
Feature

Reinventing Student Loans: Paying What You Can

by Bruce Chapman

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Parliament House, Canberra, Australia. The Australian Government introduced the Higher Education Scheme (HECS) in 1989 to provide student loans, which are repaid when the student starts earning over a certain income.

In Brief

Income-contingent student loans (ICL) for higher education, based on the idea that graduates should repay college loans as a percentage of their income, were first introduced in Australia in 1989. There is now a quiet revolution underway in the financing of student loans—a shift away from traditional approaches and towards ICL. Interestingly, economists are also now exploring new prospects for the use of ICL as a general government risk management instrument; there is room to apply this model across a range of social and economic policy outcomes, from the financing of drought relief to extensions of paid parental leave.

A quiet but radical transformation is changing student loan systems. Traditionally, loans made to borrowers deemed dependable are paid back at a set, prearranged time and amount. However, in recent decades, a different instrument, known as an *income-contingent loan* (ICL), has emerged as a major player in enabling students to receive and pay back loans. ICL are now in use across the world, with the United States Congress considering adopting them.

The subject of this essay is those loans: what they are, where they come from, their benefits and costs, and why such an instrument might be of considerable interest in an understanding of the role of government in ensuring residents have access to financial mechanisms.

ICL are unique in that they are paid back only if and when those who have benefited are in a situation to do so with financial ease. Repayment is set at a given percentage of income. This was first experimented with in 1989 when the Australian government introduced the Higher Education Contribution Scheme (HECS). HECS is a student loan policy in which no tuition payments are required for a student to enroll but instead are paid later when the student earns around the average earnings of all Australian citizens. This was the first income threshold of repayment of the debt when the policy was introduced in 1989, and it is now around 20 percent lower in real terms.

A novel, efficient, and administrative innovation of HECS is that the repayments are collected through the income tax system. Professor Joseph Stiglitz has recently argued that this aspect of the system is one of its major benefits because it is a very efficient method of conducting student loan transactions.

Although it has changed somewhat over the last 25 years, HECS remains an integral part of the Australian

higher education landscape and has been extended over ensuing years to cover many other aspects of Australian tertiary studies financing. These include, but are not limited to, tuition assistance for: graduate studies, private universities, vocational education and training, and for Australian students including study at overseas universities as part of their tertiary education experience.

Key Concepts

• Income-contingent student loans for higher education collected through the internal revenue service were first introduced in Australia in 1989

• There is currently a quiet revolution underway in the financing of student loans, away from traditional approaches and towards income-contingent loans (ICL)

• ICL have several advantages over traditional loan schemes, such as default insurance and the prospect of borrowers being able to even out consumption over their lifetimes

• The prospects of the use of ICL as a general government risk management instrument have been explored with a range of social and economic policy outcomes, from the financing of drought relief to extensions of paid parental leave

• While ICL have considerable potential as a risk management tool, there remain critical issues to be addressed concerning implementation

The Australian ICL system has turned out to be a watershed in terms of worldwide higher education financing policy. Similar higher education financing policies have been adopted in New Zealand (1992), South Africa (1994), England (1997), Hungary (2003), Thailand (2006), South Korea (2011), and the Netherlands (2012).^{1,2} A bill now before the United States Congress, the Earnings Contingent Education

Loans Act, if passed, would replace the current system of U.S. college loans with a universal ICL mechanism.

This paper has the broad goals of both examining the basis of ICL in higher education financing and exploring the potential of ICL as a general, risk-management policy instrument. The critical point is that, compared to “normal” (mortgage-type) loans, ICL delivers the advantages to borrowers of both default insurance and consumption smoothing (the latter meaning the capacity for people to even out incomes over their lifetimes); and compared to “normal” government financial assistance involving grants, ICL can be designed to be progressive when considered in a lifetime distributional context.

Conceptual Issues

A major role recognized for government involves the management and distribution of risks. The notion of risk plays a central and unifying role in current analyses of a wide range of social and political issues, perhaps similar to that performed by the concept of globalization in the 1990s. The role of government, and particularly of the welfare state, has been reinterpreted with an increasing emphasis on risk, uncertainty, and related issues.

Across the social sciences there are different analytical approaches with respect to the above. Neoclassical economists have stressed the extent to which risk can be rationally managed using the tools of expected utility theory. However, psychologists, sociologists, and various groups of other economists have stressed the expectations of this theory.

When a role of government is seen to be as a risk manager, new aspects of both existing policies and future policy options are revealed. In *When All Else Fails*, for example, David Moss offers a fine historical analysis of the role of the state as the ultimate risk manager.³ Through analysis of U.S. government legislative reforms over the last 200



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Income-contingent loans, which use a sliding scale of repayment based on the borrower's income, started in the field of education. There may be many other fruitful areas of application, says the author.

years, Moss promotes an understanding of the risk management role of the public sector, which can take many diverse forms, such as laws associated with limited liability, the application of speed limits for automobiles, national health insurance, occupational health and safety legislation, disaster relief, and social security.

Professor Nicholas Barr provides a similar treatment of the welfare state, in which the potential role of government is analyzed in the context of insurance failure, which is conventionally seen in the economics literature to be a consequence of asymmetric information.⁴ In the absence of markets providing accessible and affordable insurance Barr argues that the government has a unique role to play as a “piggy bank,” an efficient institution to manage and decrease the costs to citizens of the unavoidable uncertainties associated with human events.

What helps define ICL as a risk-management instrument is the notion that there are two essential benefits of government intervention that will not be forthcoming from the commercial market: insurance against default and consumption smoothing. Professors John Quiggin, Moss, and Barr highlight these benefits associated with an ICL.³⁻⁵ Both advantages are a direct implication of the debt only being collected when the borrower has the capacity to repay. This means that, if incomes are low in the future, borrowers avoid default and repayment hardship because no loan reimbursements are required in those circumstances.

The simple and essential point concerning the advantages of an ICL is that, if those who have been assisted find themselves in difficult circumstances in the future, the government defers the repayment until the

situation improves for the debtor. This is why there will be no defaulting on the loan and no loan-repayment hardships as a result of low incomes. An ICL thus transfers the risks and costs of unforeseen adverse outcomes from assisted parties to the government.

In many cases, ICL can be thought of as a public sector financial instrument designed to address aspects of “market failure.” Some of the shortcomings of the operation of the private sector with respect to risk might result in an absence of private sector institutions developing in response to social and economic need (such as with respect to the commercial provision of loans for human-capital investments), and in this case public sector intervention has the capacity to fill a significant void. The best-known ICL is that of HECS, and its examination provides important clarity with respect to these issues.

Income-contingent Loans for Higher Education: Background and the HECS Experience

It is widely agreed that without government intervention there will be an under-provision of investments in higher education because banks will be unwilling to help finance the investments due to uncertainty and the absence of collateral of student debtors, a critical point first raised by economist Milton Friedman.^{1,4,6,7}

There are two types of solutions to this issue, which involve either the use of government-guaranteed loans provided by banks or ICL. The latter have two important benefits compared to government-guaranteed bank loans, both related to the characteristic of ICL that if the borrower's circumstances are adverse in a particular period, no loan payments are required. This contingency results in insurance, and means that loans of this type provide borrowers with both default protection and consumption smoothing.^{4,5} A closely related question is: what have been the consequences of the use of ICL for higher education financing?

Significant findings are now available from detailed investigations of the effects of HECS. The main points are:

1. HECS has had little apparent effect on the private average returns to higher education and, related to this, higher education enrollments in Australia have increased considerably, by around 70 percent, since the introduction of HECS. This has happened for two reasons: there were no obvious overall deterrent effects for students from the new system and, in response to the expectation of high future revenue, governments substantially increased the number of places for students, a finding reproduced in similar analysis of several western European countries' student loan systems.⁸

2. There have been no consequences for the accessibility to higher education for students from relatively disadvantaged backgrounds, at least as represented by enrollments. Broadly speaking, the socioeconomic makeup of the higher education student body was about the same in the late 1990s and early 2000s as it was before HECS was introduced.⁹ The notion that prospective students from poor backgrounds are particularly averse to debt has not been borne out by the HECS experience.
3. HECS has been found to be inexpensive in administrative terms.¹ Specifically, while around 1.8 billion Australian dollars (about US\$1.7 billion) is currently repaid to the government per annum, it apparently costs less than 4 percent of this to collect. This is because repayments are straightforward given the mechanisms of the Australian Taxation Office in which the vast majority of citizens are covered and the marginal cost of recovering revenue in addition to income tax is very small.¹⁰

Additional ICL Case Studies

The policy areas considered below are: drought relief, the collection of low-level criminal fines, the financing of extensions to paid parental leave, and a housing credit for low earners. The goal in these summaries is to whet the appetite, and the focus will be on the reasons for and possible consequences of an ICL in these policy areas.

Income-contingent loans for drought relief. Australia is the driest inhabited continent on earth and it also experiences a high degree of climate variability. As such, drought is frequent and is occurring somewhere in the country most of the time. Since the arrival of European-style

agriculture, drought has been a recurring problem for Australia's farmers and the impact has been felt well beyond the farm sector.

Over many decades Australia has had in place a National Drought Policy providing government support to farm businesses as well as a welfare payment to farm families. The farm business support has usually been provided as a grant in the form of interest rate subsidies, raising questions of equity and effectiveness. An alternative ICL policy instrument for the delivery of support to drought-affected farm businesses is possible and has been the subject of a series of papers by Professors Linda Botterill and Bruce Chapman.^{11,12}

Botterill and Chapman argue that a consideration of the case typically offered as justification for government subsidization of farmers experiencing drought should be seen in the light of the cost of drought relief and the essential problems associated with conventional approaches to the issue. These include:

1. It is essentially regressive to use grants financed by all taxpayers to subsidize farmers, since the vast majority of citizens are less advantaged over their lifetimes than the owners of farm businesses.
2. There is no obvious reason for the delivery of considerable subsidies for farmers in difficulties compared to other groups, such as small business.
3. The design of Australian policy has been subjective, *ad hoc*, and often implemented in the highly political contexts in which the circumstances leading to grant drought support have been defined.

Botterill and Chapman explore the possibility that instead of grants-based drought relief there could be government-financed contingent loans with the feature that repayments would be required only if and when

farm revenues have recovered after the drought; that is, a revenue contingent loan. As with the other possible applications of ICL considered in this paper, the advantages compared to the conventional financing mechanism of a bank loan include the provision of both default insurance and income smoothing for the borrower. They stress the basic point that a revenue contingent loan for farm business is highly likely to be more equitable than a grants system financed entirely by taxpayers.

Botterill and Chapman report in some detail repayment and revenue estimates of such a proposed scheme.¹² It is apparent both that the returns to the government are manageable in a fiscal context and that there would be considerable savings to the public sector.

Low-level criminal fine repayments.

Could an ICL mechanism be useful in the design of policy for the collection of fines associated with low-level criminal offences, such as assault, breaking and entering, theft, and drunk driving? This issue has been explored in a research contribution involving economists and criminologists.¹³

The suggestion that ICL could apply to this area is motivated by several facts: that current collection processes for low-level criminal activity are very inefficient and expensive for the public purse; a very large proportion of fines remain uncollected; and, with the current fine collection arrangements, there can be very high social costs, even involving the imprisonment of offenders for low-level criminal activity.

A different approach could offer a fairer and cheaper way of collecting fines. A proposed Fine Enforcement Collection Scheme (FECS) would use the tax or social security systems to collect fines for low-level criminal activity that were not recovered within a grace period of, say, a month. The payments—typically in the order

of AUD\$500 to A\$1,000 (\$470–\$940)—would depend on the person's future income, and would thus be paid back at a rate that would fluctuate with the offender's capacity to pay. There would need to be relatively low-income thresholds for repayment to make the scheme viable.¹³

The FECS can be seen as balancing risks for the individual and the community. For the individual it almost eliminates the risk of a fine turning into something more costly, such as the seizure of a car or even imprisonment. On the other hand, it might reduce the chances of offenders avoiding paying some or all of the debt,

Professors Joshua Gans and Stephen King highlight the connection between housing and financial markets, noting that most households require borrowed funds to buy a house with the lack of availability of mortgage funds limiting the housing options for low-income households.¹⁴ They note that government policies towards low-income housing are usually geared towards households with a long-term income problem, with the policy focus on households that face long-term affordability problems for housing. These include the direct provision of housing or ongoing rent assistance for these households.

The Australian experience has turned out to be a watershed in terms of worldwide higher education financing policy.

although this seems unlikely given the very high levels of nonpayment of fines in the current system. For magistrates, FECS would produce a greater certainty that fines imposed would be collected, and this would enhance the credibility of the sanction. Thus the FECS approach offers the possibility of improving the administration of justice by rethinking the government's role as a risk manager.¹³

Housing credits for low-income earners.

Australia has one of the world's highest levels of home ownership, but it is still the case that many low-income households traditionally have been excluded from home ownership and rely on the rental market for their housing needs. Further, these low-income households are more likely to be dependent on government housing and, of all renters, approximately one-quarter rely on housing provided by a government authority.

Even so, Gans and King argue that little policy attention has been given to the need for support in response to short-term exigencies, such as the experience of unemployment. In such situations, low-income households face the possibility of the loss of housing.

To address this problem, Gans and King propose and examine the possible use of ICL in the provision of housing credits for the disadvantaged. The policy reform would allow the distribution of housing credits to qualifying poor households which are experiencing temporary financial hardship, with these credits to be repaid at a low rate and on the basis of future incomes.

Their suggested system could provide a type of insurance for housing, and is labeled by Gans and King the "housing lifeline." It is a system of ICL that fits easily into the conceptual framework explained above: it would reduce housing risk for buyers and



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Income-contingent loans (ICL) could have application in many realms outside of education. For instance, instead of agricultural subsidies, the authors suggest ICL for drought-ravaged farmers.

providers of housing services, both from bankruptcy and with respect to the payment difficulties associated with other forms of financial assistance.

Extensions of paid parental leave with ICL. The majority of governments in the Organization for Economic Cooperation and Development have now introduced grants-based paid parental leave systems (PPL), in which recent parents are provided with income support for short periods to allow time off paid work. However,

the time involved is typically quite short—only two to four months—since governments are not prepared to provide larger subsidies.

Dr. Tim Higgins, along with Chapman, illustrate that there might be a solution to the lack of preparedness of government and business to finance PPL beyond the amount of time typically available—18–20 weeks in Australia.^{15,16} They recognize that there is a fairly clear market failure, similar to that associated with higher education financing, in that, in the absence of collateral, the private

commercial bank sector would not be interested in providing loans for this activity; asymmetric information and the associated adverse selection and moral hazard loom large for this issue.

The main contribution of these analyses is to explain and present simulations of revenue streams in different household situations in which ICL are used to help finance extensions of PPL grants. This clarifies what such an approach might mean for government subsidies for particular groups and what the financial implications for households might be.

The analysis suggests that, as an optional supplement to a grants system, an ICL approach has the potential to satisfy the following key policy objectives:

1. It can introduce flexibility and choice without requiring major further contributions from the government.
2. It provides a solution to a financing impasse that would not be forthcoming from commercial banks.
3. Because repayments of the loan are only required when households are in a position to repay, it provides significant consumption-smoothing and income-distribution advantages over alternatives.

Again, the critical advantages of an ICL of insurance against default and the removal of consumption hardship from loan repayment are evident.

Concerns and Caveats in the Application of ICL

While the data reveal that the administration and collection costs of Australia's HECS system have been very small, it is not reasonable to generalize this finding to the public-sector mechanisms that might be used in other countries. As summarized by Chapman and Jane Nicholls,¹⁷ the minimum requirements for the successful collection of ICL might in some cases be beyond the capacity of some governments. In particular, countries without sophisticated and comprehensive income taxation policies and institutions would have significant trouble in this regard.

The most significant challenge in this context is the (in)capacity of the public sector to know with some accuracy the true incomes of its citizens which, as pointed out by Professors Abebayehu Aemero and D. Bruce Johnstone,¹⁸ makes the notion of a workable ICL mechanism in much of sub-Saharan Africa fanciful and uninteresting. However, in the countries of

Western Europe and North America, and increasingly in Asia, the Australian (and now New Zealand and English) experiences are likely to constitute compelling evidence that the issue is not important.

The question of the effect of ICL on the access of those from disadvantaged backgrounds has always been a significant issue for countries that have introduced such an instrument for higher education financing. The Australian research and evidence with respect to HECS, summarized above, is the most comprehensive compilation of data related to a particular country, and this shows fairly clearly that there have not been adverse consequences.

It is widely agreed that without government intervention there will be an under-provision of investments in higher education.

However, before drawing conclusions more generally, it matters that there is additional research beyond the HECS system. Two pieces of research pertaining to the UK are of interest, although neither can be completely convincing.

Professor Claire Callender conducted survey work in the UK with respect to the attitudes (and so the likely behavior) of individuals toward student debt, depending on their social background.¹⁹ The research found that young people from disadvantaged backgrounds were much more debt averse and respond to the prospect of higher levels of debt in terms of their interest in university enrollment. However, the research method did not distinguish between "normal" debt (collected on the basis of time) and ICL—the latter, of course, offering insurance against the prospects of debt payment problems if future incomes turn out to be low.

Professor Peter Dolton and Dr. Li Lin also analyze the UK experience in this area, but with quite different methods and data.²⁰ They examine time-series evidence on university attendance over the period from 1955 to 2008 and attempt to control for a host of variables representing, *inter alia*, the state of the economy and indicators of the socioeconomic mix of the prospective student body. The authors acknowledge the difficulties inherent in accurate measurement of these variables and the specific limitations in the estimation of potential effects. In this context, they find what they describe as ambiguous or negligible estimated relationships between socioeconomic

class and university attendance, and no unexplained structural breaks in the data at the time of the introduction of the UK ICL scheme.

It is also necessary to recognize that there are critical design challenges in all potential applications of ICL, related to the concepts of *moral hazard* and *adverse selection*. Moral hazard with respect to ICL is the notion that, given repayment obligations, ICL debtors might behave in ways that minimize the extent of repayment, such as those with HECS debts choosing to live overseas. Adverse selection concerns the possibility that, with respect to voluntary ICL policies in which people may choose to opt into the system (for example, with respect to PPL), the arrangements might attract individuals with relatively low expected future incomes and correspondingly low probabilities of repayment. Both aspects are very significant to the likely costs of an ICL.²¹



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It may also be possible to introduce income-contingent loans in order to extend paid parental leave for new mothers and fathers. Here, a vacationing mother swims with her daughters.

Finally, there is no doubt that the design of all ICL schemes needs to pay considerable attention to the prospects of nonrepayment of loans due to international labor mobility. (Indeed, this is an issue for the repayment of all loans.) And it is also important to acknowledge that for some countries this issue can loom large even if, for others, the problems are not apparently very severe.

Chapman and Higgins have estimated the costs to the public

sector of unpaid HECS debt from graduate debtors working overseas to be around \$400–800 million over the 1989 to 2012 period, or about \$30 million per year.²² This translates into about an annual loss of 2 percent of annual HECS repayment revenue. This is not trivial, but can be described as small, and Chapman and Higgins offer a solution to the problem: legally require debtors who move overseas to repay the minimum of their debt.

For other countries, the potential problem could be more severe and requires important policy design attention. For example, in the European context, it could be quite expensive in the case of England, which might be in a position of offering ICL places to many non-UK citizens who choose to return to their home countries with little intention of repaying. Barr and others offer potential policy solutions to address this concern.⁴

Summary

With the possible exception of drought-relief policy, in all of the examples examined above, there are arguably market failures involved. This is clearly the case with respect to the financing of higher education, and it is easy to understand that commercial banks would not provide finance for the payment of criminal fines, housing costs for low-income families, and PPL.

It has been argued that these failures might be able to be corrected with the use of ICL, an instrument that provides both consumption smoothing and default protection for borrowers. In several of the examples considered, such as for drought-relief policy in Australia, it is very likely to be the case that current approaches to policy are regressive.

This is not to suggest that the policy instrument is necessarily a panacea given the considerable issues of policy design inherent in repayment shortfalls associated with the efficacy of income tax administrative institutions, and the critical issues of both adverse selection and moral hazard in voluntary ICL policies. But the case for serious and ongoing policy debate in this area of potentially highly propitious policy reform in the area of government as a manager of risk seems incontestable. **S**

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The policy reform would allow the distribution of housing credits to qualifying poor households which are experiencing temporary financial hardship, with these credits to be repaid at a low rate and on the basis of future incomes.

ICLs as a risk-management public policy instrument offer a different way of thinking about a role for government, and are neither uncontroversial nor fully worked out in many areas of suggested reform. However, as experience in higher education financing with ICLs and the different examples touched on indicate, this new approach to the financing of important activities offers a potential solution to many and disparate social and economic problems.

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