first in 1998 and comprehensively in 2006, and with a host of countries introducing non-universal versions of ICL (for example, the US in 1994, South Korea in 2001, Thailand in 2006, Japan in 2011, Brazil in 2019 and Colombia in 2023). HECS-HELP is seen publicly to be a successful policy innovation,[1] and for Australia has been associated with a very significant expansion of higher education enrolments and much higher university participation of students from relatively disadvantaged backgrounds.

While HECS-HELP is broadly considered to be a good example of progressive public policy reform, this does not mean that all is well with the current arrangements, nor does its apparent success exclude the real possibility that significant improvements are both feasible and desirable. Indeed, it is argued in this paper that the system has a significant flaw, an ailment that has remained unaddressed and problematic for now nearly 35 years.

The continuing defect with HECS-HELP concerns the prices charged to students. It is noteworthy that even given three decades of reform, experimentation, and *ad hoc* tampering with student charges, one clear judgement is unambiguous: the prices charged to Australian undergraduate students have never been based on correct economic analysis, nor have they reflected informed perspectives on how the system works in practice. While this remains a major shortcoming of Australian university financing, the good news from this paper is that it is a problem which can be understood and rectified easily, and with no significant costs to the Commonwealth budget.

In terms of history even a cursory inspection of HECS-HELP prices reveals that there have been, and continue to be, makeshift – sometimes apparently impromptu – proposed and actual changes to the system, resulting in considerable variations in prices, both over time and with respect to subjects studied. To illustrate this in broad terms, when HECS was implemented in 1989 the student charges were set at an average of around 20 per cent of recurrent university costs, but in 2023 this figure was closer to 45-50 per cent.

[1] See Higgins (2019).

With respect to price differences between subjects studied there have similarly been major changes. For example, when the scheme began the prices charged were the same no matter what course was studied, which was $1800 per annum (in $1989) of full-time enrolment, but in 2023 the prices differed very considerably by subject: for instance, the annual price tag is $15,142 for those studying law or humanities, compared to $4,124 for those studying agriculture or nursing, an extraordinary ratio of 3.7:1. The factors behind such large differences in both price levels and changes, over time and with respect to courses, remain obscure and poorly understood.

There are several aims of this paper, the first being to rectify the disarray that has so clearly characterised the HECS-HELP price setting debate. In this context we begin with an examination of several critical issues emphasising that the effects differ importantly for the three parties involved: the students, the universities, and the government. This is the subject of Section 2.

In Section 3 the paper briefly canvasses the history of price setting in the 1989 to 2023 period of HECS-HELP. For over more than three decades many and often conflicting approaches to price setting have been used by different governments, and while they have little in common, with the stark light of hindsight it has become clear that they all share the same flaw. This that at no time has there been a HECS-HELP charge regime which has been conceptually correct; the fundamentals have not been completely understood, or they have been ignored.

The above statement is a substantial and serious claim with two quite weighty implications. The first, of which nothing can be done, is that there have been errors in charges and debts for many students and graduates. This is an unavoidable consequence of unusual public policy reform without precedent, given that HECS was the first national ICL.

There is a second and much more important and positive implication of the long-standing and continuing errors made with respect to HECS-HELP. This is that the undesirable circumstances of the past warrant a fundamental redesign of Australia's ICL and this is the motivation for what now follows. The key contribution is to set the scene for a new approach to the setting of HECS-HELP prices based on both a sound conceptual framework and drawing on the important lessons from a close examination of past charging missteps.

This discussion of Section 4 sets out the principles for the reform of prices, underpinned by economic logic and defined by the need for distributionally equitable outcomes. The key insight is that prices need to be set by field of study with reference only to an enrolling students' expected lifetime incomes. But because the government doesn't know at the time of enrolment what lies in the future with respect to a student's income, different instruments need to be used to maximise the probability that price and charge collection arrangements can help deliver this outcome.

A distinction is made in Section 4 between two such instruments. The first concerns the prices as charged on paper, set with reference to the typical lifetime incomes of graduates in their field of study; these are referred to as the *ex-ante* approach. Second, the package emphasises the importance of having collection rules which lead to the most progressive outcomes over

debtors' lifetimes, which means putting in place policies that relatively subsidise the least financially advantaged HECS-HELP debtors; these are referred to as the *ex-post* approach.

The *ex-ante* and *ex-post* distinctions are given practical clarity in Sections 5 and 6 respectively. Specifically, Section 5 provides a detailed explanation of current modelling from Higgins and Khemka (in progress) which proposes an example involving very significant changes to the current and ill-advised prices set in 2021 through the so-called Jobs-Ready Graduate package (JRG). The Higgins and Khemka analysis is based very firmly on the *ex-ante* principle in which prices on paper are set only with reference to the expected future incomes of graduates in given fields of study. Of great interest is that this analysis comes up with a set of charges which are consistent with the equity principles explained, while providing a suggested regime with no additional costs to the budget from reforms to the current system.[2]

Section 6 provides a summary of the sorts of post-university collection arrangements that can be used to maximise distributional equity between debtors experiencing quite disparate financial circumstances after finishing university. No attempt is made here to cost these regulatory reforms, all of which seem to be administratively feasible, with that important task being left to the government.

A cautionary note is in order with respect to the aims of this paper. It is that the analysis covers a very important but still one feature only (HECS-HELP pricing) of the myriad current financial issues facing the government and the sector. There are many other matters in need of close inspection and change.

2 HECS-HELP Price Setting in Concept and Practice

2 (i) Introduction

It is critical to understand that the concept of "price" in the Australian higher education financing system is not at all either simple or apparent. To explain, in just about all economic transactions there are normally two agents - a buyer and a seller - who agree about the price owed and to be paid. Then, ignoring sales taxes, the price set and received by a seller is the same as the price accepted and paid by a buyer.

But this textbook minimalism is not at all how things work with respect to Australian higher education financing. For starters there are three agents - the students, the government, and the universities - each of which faces quite different financial circumstances given the operational idiosyncrasies of HECS-HELP. This is now addressed.

2 (ii) How does HECS-HELP operate?

The way HECS-HELP works is as follows. A domestic undergraduate student choosing to enrol in a particular course at a public university is required to pay the tuition fee for the subject, with a maximum amount which is set by government, and which differs by course (although

[2] An important point for government costs is that basing HECS-HELP prices by field of study on expected lifetime earnings is that will reduce taxpayer subsidies related to the collection of the debt, so such an approach will have an additional positive benefit to the government.

not by university).[3] The student has the choice of paying "up-front" (at the point of enrolment) to the university, or having the payment deferred to some point in the future by taking out a HECS-HELP loan of an equivalent amount. Most students (about 85 per cent or more) choose the latter option, which entails the debt being recorded in the Australian Taxation Office (ATO) as a future loan repayment obligation of the student (which is formally linked with the student's unique tax file number).

If the student enrols in additional courses, the size of the debt increases commensurately. Every year the student's debt is "indexed" to the rate of price inflation, the annual increase in the Consumer Price Index (CPI), which means that on average the nominal debt accrued by a student has typically increased by around 2 to 3 per cent a year. This indexation process means that, to use an economics term, the "real rate of interest" on HECS-HELP debt is zero, thus taxpayers are in reality subsidising HECS-HELP debts; simply put, the rate at which the government borrows, the so-called government cost of borrowing, will be higher than the rate of inflation, meaning students pay less through HECS-HELP than the true costs of the funds to the government.[4]

The wedge between HECS-HELP debt indexation for the student and the costs of borrowing to the government is an important phenomenon known as the "implicit government interest rate subsidy". It means that the government is subsidising the student for every year in which HECS-HELP debt remains unpaid, with the subsidy equal to the difference between price inflation and the government's cost of borrowing; as an example, if a student has an outstanding debt of $10,000 which is adjusted for inflation of 2% pa when the government initially borrowed the money at a rate of interest of 5% pa, every year taxpayers are then providing a subsidy of 3% pa of the remaining debt, in this example, $300 a year in the first year, and cumulatively so for all years in which the debt remains. This subsidy is implicit, so it doesn't show up anywhere, and this helps to explain why it is not well understood.

The interest rate subsidy is the reason that many financial observers describe HECS-HELP as the cheapest debt a person can incur, with the most benefits being delivered to the lowest income debtors, which is an important aspect contributing to the system's progressivity. The other critical progressive aspect of HECS-HELP debt for students is the one most often and legitimately recognised as the major benefit of the system, income-contingent repayment.

The income-contingent collection arrangement of HECS-HELP debt is what made the system unique internationally when it was first introduced. The defining feature is that those with a HECS-HELP debt are required to start to repay the loan *if and only when* their future personal annual incomes exceed a certain threshold, which is currently about $52,000. At this first threshold employers withhold 1 per cent of gross incomes ($520 at this income),[5] which is then

[3] Universities are allowed to charge less than this maximum but in practice never do so.
[4] While this proposition is generally true, there can be highly unusual economic circumstances where the government cost of borrowing is lower than price inflation for a very short time. This anomalous situation arose in the early part of 2023, but no economic analysts believe it will continue.
[5] The collection of the debt based on total rather than marginal income is a problem for the system taken up in Chapman (2024a).

delivered to the government as general revenue with the individual's remaining debt being reduced by this amount[6].

The income-contingent feature of the system means that if a debtor does not receive an income exceeding the first threshold of repayment in any financial year, no repayments are required, although the debt remains as a future obligation.[7].For a very small number of former students' lifetime annual incomes never exceed the first income threshold of repayment, and for members of this group HECS-HELP becomes in retrospect a grant and not a loan.

While every student will have a different time stream of repayments of HECS-HELP, debts are typically fully repaid within about 10 to 14 years, although for the system around 15 to 20 per cent of the amount lent is not repaid, a feature known as "debt not expected to be repaid" (DNER). With respect to the proportions of debt repaid there is not a large difference between men and women, although because of their relatively low lifetime personal incomes women debtors will repay less than men, and take longer to repay; consequently, on average women receive higher interest rate subsidies than do men, which is another progressive aspect of HECS-HELP.

From a financial perspective what these features of HECS-HELP mean in terms of effective prices differ quite markedly between the student, the government, and the university, and this is the key to comprehending the meaning and significance of student price setting in the Australian higher education financing environment. What a HECS-HELP "price" means for each of the parties, and the reasons behind these distinctions, are now explained.

2 (iii) What is the HECS-HELP price for students?

As noted, upon enrolment each year a student has two options: to pay the tuition fee up-front to the university, or to opt for repayment of the charge through HECS-HELP. If the student chooses the first option[8] the amount of the fee is obviously what is required for enrolment, there being no complications, and registration of any HECS-HELP debt for that student is irrelevant (for the year of up-front payment). The price for the student for that subject is quite simply what is written down in all university handbooks and as it appears on the *Department of Education* HECS-HELP website.

But, in contrast, the price facing a typical student who opts to defer payment by taking a HECS-HELP loan is complex, and this can be traced to the role played by the implicit government interest rate subsidy explained above. In short, for students the "true" financial cost of the debt is considerably different, and always lower, than the price written down. This is a critical issue in an understanding of the effects of HECS-HELP and attention to detail is warranted.

To put the point at its simplest, there are two facts contributing to the true financial cost of a HECS-HELP debt: one, repaying a debt takes time (potentially this can be quite a few years for many students, and a very small number will never repay the debt in full) and, as already

[6] Repayment obligations as a proportion of income increase with income, for example, currently to 2 per cent of incomes at about $60,000 per annum and up to 10 per cent of annual income at about $150,000.

[7] When a former student has eliminated their debt, or at point of death, all repayments cease. This issue is taken up further below.

[8] In a typical year his proportion is around 15% of student enrolments.

explained, each year in which debt remains outstanding is associated with an implicit subsidy to the debtor because there is no real rate of interest on the debt. While this is bread and butter for accountants and economists, the concept is not obvious for normal people.

The explanation involves the use of the term "present value" (PV) which is the name given to the financial worth of a flow of money, as it is calculated in the present. Look at it like this: if you were given $1000 today as a loan, and required to repay it in one year, the borrower would not ask for just $1000 repayment, they would ask for more to compensate for the fact that instead of lending $1000 to you they could have put the money in the bank and earned interest in the year of, say 5 per cent or so. In this example, for things to be financially fair between the borrower and the lender, the latter would require repayment not of $1000 in a year, but $1000 plus about 5 per cent of $1000, which is then a total of $1050.

To continue with the example, and ignoring inflation, if a student has a HECS-HELP debt of $1000 in July 2023 and only has to repay the government $1000 when their expected income exceeds $52,000 in, say, July 2024, the student's nominal debt (the amount on paper) is implicitly been reduced because it has not been adjusted to take into account the true (what economists call the "opportunity") cost of the funds. This financial complication applies to all HECS-HELP,[9] and this has always been the case. It means that to correctly understand the true cost of the debt facing a HECS-HELP student requires a calculation of the PV of the future stream of HECS-HELP repayments made at the time the debt is incurred.

The PVs of HECS-HELP debts will always be lower than the up-front prices; for some students/graduates they will be very much lower, and they can even be zero for the very small number of students never repaying any HECS-HELP debt. But the PV of a typical student debt will be somewhere between 10 and 40 per cent less of the apparent debt incurred, with the extent of the subsidy depending on the unknown future annual income streams of each student debtor.

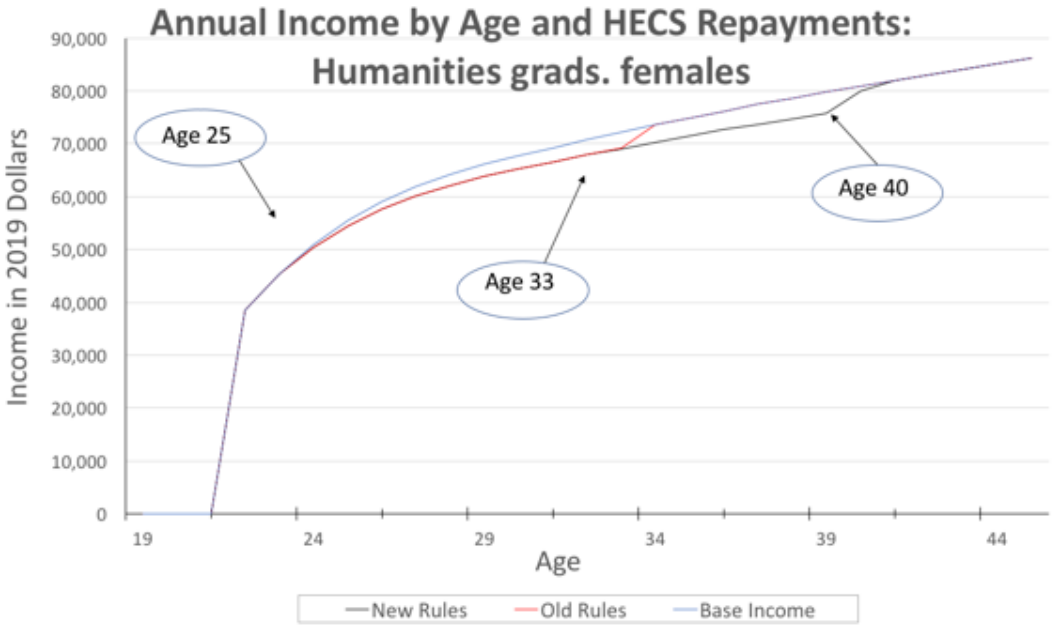
It is the above point which led Chapman and Khemka (2021) to respond critically to the government's Jobs-Ready Graduate Package (JRG) announced in 2020 and involving major changes to HECS-HELP prices in an apparent attempt by the government to influence students' educational and thus occupational choices. The announced changes to prices were immense - for example there was a doubling of the on-paper price for students interested in enrolling in humanities courses, and a decrease in the prices for so-called STEM courses, in some cases by more than 50 per cent. Consistent with the above PV story Chapman and Khemka argued that once the implicit interest rate subsidies are considered, the actual changes in prices are quite different to what they appear and must be very much smaller.

In the Chapman and Khemka paper it is emphasised that for practically all enrolling students the payments are in the future which means that assessments of their consequences need to consider the discounting associated with the PVs. As an example, we used data from the 2016 Census to produce Figure 1, shown below, which illustrates the expected time path of

[9] Although not with respect to the extension of the system to "FEE-HELP" in which there is a loans fee for students enrolled with private tertiary education providers.

repayments of the former and new HECS-HELP charges for a hypothetical 19-year-old female expecting to earn over her lifetime the median annual incomes of female humanities graduates.

Figure 1



Source: Chapman and Khemka (2021).

Recognising that a higher charge for humanities has the effect of adding several years to the student's expected period of HECS-HELP repayments, from the figure we note the following:

(i) The true financial effect of the additional humanities price for a 19 year in 2021 is deferred for the median earning female graduate until age 34; and

(ii) The extra impost implies additional years of ICL repayment from age 33 to age 40 of around 6 to 7 per cent of income per year under the 2021 HECS-HELP repayment schedules.

We concluded that:

> "These time stream dimensions of the new repayments are extremely important in an understanding of what the additional charges for humanities mean for students. This is because of the need to discount the expected stream of repayments, none of which is relevant to this 2021 student for at least 15 years. We have calculated that using plausible personal discount rates recalibrates what looks on paper to be around a $20,000 price hike to about one third of that. Let's put this into perspective: for the median earning female humanities graduate the (discounted) true price increase considering the ICL form of the repayment for a 19-year-old student is about $4 a week, around the price of a cup of coffee." (Chapman and Khemka, 2021, page 60).

And added further:

> "There are two other points concerning the above: (i) Even ignoring the key discounting issue, as a proportion of lifetime incomes the extra $20,000 is for the majority of students less than 0.5 of 1 per cent; and (ii) HECS-HELP is protected debt, meaning that if a debtor in the future is unable to afford to repay there is no issue, and this adds insurance from the demand reduction prospects of price increases." (Chapman and Khemka, 2021, page 62).[10]

The conceptual point concerning the role of interest rate subsidies in determining the true HECS-HELP price faced by students, in association with the plethora of analyses based on the potency and validity of the PV argument, have profound implications for our understanding what a HECS-HELP price really means for students, with the following conclusions.

For students, the PV of a HECS-HELP price is:

(i) Very much lower than the apparent price;

(ii) Unique for each student because the expected time stream of lifetime earnings differs for everyone;

(iii) Zero for the small proportion of students who never repay any of the debt; and

(iv) Always going to be an extremely small proportion of a graduates' expected lifetime incomes, which are typically several millions of dollars greater than is the case for non-graduates.

To these results we can add two additional points concerning the likely incapacity of even radical changes in HECS-HELP debts to influence students' behaviour. First, it is critical to emphasise that with the use of HECS-HELP there is no need for domestic students to find any money to enrol in a university course; the system is and was designed to be free at the point of entry, and it is this feature which helps guarantee that there are no financial barriers to enrolment or with respect to the choice of subject. The goal of HECS was in fact to minimise the impact of prices to diminish importantly students' family socio-economic background as a factor determining university participation; that this seems to have been achieved through a plethora of research[11] reinforces that the prices set are not an influence on student choices.

Second, and perhaps more importantly than all the issues raised above, is that it is implausible that students enthusiastic about pursuing studies and careers in particular broad areas of study - such as implied by their preferred university discipline - would consider a significant switch to quite a different area, because of a relatively low change in an ICL (discounted) price. It is very likely that keen and talented students with respect to their first choice of discipline will be very proficient at and/or interested in quite different areas of the labour market; their subject choices are demonstrating comparative advantage after all. Thus, if a student switches to a

[10] The JRGP is analysed further in Section 3.
[11] For a comprehensive summary, see Chapman and Dearden (2022).

different area, even if they are able educationally to enrol in the course, might well result in major falls in their expected lifetime incomes and job satisfaction; this is a further persuasive reason to discount the role of subject price differences as a factor in student decision-making.

Apart from these compelling conceptual arguments and illustrations, there is now an abundance of empirical studies on this issue with respect to both Australian and international experience with ICL student debts.[12] Decisively and unambiguously the research results are the same: there is no evidence across time, between countries and for quite different design parameters of ICL, that there are any effects on students' enrolment and subject choice behaviour of even quite dissimilar and significant changes in prices.[13]

One of the interesting aspects for policy is that very few students would have ever heard of the concepts of "present value" and "interest rate subsidies", nor would most people understand formally the insurance aspects of ICL-type debt which protect people from the prospective adverse repayment consequences of normal debt. Yet millions of people with ICLs over several decades and in different countries have behaved in ways that seem to give important weight to the protections and subsidies of such systems. This is good news for governments interested in pursuing student loan or other reforms involving income-contingent repayment.[14]

The unequivocal conclusion in both concept and from the evidence is that, within the ranges that would ever be contemplated, governments can set ICL prices without concerns for student applications or even educational choices, broadly defined. Put differently, the prices students face on enrolment when there is an ICL just don't matter much for either the total levels or course engagement mix of members of the prospective student body. However, prices set will of course affect students' lifetime financial well-being and the distribution of economic welfare between socio-economic groups of graduates, and these are the key issue considered below in the context of plans for the redesign of HECS-HELP prices.

2 (iv) HECS-HELP as the supply price: The revenue received by a university

The financial meaning of HECS-HELP from the perspective of a public university is very much simpler than it is for students, although there are important issues for universities related to the prices set. To provide context it is important to understand how HECS-HELP prices currently influence institutions' resource allocation decisions. While it is not critical to HECS-HELP price setting reform, what follows helps in an understanding of how government-university financial relationships work, in terms of payments for education and research activities.

The funding operates through "Commonwealth Grants" which are classified into "clusters" defined by area of study, and, in each cluster, there are two components: "maximum student contributions" (MSC) and "government contributions" (GC). As far as a university is concerned with respect undergraduate teaching each year it receives as grants the addition of MSC and GC per equivalent full-time student (EFTSL).

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[12] Reported in Chapman and Dearden (2022).
[13] For evidence of the UK experience, see Barr, Chapman, Dearden and Dynarski (2019).
[14] For many different possible applications of ICL see Chapman, Higgins and Stiglitz (2014).

To understand how this works, the MSC is the enrolment price on-paper charged to the student, which commonly involves the student incurring a HECS-HELP debt of this amount. But as noted in Section 2 (iii), all students taking this option face unique and always lower prices than they first appear on paper because of the PV of the subsidies. But as far as a university is concerned, the MSC received is in effect the price being charged because the revenue is received at the point of entry of enrolment.

With respect to HECS-HELP price setting we don't need to understand this part of the process further, but it should be recorded that the use of the MSC and GC nomenclature is a deterrent to the comprehension of what the prices and revenue classifications mean in practice. Consequently, there is great potential for confusion in this area, with a basic point being that the MSC is not even close to the real price faced by each students taking the debt, which is compounded by the difficulty in understanding the meaning of the oblique concept of the GC. The GC has been part of the Commonwealth funding system for over 15 years now, but governments have not provided an explanation of what it represents, nor is there information available as to why the MSC and GC differ so much between courses (in both absolute dollar terms and as a percentage of the total funding allocations).

On this issue of transparency, analyses such as in Chapman, Dawkins, Dixon and Houghton (2023) have promoted the case for Australian governments to be much clearer as to the role and function of both the MSC and the GC. This is not a new complaint and mirrors the concerns raised in the Bradley review of 2008 in which it is stated: "The current range of Commonwealth subsidies across fields of study appears to bear little relationship to the actual cost of teaching or to any notional public benefits. Similarly, the range of maximum student contributions has no strong policy or empirical basis." (Bradley Review (2008), page 16).[15]

While an understanding the intricacies and meaning of the GC is not critical to this paper's critique and suggestions for reform of HECS-HELP price setting, there is a distinct aspect of government higher education grants that should be of essential interest to the deliberations of the University Accord review and for government policy beyond. This relates to the extent to which the actual funds allocated to universities are an accurate reflection of the true teaching costs by course, the way the total of the MSC plus GC often seems to be (mis)interpreted. It is critical that higher education financing involves measuring properly the true costs of teaching, not as suggested by survey approaches, but instead through the application of the empirical methods explained and provided in HERG (2024a, 2024b); once this happens, we will be a long way towards understanding what is really going on with respect to university funding, a place which is quite a distance from here.

There is a final significant point to be made with respect to universities' enrolment decisions and apparent course prices as reflected in the total financial transfers associated with the per course total of the MSC and the GC. This is that, if the MSC is increased while the GC is not correspondingly decreased, it is in the financial interest of universities to increase the number of places in the cluster because they will then receive higher total payment for each student in

[15] As well, it is very important that in considering these issues substantial attention is paid to the derivation of the true teaching costs, rather than the use of unconvincing surveys. How to go about this this is explained in HERG (2024a, 2024b).

the course with the increased price. It follows that so long as student demands are not unduly affected by the price they are charged (which is what our analysis and the evidence show conclusively), higher prices can have the opposite to an intended effect of diminishing enrolments, a point made compellingly in Holden (2021).

The point from the above for student participation in universities is that not only do prices have very little role to play in terms of student demand a government setting higher prices can mean higher not lower enrolments. The university will be receiving more money per EFTSL in a cluster with a higher price and while the higher price might have small effect on applications, a university will still be able to fill the places and receive more money per place, an issue that emerged with the government's JRG of 2020.

2 (v) HECS-HELP: Costs incurred, and revenue received by the government

A last important step in understanding how HECS-HELP finances work concerns the meaning of student charges and corresponding revenue received from the perspective of the government. As already explained in Section 2 (iii) the MSC delivered to a university and added to students' debt totals is quite different to the revenue eventually received by the government through the repayment of HECS-HELP. The reason, to reiterate, is that there are significant, sometimes very substantial, interest rate and non-repayment subsidies involved meaning that the PV of the MSC outlaid is quite different to, and always greater than, the PV of the revenue received in the future through debt repayments.

With respect to what higher prices can mean for the budget, it is of interest that the subsidies involved with HECS-HELP debts will differ quite significantly depending on the price mix of clusters. This is because graduates in relatively low lifetime earnings jobs will receive the highest interest rate subsidies and will have the highest proportions of debt that is never repaid. This means that in setting HECS-HELP prices governments need to consider the potential that some apparently higher prices are going to have higher government costs because of the budget subsidies. Again, HECS-HELP prices are rarely what they seem.

There is a critical related issue to be raised with respect to the funding clusters delivered to the universities from the government which has been touched on above but requires additional emphasis. This is that a broad understanding of the complicated funding relationship between the Commonwealth Government and the universities concerning teaching and research costs and grants has not been served well in a classification sense with the use of such terms as the "maximum student contribution", as if that is a useful way to approximate what students cost to teach in their courses.

The point is that, because of the lack of a relationship between the on-paper prices and what students contribute to teaching costs through repaying HECS-HELP, the nomenclature is quite confusing in an interpretation of the true contribution of the parties. In this context, a useful reform would be for the government's budget to very clearly separately identify and accurately fund the true costs of education thus severing the artificial link between the classification of HECS-HELP prices and the true levels of government provided funding for teaching. But important as this is, it is not a main topic for the setting of tuition prices.

2 (vi) Conclusions

So-called HECS-HELP prices are not at all what they seem, with their financial implications differing very much between students, the universities, and the government. Understanding these distinctions is critical to the question: what are the right charges for students to pay? We can derive from the above that with respect to HECS-HELP prices:

(i) For students, what you see is not what you get. The "sticker price", the charge required to be paid to enrol, is not at all indicative of the true charge facing the majority of students, those who choose to repay through the debt system simply because of the huge role that is paid through both interest rate and non-repayment subsidies;

(ii) Not only are the true charges poorly related to the prices set, but they will also differ very substantially between students depending on their lifetime's incomes, with a very small number repaying the apparent price, a very small number paying close to nothing, and with the vast majority repaying in PV terms somewhere between 60 and 90 per cent;

(iii) What matters for the allocation of a university's enrolment offers beyond what governments encourage them to provide is the amount of money they receive in total and up-front for student course clusters. This suggests strongly that governments have close to no influence on enrolments through the setting of prices, although the amount of money received by universities to finance teaching will be very important to universities' decisions concerning placement offers;

(iv) Because the prices set as charges to students have close to no influence on applications and no direct effect on university placement offers, there is minimal scope for governments to influence educational choices and enrolment decisions through inter-disciplinary price variations;

(v) Not only is there close to no influence running from prices to student demand, but there can also be higher budget subsidies and thus government costs associated with overall higher prices in areas of study after which graduates earn relatively low incomes. Thus, it is in the budgetary interest of the government to set prices that are relatively low/high for students expecting to earn relatively low/high lifetime incomes;

(vi) Accordingly, this must significantly downplay HECS-HELP price setting decisions giving weight to either erroneous presumptions of budget savings and/or labour market goals associated with the disciplinary make-up of the student body; and

(vii) All the above has to mean that alternative government aspirations for the role of HECS-HELP prices (such as with respect to the PV of expected total debt streams,

and the distributional justice/equity implications for students), are given close to total primacy in price setting decisions.

This set of findings and principles can be used to explore the extent to which HECS-HELP price setting regimes and proposals over the 1989-2024 period have been consistent with or influenced by reference to the conceptual bases and practical realities of the system. The no-surprise conclusion from this journey is that there has never been a set of HECS-HELP pricing structures, suggested or instituted, which are completely consistent with where the arguments and evidence logically take us.

3 A Brief History of HECS-HELP Price Settings: 1989 to 2023

3 (i) Introduction

Since its inception the HECS-HELP charging system has been associated with prices that have varied over time and between subject areas, and universities have just about always charged these maxima. It is of interest that over nearly 35 years there have been many quite different suggestions and policy-initiatives for these prices, implying clearly that the policy debate has been and remains a long distance from consensus. To get to the bottom of what HECS-HELP prices should be it is important that the historical bases of these disparate approaches are critically examined, and this is what motivates this Section.

What emerges are two very clear conclusions. First, from around a dozen different policy positions, either promoted by high-level independent enquiries or put into practice by government, there has been virtually no agreement as to what constitutes the right set of HECS-HELP prices. Second, even given the plethora of HECS-HELP price setting discussion associated with public enquiries, and the actual many changes to policy, in the main no weight has been given to the principles explained, developed, and expounded on in the analyses provided above. Both inferences suggest quite strongly that there have been insufficient attempts over more than three decades by governments and their advisory bodies to critically analyse the basic conceptual underpinnings of student price setting.

3 (ii) The Wran Report: Cost-based pricing

The Report of the Wran Committee (1988) (referred to below as "the Wran Report") set the scene for the reintroduction of tuition fees in Australia (after fees had been abolished by the Labor Government of 1974), to be accompanied and facilitated by the adoption of an ICL to be known as the Higher Education Contribution Scheme (HECS). In place of so-called "free"[16] higher education, the committee recommended that to enrol in an undergraduate degree students could choose to pay around 20 per cent of course costs at point of entry, or incur a "tax debit" which would involve those who so choose to pay the costs in the future only if and when their personal incomes exceeded $21,500 in 1989 terms, and at a rate of 2 per cent of annual

[16] There is of course no such thing as a "free" university place; the term means that students/graduates paid nothing with the costs all being paid from general tax revenue (Chapman, 2019).

incomes.[17] Thus began international change in student loan systems towards ICL, a reform movement that now covers around 8 countries, although some of these have partial ICL coverage only.

It is of interest that the Wran Report mentioned different approaches to the setting of fees, noting that:

> "The fees could be varied according to differences in cost between courses; the level of course, so that students in diploma courses pay less than those in degree courses; or the benefits derived from different courses, based on some estimate of the future earnings of graduates, and the Government could permit institutions to set their own fees" (Wran Report, 1988, page 23).

However, there was no discussion or comparative examination of these price setting alternatives, but simply a statement towards the end of the report promoting the first option only, with the words:

> "Where possible, charges should reflect the costs of course provision so that those who take high-cost courses pay more than those choosing lower cost courses. (Wran Report, 1988, page 54).

A three-tiered pricing structure motivated solely by costs was recommended, with the most expensive courses (for example, medicine, dentistry and veterinarian science) to be priced in 1989 dollars at $3000 per full-time year, with a middle tier of $2500 for the medium expensive courses (for example, for engineering and applied science) and $1500 for the rest (excluding a moderately expensive course to teach, that of nursing). The Wran Report did not explain or justify having cost-based prices, which presumably reflects a view that it must be obvious that this is the way to think about HECS pricing decisions and therefore it was unnecessary to consider alternatives.

Norton (2022) provides some insights into what might have been going on in the deliberations of the Committee, by suggesting that while the government had motivated the need to have students paying for a proportion of course costs, the Committee interpreted this as applying to individual student's course costs rather than as a system-wide aspiration. He writes:

> "Under the user pays policy of the Wran Report students were expected to contribute to the cost of their education … But was this the specific cost of their own course, which could vary according to the methods used to teach it, or was it the cost of the system as a whole?" (page 9), implying that the Committee had made an error of interpretation by adding:
>
> "The policy task the committee had pointed to was system costs. The prices students paid were not going to set funding levels for courses or universities …" (page 9).

[17] Consistently since 1989, and until now, around 80-85% of students have chosen the pay-later option.

A close reading of the Wran Report reinforces Norton's assessment, supporting the notion that the Committee's deliberations and energies were motivated almost entirely with understanding and validating the case for the introduction of income-contingent tuition charges; this over-riding objective was not to be distracted through an exploration of the right basis on which to set HECS prices.[18] In this view the recommendation of a three-tiered cost-based price system from the Wran Report was a side issue and not seen to be fundamental to the reforms of re-introducing users-pays into higher education.

When HECS was implemented in 1989 the suggestion from the Wran Report with respect to cost-based pricing was not taken up, with the government announcing a single price to students of $1800 per full-time year (to be adjusted annually for price inflation). This decision followed from, and was likely to be importantly influenced by, the Labor Caucus' strongly held view frequently communicated to Minister Dawkins that it would be unfair to charge those undertaking the relatively high-cost training involved in nursing more than the low-cost training associated with the education of lawyers (Chapman and Hicks, 2019; Norton, 2020). By having the same charge for all students would thus help limit the political fallout of what became "the lawyers and nurses" dilemma (Norton, 2022).

3 (iii) The 1996/97 Hybrid Reforms

The uniform HECS price remained until the change of government in 1996. The newly elected Howard Government called on the bureaucracy with respect to the budget-savings potential for different HECS-HELP pricing approaches, including: cost-based; relative levels of student demand for courses, and expected future earnings associated with different degrees and occupations (Norton, 2022). In the 1996/7 policy revision which followed new prices were set with reliance on a hybrid of rationales involving both course costs and expected lifetime incomes of graduates in different courses. Thus was introduced "differential HECS".

The best example of the new hybrid nature of HECS prices set in 1997 is most obvious with reference to the prices for law and nursing. Law attracted the highest price, when it is one of the cheapest courses to teach, and the lowest price was set for nursing, which is relatively expensive course to teach. Given that the law and nursing professions are associated with very high and relatively low expected lifetime incomes respectively, these price choices meant that the government gave future capacity to repay an important weight in setting HECS prices.

The Minister, Senator Amanda Vanstone, was clear about the reasons for the hybrid model, announcing that:

"…charging all students the same regardless of the course, as the existing system does, is inequitable.

[18] It is important to understand that all of the people involved in this reform were considering a complicated and new policy issue of policy that had never before been examined in Australia: how to best introduce university tuition fees in Australia. It is not surprising that many of the issues were not analysed in any detail.

It would be inequitable to charge a differentiated HECS on the basis of cost alone. That would be unfair to nurses, for example, who have a high course cost but lower later incomes.

The Government will therefore introduce greater equity into the HECS system by introducing a three-tiered system which reflects both actual course costs and future income." (Vanstone, 1997)"

The 1997 new pricing reality is documented in Norton: "Courses in the lowest HECS band are in the cheapest three teaching cost categories, and three of the four most expensive to teach courses are in the highest HECS band. But the middle HECS band is varied, containing courses from the lowest and highest cost categories. (Norton, 2022, page 15).

"Differential HECS" then clearly signalled the end of uniform prices and illustrated the reduction in significance to be placed on "cost-based" pricing. Interestingly, these hybrid weightings were both justified with reference to the notion of "equity".

There are at least two noteworthy aspects of the 1997 HECS-HELP price settings policy revision. The first is that using teaching costs as a basis for price setting was accepted as both a legitimate and "equitable" part-basis on which to charge students, the perspective implied in the approach of the Wran Report of 18 years previously. Second, for the first time, expected future private benefits from the course studied were accorded validity in price setting.

These differential HECS-HELP price settings remained without important changes until 2021, although in 2004 the Coalition government allowed the institutions to charge 25 per cent more for most courses, if they chose to, and all except ANU did so immediately (ANU followed 2 years later). Over time several courses were moved to the top tier of prices (for example, economics and business) but apart from this there were no significant changes until the transformational charge restructuring announced in 2020 and enacted in 2021. However, even though the basic price template for HECS-HELP price setting constancy for around 14 years did not mean an absence of public debate in the area.

3 (iv) Pricing issues from the Bradley (2008) and Base Funding Reviews (2011)

After the 1996/97 hybrid price setting reforms, Australian governments set up different independent enquiries into higher education policy, with terms of reference broad enough to include the examination of HECS-HELP financing issues. The first of these, in 2008, was the *Review of Australian Higher Education* (the *Bradley Review*), which concentrated on the distribution of government funding between institutions and issues of access and equity.

Little attention was given to the issue of HECS-HELP price setting in the *Bradley Review,* although the report was quite critical about the existing arrangements, saying:

"The current range of Commonwealth subsidies across fields of study appears to bear little relationship to the actual cost of teaching or to any notional public benefits. Similarly, the range of maximum student contributions has no strong policy or empirical basis." The panel is concerned about the extent of variation in the proportions of the cost contributed by the

Commonwealth and the student in different disciplines and the lack of any clear and consistent basis for this variation." (page 161).

But negative as it was in its assessment of policy at the time, what is also very clear is that the *Bradley Review* did not question the basic validity of having a costs-based rationale for setting the public and private contributions, saying:

"A range of options was considered for changing the Commonwealth and student contributions to produce a simpler and more consistent approach. For example, the panel examined options to set the Commonwealth contribution at a common proportion, say 65 per cent, of the funding for a student place in all disciplines, with the balance of 35 per cent to be contributed by the student. However, there is inadequate data on which to base judgments about the 'right' level of funding in total for the costs of teaching in any discipline, and no easy basis on which to determine the 'right' mix of public and private contributions." (page 162).

The second enquiry, set up in 2011, is known as the *Base Funding Review* (*BFR*), the remit of which was to critically examine the nature and efficacy of how and why government funds are and should be distributed between and within universities with respect to operations involving both research and funding. The government did not ask or expect the *BFR* to come up with a detailed critique of HECS-HELP price settings, although it would have been strange if no analysis was forthcoming from the *BFR* on this issue.

In the end the *BFR* report did contribute to this policy issue, and the form it took is now described and examined. On the question of the setting of HECS-HELP prices, the *BFR* was both very clear and quite straightforward. It began (and seemed to end) this discussion with the following point:

"Economic theory suggests that the public contribution towards a good should be based on the public benefits of that good (Barr 2000)." What is interesting about this statement of principle from the *BFR* is that if it is the case that "public benefits" (externalities in the jargon if economics) are assumed to be the same between graduates, the approach adopted in Chapman and Lounkaew (2015) analysis commissioned by the review, then this amount of subsidy should determine the government's contribution with the rest of the costs of the course being paid for by the student.

This is clear from the *BFR*'s following statement on the issue: "Applying Professor Chapman's results to this figure suggests that public benefits account for approximately 40 to 60 per cent of the average base funding amount. This would therefore indicate that the Government should contribute anywhere between 40 to 60 per cent of the total base funding for a unit of study, with students contributing the balance." (page 109).

The bottom line from both the Bradley review and the *BFR* seems to be that the setting of HECS-HELP prices should be determined by teaching costs, defined by course provisions. Thus, at the beginning of the third decade of the Australian ICL system, with much change having already been experienced, the policy support for costs-based pricing was essentially back to where it began with the Wran Report in 1988. This was soon to change.

3 (v) The 2014/15 Budget: Recommending Full Price Discretion

The 2014/15 higher education budget proposals became the most publicly engaging of all the discourse associated with HECS-HELP pricing in the history of the system. The then Minister, the Rt Hon Christopher Pyne, presented a sweeping plan the intent of which was to provide universities with complete undergraduate price discretion based on the commonly held presumption of the benefits that free markets lead to economic efficiency and thus wealth creation. To quote the Minister: "If universities and colleges were able to compete on price, it would mean they must have a greater focus on meeting the needs of students. They would need to continuously improve the teaching and learning they offer to attract students."[19]

If enacted this policy would have allowed universities to set their own prices with consequent very major implications for the enrolment and thus charge obligations of all students. The policy was rejected by the Senate and thus did not eventuate. An important question remains, which is what might have been the implications for HECS-HELP prices if the proposed 2014/15 Budget proposals had become policy?

Chapman (2014) contributed to the debate with a submission to the Senate Enquiry concerning the possible consequences of the passage of legislation allowing full price discretion for the universities, writing:

"There are several important reasons for believing that full fee deregulation in the Australian tertiary education institutional and policy context would potentially lead, eventually, to very high course prices (and thus debts for many) for students in some - perhaps many - areas of tertiary education." This claim was backed up with several conceptual arguments and the presentation of a plethora of data from both Australian and international ICL forays into the student demand implications of greater price flexibility.

Chapman (2014) argued further that such excessive prices would be "…an improper and unfair use of a government instrument [HECS]." and, by implication, would lead to considerable cross-subsidies from student charges to the financing of research; that this could be characterised as both unethical and poor public finance economic policy seemed to be obvious to many analysts. The Budget Bill was rejected in the Senate meaning that the relative prices set in 1997, based on both costs and expected lifetime incomes, were maintained.

3 (vi) The Jobs-ready Graduate Package (2021)

In 2020 the government announced sweeping changes to HECS-HELP prices which these were passed into law in 2021. In response several research critiques of the JRG emerged, including Daly and Lewis (2020), Chapman and Khemka (2021) and Holden (2020), and from quite different perspectives these all predicted and explained why even the radical changes to prices would not have important effects on student enrolments, nor would they be of any obvious benefit to the Australian labour market. It was a watershed moment in Australian economic policy debate because all economists involved agreed that the JRG is seriously flawed.

[19] The Rt Hon Christoper Pyne, speech delivered at Monash University, June 2014.

An important reality, explained in Chapman and Khemka (2021) and described above, is that the price changes were in effect much smaller than is apparent and would not be sufficient to significantly change student choices. Perhaps more importantly than these price issues, it is difficult to believe that students particularly keen on pursuing studies and careers in particular broad areas - such as implied by their preferred university discipline - would consider a significant switch to quite a different area, because of a relatively low change in an ICL (discounted) price.[20] It is very likely that students enthusiastic and talented with respect to their first choice of discipline might not be very proficient at and/or interested in quite different areas of the labour market. Such a switch, even if students are able educationally to achieve this, might well result in major falls in lifetime incomes and job satisfaction.

It is reasonable to conclude that that total and even between-course applications by students will be very insensitive, even unrelated, to HECS-HELP prices, and we can refer to this as the demand side. However, concerning the JRG there is also an enrolment issue by course for universities that is related to the price, and this can be referred to as a supply response by universities. It operates through the total base funding received by universities which, as has been explained, involves the financial resources allocated to the total of the MSC and the GC. A reason this is important is that even policies apparently motivated solely to influence student choices through price changes, such as the JRG, also have the potential to influence supply incentives for universities with respect to course mix; the point has been made most clearly by Holden (2020).

The academic critiques concerning the effect of the JRG seem to have been borne out in practice with there being no effects on university enrolments. The case for abandoning the erroneous system introduced in 2020 is incontrovertible.

3 (vii) Conclusions

HECS-HELP price setting policy approaches and suggested reforms over the last 34 years have been many and varied. There has been a plethora of ideas motivating different price templates and the clearest conclusion seems to be that there is no consensus concerning the way to go about establishing the "right" set of relative prices for the system. This lack of agreement has helped motivate the discussion now following concerning the establishment of some basic guideposts for potential reform to the HECS-HELP pricing system.

We can combine the analyses of the principles for HECS-HELP pricing as explained in Section 2, with the emergence of clear contradictions and intellectual ambiguities concerning policy in over the entire period. There are four substantial takeaways:

(a) Because of the subsidies associated with both interest rates and the non-repayment of HECS-HELP debts, there is close to no connection between the up-front prices set and the actual prices paid in reality by the majority of students;

(b) The lack of a relationship between the price imposed and students' educational choices means that there is nothing governments can achieve with respect to labour

[20] Norton (2022) explains the point very clearly.

market efficiencies through HECS-HELP price manipulations; this aspect (and others) of the JRGP package is seriously misplaced;

(c) Points (a) and (b) highlight the disconnect between prices set and the efficacy/utility of higher education financing which implies strongly that any efforts to set prices seeking to maximise resource allocative efficiency, such costs-based approaches, are misguided and erroneous; and

(d) Consequently, given that there is no role for prices with respect to efficiency, the remaining goal with respect to the charges set and debts incurred by students must be related very clearly to their income distribution consequences.

In short, the case for setting prices with respect only to their implications for distributional justice within and between cohorts of graduates is compelling. That is, price setting and the debt collection parameters/rules with respect to HECS-HELP need to be based on two ideas: to maximise the likelihood that the charges imposed consider the expected future lifetime incomes of students with respect to course cluster/field, which could be labelled the *ex-ante* approach. Also, as far as is possible, ways need to be found that result in relatively high charge repayments from those who turn out to be the most advantaged graduates, and relatively low repayments from their less financially successful colleagues, and this could be labelled the *ex-post* approach.

4 HECS-HELP Price Setting: Lessons for Policy in Concept

4 (i) Introduction

To recap, the analyses presented above lead to the inexorable conclusion that the tuition charges for domestic undergraduate students in Australia need to be set with reference only to their implications for lifetime income distributions of graduates. This the bottom line from Friedman's seminal contribution explaining market failure in higher education financing which led to the recommendation of an equity-based system for university students (Friedman, 1955). The essential motivation from the Friedman analysis is to maximise the possibility that graduates with the highest financial returns to their studies pay the most for this privilege, and that those with the lowest financial returns to their studies pay the least. This means that if the government could anticipate with confidence the lifetime incomes of enrolling students, the price setting process would be trivial, but of course this is not the case.

The essential idea concerns the right principle for the setting of HECS-HELP prices is that policy results in, as far as possible, the highest/lowest prices apply to those debtors who will experience the highest/lowest in most financial need and the least possible subsidies go to the most financially advantaged former students. Consequently, the government has available two instruments at its disposal: the prices set at enrolments in anticipation of relative graduate lifetime incomes by course, and post-graduation financial mechanisms designed to provide the greatest/least subsidies from the lowest/highest lifetime income graduates. These are now considered in concept.

4 (ii) Ex-ante pricing decisions

This aspect of equitable pricing concerns the course charges set for students. The policy goal is to design a set of student course prices with the highest likelihood that students enrolling in courses will end up repaying HELP charges that are highly positively correlated with their eventual lifetime incomes. The guiding principle for the design of the most correct *ex-ante* price structures is that there is a strong relationship between what people study and the associated occupational consequences of this study experience. Put simply, that people studying nursing have a high probability of working as a nurse, and people enrolled in law courses have a high probability of working as lawyers.

There will of course be many inaccuracies and approximations with such an approach but so long as there are significant correlations between, for example, studying law and becoming a lawyer, or studying nursing and become a nurse, there is empirical merit in the use of such an approach as an equity pricing instrument. This is the method adopted in the 1997 reforms which were the closest example historically of the setting of HECS-HELP prices most consistent with these economic principles.

With respect to contemporary policy debate and public policy, it needs to be emphasised that we are not operating in a policy vacuum, because government policy decisions in this area need to be framed through reference to the imperative to replace the current set of inappropriate prices implemented through the 2020 JRG package. This is the right reference point in 2024 because the budget costs of changes to HECS-HELP prices are a key issue for reform.

Consequently, the critical contemporary HECS-HELP pricing decisions have a dimension beyond the importance of lifetime equity comparisons, which is that budget costs associated with price changes need to be taken into consideration. The policy agenda is then to find a set of charges related to courses which maximise lifetime distributional equity without major budget costs. Clearly this is quite a challenging contemporary research and policy issue, but one which has been addressed compellingly in the discussion in Section 5 of Higgins and Khemka (in progress) (henceforth referred to as HK).

4 (iii) Ex-post policy issues

Apart from the setting of prices by field of study there is an additional aspect concerning the application of a lifetime income approach to maximise the likelihood that HECS-HELP policy is distributionally equitable. This concerns the financial procedures associated with what happens to students after they leave university and is labelled the *ex-post* arrangements. The relevant instruments need to be designed in a way that, irrespective of field of study, ensures that in present value terms the most financially advantaged graduates repay the most, and the least financially graduates pay the least.

By design, ICL systems such as HECS-HELP go a long way to achieve this objective because debt repayments are only required when former students are receiving incomes in each period that exceed a given minimum amount. But there is more to be done in this regard and Section 6 outlines some of the possible options. However, further consideration and modelling the prospective implications for government revenue is a critical next step.

5 Applying the *ex-ante* principles in practice: Resetting HECS-HELP Prices

5 (i) Introduction

What now follows promotes for discussion the research methods, analysis, and a key illustrative example of a new set of HECS-HELP prices from HK.

5 (ii) The HK approach in summary

With the use of the 2021 Census the HK contribution formulates, models, and costs different packages of HECS-HELP prices as options to replace the current and misplaced JRG charges. HK explore a range of student charge regimes in a rigorous and flexible way using income information for people aged 25 to 60 for bachelor's degree graduates from the 2021 Census. The analysis uses the distribution of disciplines based on EFSTL for 2021 commencing domestic students to estimate graduate median full-time incomes[21], with the results being shown diagrammatically in Appendix 1.

This information is then used to estimate the implications of a range of alternative field of study HECS-HELP price bands that reflect these income differences, with this process allowing calculations of the consequences of the different price regimes for government interest rate and DNER subsidies (weighted by the student number distributions by EFTSL). The HK method is thus able to illustrate the likely extent to which different restructuring of HECS-HELP prices comes close to consistency with respect to our two fundamental criteria: that the prices charged to students are closely correlated with the expected income experiences for people enrolled in the fields of study, and that there are minimal consequences for HECS-HELP taxpayer subsidies. There is a particularly apposite HK example, now examined, which meets these goals.

5 (iii) HK1: An important HECS-HELP reform illustrative example

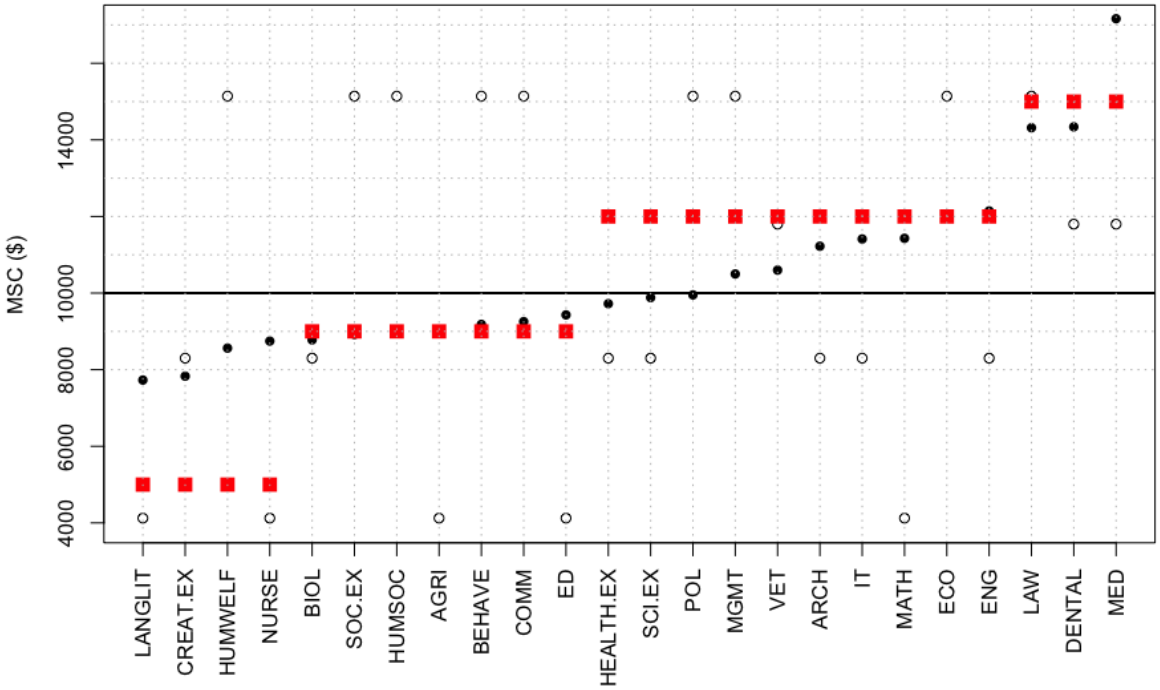
There is a pricing restructure illustration from the HK exercises which is wholly consistent with the policy aspiration of the achievement of lifetime equity, and which is associated with no extra costs to the budget which will be labelled HK1; for HK1 the price Bands by field of study are shown in Appendix 2. Some highlights of the HK1 price package concerning EFTSL per annum, include placing: nursing in the lowest Band of $5000; education and humanities in the second lowest Band of $9,000; engineering, mathematics and economics in the second highest Band of $12,000; and law, medicine, and dentistry in the highest Band of $15,000. It

[21] As a sensitivity test HK repeated their exercises using the total (as opposed to full-time) incomes and find very similar results.

is reminded that these price decisions are all made based on the expected earnings distributions as illustrated in Appendix 1.

This HK example can be shown in Figure 2 in which the new suggested prices in the orange squares can be compared with the black dots which represent what prices would be set for each field of study if a regimes set prices to be exactly proportional to average graduate median full-time income for each discipline (averaged over all ages), an approach which could have been adopted except that it requires an excessive level of complication, requiring separate prices for the units of 25 different study areas. The new suggested prices involving just four Bands, can be compared with current 2023 HECS-HELP maximum student contribution charge amounts, which are given by the empty dots in Figure 2.

Figure 2
HECS-HELP prices compared: Suggested, alternative and current ($ per EFTSL)

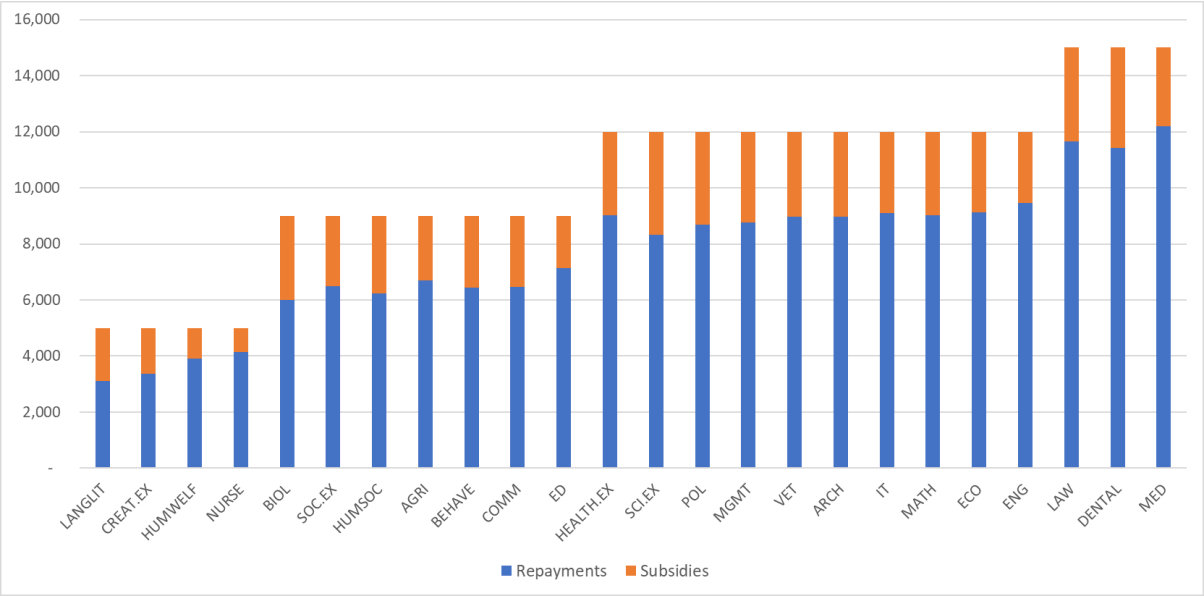


A key point from this HK example is that the suggested pricing Bands have been selected to ensure that the *total* amount of government outlays provided to the university sector is the same as under the existing scheme. This is a very important point for policy reform because it means that a much improved and highly equitable new pricing structure, based on the fundamental principle of maximising graduate lifetime equity, can be delivered without extra costs for the budget. The existing JRG system can be replaced, equitably and fairly, at no extra costs to taxpayers.

A critical additional issue with respect to the HK example involves the calculations of taxpayer HELP subsidies which can be computed with reference to the income distributions presented in Appendix 1, and these are now shown in Figure 3. It is of considerable interest that when prices are motivated solely by measures of expected future income, the HK option indicates

that aggregate subsidies would be *lower* than subsidies under the JRG. It is also the case that there are very similar expected subsidies across the bands and prices which is a further attractive feature of HK1.

Figure 3
Prices and taxpayer subsidies with a proposed pricing option



5 (iv) Summary

The HK1 example shown here should be seen as only one of many possible options for HECS-HELP pricing changes to the existing JRG. After all, the government needs to consider its own modelling and policy option package for a new set of prices and in this context it is also important to note limitations with the approach shown here.[22] But the analysis and modelling presented makes it clear at least that is feasible to design different pricing arrangements that are both fairer to students, more equitable, and which potentially result in savings to the budget through reduced HECS-HELP subsidies. Desirable *ex-ante* reforms are clearly achievable.

[22] A limitation in the HK approach is that there has not been consideration of the impact of different minimum degree lengths. For example, some degrees (e.g., law) require four years of study. The pricing approach could be modified by setting charge band amounts such that students with similar full-time median earnings are charged similar *total* amounts over their degree, even if those degrees have different minimum length requirements.

6 Applying the principles: Potential *ex-post* policy instruments

6 (i) Introduction

The basic idea with the *ex-post* HECS-HELP pricing policy approach is to offer some ways to help ensure that the goal of lifetime graduate income equity can be addressed further in the ICL framework. This is important because while the *ex-ante* issues are capable of being addressed through the application of prices restructuring through policies such as HK1, there is going to be an imperfect mapping between students' field of study and projections of lifetime incomes. We all know, for example, that many people studying law will not end up as high-income corporate lawyers, perhaps because they choose to work as public defendants or in legal aid. Thus, as well as price restructuring, attention needs to be given to what happens in financial terms after students begin work and earn incomes that are going to be quite different to their student peers, and what if anything can HECS-HELP policies contribute to the equity beyond the prices set.

Several of the ideas mentioned below have been tried before in Australia or other countries and will be familiar. Others are more speculative, the goal being to provide the government with a list of potential instruments to be modelled and analysed further, and these are:

6 (ii) The maintenance of indexation

Since 1989 HELP debts, once incurred, are indexed annually through CPI adjustments. This has two effects, the first of which is to maintain the value of debt repayments to the government in real terms which has the consequence of preserving the purchasing value of the loan for the government. Second, indexing with respect to price inflation only means that in financial terms the real rate of interest that students are required to repay is zero. Thus, in real terms, there are interest rate subsidies to debtors, and these are higher the lower are debtors' incomes.[23]

The issue of implicit taxpayer subsidies is explained in some detail in Section 2 above. It is important for the government to promote understanding of this, for two reasons. The first is that indexation based on changes to the CPI delivers financial benefits to debtors for reasons explained above and is also progressive because it means that the HELP collection system assists the poorest former students. Second, this indexation arrangement is a cost to the budget which means that if is replaced with an indexation adjustment which is more generous to debtors, this must be paid for by all taxpayers; this be a regressive outcome because taxpayers in general have lower lifetime incomes than graduates.

Thus, the current indexation processes are both progressive and serve to limit budget costs. It is important that the government does not respond to the short-term political pressures aimed at reducing the rate of interest on HELP debts. Reforms to lower the implicit interest rate costs of HELP would be both regressive for all taxpayers and expensive for the government (Chapman and Dunk, 2023).

[23] This means that the 2023 political debate concerning the alleged "unfairness" of HELP indexation adjustments was uninformed with respect to the basic economic principles underlying the indexation of HELP debt (see Chapman and Dunk (2023)). But it became clear that the government needs to explain the issue better or it will resurface again when price inflation becomes unusually high.

However, the above this doesn't mean that nothing should be done in this area. For example, the indexation adjustments to HELP could be undertaken on a quarterly basis rather than the annual procedures that currently operate; this simple adjustment would limit the extent that a very unusual inflation experience, such as what happened in 2023, heightens unfounded fears from HELP debtors about the (unfounded) problems associated with CPI indexation.

6 (iii) Debt forgiveness after a considerable period

In the UK all student debts are forgiven for unpaid ICLs after a given long period, which has varied but is currently 40 years. This option was motivated by the economist most involved in the HECS-type system in that country, Nicholas Barr (see Barr (1979), and Barr, Chapman, Dearden and Dynarski (2019)). Debt forgiveness has two important features that need to be explored in an Australian context.

These are that forgiveness is progressive and equitable in a lifetime income context because it means that the lowest earning graduates over a long period of time do not have to repay any further. Second, forgiveness removes any anxieties associated with having debt obligations when former students are quite old. While this not a financial issue, it must presumably be important to for people with outstanding student loan balances.

It is easy to understand the benefits of HELP forgiveness. But the period after which forgiveness takes effect must be costed, because if the period chosen is very low taxpayers will be taking on the implicit financial consequences of the extra debt not being repaid; and, of course, vice-versa. It is difficult to believe that these budgetary costs are very high, but for propitious reform of public policy the costs of debt forgiveness certainly need to be explored by the government. Modelling of the costs associated with forgiveness after a period of 30 years would seem to be a useful starting point.

6 (iv) The use of conditional debt repayment contingencies

There is no doubt that many students undertake courses of study that are unlikely to result in high lifetime earnings, and some of these lead to employment in occupations which are generally considered to involve high social value and are generally thought to be poorly rewarded financially. The classic examples in this territory are nursing and teaching, and it is of interest for Commonwealth government HELP policy that nurses and teachers are usually employed in jobs involving State/Territory budget jurisdictions.

There is a way that *ex-post* HELP repayment arrangements might be useful in this domain, with both equity and labour market effectiveness implications. This would be through policies designed to assist financially HELP debtors being rewarded depending on their occupational experiences. For example, different forms of HELP forgiveness could be employed as equity instruments which are related to the job outcomes of specifically trained graduates, such as nurses and teachers.

An application of this notion could be that for each year a debtor is employed as a public sector nurse or teacher has, as a consequence, no HELP repayments being required in that year, and that there is also a 20% reduction in total HELP debts per year[24]. Two points should be emphasised: while this instrument is motivated by equity concerns, there could nevertheless be efficient labour market choice consequences; and, because nursing and teaching are in the main State/Territory employment responsibilities, a strong case exists for non-Commonwealth government contributions to the associated costs.

6 (v) Increasing HECS-HELP total repayments for the highest earning graduates

There is a range of collection options available to increase HECS-HELP repayments from the most financially advantaged graduates. Some possibilities with respect to the highest income graduates include:

(a) Extending by a short period the length of time of debt repayments for those graduates who fully repay their debts most rapidly; and

(b) Imposing higher rates of the indexation on their outstanding debts.

All these and related options require careful analysis with respect to two matters. First, to make sure that the policies designed are not characterised by moral hazard, in which the highest income graduates behave with respect to labour supply choices to avoid, or at least minimise, the additional required repayments. Second, that estimates are undertaken to properly cost what such policies mean for government revenue and thus to address the issue of whether the additional complexities involved for HECS-HELP collection are sensible as an equity package.

6 (vi) Conclusions

To assist in the attainment of the goal of distributional equity, reforms to HECS-HELP prices (the *ex-ante* approach) are of fundamental importance. But even if these reforms are of significance, the experience of HELP debtors financially after they begin their careers is a different and potentially significant issue for policy. There are several *ex-post* instruments available with the potential to contribute to lifetime income equity, and it is critical that these are considered more both analytically and with respect to the potential implications for the Commonwealth budget.

[24] It is understood that HELP policies of this type have been tried previously. The motivation here for the possible reintroduction of these arrangements is essentially that of equity.

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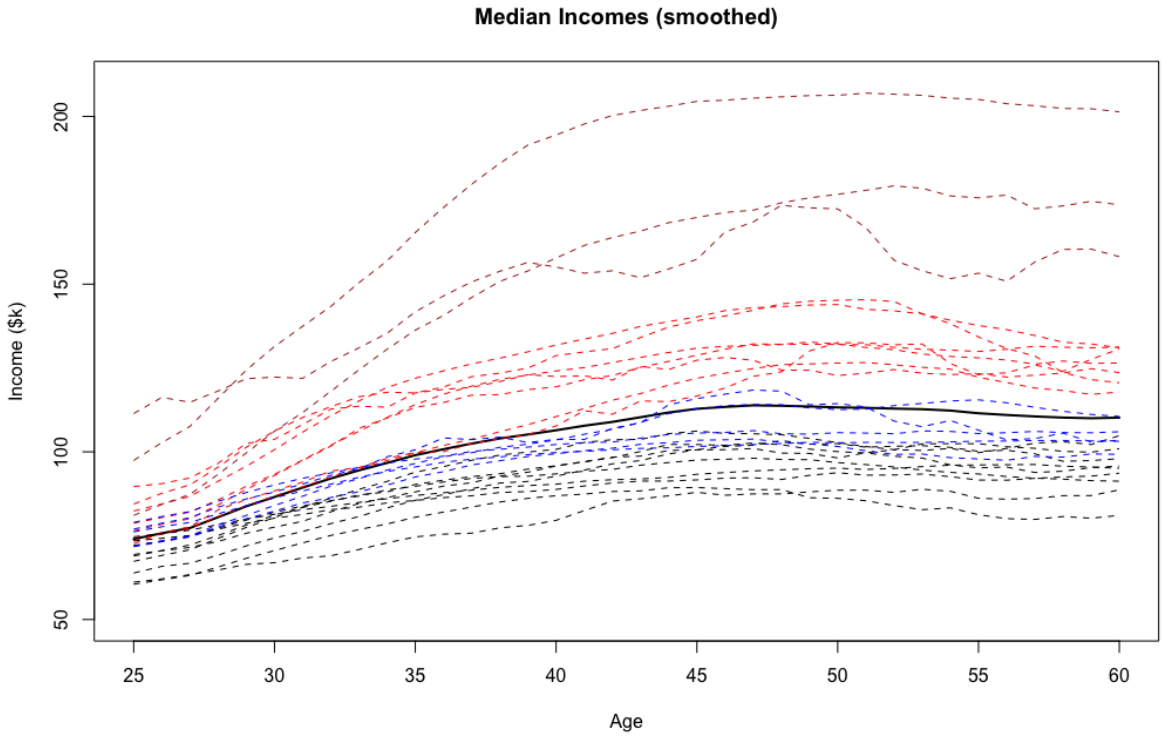
Appendix 1
Incomes by Discipline of Study

From HK Figure 1 shows the (smoothed) median full-time incomes for each discipline for graduates with respect to each of 24 discipline groups by age**.**

Figure 1
Annual incomes by age and discipline, 2021 Census.



The key for the figure is as follows:

Bold line = Median income for average bachelor's degree graduate.
Brown = Medicine (MED), Dentistry (DENTAL), Law (LAW)
Red = Mathematical sciences (MATH), IT, Engineering (ENG), Architecture (ARCH), Management and Commerce (MGMT), Veterinary Sciences (VET), Economics/Econometrics (ECO).
Blue = Science (excl. biology/maths) (SCI.EX), Education (ED), Health (excl. nursing/medicine/dentistry/vet sci) (HEALTH.EX), Behavioural Sciences (BEHAVE), Communication and Media (COMM), Policy and political science (POL)

Black = Nursing (NURSE), Human society (sociology, history, etc) (HUMSOC), Human welfare (social work) (HUMWELF), Biological sciences (BIOL), Agriculture (AGRI), Other human society and culture (SOC.EX), Language and literature (LANGLIT), Creative arts (CREAT.EX).

Appendix 2
The HK1 Example of HECS-HELP Price Restructuring

Band	Field of Study	Student Charges (EFTSL) ($)
Band 1:	Nursing	5000
	Human welfare	5000
	Lang/literature	5000
	Creative arts	5000
Band 2:	Com. and media	9000
	Human society	9000
	Biol sciences	9000
	Agriculture	9000
	Society/culture	9000
	Education	9000
	Behave. Science	9000
Band 3:	Management	12,000
	Health Ex.	12,000
	Science Ex.	12,000
	Political science	12,000
	Vet science	12,000
	Architecture	12,000
	Info. Tech	12,000
	Maths	12,000
	Economics	12,000
	Engineering	12,000
Band 4:	Law	15,000
	Dentistry	15,000
	Medicine	15,000