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Higher Education Financing in Australia

Bruce Chapman*

Introduction and background

In 1989 the Australia government introduced an income contingent loan for the payment of higher education tuition charges, known as the Higher Education Contribution Scheme (HECS). The debt is repaid through the income tax system and at the time it was the first of its kind. Since then similar arrangements have been adopted in, among other countries, New Zealand (1992), South Africa (1991), the UK (2006), Thailand (2006) and Israel (planned for 2008). As well, there is currently active consideration of potential higher education financing reforms towards income contingent loans in Germany, Malaysia, Canada and a host of other countries. It is not an exaggeration to suggest that there is an on-going quiet revolution internationally in higher education financing towards the adoption of income contingent loans.

This paper examines the basis of income contingent loans for higher education financing, focusing on the Australian experience with HECS.[1] A key aspect of the discussion is an analysis of the benefits in concept, and a difficulty in practice, of income contingent loans. A major issue for the adoption of HECS was the potential for the scheme to reduce the access of the disadvantaged to Australian higher education; an extensive review of the literature illustrates that this has not eventuated. As well, there is evidence to suggest that HECS has been associated with significant increases in the size of the higher education system and has proved to be administratively inexpensive. This is not to suggest that income contingent loans are a panacea to international higher education funding difficulties however, since there are important institutional challenges to the adoption of such approaches.

Brief history of the introduction of HECS[2]

1973 to 1986

Australian universities required students to pay fees until 1973. Even then, the vast majority of students had fee obligations exempt through the receipt of scholarships awarded on the basis of academic merit. Fees were abolished in 1973 for all students, meaning that from the early 1970s to the late 1980s Australian Universities were financed without any direct contribution from students.

This policy stance changed significantly in 1986 with the institution of the Higher Education Administration Charge (HEAC), a small up-front fee on all university students of $(A)250 in 1987 terms, a charge which did not vary with respect to either discipline or course load. In symbolic terms the institution of HEAC was significant in that it represented government endorsement of the charging of fees, and thus set the scene for more radical reforms involving user-pays.

The revenue raised from HEAC was trivial in comparison to the total costs of higher education – amounting to around three percent only of teaching costs. In 1987 it remained the case that taxpayers provided practically all of the finances for higher education. At this time a conjunction of forces made it inevitable that the government would move financing arrangements towards increased contributions from students. These forces were as follows.

First, over the 1980s there was a significant increase in year 12 (the final year of high school) completion rates, but there was not a commensurate expansion in higher education places. This resulted in the political problem of large and growing queues of qualified prospective students.

Second, while this problem could have been solved with increased Commonwealth budget outlays, the Labor Government was intent on fiscal parsimony and not prepared to spend the additional taxpayer resources necessary to finance additional university places (Edwards 2001).

Finally, and perhaps most importantly with respect to the political process, at least two cabinet ministers, John Dawkins and Peter Walsh, were strongly in favour of student fees on grounds of redistribution. Their view was that a system which did not charge higher education students was regressive: after all,

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[1] For simplicity the discussion does not include consideration of the period since 2005, when the scheme was made much more complex. The essential aspect of HECS, income contingent repayment of the debt, remains. For analysis of the likely effects of the changes introduced in 2005, see Beer and Chapman (2004).

[2] The discussion of this section is based on description from Chapman and Ryan (2002).

universities were paid for by all taxpayers, yet students came from relatively privileged backgrounds, and as graduates they received relatively high personal economic benefits. It is important to record that Peter Walsh and John Dawkins were then respectively in charge of the critical Ministries of Finance and Higher Education.

The introduction of HECS

In 1987 John Dawkins invited the author of this article to prepare a report outlining the costs and benefits of different approaches to the introduction of a user-pays higher education system for Australia. The report presented analyses of several financing mechanisms, including up-front fees with scholarships, up-front fees with government subsidised bank loans, and an income contingent charge system. The paper recommended the last of these, with repayments being made via the direct tax system. Details were provided of how such a system might work, including possible fee levels and repayment parameters.

The minister believed that this report would have a difficult reception, for three reasons. First, the Australian Labor Party (ALP) in government had abolished university fees in 1973, and this had happened under the larger-than-life Labor icon, former Prime Minister Gough Whitlam. Second, at that time the Labor Party platform included a statement to the effect that " … all education should be free of charge". Third, the income contingent payment system recommended was both radical and untested: there was no similar scheme internationally, and thus no empirical or political basis to assess its likely economic, social and administrative implications.

Minister Dawkins' response was to set up a committee chaired by a popular former state labor premier, Neville Wran, to examine the relative merits of potential options. It was clear from the Terms of Reference that the government's intent was to set the scene for the introduction of charges.

In May 1988 the Wran committee recommended that all Australian undergraduates should be required to pay a uniform charge, with the timing and level of payment being dependent on income. This became policy in 1989, with the income contingent feature of HECS being unique internationally. At that time the first repayment threshold was around $(A)50,000 per annum in 2007 terms.

Labor lost power in 1996, but the new Conservative government maintained the essence of HECS. However, in 1997, charge levels were increased by about 40 percent on average, differential charges by course were introduced and the first income threshold at which graduates began to repay their loans was decreased to around $21,000 per annum. This last decision was reversed in 2005, at which time the government also allowed some price discretion and extended HECS to cover full-fee paying domestic students.

The advantages of, and a difficulty with, income contingent loans[3]

The failure of capital markets for the financing of higher education

Some might be tempted to ask why government intervention is required with respect to higher education financing. Why not impose charges at the point of entry and allow prospective students without access to the financial resources needed to pay the tuition borrow the finances from banks?

The problem is that commercial banks will not in general be interested in providing loans to finance human capital investments. The concern of a bank lending in these circumstances is that, unlike many other purchases from a prospective debtor, there is no saleable collateral in the event of default — such as would be the case for the housing capital market — and there is no slavery market in which to sell the human capital being developed. As well, and as recognised in Barr (2001) and Chapman (2006), investment returns from higher education are highly variable and uncertain. This implies a real risk to a bank with respect to default in the situation of former students receiving low future incomes.

The governments of many countries (for example, the US, Canada, Japan and the Netherlands) address these problems by acting as a guarantor for student loans, and by paying the interest on the debt for the period before the borrower's graduation. A problem inherent in this approach is that because the loans are government guaranteed, high default rates imply additional government subsidies, which can be very high.[4] What now follows examines other difficulties with this approach.

[3] Much of the discussion in this section follows that of Chapman, Rodrigues and Ryan (2007).
[4] See Harrison (1995) for data on US student loan defaults.

Income contingent repayment and default protection

Instead of allowing some prospective students access to a bank loan with a government guarantee, other countries (including Australia, New Zealand and the UK) have adopted income contingent loan systems, in which the former student repays the debt through the tax system, with repayments being dependent on incomes. Making repayments conditional on future income has a special advantage over other typical debt repayment schemes, a point now explored.

One advantage of an income contingent repayment approach is that it avoids the basic problem of the usual type of loan offered by banks, known as a 'mortgage style' loan. Unlike income contingent loans, normal bank loans require repayments to be made over a specified period of time, for example, the term of a mortgage. Usually no weight is given to the consequences of a borrower's low income: the contract specifies that debt obligations have to be met within a given period of time.

The essential difference between income contingent and mortgage types of loans is that the income contingent variety serves to protect prospective students from the costs of the exigencies associated with the financial returns to educational investments. So income contingent loans offer a form of "default insurance", such that former students do not have to bear the costs of reneging on their debt as a result of periods of low future incomes. This is quite different to a mortgage-style loan, in which the costs of defaulting exist and may be very high in terms of the defaulter being locked out of other borrowing markets (most notably for housing) through damage to credit reputations.

Default protection with income contingent repayment overcomes a fundamental problem for prospective borrowers inherent in other loan schemes. With income contingent approaches there is unlikely to be any concern about prospective students being unable to repay a loan or making repayment under financial duress.

Income contingent repayment and consumption smoothing

A related problem for students with bank loans concerns possible consumption difficulties associated with fixed repayments. If the expected path of future incomes has a high variance, a fixed level of a debt payment will increase the variance of disposable (after debt repayment) incomes. The point can be illustrated with the following simple example, with much more detail being available in Chapman (2006).

Imagine that a student incurs a debt with a constant monthly level of repayments of $500 after graduation, say, for five years. If her monthly income is expected to be a constant amount of $5,000 after-tax, then the debt is also a constant proportion of income, in this case 10 percent. It is more likely to be the case that she expects her income to increase over time, as a result of promotions for example, implying that the bank repayment would be expected to fall as a proportion of disposable income. In these cases the bank loan should not be expected to significantly affect her welfare.

But in the event of misfortune, such as job loss, or sickness, the former student's income stream might be far less stable than for the above circumstances. For example, imagine that the student experiences a monthly after-tax income stream of $5,000 for the first year, but only $1,500 for the second year. In this case, her *ex post* loan obligations turn out to be 10 percent of income initially, but then reach 33.3 percent of income. The fixed loan repayment obligation is then associated with the likelihood of significant consumption hardships. Moreover, the possibility has a greater potential to discourage loan take-up from those expecting to not have access to alternative finances to help in the event of low future incomes, and these are more likely to be members of relatively disadvantaged groups.

However, with income contingent loan repayments the above difficulties are avoided. Imagine that the repayment rule is 12 percent of income when monthly incomes are above $3,000, and zero otherwise. In the above example the former student pays $600 a month of her debt in the first year, but is not required to pay anything in the second year. That is, income contingent loan schemes offer insurance against consumption hardship, and this is because they are based on capacity to pay, not time as is the case with a mortgage-type loan.

An important administrative concern

In Australia and other countries in which an income contingent loan system has been introduced, this has been a relatively simple matter from an administra-

tive point of view. The reasons for this are that the public administration systems of these countries feature a strong legal framework, a universal and transparent regime of income taxation and/or social security collection, and an efficient repayment mechanism. The last involves computerised record keeping of residents' vital financial particulars and, very importantly, a universal system of unique identifiers (often accompanied by an identity card).

Under these circumstances it is not complicated to identify and track individual citizens and their incomes over time and space. It is not expensive, moreover, to tack onto some existing tax collection mechanism an additional function: the collection of payments from ex-students, on the basis of a fixed proportion of income. In the developing world, however, these preconditions are often lacking.

Chapman and Nicholls argue that the minimum conditions for a successful income contingent loan[5] seem to be:

(i) accurate record-keeping of the accruing liabilities of students;
(ii) a collection mechanism with a sound, and if possible, a computerised record-keeping system; and
(iii) an efficient way of determining with accuracy, over time, the actual incomes of former students.

Some would argue that a further basic requirement for the introduction of an income contingent loan is a strong legal framework and functional judicial system. Indeed, it is hard, from a developed-world perspective, to imagine implementing a workable scheme outside this context. However, it is important to be mindful of the need to tolerate imperfections in any scheme – within the limits imposed by the need for policy integrity and credibility.

It is worth emphasizing that of the three conditions noted above for the implementation of an income contingent loan, two apply also to the collection of any kind of loan. The exception involves determining with accuracy, over time, the actual incomes of former students. This seems to require an effective income tax system including a reliable, preferably universal, system of unique identifiers; accordingly this particular criterion is likely to be the most difficult institutional barrier to reform in developing countries.

[5] See Chapman (2006).

Australia's experience with HECS: the access of the poor to the system[6]

At the time of the introduction of HECS close to nothing was known about the effects of income contingent loans, because the scheme was the first of its kind. There are several areas of interest in an assessment of the empirical consequences of HECS, but by far the most important issue concerned the effects of introducing an income contingent tuition charge on the participation of the poor in higher education. This is the main focus of what now follows.

Studies of the participation of disadvantaged groups

The biggest policy and political concern with respect to the introduction of HECS was whether or not imposing a charge on students to be repaid in this way would have adverse consequences for the participation of poor prospective students. In the two instances in which the policy was changed after 1989, in 1997 and in 2005, the same issue has arisen. There have been a large number of disparate investigations into this matter.

For example, Aungles et al. (2002) used the local area socio-economic averages concerning education and occupation, as did Andrews (1999), to explore the possibility of there being an effect on commencements of the relative disadvantaged from the very significant increases in HECS changes in 1997. In general, they found that the share of university commencements of students from low socio-economic backgrounds did not change. However, there was apparently an effect of differential HECS on subject choice, with a decrease in enrolments of low socio-economic status males in courses in which the HECS charge increased most. The actual numbers involved were very small (less than 200 individuals) and these individuals were not discouraged from attending university *per se,* they simply changed their course choice. Chapman and Ryan (2005) report a similar effect in direction for this group using a measure of family wealth, but it was not found to be statistically significant.

Other studies have used individually based socio-economic status measures in analysis of Australian higher education participation. Long, Carpenter and Hayden (1999) and Marks et al. (2000) used four and five panels of longitudinal data, respectively, to identify how

[6] Some of the analysis of this section follows discussion in Chapman (2006).

education participation changed in Australia from the 1980s to the late 1990s. Long et al. (1999) used parental education and occupation to identify differences in education participation by socio-economic status, as well as an indirect wealth index constructed from responses by individuals to questions about the presence of material possessions in their houses.

Chapman (1997) analysed university participation among 18 year olds with the two of the cohorts also examined by Long et al. (1999) and concluded that the introduction of HECS had not affected university participation by students from disadvantaged backgrounds. Chapman's approach had the advantage of measuring university participation in 1988 for the third cohort, prior to the introduction of HECS. However, not everyone aged eighteen in these data had completed school when surveyed in the relevant years, so the estimates understated university participation among young Australians.

The measure of participation used by Marks et al. (2000) for the additional cohort they analysed differed from that used for the earlier cohorts by Long et al. (1999). It was the proportion of individuals in higher education in 1999 that had been in Year 9 in 1995. The wealth measure used by Marks et al. (2000) for the last panel also differed from the earlier ones. This research confirmed the positive impact of wealth on higher education participation. However, in general, their results suggested that socio-economic status was less important in determining higher education participation in the 1999 data than had been the case in the earlier panels.

Marks and McMillan (2006) analyse university participation within ranges of the entrance scores used by universities to select students for undergraduate courses in 1999. They find that within these entrance score ranges, individuals whose parental occupational backgrounds are "blue" collar are as likely to participate in university as those whose parental occupational backgrounds was professional. They conclude that since occupational origins have little influence on university participation once entrance scores are taken into account, HECS has not deterred students from less privileged backgrounds from attending university.

Cardak and Ryan (2006) produced similar results. They found that students from the most disadvantaged social backgrounds entered university at similar rates to those from the most advantaged backgrounds who had the same university entrance scores as them. Their university participation rates were much lower than those from the most advantaged backgrounds because they were less likely to obtain an enter score and obtained a much lower one on average where they did. Among students with the same levels of school achievement in year 9, those from more advantaged backgrounds were able to convert that achievement into substantially higher university entrance scores by the end of their schooling than otherwise similar students from poorer backgrounds.

Chapman and Ryan (2005) analyse the access effects of HECS using three of the longitudinal panels of data used in the Long et al. (1999) and Marks et al. (2000) studies. They use a consistent definition of university participation across these three cohorts. Chapman and Ryan (2005) analyse the participation in higher education of 18-year-olds in the first year they could potentially attend university. Thus for the first two cohorts they estimated the participation in higher education in 1988 and 1993 of individuals who should have reached Year 12 in 1987 and 1992, respectively. For the 1999 cohort analysed in Marks et al. (2000), Chapman and Ryan analysed higher education participation among 18-year-olds.

Chapman and Ryan concluded that the introduction of HECS did not affect the access of the disadvantaged, in terms of enrolments. They found that the socioeconomic composition of the higher education student body changed somewhat between 1988 and 1993 in Australia, with the main change being the relative increase in participation by individuals in the middle of the wealth distribution.

In the period after significant modifications to HECS all socio-economic groups experienced the same proportionate increases in participation. Further, while there was an across-the-board decrease in the intentions of secondary students concerning university participation in 1996 after the announcement of the changes, in the next year (for all socio-economic groups) enrolment intentions rebounded to their previous levels. Finally, for those who had not intended to participate in university, no differences associated with socio-economic background were found in the proportion that eventually did participate.

More generally, Chapman and Ryan (2005) concluded that changes in overall university participation

appeared to reflect different behaviour across genders rather than across socio-economic groups, with the exception that growth was highest among the middle of the wealth distribution.

The conclusions from the Australian research with respect to socio-economic mix and access are as follows:

(i) The relatively disadvantaged in Australia were less likely to attend university even when there were no student fees. This provides further support for the view that a no-charge public university system (that is, financed by all taxpayers) is regressive;
(ii) The introduction of HECS was associated with aggregate increases in higher education enrolments;
(iii) HECS did not result in decreases in the participation of prospective students from relatively poor families, although the percentage point increases were higher for less disadvantaged students, especially in the middle of the wealth distribution;
(iv) There was a small decrease in the aggregate number of applications after the 1997 changes, but no apparent decreases in commencements of members of low socio-economic groups, except perhaps for a small number of males into courses with the highest charges; and
(v) The significant changes to HECS introduced in 1997 were associated generally with increases in the participation of individuals to 1999, irrespective of their family wealth. Even so, the growth in participation has slowed since then.

It appears that there have been few consequences for the accessibility to higher education for students from relatively disadvantaged backgrounds, at least as represented by enrolments. Broadly speaking, the socio-economic make-up of the higher education student body was about the same in the late 1990s and early 2000s as it was before HECS was introduced. This may not, of course, be the consequence of the income contingent repayment characteristic of the system, since this might have happened also with other financing approaches.

HECS revenue, changes in the size of the system and administration costs

Additional data with respect to the role of HECS in the Australian higher education system are analysed in full in Chapman (2006). In summary the following points may be made:

(i) HECS has been associated with considerable increases in revenue for the government, of the order of about $(A) 13 billion in total, with annual receipts being of the order of $(A)1.3 billion. Governments have used these resources to reduce considerably the proportion of the financing that is funded by taxpayers;
(ii) The number of students in the system has increased very considerably in the 1988–2007 period, by around 70 percent; and
(iii) In administrative terms the costs of running HECS, for the Australian Taxation Office and the universities, have been estimated by Chapman to be of the order of $(A)60 million per year, which is less than 5 percent of the annual receipts from the scheme.

There are some caveats and qualifications to several of these conclusions, essentially along the lines that the findings with respect to revenue, aggregate demand and student access cannot be traced directly to the fact that HECS is an income contingent loan per se. Much of the 1989–2007 Australian higher education experience might well have resulted from the introduction of charges financed in other ways, such as up-front fees with scholarships. As well, it is critical to reinforce that the institutional and administrative arrangements need to be appropriate to allow income contingent schemes to be implemented, and in many developing countries this will not be the case.

References

Aungles, P., I. Buchanan, T. Karmel and M. MacLachlan (2002), *HECS and Opportunities in Higher Education,* Research, Analysis and Evaluation Group, Commonwealth Department of Education, Science and Training, Canberra.

Andrews, L. (1999), *The Effect of HECS on Access,* Research report, Department of Education, Employment, Training and Youth Affairs, Canberra.

Barr, N. (2001), *The Welfare State as Piggy Bank,* Cambridge University Press, Cambridge.

Beer, G. and B. Chapman (2004), "HECS System Changes: Impact on Students", *Agenda* 11 (2), 157–74.

Cardak, B. and C. Ryan (2006), "Why are High Ability Individuals from Poor Backgrounds Underrepresented at University?", *La Trobe School of Business Discussion Paper* A06.04, Melbourne.

Chapman, B. (1977), "Conceptual Issues and the Australian Experience with Income Contingent Charges for Higher Education", *The Economic Journal* 107 (442), 738–51.

Chapman, B. (2006), *Government Managing Risk: Income Contingent Loans for Social and Economic Progress,* Routledge, London.

Chapman, B. and C. Ryan (2002), "Income Contingent Financing of Student Charges for Higher Education: Assessing the Australian Innovation", *Welsh Journal of Education* 11 (1), 45–63.

Chapman, B. and C. Ryan (2005), "The Access Implications of Income Related Charges for Higher Education: Lessons from Australia", *Economics of Education Review* 24 (5), 491–512.

Chapman, B., M. Rodrigues and C. Ryan (2007), "HECS for TAFE: The Case for Extending Income Contingent Loans to the Vocational Education and Training Sector", *Treasury Working Paper 2007-2,* Commonwealth Treasury, Canberra, April.

Edwards, M. (with C. Howard and R. Miller) (2001), *Social Policy, Public Policy,* Allen & Unwin, Sydney.

M. Harrison (1995), "Default in Guaranteed Student Loan Programs", *Journal of Student Financial Aid* 25, 25–42.

Long, M., P. Carpenter and M. Hayden (1999), *Participation in Education and Training: 1980–1994,* Longitudinal Surveys of Australian Youth, Research report no. 13, Australian Council for Educational Research, Melbourne.

Marks, G. and J. McMillan (2006), "Australia: Changes in Socioeconomic Inequalities in University Participation", in Shavit, Y., R. Arum and A. Gamoran, eds., *Stratification in Higher Education: A Comparative Study,* Stanford University Press, Standford.

Marks G., N. Fleming, M. Long and J. McMillan (2000), *Patterns of Participation in Year 12 and Higher Education in Australia: Trends and Issues,* Longitudinal Surveys of Australian Youth, Research report no. 17, ACER, Melbourne.

Ryan, C. (2002), *Individual Returns to Vocational Education and Training Qualifications: Their Implications for Lifelong Learning,* National Centre for Vocational Education Research, South Australia.