Student Loans in International Context: A Primer

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Student Loan schemes allow students, as well as taxpayers and alongside parents, to shoulder a portion of the costs of higher education, including either a portion of the costs of instruction and other educationally-related costs (that is, through tuition and other fees), as well as some or all of the cost of student living. We use the term *student loan* to include any repayment obligation resulting from a scheme designed especially for students—generally with governmental sponsorship and some element of governmental subsidization and/or assumption of risk—to defer higher educational expenses and to incur thereby a repayment obligation, whether this obligation is actually called a loan or by some euphemism, and whether the obligation is to a fixed schedule of payments or is expressed as some percentage of the borrower's future earnings.

Student loan schemes vary enormously. They can vary in *purpose*: including borrowing to cover the student borrower's share of tuition fees, or borrowing to cover all or some of the cost of student living, or borrowing for both purposes. Similar to the variations in purpose, student loan schemes can vary in *ultimate financial impact*, with some schemes serving to benefit the university or the higher educational system—as when the loan adds to the university's revenue streams. Student loans can benefit mainly the government—as when the new revenue from the fees that are covered by new loans simply allow the government to decrease its share of current operating revenues, or when the repayment stream is never capitalized at all but simply becomes a future additional revenue stream for the government like any other future stream of taxation. Or, Student loans can accrue to the parent, as when an up-front fee paid mainly by parents is shifted to a deferred fee paid mainly by the student. And finally, the impact of a new flow of revenue from student loans can accrue to the students themselves in greater living expenditures.

Student loan schemes also vary in the *nature of the lender*, including borrowing from a bank, from the government, from a public student loan agency, or from a university (which presumably would immediately sell the note to a bank or student loan agency). Schemes also differ in the *act of borrowing*, depending on whether the student borrower literally receives a loan in cash and then pays college or university tuition fees or the expenses of lodging or food—as opposed to merely incurring a repayment obligation simply by virtue of college or university attendance, with the deferred tuition fee, or loan, never passing through his or her hands, but still obligating the student to a stream of future payments.

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The Need for Student Loans

The need for a governmentally-sponsored student loan scheme follows from the perspective and the policy of cost-sharing. Borrowing, at least in theory, can provide a substantial amount of money in support of higher education, essentially adding a 'third leg" to cost-sharing and supplementing revenue from parents and taxpayers. Thus, a functioning student loan program can provide revenue to higher education that, in its absence, would presumably not be there at all. Assuming (or to the degree that) borrowing does indeed *supplement* rather than *supplant* higher educational revenue from taxpayers and parents, the additional revenue from borrowing can make possible: (a) enhanced institutional quality, (b) additional capacity and thus additional participation and accessibility, (c) more higher educational choices for students, and/or (d) a better style of student living. Expressed another way, if additional revenue from governments or taxpayers is unlikely, either because a government is at its effective tax capacity or because other public needs would take precedence even if taxes could be raised, and if parental contributions are also at their likely maximums, then the other major possible source of additional revenue for the general operations of the university or for the costs of student living would seem to be the deferred, or borrowed, contributions of the students themselves.

From the perspective of the student, the ability to borrow for at least some of the costs of their higher education gives young persons the ability to invest in their own futures. While many or most students might prefer all of the money to come either from parents or (preferably) from taxpayers, in light of the demonstrable private benefits from higher education that accrue to the student—including both monetary (i.e. higher future earnings) and non-monetary (e.g. higher status, access to generally more interesting and pleasant jobs, and more choices of occupations, mates, and places to live)—such an investment is perfectly reasonable. In fact, in light of the limits on both parental and governmental contributions as well as on part-time employment possibilities, borrowing, for some students, will be the difference between having and not having access to higher education.

Borrowing is particularly necessary in the absence of (or to supplement insufficient) parental contributions. This lack of sufficient parental contribution may be the obvious consequence of low family income, or of the parent's disinclination to provide further financial support, or of the student's disinclination to be financially dependent on his or her parents—all of which reasons are more compelling the older the student and/or the more advanced the degree. Or, the absence of any officially expected parental contribution may, as in the Nordic countries, be the prevailing socio-political norm by which the parental contribution is assumed to be through the high taxes that support university education without the supplementation of tuition fees, but that requires the costs of student living to be born by the students themselves through borrowing. In the case of a *dual tuition* country such as Russia, borrowing also allows (or in theory ought to allow) students to attend a university or other higher educational institution when they are capable of the academic work but did not pass the admission examination with a high enough score to earn a tuition free admission--and whose parents cannot afford the tuition fee.

In other cases, borrowing is not so much the difference between participating or not participating in higher education, but rather provides the student with additional choices, such as living independently instead of living at home and commuting, or attending an expensive private college or university instead of a less expensive public institution, or accepting more debt but working fewer hours or not at all, or living at a somewhat higher standard than is often thought of as the appropriate life of student poverty. In these examples, borrowing (and saving and lending) are economic expressions of time preferences for money. The saver is one who has more claims on goods and services than he or she needs at this moment and who, as (or through) a lender, is wiling to rent these claims for a fee that we call interest. The borrower, in turn, is one who has a need in the present for claims that he or she does not yet have, but who is reasonably certain to have these claims (that is, the money) in the future and so is thus willing to return these claims with interest, which is a payment for the use of this borrowed money. In this way, the ability to borrow makes possible the choice of a higher standard of living for students confident of their eventual higher incomes and who thus would apply higher subjective discount rates to their future repayment obligations.

The Aims of Student Lending

Student loan schemes can have several different aims. However, some of the aims may be less than fully compatible or even contradictory—such as, for example, the aim of *simply putting money into the hands of students*—which is always a politically popular goal to profess, especially if the loans can be portrayed as much less costly to the government's budget than outright grants or stipends (which may or may not in fact be the case)—as opposed to the less politically popular goal of *increasing revenue to* higher education by moving some expenses to students rather than to governments or even to parents. The last-mentioned aim may in fact be what a higher education system most needs, particularly if, as in most countries, the revenue needs of higher education (including both the costs of instruction, the costs of additional capacity, and the costs of student maintenance) are increasing rapidly and annually at rates considerably in excess of the likely rates of increase of the government's higher education budget.

The principal aims of student loan scheme in any country include the following:

1. To put money in the hands of financially needy students in a way that expands participation. Such an aim requires a student loan scheme that is both means-tested (or need-based) and also generally available. In other words, loans are made available to all or most students who have a remaining financial need after considering all other sources of revenue, including parents. In this way, the loans would not be available simply to provide a higher student living standard or to allow students to become financially independent of parents who would otherwise be providing at least some financial assistance. As the loan recipients, then, would be mainly from low income and rural families, whose parents would probably be unable to contribute or even to co-sign for a loan, such a loan program should anticipate a relatively high rate of default.[1]

[1] Defaults are high in virtually all loan schemes that are *generally available*: that is, which do *not* discriminate among potential borrowers by likelihood of default—which discrimination would likely discriminate against potential borrowers from lower socio-economic classes or from single parent families or from certain ethnic or linguistic minority groups. Defaults are also generally high in countries (such as

2. To put money in the hands of all students. Student loan schemes that are generally available to all students without regard to the incomes of their parents can serve the aim not only of making possible higher educational participation, but also of furthering students' financial independence from their parents. This is essentially the system in most of Scandinavia, Australia, and the UK, where parents are not officially expected to contribute either to tuition fees or to the costs of student living (although parents who are affluent can, of course, nevertheless contribute and either provide their children with higher standards of living or lower student debts, or both). In Scandinavia, where there are no tuition fees, student are expected to cover their living costs with student loans—which costs are far greater than the public sector tuition fees in almost any country, including the United States (which is known for high tuition fees in all sectors). In Australia and the UK, aside from the need to borrow for the living costs (i.e. food and lodging), students are also expected (or allowed) to cover the costs of the tuition fees by borrowing, thus allowing financial independence from parents—although at a considerable costs to students in the form of additional debt.

Student loans that are made available for the primary purpose of simply putting money in the hands of all students necessarily feature large amounts of lending (sometimes extending even to the substitution for what previously had been expected parental contributions), frequently substantial subsidization, and oftentimes less concern for collections or for the present discounted value of the stream of likely repayments. For this reason, and given the very many substantively and politically pressing needs for whatever limited amounts of additional Romanian tax revenue there might be, the chances of the Romanian government being able to support a comprehensive, generally-available student loan scheme that would cover the financial needs of both the current numbers as well as the increased future numbers of both governmentally-supported and the fee-paying students (as well as private students)—and leave enough taxpayer money to pay for the desperately needed additional capacity and additional quality—seems doubtful.[2]

3. To implement a degree of cost-sharing by shifting some of the costs of instruction and/or student maintenance from either the government or the family to the student. For example, a student loan scheme can allow an increase in food and lodging fees, thereby allowing a lowering of the governmental subsidization of student maintenance and a shifting of these savings to other higher educational needs such as increased financial assistance, increased capacity, or increased quality—but maintaining accessibility by allowing students, if necessary, to borrow the funds to cover the increased fees. Similarly, a student loan scheme could permit an increase in some or all of the tuition fees paid in the fee-paying tracks—again, by allowing such increases to be borrowed, thus maintaining accessibility. Finally, the universities could be allowed to

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Romania) that are still developing a *credit culture* in which debts tend to be repaid because a good credit rating is important to virtually all citizens (even to young university graduates).

[2] While we do not have the data to provide precise estimates, it is almost a "given" in countries with low but increasing participation rates that the average student within the *participation margin*—that is, the students who in the future will be leaving secondary school prepared for and desirous of higher education but who are currently are not so completing—will be, on average, considerably more financially as well as academically *needy* than the students currently going on to higher education.

begin charging fees for some of the most selective, high-cost, and highly remunerative advanced graduate programs, such as medicine or graduate management training—again maintaining accessibility, but allowing students to contribute more to the programs with such manifestly high private returns.

A student loan scheme that is linked to revenue supplementation as well as accessibility requires that loan recovery be maximized: that is, that the two principal sources of losses—i.e. of interest subsidies and defaults—be kept to a minimum. The purposes of the enhanced revenue made possible by the cost-sharing, in turn, may be expansion of capacity, enhancement of quality, provision of more targeted (i.e. means tested) financial assistance, a substitution for tax-based governmental revenues, or any or all of the foregoing.[3]

4. *To influence institutional or program selection*: Eligibility for student loans can be made contingent upon the recipient selecting certain institutions (e.g. rural, or newer, or non-university institutions) or certain high need programs (e.g. teacher education, nursing, or engineering). Thus, just as loans can be rationed or targeted by financial need or by ethnic or linguistic minority status or by region or rural schools in order to expand certain kinds of participation (as set forth, for example, in aim #1 above), loans can also be rationed, or targeted, to achieve other public purposes such as manpower needs (e.g. for teachers or nurses) or regional planning needs (e.g. to induce students to select colleges or universities in remote territories), or to provide special assistance to certain higher educational sectors (e.g. private or non-university institutions).

Unlike targeting low income or rural youth for the purpose of advancing accessibility to any college or university, as in aim #1, the targeting of loans to certain institutions or academic programs is meant to make the targeted institutions or programs *relatively more attractive* than those not so targeted. Thus, the aim is not simply to remove a barrier or to make attendance possible, but to steer a student—probably already destined for higher education of some kind—toward a particular program, institution, or region. And such steering by student loan eligibility, therefore, is likely to be effective when the loans in the targeted programs or institutions are substantially more subsidized, or simply more available, than loans in the non-targeted programs or institutions.

5. *To encourage academic progress and/or success by forgiving portions of principal for years of academic success.* This aim is less a loan scheme, or even a system of rewards that depends on a loan scheme, than it is a simple monetary reward wrapped in the form of *repayment forgiveness*. Such a program is expensive and depends on an assumption that desirable academic behaviors—for example, achieving a high level of achievement or, less ambitiously, simply finishing on time—respond *cost-effectively* to the prospect of a future reward in the form of a repayment forgiveness (as opposed to other methods of eliciting the desired behavior). Such a provision could be thought to be cost-ineffective if—as is almost certainly the case—many or even most of the student borrowers who are academically able to avail themselves of this reward would finish

[3] Ziderman (2002) differentiates the aim of revenue generation from the aim of university expansion, but otherwise presents essentially the same portrayal of the policy aims of governmentally-sponsored student loans.

their academic program with distinction anyway, with or without any loan forgiveness. In fact, as the most academically able and academically responsible are likely to be disproportionately from middle or upper middle classes, who have been taught such behavior in their homes, the effect is much like a system of merit awards or merit selection in a supply constrained system: that is, likely to reward those who do not need the reward financially and do not need the reward to behave in the desired manner.

6. ***To influence post graduation practice or venue****:* Finally, a student loan can be given for the aim of influencing the choice of the student as a graduate to practice a certain profession and/or to practice in a certain target venue: for example, the practice of medicine, nursing, or teaching in a rural district. This is done by granting or even requiring most students to complete with a certain level of indebtedness, portions of which can then be forgiven for each of several years of practice in the target venue.

In the case of Romania, where one of the university-related problems is the exodus of higher educated talent to other countries, the debt forgiveness could also be extended simply to all students who returned to Romania with a student debt. As in schemes of repayment forgiveness to elicit desired academic behavior described above, what are sometimes called *workforce contingent* loans assume that professionals will be motivated to do what they would likely not otherwise do (i.e. teach or practice medicine in a remote village for little salary) because of the prospect of debt forgiveness. Furthermore, the public policy assumption is that student debt forgiveness is more cost-effective (or more politically feasible) than alternatives such as higher salaries, first year bonuses, subsidized housing and transportation, and other incentives that might target public resources to the same end. Research on these questions is inconclusive, and we would discourage the Romanian government implementing a massive program of workforce contingent loans without some well-analyzed pilot programs. Nevertheless, such a scheme is, at least in theory, an attractive way to combine the aims of revenue generation, manpower planning, expansion of participation, and rural development. And a pilot program—for example, of medical or nursing loan repayment forgiveness for practice in some rural provinces—would be easily implemented and, if designed with minimal subsidization, affordable to the government.

The Need for Government Participation in Student Borrowing

The case for student borrowing, as made above, does not in itself make the case for *governmental participation* in this lending. That is, if student loans were no more than the bringing together of student borrowers, who wish to invest in their higher education, and lenders, who have the savings to lend, or to rent for the price of interest, it is not immediately clear why the governmental participation (that is, beyond the normal regulations and consumer protections applied by governments to borrowing and lending generally) should be needed. Particularly in a market economy, banks and other private financial institutions, on behalf of savers, lend for purposes of business expansion, working capital, or the purchase of homes or automobiles, covering their cost of money, administration and all other expenses, as well as allowances for defaults, with the *interest rate spread*, or the difference between the interest paid to savers and the interest charged to borrowers. In fact, there are in many countries many examples of strictly private—that is, neither governmentally subsidized nor guaranteed—loans to students. But these will generally be limited to students in elite colleges or universities or in advanced professional programs such as medicine or law, in which the likelihood of high future

earnings and the imperative of building a good credit reputation lower the risk of default, and in which the desirability of attracting such students as future bank customers combine to allow credit to be extended to such students at favorable terms without governmental subsidization or guarantees.

However, *generally-available* lending to students—that is, without tests or conditions of credit-worthiness as described above, and without requirements of credit worthy co-signatories or other collateral—is another matter altogether. In the absence of credit worthy co-signatories or other guarantors, the risk of default on student loans is considerable—probably high enough to force the student's interest rate to entirely unacceptable levels in the absence of governmental intervention, either in the form of a governmental guarantee or an interest rate supplement to the lender (both of which, of course, imply costs to the government). What makes the risk of default especially great in lending to students is the absence of collateral that can be recovered in the event of non-payment. Unlike a business loan in which machinery or inventory can be repossessed in event of default, the only collateral stemming from an investment in higher education is in the form of knowledge and learned behaviors that cannot be so easily repossessed in order to recover on a defaulted loan. Further increasing the likelihood of default, and raising the costs of collection even in the absence of default, the typical student borrower usually cannot begin repayment until the end of his or her studies and the beginning of gainful employment, often leaving a long period of time between the origination of the loan and the beginning of repayment—in any event, long enough for the student to have forgotten the debt or to have moved residence three or four times, possibly to another country, leaving little trace of his or her whereabouts.

Such a risk, then, on generally-available student lending, calls either for a governmental guarantee or for a substantial up-front payment (or a discount on the purchase of student loan obligations), thus enabling a student loan program to tap the private capital markets of banks, pension funds and other major sources of savings. Or, the inherent risk of student lending calls for the government itself to be the lender, effectively originating the student loans either from current tax revenue (like any other governmental expenditure) or from revenue borrowed from the national and or international capital markets and added to all other governmental borrowing, to be repaid from future tax revenues.

Of course, there are limits on the borrowing capacity of any government, especially a government whose ability to tax and/or to maintain the value of its currency may be suspect in the views of domestic and international capital markets—as in most developing and many transitional countries. But these very limitations may apply as well to the worth of the governmental guarantee: a government that might not be able to repay its debts to domestic bondholders or international lenders may be as unlikely to be able to cover the defaulted debts it has guaranteed. In such cases (again, applying mainly to developing as well as to some transitional countries with limited taxing capabilities), the need to cover the risks of generally-available student lending can be at least lessened through judicious use of co-signatory requirements, with the government as a primary guarantor only for families with insufficient collateral, and then as a secondary guarantor for families who are able to co-sign the loan and bear a part of the risk. However, in the end, generally available student loans are inherently risky, and governments will always

Table 1
Agents and Functions of Governmentally-Sponsored,
Generally-Available Student Lending

Functions of Student Lending ↓	Agents of Student Lending					
	Governments & Ministries	Public Agencies	Banks & Other Capital Sources	Universities & Colleges	Parents or Other Co-Signatories	Collection & Servicing Agents
Setting Terms e.g. eligibility, rates, & rpmnt. periods	Government must set terms of loans					
Originating loans	Can originate, but not ideal for purpose	Can originate if can tap private capital sources	Can originate if risk is born by other agents	Can originate & risk some (not all) default risk		
Bearing Risk of Default	Must bear risk via guarantee or up-front pmnt.		Will bear risk only for credit- worthy borrower	Can bear some risk for credit-worthy borrower	Can bear some or all risk if credit worthy	
Subsidizing Loans	Only significant source (if any) of subsidy					
Providing Capital	From public budget or public borrowing	Can be conduit for capital via securitization	Purchase loans or securitize agency paper			
Servicing & Collecting	Can service , but generally inefficient	Can service if sufficiently efficient	Can service	Can service , but generally inefficient		Can service

be required to at least share in the risk of a student loan program that is widely available to all or most students in need.

At the same time, the need for government to bear a substantial portion of risk does not in itself mean the need for the government also to heavily subsidize the loans—or to collect the repayments, or even to originate the loans. If the government decides to subsidize student borrowing—for example, by covering the interest payments during the in-school years and perhaps for a period of time afterwards while the student (hopefully having graduated) is seeking employment, or by charging an interest rate that is less than the cost of money to the government for the entire life of the loan—it is making an effective policy decision that the cost of the subsidies, which can be very considerable, is worth the expense in terms of the greater and/or the more equitable higher educational participation that the borrowing can generate. It must be kept in mind, however, that a high level of subsidization of student borrowing—which is already expensive to service, and which carries the additional expense of absorbing some level of default in the best of circumstances—can be extremely expensive. In fact, Ziderman and Albrecht (1995, and Shen and Ziderman (2007) describe scenarios in which the combination of high defaults, high levels of subsidy, and high expenses of servicing and collecting yields student loan programs that bring an effective *negative* return: in other words, the governments would have saved money by giving the money out in non-repayable grants in the first place.

To summarize: the need for government in the provision of generally available student loan schemes (or for that matter, the need for any of the possible agents in such student lending) is best seen in an alignment of the possible *agents* in student lending—that is, governments (by which are to be included governmentally created public agencies), banks, other sources of private capital, and universities and other institutions of higher education—with the necessary *functions* of student lending. The functions of student lending are shown in Table 1 with the appropriate agents of student lending. As can be seen, the functions that absolutely require government are the setting of the terms, the absorption of some or all of the risk, and the provision of subsidies (if any are to be provided). Governments can also provide any or even all of the capital—b*ut do not have to*. In the case of developing countries, where general governmental credit is limited, the provision of capital (that is, being the lender) directly impacts the operating budget and thus has an opportunity costs not unlike any other governmental expenditure. However, by the government covering the risk, which it must do, or at least share in, the capital itself—that is, the amounts to be lent—can be provided by banks or by any holder of savings.

Governments or public agencies also can originate the loans—*but again do not have to,* as the loans can be originated by the colleges and universities themselves, as in the US direct loan program, provided the risk is absorbed by the government (thus enabling the loans to tap the private capital markets) and provided that any subsidies are also provided by government. Similarly, governments or banks (or even universities) can collect the loans—*but again do not have to,* as this is a function that can be assumed by private debt collectors or by any agency with the experience and the necessary computing and skip-tracing capabilities

In short, and particularly important in the case of developing countries contemplating new student loan schemes, governments must set forth the rules of the

game (e.g. eligibility, rates, terms, and maximum amounts to be borrowed), must pay for any subsidization, and must at least share substantially in guaranteeing the loans (or covering defaults). Only banks and other agencies of the larger capital market, however, are appropriate in the long run for the provision of capital. Either government agencies or the colleges and universities themselves can originate the loans (and then sell the notes to the providers of capital). Finally, any entity with collecting experience can service the loans, generally under contract to the holders of the obligations themselves. But it is often well for governments to not attempt to do all of the origination, provision of capital, or servicing of the loans.

Forms of Student Loans

Student loans may take one of two basic forms, with many variations of each and with "hybrids" of the two also possible. Although the most important feature of student loan schemes is the degree of cost recovery, the form of the loan—especially whether the repayment obligation is fixed or is based on the borrower's income—has come to dominate the political discourse about student loan schemes.

The Fixed-Schedule, or Conventional Mortgage-Type, Loan

The fixed-schedule, or conventional mortgage-type, loan obligation carries:

- a rate of interest expressed as an annual percentage of the amount borrowed, which may be fixed or variable (e.g. linked to the government's borrowing rate or the prime commercial rate), which—after any subsidies, usually from the government—must cover the cost of money plus the costs of administration, or collections, and sometimes an amount to cover the costs of defaults (which may also be covered by subsidies or through co-signatories). Sometimes, there will be an up-front fee or discount attached to the loan—for example, borrowing and paying interest on $1000 but getting only $850—actually a hidden boost in the rate of interest.
- a repayment period, or the amount of time the borrower has to repay, or amortize, the loan, and
- repayment terms, such as whether the payments are to be in equal monthly installments, or installments that begin small and increase over time, or some other arrangement that yields a stream of payments sufficient to amortize the loan at the contractual rate of interest.

The Income Contingent loan

The second common form of student loan is the income contingent (or income-related, or contingent repayment) loan.[4] This type of loan carries a contractual obligation to repay:

- some percentage of future earnings or income, generally until the loan is repaid at a contractual rate of interest. This percent of income may be set as a flat rate on all income or earnings, or may be progressive (i.e. higher percentages at higher levels of income), or may achieve a measure of progressivity by applying a flat rate only to income over some threshold level, such as a minimum wage,

[4] The literature on income contingent loans is extensive. See e.g. Barr (2001), Chapman (2006a, 2006b), Johnstone (1972, 2004a, 2004a), Palacios (2004), and Usher (2005a).

or even more progressively, the median income for beginning college or university graduates. (The latter, then would normally require a higher percentage of income after this threshold level in order to return a sufficient amount to amortize all debts.)

- the contractual rate of interest, which, as in the fixed schedule obligation, must (after any subsidies, again usually from the government) cover the cost of money plus the costs of administration, or collections, sometimes an amount to cover the costs of defaults (which may also be covered by subsidies or through co-signatories), and in some versions the shortfalls from other borrowers whose incomes are never sufficient to repay their loans.
- A maximum number of repayment years after which the low earner is to be released from any further obligation regardless of the amount or the effective rate of interest (or discounted present value) that has been repaid.
- A limit for the high earner, which is generally when the borrower has repaid his or her debt at the contractual rate of interest. (A mutualized income contingent loan plan, in which the shortfalls from the low earners must be recovered from the interest premiums paid by high earners, will require high earners to continue paying. There has been to date only one such operational plan—the *Yale Plan for Tuition Postponement* in the early 1970s—but such a plan had a maximum for the very high earner beyond which no further payments were to be required [Johnstone 1972]).

In a fixed schedule, or conventional loan, the repayments, the interest rate, and the repayment period are all fixed in the repayment obligation, or loan note. What varies—mainly according to the income of the borrower, including periods of low or no income, as in unemployment—is the burden of the payments. In contrast, in an income contingent loan, what is fixed is the monthly or annual repayment burden (at least as far as burden is a function of earnings). What varies—again as a function mainly of the level in income, or earnings—is *the repayment period* (for those who eventually repay their loans in full) and, *the ultimate cost of the loan* (for some low earning borrowers). The, Australian, New Zealand, South African, English, Welsh, and formerly the Scottish student loan programs, as well as several new loan schemes in Africa such as those in Ethiopia, Rwanda, and some schemes in other countries all feature income contingent repayments. In addition, the US has an income contingent repayment option within its Direct Loan Program.

As in conventional student loan programs, an income contingent loan program is likely to subsidize all of the borrowers to the degree that even those who repay "in full" will generally have repaid at a somewhat subsidized rate—that is, at a rate that is generally set below the prevailing market rate of interest (or even below the rate of interest charged to the best and most credit-worthy borrowers, or even to the government itself). For most income contingent borrowers, then, repaying *income contingently* as opposed to *conventionally* merely affects the shape and length of each individual repayment period, rather than the ultimate amount (in present value) to be repaid. However, all income contingent loans have a provision for forgiving the remaining debts of some of the lowest earning borrowers who reach some maximum repayment period or some maximum age with a debt still outstanding. The present value of this so-called *low lifetime income subsidy* for any particular lifetime earnings profile depends on the terms

of the income contingent loan contract. For example, for any given set of assumed borrower lifetime earnings profiles, a high percent of income required for repayment together with a long repayment period will minimize the number and amounts of remaining debts to be forgiven and reduce the subsidy cost to be recovered (usually from the government). In contrast, a low percent of income and a short maximum repayment period will (again, for any given set of assumed borrower lifetime earnings profiles) increase the number of borrowers who are likely to reach the end of their maximum repayment period with substantial debts to be forgiven—and of course increase the cost to the lender (presumably the government.[5]

The source of the special subsidies that relieve the lifetime low earner from some of his or her debts in most cases is the government itself, which will ultimately forgive the remaining debts of these *low earners* in the same way that it might elect to make up the shortfalls from borrowers who simply default, or might provide other kinds of grants or subsidies to students on the basis of their low family incomes at the time they were in the university.[6] Expressed another way, the government in such an income contingent loan program is electing to *subsidize ultimately* those who turn out to have low lifetime earnings, just as it may, in a conventional need-based grant program, be electing to *subsidize currently* those whose parents had low incomes at the time the student was in the university. Those who advocate governmentally-subsidized income contingent loans frequently claim that it makes greater sense to spend scarce tax dollars to subsidize those whose higher education, for whatever reason, has not paid off monetarily, than to provide a stream of repayment subsidies to students merely because their parents were poor when they were students and had to borrow--but who may later earn good incomes.

A variant on the income contingent loan is the *graduate tax*, whereby the student (sometimes only the graduated student), in return for government subsidization of higher education in the form of low or no tuition (and possibly of an additional student maintenance grant), becomes obligated to an *income surtax*, generally for the rest of his or her earning lifetime. A true graduate tax is just that: an income surtax on university graduates, without the keeping of individual borrower accounts or "balances owed" (Woodhall 1989).[7] However, one purpose of a graduate tax—like any governmentally-

[5] The US income contingent loan program, for example, features such high percent-of-income repayments and such a lengthy repayment period that only the very lowest lifetime earners are likely to be forgiven any debt; the merely moderately low earners will simply pay for a very long time (US General Accounting Office, 2001).

[6] In theory, the source of subsidy might also be the high-earners who, in a so-called *mutualized* plan, would finish their repayments having repaid at a premium rate of interest, thus effectively subsidizing their low-earning borrowing colleagues and providing the loan program with an average break-even interest rate over all of the loans. The principal conceptual flaw in this concept—perhaps explaining why there are no such generally available mutualized plans in operation— is that students who reasonably anticipate high lifetime incomes will decline to participate, at least in any voluntary scheme, thus depriving the plan of its necessary source of subsidies to protect the low earners.

[7] A true graduate tax in this form has never been implemented, due in part to the weakness of the correlation between lifetime earnings and the actual cost of the higher education received, as well as the seeming impossibility of capitalizing or securitizing this form of obligation. The Ethiopian Graduate Tax implemented in 2006, then, is not a graduate tax at all but is merely another example of a deferred tuition fee that is to be collected income contingently. Glennerster (2005) continues to be the foremost proponent of the graduate tax.

sponsored student loan plan--is to shift a portion of the costs of higher education from the government or taxpayers to students, albeit to be paid only after the student has finished (presumably graduated) and is earning an income (supposedly higher because of the higher educational experience). The financial success of the graduate tax would be measured by the discounted present value of this stream of future income surtax payments—just as the financial success of a government-sponsored income contingent student loan program, would be measured by the present discounted value of repayments that are based on a percentage of yearly income. Thus the mathematics and the practical effect on participating students of the graduate tax and the income contingent loan—assuming similar terms—are practically indistinguishable.

The Hybrid Fixed Schedule-Income Contingent Loan

Finally, a student loan program can combine features of the conventional fixed schedule and the income contingent obligations in any number of what might be called hybrid fixed schedule-income contingent loan plans.[8] These would feature an underlying, or default, obligation with a fixed schedule of payments that would be due unless the monthly or annual repayments exceeded some maximum percentage of monthly or annual earnings—in which event the obligation would not exceed that maximum percentage. Amounts owed on the original fixed schedule of repayments would be deferred and become due only at such a time as the earnings or income rose and the repayment obligation could once again be made within the maximum percent of income limit. In such a scheme, most borrowers would simply repay according to the original fixed schedule (which might be graduated upwards over time to correspond with anticipated earnings growth, but still on a fixed schedule of repayments). Some borrowers, particularly those experiencing a year or perhaps two or three of low income due to unemployment, would pay *income contingently* during these years, but return to the fixed schedule of repayment obligations when they regained their employment and their earnings. These borrowers would have been granted the convenience of automatic deferment of payments—similar to a refinancing—but not a subsidy, as such. However, a few borrowers who combined prolonged periods of unemployment or a low paying job with high initial indebtedness might never get back on the fixed schedule. They would continue to repay their student loans on an income contingent basis, reaching the end of the original underlying repayment period with remaining indebtedness—which at some point would be forgiven as though the entire student loan obligation had been income contingent from the beginning.

The advantage of such a hybrid version, as found in Canada and the Netherlands, and even in the United States under the provision allowing borrowers to change repayment programs (Usher 2005a), is that most borrowers in most years would repay on an administratively simpler fixed schedule, not requiring income verification, and the lender (presumably the government) could count on a flow of repayments—which could still be collected at the point of wage or salary payments by the employer if this is what government policy established. At the same time, borrowers would have the assurance that their repayments, by definition, would never become hopelessly burdensome and that

[8] Usher (2005a) calls these plans *soft* income contingent loans.

they would be ultimately be forgiven some measure of their initial student indebtedness in the event that their higher education never pays off monetarily.

Elements to Be Considered in Any Student Loan Program

Any of the forms of student loan programs described above need to answer the following seven questions—and in so doing can be fully and unambiguously described.

1. Eligibility: who is eligible to borrow? Are loans generally available to all students who want them? Or—as is common in developing countries where student loans as yet have little or no real asset value and thus little access to private capital—is the volume of new lending limited to the combination of current repayments and current appropriations, which is probably far below the need for new lending, requiring stringent rationing, either of the number of new loans or the average amounts of the loans? And if the number of loans is to be rationed, might the loans be made available, for example, only to students in the public sector, or only to students in the so-called tuition free track? If the possible volume of loans permits, might eligibility for governmentally -sponsored student loans be one of this ways that government can support—and even indirectly subsidize—a private sector of higher education? Of special importance in any of these rationing schemes are the criteria of *financial need* (usually determined according to the financial means of the parents) or *academic merit* (which may refer either to academic promise or actual performance).

2. Source of Capital: Where does the money come from? The capital for the student loans may come from individual or institutional savers, made available to the student borrower via a bank or other form of credit institution that in turn sells its notes to savers. Or, the money to be lent may come from the government—in which case it may be obtained: (a) from savers, via governmental debt; (b) from taxes, levied either directly upon the general citizenry or indirectly on business and passed on to the general citizenry through higher prices of the products or services; or (c) through the printing of money and the confiscation of purchasing power from the general citizenry through the resulting inflation. Clearly, the aim of any student loan scheme must be for student loans to be treated as <u>assets</u>, the value of which depends on the present discounted value of the reasonably anticipated payments (that is, less defaults an other sources of non repayment, such as mortality).and is actually set by the market. Student loans that have market of near-market rates of interest and that are guaranteed can be sold or securitized, thus tapping private savings rather than governmental appropriation for the new lending.

3. Origination and lender: Who or what is the lender? The source of capital, as seen above, need not be the entity that actually disburses the student loan: that is, from which the student actually receives the money and with which the student borrower (and any required co-signatories) make a legally enforceable contract. The originator may be a governmental agency, a quasi-governmental "public corporation," a private bank, or the higher educational institution itself. In some cases (e.g. Germany or South Africa), the loan is that ultimately repayable part of a larger sum given to the student as <u>study assistance</u> (the other part being a grant, or bursary). For loans given to students at public institutions and which are limited to no more than the tuition due, no cash need actually change hands: the "loan" (as in Australia) becomes whatever portion of the governmental allocation to the university that the student is to bear (i.e. the tuition) and which the

student, with his or her parents, must choose either to defer and repay as a loan or to pay directly "up front."

4. Ultimate Risk: Who bears the ultimate risk: that is, who or what loses in the event of default? With a private commercial loan, the risk is usually born by the lender, who reduces this risk by the requirement of collateral, or assets that must be forfeited in the event of default (as well as good lender practices). However, the default risks on generally available student lending, as noted above, are very high due to the absence of collateral, frequent periods of unemployment, high mobility, and lack of already established credit. For this reason, a truly market rate on generally available student loans (that is, loans available to most or all students rather than just to low risk students such as medical or MBA students) would almost certainly have to carry a prohibitively high rate of interest. Therefore, most student loan programs pass most or all of the risk on to the government and or family co-signatories. This risk and the resulting cost of student lending may be largely hidden, as when the government serves as the lender and simply fails to collect on all of the repayments that are due. Or the risk may be in the form of a guarantee to a private or quasi-private lender, which can collect from the government in event of default, leaving the government with the defaulted note and the task of finding, and trying to collect from, the defaulting borrower or simply absorbing the loss as any other government expenditure. Or the risk may be shared, as with parental or other co-signatories or with the higher educational institution itself in addition to the state. At any rate, controlling risk must be a central part of any student loan plan, whether the goal is to access private capital or simply to maintain credible governmental accounts.

5. Loan Amounts and Limits: How much can be borrowed (or deferred)—each year and in the aggregate? To significantly enhance accessibility (and not merely provide a better standard of student living, or reduce the amount that might otherwise be contributed by the parents), the maximum loan should be sufficient to cover at least the minimum expenses associated with university participation, less any reasonably expected means-tested contribution from parents and less any amount deemed appropriate (and possible) for the student to earn and save during the academic terms or between academic years. At the same time, the resulting aggregate debt levels—together with the interest rates and repayment periods that together generate the monthly repayment amounts—must be in some kind of accord with the prevailing earning of the graduates so that repayment is possible without great hardship (and thus likely default).

6. Amount and Form of Subsidization: What is to be the amount and the form of subsidization—or conversely, how much of the full costs of the loans are to be repaid by the borrower? The costs of lending are three: (1) the cost of money to the lender—which will always be some rate of interest in excess of the prevailing rate of inflation for there to be any real return to the saver and/or lender; (2) the costs of defaults; and (3) the costs of administration, or servicing and collecting the loans. The key question in student lending is how much of this total cost is to be paid for by the student borrower through payment of interest and how much by some source of subsidy—generally by the government, or taxpayer? As mentioned above (#4) under the treatment of risk, a generally available student loan program must cover much if not all of the costs of default through some combination of governmental and co-signatory guarantees rather than through the interest charged to all of the borrowers. But the cost of money and the

costs of administering student loans—which are, in comparison to most business or consumer lending, small and expensive to service and collect—must be recovered through the interest charged to the student and the (usually) governmental subsidy.

A few loan programs, such as the repayable portion of the German Study Assistance, or BAföG[9], charge no interest at all, which amounts to a very large governmental subsidy to all student borrowers. Others, as in Kenya and Ghana, charge a flat rate of a few percentage points regardless of the interest rates prevailing in the market, which may still amount to a very large subsidy in an inflationary climate where the money eventually returned will have lost most of its value by virtue of the inflation. Some student loan schemes, such as those in Sweden, Australia, and the UK, will claim that they do not charge "interest," as such, but merely adjust upwards the amount owed according to the prevailing rate of inflation so the borrower repays in real terms only what he or she borrowed. This is still an interest rate—albeit what is frequently called a zero real, or inflation-adjusted, rate of interest—which by definition is still moderately subsidized, as money always has some real value, and interest rates will always be something in excess of the prevailing rate of inflation. A still lesser degree of subsidization might be a rate of interest charged at the government's borrowing rate, which is generally the lowest nominally unsubsidized interest because of the large denominations (and thus lower cost per dollar borrowed) and because of the presumed security of government notes. Finally, an essentially unsubsidized student loan might be one that charged a rate of interest equivalent to the rate charged on consumer debt generally.

The inevitable political pressure for high subsidization—in addition to the recognition that higher rates of interest cause higher debt loads and almost certainly contribute to higher default rates—will press for higher subsidization and lower student interest rates On the other hand, high governmental subsidies carry extensive opportunity costs—that is, forgone alternative governmental expenditures, which might, for example, be more loans at lesser amounts of subsidy, or more grants, or additional operating revenue either to improve university quality or to expand capacity (and thus participation).[10] In addition, high subsidies require rationing, which in turn needs to be primarily on the basis of family financial need in order to prevent subsidized loans from simply displacing parental contributions and further subsidizing the upper middle class. But rationing by forms of means-testing itself adds both administrative costs and opportunities for unfairness and corruption. A reasonable compromise is probably *minimal subsidization*: an interest rate high enough to assure some recovery and to discourage unnecessary borrowing (and thus to minimize the need for extensive family income verification—which would probably be futile anyway in many countries), but still subsidized enough to be politically palatable and to control excessive student indebtedness.

[9] *Bundesausbildungsförderungsgesetz*, or Federal Law for the Promotion of Education.

[10] See Johnstone (2006a, 2006b) for an elaboration of the theoretical trade offs between a dollar volume of *general subsidies* (such as to allow free or very low tuition fees for all students), the same dollar volume of *targeted subsidies* (i.e., grants whether means tested or rationed in some other way), and finally, the same dollar volume of *effective subsidies* imbedded within subsidized student loans.

Finally, a loan program must resolve how it will disburse the subsidies. Loan subsidies can, for example, be granted at the beginning by subsidizing all interest during the period in school and during a substantial grace period afterwards. Or, the subsidies can provide fewer "front end" years of total interest forgiveness, but charge a considerably less than market rate of interest during the actual years of repayment. Income contingent loans can feature a substantial subsidy to all borrowers—as in the Swedish and the proposed UK plans, which feature a zero *real* rate of interest—or they can charge closer to a market rates to the students who will repay, but provide more substantial low-earnings protection to those who cannot. None of these policy options is necessarily correct. But the differences are significant. And a student loan program cannot provide all forms of subsidization at generous levels and still be part of an overall policy of cost-sharing.

7. The Nature, Shape and Duration of the Repayment Obligation: Finally, some essentially technical questions must be resolved regarding the shape and the duration of the repayment obligation. A repayment period is defined precisely in a conventional fixed schedule, or mortgage-type, loan; it is only implied in an income contingent loan by the combination of percent-of-earnings required to be repaid, the average level of aggregate indebtedness, and the earnings profiles of the borrowers. With subsidized loans—as most student loans are—the value of the subsidy to the borrower (and likewise, the cost to the government lender) increases as the repayment period increases, giving reason to limit the repayment periods. At the same time, the shorter the repayment period, all, else being equal, the higher the individual payments and the likelier the payments are to be a burden —and to be defaulted. As in the resolution of the rate of interest to the student borrower and the degree of subsidization borne by the government, as discussed above, the resolution will need to be a compromise between several competing objectives, including maximum cost recovery, the generation of maximum additional higher educational participation, the minimization of defaults, and maximum political acceptability.

Less politically charged and more technical matters having to do with the form of repayments must also be resolved. For example, conventional, fixed schedule loans generally feature equal, or level, installments. However, the fixed schedule of repayments can also be graduated upward over time to correspond better with the likely increases in income or earnings—that is, made to approximate an income contingent repayment schedule. The terms of the loan must also stipulate whether the payments are to be paid directly to the lender by the borrower or whether they are to be (or can be at the discretion of the borrower or his/her employer) removed from the borrower's pay by the employer and paid directly to the government, similar to the withholding of taxes or pension contributions.

An income contingent obligation must stipulate the percentage of income that is required for repayment as well as how "income" is to be defined: e.g., last year's actual or the current year's estimated income, or earnings only or earnings plus taxable assets, and similar questions. Some income contingent obligations have an income threshold that must be exceeded before the effective *surtax*, takes effect, such that only income in excess of this amount is subject to the repayment rate. Income contingent obligations must also stipulate how long this percentage of income is to be paid: e.g. until the loan is

fully repaid at some rate of interest, or until the attainment of some age, or until some maximum number of years has passed since the beginning of repayments.

The Applicability of Income Contingent Loans

An increasingly important question in the construction of national student financial assistance and student loan policies is the applicability of income contingent loans, which seem to be increasingly capturing the fascination of policy makers and politicians. As provided in Australia, New Zealand, and South Africa, and as adopted in the constituent countries of the United Kingdom (although abandoned by Scotland in 2008), and as recommended in much of the higher educational policy literature, income contingent loans (sometimes mistakenly referred to as graduate taxes, as explained earlier in this chapter) have certain theoretical as well as practical advantages. However, some of these commonly touted advantages are not in themselves properties of income contingency, per se, but of features that can as easily be built into conventional fixed schedule loan forms (e.g. collections by employers at the time or wage or salary payments). For analysts contemplating new governmental student loan programs, it is well to keep in mind four qualifications, or caveats, to the all-too-common presumption of the superiority of the income contingent loan form.[11]

First, an income contingent loan is still a loan, and in spite of presentations to the contrary it is not *per se* any "cheaper"— for most student borrowers—than a conventional loan merely because the repayment obligation is expressed as a percentage of income or earnings. For most student borrowers, the "cheapness" or "expensiveness" of a loan—not to be confused with the manageability of its repayments—is measured by its "true" simple annual interest rate (or alternatively, by the discounted present value of the reasonably anticipated repayment stream). On the other hand, "manageability" is measured by the ease of the repayments. Manageability can always be enhanced by reducing the individual repayments (for a conventional loan) or by lowering the percent of income to be repaid (for an income contingent loan)—in either case, however, extending the repayment period and the total dollars that will ultimately be repaid, but not *in itself* affecting the true cost of the loan (that is, the discounted present value of the eventual repayment stream).

Second, an income contingent loan ought not to be viewed as a substitute for a tuition fee, but rather as simply another way of deferring the fee—like deferring any other necessary expense of higher educational attendance by borrowing. If a student incurs a payment obligation for attending an institution of higher education that can be paid in the future—income contingently or otherwise—then for all practical purposes there is an effective tuition fee. In some cases, as in the US, it is assumed that parents (or perhaps students) pay the tuition "up front," but may take out either a parent or a student loan to do so—which, in the case of a US Direct Student Loan, may be converted at the initiation of the repayment process to an income contingent repayment schedule. In other countries, the "loan" passes directly from the lender (generally the government) to the university (or into the university's budget appropriation) without ever passing through the student's

[11] Johnstone has criticized not the income contingent repayment obligation, but the *overselling* of income contingency and the attribution to income contingency of strengths that can be built into fixed schedule loans as well. See Johnstone (2006a, 2006c, 2004a, 2004b).

hands, and perhaps never even being perceived quite like the combination of tuition fees and student loans that such a policy really presents. In still other cases—Australia being a good example—the student and the parents are given the choice of accepting the income contingent loan, which goes directly to the university and is repaid by the student, or paying "up front," which likely to be paid by the parents but at a considerable discount. However, a cost-sharing obligation that is totally in the form of an income contingent loan and that is presented (or allowed to be perceived) as in lieu of tuition (without a strong incentive to pay "up-front) discourages and may all but preclude a parental contribution to the costs of instruction, thus effectively shifting the higher educational cost burden only to the student (Johnstone 2004b).

Third, some of the attractiveness attributed to income contingency—specifically, the presumed convenience to the borrower and the presumed greater certainty of repayment (and thus of lower defaults) to the lender, or the government—comes primarily from the government's willingness to force the same policies and procedures of mandatory, employer-collected income tax and pension or insurance withholding on to the cause of collecting student indebtedness. But this machinery, including the power to mandate employers to collect such sums at the point of wage and salary payments as well as the government's power to verify compliance and punish transgressors, could in theory be applied as well to the collection of conventional loans. This observation in of itself does not deny the theoretical attractiveness of these provisions, nor deny certain other theoretical attractions of income contingency. But if the government can compel employers to collect income contingent loans or graduate taxes, it can also compel employers to collect any payment owed by citizens, the effective collection of which is deemed to be of overriding public importance: local taxes, for example, or child support, or the cost of automobile insurance, conceivably weakening the primary purpose of tax collection, which is to make possible necessary public expenditures Furthermore, an obvious corollary to this presumed advantage, of course, is that a government that has difficulty collecting taxes and pension contributions from its citizens—which difficulty surely describes most developing and many transitional countries—such countries can hardly be expected to be able to collect payments on an income contingent loan or graduate tax obligation.

Finally, an income contingent loan presents major complications not found with conventional "mortgage-type" loans. Most of these arise from the need to stipulate precisely, and to be able then to verify, the income that is effectively to be "taxed" in order to arrive at the proper repayment amount. Multiple sources of income, highly variable income, income that tends to not get reported all, and income that can be easily shifted between a borrower and a non- borrower member of the family all constitute great problems for the viability of an income contingent loan scheme. Highly industrialized countries with extensive reporting and monitoring of virtually all income and with a culture of voluntary income tax compliance may be able to overcome these problems, as Sweden and Australia seem to have done. For other countries, including most of the developing and many of the transitional countries, where sources of income of earnings are frequently multiple, highly variable, and often unreported, the problem of establishing the repayment obligation may be enormous and virtually invites misrepresentation of income and almost certain repayment shortfalls.

In summary, then income contingent loans such as those modeled after the Australian Higher Education Contribution Scheme (HECS) would seem to work well when:

- A government, by downplaying (or not mentioning at all) the politically treacherous concept of tuition fees, is able to get an element of cost sharing that it would likely be politically unable get were it to advocate openly even the relatively modest tuition fees that such plans generally reflect.
- A government in stressing mainly the income contingent loan obligation of the student, is willing to forego the potential of more up front tuition—and thus to minimize the role of parents (even affluent ones) as an important current partner in sharing the costs of higher education.
- A state does not need even the students' deferred revenue *now*, but is able to tax or borrow sufficiently to keep the universities open and the students fed and housed, and to accept payment only in the future—in essence *becoming the lender*.
- The majority of student borrowers (or students who become obligated to future income contingent payments) will have a single employer, which will pay them a periodic and relatively regular salary, and which is also sufficiently large, sophisticated, and legally compliant that it can be counted upon to take out of the borrower's paycheck the correct amount, year in and year out.

Conversely, income contingent loans would seem to be less applicable when:

- The need is for non-governmental revenue *now*, making the parental contribution to tuition (even with a great deal of discounting) the primary source of needed revenue supplementation.
- The scarcity of governmental revenue precludes government from being the sole lender (which places a premium on student loans that have some—albeit discounted—value in the private capital market).
- Many graduates (borrowers) are likely to hold multiple short-term jobs or to be employed in the informal economic sector, where records are most unreliable—or are likely to be emigrating.
- There is no tradition of voluntary, reliable self-reporting of income, and state systems for monitoring and verifying income for the purpose of income tax withholding and/or pension or social security contributions are non-existent or unreliable.

Examples of Current Student Loan Programs

Drawing on, and providing examples of, the aforementioned principles, some current student loan programs are briefly described below. Additional examples can be found on the Project Website.[12]

Australia: Australia introduced its Higher Education Contribution Scheme (HECS) in 1989 as a tuition fee that could be deferred for all Commonwealth-supported students and repaid as an income contingent loan. In 2005, HECS was folded into the Australian Higher Education Loan Programme (HELP). Commonwealth-supported students are entitled to the HECS-HELP loan scheme, which covers the full amount of

[12] International Comparative Higher Education Finance and Accessibility Website, <http://www.gse.buffalo.edu/org/IntHigherEdFinance>. [Accessed April 2008]

the tuition fee within three bands as established by the university up to limits set by the government. The upper limits in 2006-7 have been set at A$4996 [$3540 using 2006 ppp estimate] for Band #1 (humanities, social and behavioral sciences, languages and visual and performing arts); A$7118 [$5,050] for Band #2 (engineering, science, computer science, and business/economics); and $A8333 [$5,910] for Band #3 (medicine and law). Up to 20 percent of the tuition due is discounted for paying "up front." The interest rate, as in Sweden and the UK, mirrors the rate of inflation—that is a *zero real* rate of interest. Repayments are income contingent on annual incomes above A$ 38,148 [$27,055]. Rates range from 3 percent to a maximum of 8 percent on annual incomes in excess of A$ 64,999 [$46,100]. Repayments due are collected as an income surtax by the employer or are paid along with estimated or year-end taxes due. There is no forgiveness after a certain age or passage of years since the borrowing took place. According to the definitions above, HECS is not a true graduate tax as individual accounts and balances owed are maintained on each borrower. However, enlistment of the national tax system gives HECS the appearance of a graduate tax and assures both a low administrative cost of servicing as well as a very low default rate. (There is also a loan scheme, labeled FEE HELP and described in Chapman and Ryan [2002], for non-Commonwealth supported—that is, non-HECS eligible—students collected in the same way and with zero real interest, but without the in-school and grace period interest subsidies.)

China: China's loan programs have undergone many modifications since their experimental beginnings in 6 cities in 1999. The Government Subsidized Student Loan Scheme (GSSLS) as modified in 2004 provides student loans in amounts up to Y6000 [$109] a year to needy students (officially acknowledged to be 20 percent of the enrollment). Interest rates are paid by the government during the in-school years. Borrowers pay one-half of the commercial interest rate after graduation, which is deferred (but not forgiven) for up to two year's grace period. Repayment periods are 6 years, which is an increase over the prior 4-year repayment period that required far too high monthly payments. The loans are disbursed by participating banks, and the risk is shared by the university, the government, and the bank. Co-signatories are not required for the GSSLS. There is also a non-subsidized student loan program, the General-Commercial Student Loan Scheme (GCSLS), available for children of the more affluent families, requiring a parental co-signatory (Shen and Li, 2003).

Japan: The newly created independent administrative institution, Japan Student Services Organization (JASSO), administers the recently revised student loan system. The system is made up of two types of student loans: the first class scholarship loan that is interest free and awarded based on merit and need, and the second class scholarship that is interest free during in-school years (carries a maximum of 3 percent interest after school has been completed) and awarded based on economic need. When applying for the loan, students can choose between the personal guaranty system and the institutional system, whereby the Japan Educational Exchanges and Services (JEES) cosigns the loan and the student pays monthly default insurance ranging from ¥1,000 to ¥ 7,000 [$8-56 using 2006 ppp estimate]. The loans themselves range from ¥ 45,000 to 51,000 [$363-411] per month based on residency (living at home or independently) in the first class scholarship program and from ¥ 30,000 to 100,000 [$241-$806] per month also based on residency in the second-class scholarship program. Loan repayment is on a fixed monthly schedule of payments and must be paid within 20 years. Loans are collected

automatically from the student's bank or postal account, the information for which the student must supply when applying for the loan Shibata, 2006; Johnstone, 2006d).

The Netherlands: Student loans are provided in the Netherlands to cover tuition and maintenance. Part of the loan, including a basic allowance that is not "means-tested," plus another means-tested component, can be converted to a grant if satisfactory academic progress is maintained. Interest on the remainder varies annually at the government's borrowing rate plus about 1 percent to cover administrative costs. Repayments are fixed after a two-year "grace period," with an income contingent payment feature for those whose incomes are low. Repayments remaining for those repaying on an income contingent basis are forgiven after 15 years.

South Africa: Student loans are given by the governmentally-sponsored National Student financial Aid Scheme (NSFAS). Loan amounts range between R2000 ($770 using 2005 ppp estimate) and R32,500 [$12,500] and are need-based. The interest rate is a relatively high inflation-plus-two percentage points, with no in-school interest subsidy. For some universities, however, fully 40 percent of the amount borrowed can be converted to a grant if all subjects are passed, with this "forgiveness" prorated for only some subjects passed. Repayment is income contingent, beginning with 3 percent on the first R26,300 [$10,000] of income, progressively adding an additional 1 percent for each annual income increment of R6000 [$2,310] until a maximum of 8 percent of income must be paid for student debt retirement at an annual income of R59,300 [$22,810] and above. The national tax and pension contribution systems are not used for collection, but the government has authorized the tax agency to report borrower incomes to NSFAS for purposes of income verification (Jackson 2002).

Sweden: Sweden (along with other Nordic countries) has relied on student loan programs since the 1960s to cover student living costs and to free parents from the obligations of paying for these costs. (The university is tuition-free; that is, the government covers all instructional costs.) Swedish student loans are generally-available—that is, available to all who wish to avail themselves of the opportunity, with no "risk rating" or co-signatory requirement, and diminished only according to the students own income and/or assets. Repayment of the study loan is made in the form of annuities (calculated annually based on a formula that includes the student's outstanding debt, the interest rate and an annual escalator) and begins not less than 6 months after final receipt of study assistance (Usher 2005). The maximum repayment period is 25 years or until aged 60. A variable interest rate, which is set annually at the government's borrowing rate minus a 30 percent subsidy, is compounded starting from the first payment. Since 2001, all borrowers must pay at least 5 percent of their income towards loan repayment and the annual amount of payment increases each year by 2 percent. The system also permits income-contingent repayment.

United Kingdom: The UK student loan program began in 1989-90 as a small, conventional (i.e. mortgage type), strictly "top up" loan program as the government began to freeze, then lower, its once generous means-tested maintenance grants. The private sector never embraced the program, however, and in 1998-99, a much expanded program was announced by the government to replace the former maintenance grants and to accommodate the inauguration of means-tested tuition.

As devolution began in the late 1990s, the constituent countries of the United Kingdom—England, Scotland, Wales, and Northern Ireland—began to shape their own higher education policies, including tuition fees and financial assistance, which includes both the provision of student loans for maintenance as well as the policy, begun in Scotland in 1999 and later extended to England, Wales, and Northern Ireland, of shifting from up-front fees (mainly paid by parents) to deferred fees—or loans—paid mainly by students)Woodhall and Richards, 2006).

Scotland: The devolution began in Scotland, which was permitted to elect its own parliament in May of 1999 (their first Scottish parliament in some 300 years). Throughout the 20th century, Scotland had had a distinctive higher education system within the United Kingdom, but devolution made it possible to disassociate itself from the unpopular tuition fees that the center-left government of Prime Minister Blair had inaugurated in the UK. One of the first acts of the new Parliament was to establish the Independent Committee of Inquiry into Student Finance (The Cubie Committee), which recommended an abolition of up-front tuition fees, which fees were then paid directly to the Scottish universities by the Student Awards Agency for Scotland, with the graduates obligated to repay a flat rate of £2000 [$3185] after graduation to the Scottish Graduate endowment. Repayment was based on income, with graduates obligated to repay 9 percent of their income4 over the then-threshold of 10,000 [$15,924] until the debt was repaid at a *zero real* rate of interest (i.e. mirroring the prevailing rate of inflation) or until reaching the age of 65. There were many additional elements and complications to the scheme. But the essence, according to an analysis by Richards (2002), was that the former UK means-tested up-front tuition fee was replaced with a new non means-tested deferred fee (i.e., a loan), with the almost certainly unforeseen and unintended consequences of actually making the wealthier parents or students (whichever paid the former up-front tuition fee) better-off and the poorer students worse off (as they were now obligated to the deferred fee which was no longer means tested (albeit might be reduced if their own future incomes were low). Additional complications were also introduced over eligibility to the newly up-front tuition free Scottish universities, which extended the same financing terms to EU students but not to students from elsewhere in the UK. However, the unintended consequences and other anomalies have since been solved as Scotland, effective in 2008, has eliminated its deferred tuition fee, reverting to free tuition and removing cost-sharing of instructional costs altogether (although retaining grants and loans for the considerably higher costs of student maintenance).

England, Wales, and Northern Ireland: England, Wales, and Northern Ireland, facing the same unpopularity of tuition fees as were faced in Scotland, and essentially followed the Scottish (and Australian) model of applying a deferred tuition fee. Students (or their parents) may pay their tuition fees up-front or may apply to the Student Loans Company (via their Local Authority or online through Student Finance Direct, a service delivery partnership between the Student Loans Company, local authorities and the Department for Innovation, Universities and Skills). The Student Loans Company pays the student fees directly to the college on the student's behalf. The loans accrue interest (2.4 percent in 2006), which is linked to the rate of inflation in line with the Retail Prices Index. The loan becomes due for repayment when the students have left higher education and are earning more than £15,000 ($23,000 using 2006 ppp estimate) per year. Borrowers must pay 9 percent of their income each year that is over £15,000.

Student loans are also available for maintenance. Students who are eligible for the mean-tested maintenance grant may also receive a maintenance loan of up to £3,200 ($4,910) per year, while students not eligible for the maintenance grant (their annual family incomes exceeds £37,500 [$57,515]) may receive a student maintenance loan of up to £4,400 ($6,750) per year if they are living away from home outside London and £6,170 ($9,460) if they are living away from home in London.

The means-tested maintenance loans currently carry a 2.4 percent interest rate reflecting current inflation rates and, like the deferred fees, are repayable once the student has left university and starts earning more than £15,000 per year. Repayments (linked to earnings) are done through deductions made through the PAYE tax system by the employer. Loan balances for both tuition fee and maintenance loans are written off after 25 years from commencement of repayment.

The United States: Loans and parental contributions are bedrocks of the very extensive reliance in the United States on cost-sharing. The United States provides mainly conventional, fixed-schedule loans, available to all students with some financial need (including some students from upper-middle income families attending very expensive private colleges and universities) at minimally subsidized rates of interest. The federal government guarantees all student loans and pays all interest during the "in-school" years and for a grace period for those with financial need. Also available are unsubsidized loans that do not require the demonstration of financial need and that carry only the implicit (but not insubstantial) subsidy of the governmental guarantee and the benefit of an interest rate near the government's borrowing rate.

Much of the capital and loan origination is provided by the private banking sector, which in turn sells much of its student loan portfolio to private secondary markets. The federal government through participating colleges and universities can lend to students directly via the Direct Loan Program, in turn either selling the notes in the private capital market or tapping the federal government's general borrowing capacity. Student borrowers in the Direct Loan Program can elect to repay according to an income contingent repayment schedule, but as yet relatively few have elected this repayment option (which is *not* collected by employers along with income tax withholding and insurance / pension contributions, and which features mainly a kind of "assured refinancing" that stretches out the repayment period, with very little ultimate low-earnings protection.

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