

Global Debt Patterns

An International Comparison of
Student Loan Burdens and
Repayment Conditions

Alex Usher

September 2005

The Educational Policy Institute

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Citation:

Usher, A. (2005). *Global Debt Patterns: An International Comparison of Student Loan Burdens and Repayment Conditions*. Toronto, ON: Educational Policy Institute.

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Acknowledgements

This paper is in part the result of research conducted on behalf of the Government of Canada on the subject of international evidence on student debt management, a contract that was won on a competitively-tendered bid in the winter of 2005 and completed in March of that year. This paper is not the same as the one that was provided to HRSDC in fulfilment of that contract, but contains some of the same material. That said, the opinions and statements made in this paper are the author's alone and do not in any way represent the views of the Government of Canada.

Thanks are due to the many people in different countries who helped us assemble the data in this paper, and in particular Melanie Corrigan of the American Council of Education and Ian Dobson of EPI Australasia. Kim Steele and Massimo Savino were essential in putting together the final product and, as always, the brilliant Amy Cervenak's valuable copy-editing and general sanity-enhancing qualities require acknowledgment.

But the most important thanks are due to my co-investigator on the initial project, Dr. Hans Vossensteyn of the Centre for Higher Education Policy Studies (CHEPS). In addition to his diligent work on this specific project, his scholarship has helped the author come to a more nuanced understanding of comparative higher education policy. His friendship is greatly valued.

I. Introduction

Much has been written in various countries over the past decade on the problem of student debt. A good deal of it has focussed on spectacular (and sometimes incorrect) figures with respect to the average debt of students who borrow. The implication is usually that student debt is too high and that a variety of negative consequences will follow from this, such as fewer low-income students attending PSE, greater penury among graduates, and so forth.

However, declaring a particular amount of debt “too high” (as some are wont to do) is impossible without taking into account the terms on which this debt is repayable. In particular, the rate of interest and the amortization period of the loan are especially important in this respect. As Junor and Usher (2004) show in a Canadian context, even with steady levels of debt, changes in interest rates can change monthly repayment burdens by as much as 20 percent in just 3 years. Similarly important is knowledge of the borrowers’ future income – a debt of a given size might seem manageable to a graduate of professional programs (e.g. Law and Medicine), but a debt of the same size might be completely unmanageable for someone entering a less well-paid profession (e.g. Early Childhood Education).

One commonly suggested “solution” to rising student costs and student debt is to make loans “income-contingent.” But this, too, is overly simplistic. In the first place, most loan systems have some degree of income contingency even if they do not call themselves such. Canada, Germany, and the Netherlands, for instance, all have “soft” ICR systems which allow low-income borrowers to suspend payments temporarily. Even among the “hard” ICR systems (such as those in Australia, New Zealand and the UK) rules regarding repayment periods, repayment rates, interest rates and – crucially – different assumptions about the amount of debt that students will incur to fund their studies (Usher 2005) vary significantly. As a result, the burdens placed upon the students that borrow money from these systems varies considerably as well, thus rendering impossible any generalizations (be they positive or negative) about the desirability of income-contingency in a particular setting.

The purpose of this study is to move beyond debates about income-contingency or non-income contingency as a means of loan repayment and focus on the specific nature of the debt burden facing students in different countries. In particular, it will explore how much students in different countries owe in student loan debt, the conditions governing loan repayment, and the proportion of students’ post-graduation income needs to be devoted to repayment. Exploring the nature of student debt-burdens in a comparative context provides insights into the consequences of program choices that policy-makers

in a single country may fail to observe. As shall later be demonstrated, some of the rules regarding student loan repayment that governments – perhaps unthinkingly – have adopted over the years have a greater impact on debt management than does the actual amount of debt itself.

The eight countries included in this comparison are: Australia, Canada, Germany, The Netherlands, New Zealand, Sweden, the United Kingdom (England and Wales), and the United States. Together, these eight programs represent nearly all of the OECDs’ largest and most long-standing public student loan programs. Details on each individual country’s student loan debt management programs are included in this document as an appendix; the main document will look solely at key data in comparative perspective, including:

- The rate of interest on student loans
- Any loan remission programs available to students
- Targeted subsidies available to students during the repayment period
- Favourable tax treatment given to loan repayments
- Income thresholds beneath which no loan repayment is required
- Rates of required repayment above the income threshold
- Average debt burdens
- Average incomes of graduates

The report will conclude by examining the debt-to-income and debt-service ratios of student loans among students in different financial circumstances in all eight countries. The result is a fairly nuanced view of student loans in international context; no country is consistently “better” or “worse” than the rest; each loan repayment system appears to have specific strengths and weaknesses when compared to other countries.

II. Student Loan Interest Rates

In looking at student loan debt management programs, this section will start from the point of loan origination; that is, from the point the loan enters the student's hands. At this stage, some countries begin their debt management efforts by subsidizing interest costs while the student is in school. Table 1 shows the ways in which various countries choose to subsidize loan interest, both during the period of studies and during the repayment period.

Table 1 - Loan Interest Subsidies

	Subsidies During Studies	Current Interest Rate	Subsidies During Repayment	Current Interest Rate
Australia	Full real interest subsidy: Students pay the real value of the loan (i.e. interest = inflation)	2.4%	Full real interest subsidy: Students pay the real value of the loan (i.e. interest = inflation)	2.4%
Canada	Full nominal interest rate subsidy: students pay no interest	0%	No subsidies: students pay "market" rate (prime + 2.5%)	6%
Germany	Full nominal interest subsidy: Students pay no interest	0%	Full nominal interest subsidy- Students pay no interest	0%
Netherlands	Students pay government rate of borrowing	3.05%	Students pay government rate of borrowing	3.05%
New Zealand*	Full real interest subsidy: Students pay the real value of the loan (i.e. interest = inflation)	None	No subsidies: students pay govt. cost of borrowing plus CPI	7%
Sweden	Government subsidizes 30% of the cost of borrowing	3.1%	Government subsidizes 30% of the cost of borrowing	3.1%
United Kingdom	Full real interest subsidy: Students pay the real value of the loan (i.e. interest = inflation)	3.37%	Full real interest subsidy: Students pay the real value of the loan (i.e. interest = inflation)	3.37%
United States	Full nominal interest subsidy: Students pay no interest	0%	No subsidies: students pay govt. cost of borrowing	3.37%

* As of July 2005, the Government of New Zealand is considering eliminating all interest – real and nominal – on student loans both during studies and during repayment, a move which would make New Zealand's system identical to that of Germany. The proposal is a major plank in the ruling Labour Party's re-election platform for an election due to be held in late 2005.

The first column of Table 1 makes it clear that there are three basic approaches to dealing with loan interest rates during the study period: "zero-nominal", "zero-real", and "cost of government borrowing." The zero-nominal interest approach is taken by Canada, the United States, and Germany. In this approach, the loan does not grow in nominal terms for the duration of the study period; in fact, in real terms, the loan shrinks while the

student remains in school. This is the approach that has the largest government subsidy attached. The zero-real interest approach is taken by Australia, New Zealand, and the United Kingdom. Here, no real interest is charged, but loans are permitted to grow with inflation so as to remain of constant value in real terms. This approach, too, has a government subsidy attached, but less so than that of the zero-nominal approach. Finally, there are those countries that charge students the government cost of borrowing (the Netherlands) or a rate based on the cost of borrowing (Sweden). In these countries there is no government subsidy at all, though students still benefit from government intervention since they would be unable to receive such a rate on their own in the private market. Interestingly, no country in our survey makes its students pay market interest rates during the period of studies.

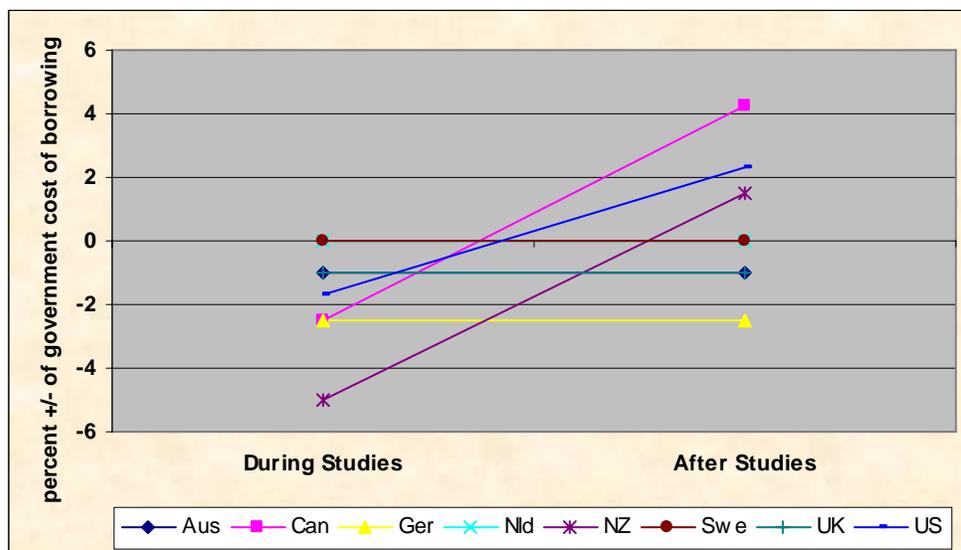
Column 3 of Table 1 illustrates the subsidy embodied in the loan during the repayment periods. In five of the countries examined here, the loan subsidy remains the same for the lifetime of the loan: from the time money gets in students' hands to the time the loan is repaid. These five countries - Australia, Germany, the Netherlands, Sweden, and the United Kingdom - are also the five that provide loans to their students at below-market rates. However, the fact that rates are below-market does not imply that the governments actually have to pay money to subsidize interest. The Netherlands, for instance, requires students to pay an interest rate equal to the government cost of borrowing, which is an advantage to the students but does not require any outlay on the part of the government (though it does carry an opportunity cost). Sweden charges its borrowers the government rate of interest minus a 30 percent subsidy. Australia and the UK have a more explicit subsidy in that they charge no real interest at all but apply only a charge equal to annual inflation. Germany provides the largest subsidization of all, as it charges no interest of any kind. There, the value of the loan stays constant in nominal terms, meaning that the real interest rate is negative.

In the US, Canada, and New Zealand, however, the interest regime changes considerably once a student leaves school. In these countries, during the in-school period, the rate of interest is highly subsidized: in New Zealand, real interest is zero while in Canada and the United States the effective zero nominal rate means that real interest is negative. However, as soon as students leave school, rates jump significantly. New Zealand charges its students the government cost of borrowing plus CPI (which, since the government rate of borrowing has a built-in inflation factor, amounts to a form of double charge). The United States charges its students the government cost of borrowing plus 230 basis points (100 basis points equals 1 percentage point). Canada charges its students the highest real interest rate of all: 250 basis points over the banks' prime lending rate, which is itself over 175 basis points over the government's cost of borrowing (i.e. the Bank of Canada overnight rate).

These systems could be seen as having “negative” subsidies to certain students, because interest payments from borrowers are an actual source of revenue to government. In effect, these three systems contain a degree of cross-subsidization, where “average” borrowers who repay their loans steadily over a long period of time provide governments with a stream of revenue which helps to pay for the loan losses incurred by other students who do not or cannot repay their loans, or to cover other subsidies embedded in the loan system (such as subsidized in-study interest in both Canada and the United States). However, in no country does this cross-subsidization fully cover the cost of loan losses; all three student loan programs still require substantial taxpayer subsidies in order to remain solvent.

Of particular interest when viewed in international comparison is the seemingly paradoxical treatment of student loan interest charges in Canada, New Zealand, and the United States. When loans are in repayment, these three countries charge high levels of interest; yet during the in-study period, both countries subsidize loans so heavily that they carry no real interest. Figure 1 compares the treatment of loan interest during and after studies.

Figure 1 – Student Loan Interest Charges During and After Studies Relative to the Government Cost of Borrowing



III. Debt Remission Programs

Perhaps the simplest form of debt management is to reduce outstanding debt. This is often known as “debt waivers” or “loan remission” or “loan forgiveness.” This is not particularly common internationally, but it is an important feature of debt management in a few countries, especially Canada and Germany. Table 2 shows debt reduction payments made at the time of graduation.

Of the four countries where loan remission exists, only two – Germany and Canada – use remission as a means to lower debt prior to the commencement of repayment. In Canada, roughly one quarter of a billion dollars is spent annually by various provinces and the Canada Millennium Scholarship Foundation to reduce debt at the end of the period of studies. Generally speaking, remission is given to people based on the amount borrowed over a year or a period of studies. Roughly one tenth of all debt incurred by Canadian students is forgiven this way. Germany, on the other hand, has a threefold program of debt remission, based variously on need (all debt over 10,000 euros is automatically forgiven at graduation), merit (the top 30 percent academically of each cohort receives debt remission of between 15 and 25 percent of debt) and completion (students graduating early receive some debt remission).

In the other two countries where remission exists, the United States and the Netherlands, remission occurs well after the start of repayment. In the United States, most remission programs offer loan forgiveness in return for working in particular fields deemed “sensitive” – such as health care, education, or engineering. There are over 150 such programs spread over 43 states in addition to some small programs at the federal level. In the Netherlands, forgiveness occurs at the end of the 15-year repayment period. In addition, the US has one other form of loan remission, which is the remission given to ICR users at the end of 25 years of repayment. Similarly, the Netherlands also has remission at the end of the repayment period (fifteen years).

Table 2 - Loan Remission/Forgiveness

	Targeting	Description	\$ Benefit to Student
Canada*	Debt	Students with high debt on an annual or per degree basis receive remission	\$2,775 per recipient
Germany	Merit	Students finishing in the top third of their class in final examinations have their debt forgiven	€1,342 per recipient
	Completion	Students who complete their studies within a prescribed period of time have part of their debt forgiven Debt over €10 000 is forgiven	€1,880 per recipient
	Debt		Unknown
Netherlands	Completion	Students who complete their studies within a prescribed period of time have part of their debt forgiven	Unknown
United States*	Usually, workforce contingent	Students executing certain workforce commitments or filling a specific work need may have part of their loan forgiven	Unknown

At 2004 PPP, \$1Cdn = US\$.78 = A\$1.08 = €.75 = NZ\$1.17 = SEK 7.46 = £.48

**Not universally available in all sub-jurisdictions; in both Canada and the US, remission is primarily a tool of sub-national governments and in neither case does the national government use remission at graduation as a major policy tool (though the US government is starting to use remission as a tool to encourage people to become teachers in certain subjects). As of 2002-3, seven Canadian provinces and 43 American states had remission programs, each of which had different policy and program features. For details on Canadian remission programs, see Junor and Usher (2004), *The Price of Knowledge 2004*; for details on American programs see the 33rd Annual NASSGAP Survey¹ and Kirshstein, Berger, Benatar and Rhodes (2004), *Workforce-contingent Financial Aid: How States Link Financial Aid to Employment*.²*

¹ 33rd Annual NASSGAP Survey: available at <http://www.nassgap.org/viewrepository.aspx?categoryID=3#>

² *Workforce-contingent Financial Aid: How States Link Financial Aid to Employment*. available at <http://www.luminafoundation.org/research/Workforce.pdf>

IV. Other Subsidies in Repayment

Within the repayment period, some countries specifically target some subsidies at low-income students. These tend to come in two forms: those that exist for temporary low-income status and those that are related to long-term debt forgiveness.

Countries with income-contingent systems (which tend to have subsidized interest rates) tend not to have subsidies for short-term periods of low income. Instead, students are simply permitted to abstain from payment until such time as their income recovers, and the cost of this “payment holiday” is swallowed up in the more general interest subsidies shown in Table 1.

On the other hand, countries using income-contingent deferrals (or “soft” ICR) do tend to have specific subsidies for students whose income is temporarily too low to permit repayment. In Canada, this is known as “interest relief,” in New Zealand as a “Base Interest Write-Off” or “Base Interest Reduction” (the former is a full subsidy, the latter a partial one), and in the United States, Germany, and the Netherlands as “deferment.” In the Netherlands and Germany, these deferrals do not cost the government any extra money; in the Netherlands because the interest is recapitalized into the loan and in Germany because the cost is already subsumed by the general zero-interest cost (technically, there is a cost because it extends the life of the loan, but this is difficult to calculate). In the other three countries—New Zealand, the US, and Canada—the subsidies all appear to be of roughly the same magnitude: roughly \$500 per student per year. Details on repayment subsidies for low-income students can be found below in Table 3.

Table 3 –Repayment Subsidies Specifically Linked to Low-Income Status

	Subsidies	Targeting of Subsidies	Value to Students (annual)
Canada*	Interest Relief /Debt Relief in Repayment	Low-income/ Persistently high debt-to-income ratio over 3 to 5 years.	IR: C\$546/recipient annually DRR: C\$6,068 per recipient
Germany	Loan Write-offs	Presence of children	€1,256 per recipient
Netherlands	Loan Forgiveness	People with persistent low-income over 15 years	Unknown
New Zealand	Base Interest Write-Off/Base-Interest Reduction	Low-income	Write-off: NZ\$575/recipient Reduction: NZ\$520/recipient
US (ICR)	Deferment/Loan write-off	Low income/Persistently high debt-to-income ratio over 25 years (ICR loans only)	Unknown

At 2004 PPP, \$1Cdn = US\$.78 = A\$1.08 = €.75 = NZ\$1.17 = SEK 7.46 = £.48

* Canadian dollars figures refer only to the costs accruing to the Government of Canada – to estimate the costs to provinces one should add another 66 percent.

Two countries—Canada and the United States—also have a separate set of subsidies in repayment which are tax-based in nature. In Canada, all student loan interest paid in a calendar year is counted as a tax credit. Tax credits in Canada are calculated by multiplying the tax credit “amount” (in this case, interest paid) by the lowest rate of marginal tax (currently 16 percent) and outstanding taxes are then offset by the amount of outstanding credits. In Canada, tax credits are preferred to tax deductions because they are comparatively “flat” in their distributional effects; that is to say, they are worth the same to all taxpayers, regardless of the tax bracket, whereas tax deductions are worth more to taxpayers who are in higher income brackets. In contrast, in the United States, the general tax regime posits that virtually all loan repayments are exempt from tax (mortgage interest, for example, is tax deductible). Hence, the US’ very similar tax provision to help graduates offset the cost of student loan interest is given as a deduction rather than a credit. The US subsidy does, however, have a cap on the total value (\$2,500 US) so as not to provide too much tax benefit to high-income, high-debt borrowers in repayment.

Table 4 - Tax-related Repayment Subsidies

	Subsidies	Targeting of Subsidies	Average Value to Students (annual)
Canada	Loan interest Tax Credit	None	C\$100 annually
United States	Loan interest deductibility (max \$2,500)	None	Unknown

At 2004 PPP, \$1Cdn = US\$.78

V. Thresholds, Repayment Rates and Amortization Periods

We come now to the specifics of loan repayment in various countries, which are shown in Table 5 below. The table's first column shows income thresholds for repayment. Although the existence of income thresholds below which no repayment is required is often popularly associated with "income-contingent" student loans, the fact is that virtually all student loan systems have such thresholds. In systems that are not "formally" income-contingent, these payment deferral mechanisms have been referred to as "income-contingent deferrals" (Albrecht and Ziderman, 1991), and or as forms of "soft" income-contingency (Usher, 2005). The primary difference is that in hard income-contingent systems repayment the suspension of payments is automatic, while in other systems borrowers in repayment must apply for the deferral and prove their low-income status. This is a non-trivial transaction cost which prevents these programs from achieving the universal coverage of low-income borrowers in repayment that formal ICR systems achieve.

Table 5 – Loan Repayment Characteristics

	Income Threshold	Standard Repayment Rates	Amortization Period	Loan forgiveness
Australia	\$A 35,000	4-8% of all income	n/a	At death/disability
Canada	\$C24,000 † (approx)	Mortgage-style	9.5 years	At death/ Disability
Germany	€11,520‡	Mortgage-style*	20 years	20 years
Netherlands‡	€13,870	Mortgage-style	15 years	15 years
New Zealand‡	\$NZ 16,172	10% of marginal income	n/a	At death/disability
Sweden	None	See Appendix	25 years	Age 68/death
United Kingdom	£15,000	9% of marginal income	n/a	Age 65/death
US (ICR) ‡	\$US 10,712	See Appendix	10-25 years (flexible)	At death/disability or at 25 years (ICR loans only)

At 2004 PPP, \$1Cdn = US\$.78 = A\$1.08 = €.75 = NZ\$1.17 = SEK 7.46 = £.48

*Assumes single student with no dependents with av\$18,900 in outstanding debt (average debt). Will increase with family size.

‡ Assumes a single student with no dependents. Will increase with family size. The figure applies to deferments for economic hardship – other types of deferments are possible but do not have an income test.

Among the countries in our survey, all except Sweden have such thresholds. The thresholds vary in size from about \$8,000 US (in the US ICR system) to about \$24,000 US

(in the Australian HECS system). The Canadian threshold (for the Interest Relief program) is the only one that moves in relation to both debt and income levels³; however, assuming an average-size debt, Canada's threshold is slightly higher than most other countries at just under \$20,000 US.

The second column shows the standard repayment rates in each country. Three countries (Canada, the Netherlands and the some of the US programs) use standard mortgage-style repayment rates. Germany is theoretically on a mortgage-style repayment but in practice repayment is a flat 105 euros per month. New Zealand and the UK have income-contingent systems with income above the threshold subject to a standard rate of repayment of 10 and 9 percent, respectively. Australia has a series of 9 income bands above the threshold, with repayment rates varying between 4-8 percent. Unlike New Zealand and the UK, however, Australia's repayment applies to all income, not just marginal income, which would seem to suggest that marginal taxation rates go well over 100 percent at points approaching each of the band boundaries. The Swedish system, as well as the US ICR and the US "graduated" systems, use very complex formulae for setting repayment rates.

The third column shows the amortization period of various loan programs. Most of the "hard" ICR programs do not have amortization periods. In the other programs, amortization periods vary between 10 and 25 years. Canada's standard repayment period is the shortest at 9.5 years. The fourth and final column shows loan forgiveness periods. Most countries do not have loan forgiveness; none permit it for a period shorter than 15 years.

³ Technically, the threshold for interest relief is based on a combination of debt and income and then adjusted for family size. It is an extremely opaque system which cannot be described as "client-friendly"; indeed, none of the Canada Student Loan Program's student information guides mentions the actual eligibility thresholds, suggesting instead that students contact their provincial student aid office to see if they are eligible.

VI. Final Debt Burdens and Salaries after Graduation

Having now examined the many factors that affect how loans are repaid, it is now time to turn to the real debts that graduates have at the time of graduation, as well as their ability to repay these debts. Details of average graduate debt burdens and average graduate incomes are presented in Table 6.

The first column shows the proportion of students that graduate with student debt in each country. These figures vary widely. Generally speaking, the countries where loans are effectively non-means tested (Australia, New Zealand, Sweden, and the UK) also have the highest take-up rates. However, the Netherlands, which also makes its loans available to all students regardless of means, has one of the lowest rates of student take-up. The US – which has one loan program that is means tested and one that is not – also has a reasonably high take-up rate. Canada and Germany, both of which have exclusively means-tested loans, have somewhat lower rates of take-up.

Table 6 – Estimated Average Government Debt at Graduation and Average Incomes of Recent University Graduates⁴

	% of Graduates with Debt (approx.)	Average Debt at Graduation	Estimated Annual Income of Recent University Graduates
Australia	77%	\$A 14,697	A\$38,000
Canada	50%	\$C 18,900	C\$38,000
Germany*	15 – 20%	€5,600	€41,136
Netherlands	15 - 20%	€8,700	€28,000
New Zealand	(check)	\$NZ 15,930	NZ\$44,510
Sweden	85%	230 000 SEK	290 400 SEK
United Kingdom [†]	85%	£8800	£22,000
United States	50%	\$US 19,300	US\$34,100

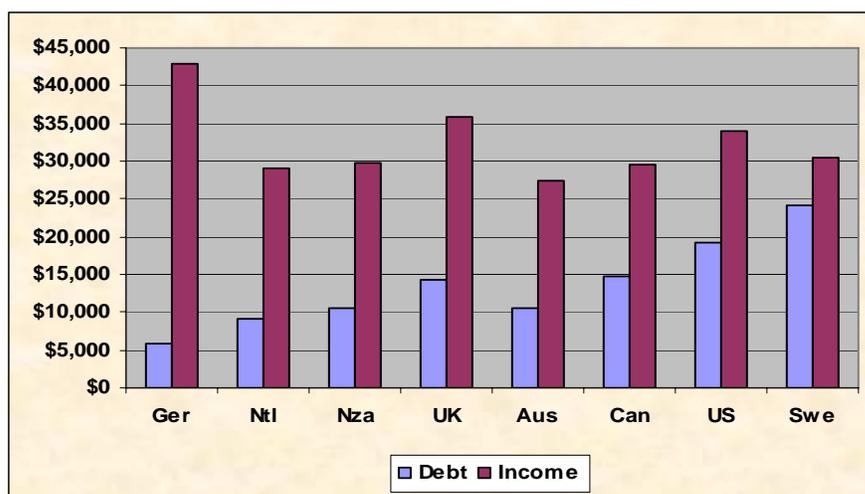
At 2004 PPP, \$1Cdn = US\$.78 = A\$1.08 = €.75 = NZ\$1.17 = SEK 7.46 = £.48

⁴ Sources: Australia - author's calculations based on annual HECS debt files from EPI Australasia. Assumes all graduates take a 4-year course. Canada – National Graduates Survey 2000; Germany - BMBF (2005), *Sechzehnter Bericht nach §35 de Bundesausbildungsförderungsgesetzes zur Überprüfung der Bedarfsätze, Freibeträge sowie Vomhundertsätze und Höchstbeträge nach §21 Abs. 2*, Berlin: Bundesministerium für Bildung und Forschung. Netherlands – Belastingdienst (2004), *Fiscale uitleg bij aangifte: Persoonsgebonden aftrek, Uitgaven voor levensonderhoud van een kind jonger dan 30 jaar*, www.belastingdienst.nl.; New Zealand – NZ Bureau of Statistics Student Loans Data 1997-2002, table 2; Sweden - Statistics Sweden – "Entrance to the Labour Market 2004" UK – Association of Graduate Recruiters 2004, US - United States National Centre for Education Statistics' Baccalaureate and Beyond Study.

The second column of Table 6 shows average debt levels at university graduation in various countries in their national currencies⁵ (the figures in a common currency – US dollars – are shown in Figure 2, below). By some considerable amount, debt is highest in Sweden: at current PPP values, average graduate debt in Sweden is just over \$24,000 in US dollars. This is more than a little peculiar, given that Swedish universities do not charge tuition fees and all students are eligible to receive comparatively generous student grants. Average debt in the US is next highest, followed by the UK and then Canada. Student debt in the US and Canada is reasonably stable or only growing slowly – the same is not true in the UK, where student debt is rising rapidly in conjunction with higher tuition fees and higher loan limits. Student debt is considerably lower in the Netherlands and in Germany than in the other six nations included in this study.

The third column shows estimated average annual income of recent university graduates in various countries in their national currencies (the figures in a common currency – US dollars – are shown in Figure 2, below). The data shown here are not strictly speaking completely comparable. While all countries in the survey do have similar types of graduate surveys to monitor labour market outcomes, these surveys take place anywhere between 6 and 36 months after graduation. While this is a limitation on data comparability, the data are nevertheless reasonably similar enough to permit broad comparisons.

Figure 2 – Average Graduate Debt and Income Figures (in USD)



⁵ Note that the figure for “average debt” is the subject of some debate in a number of countries. In New Zealand and Australia, governments do not, as a rule, publish figures on average debt at graduation. The figure for NZ comes from a Statistics New Zealand survey and is the figure for average debt in the final year of all students graduating between 1997 and 2002. Because average borrowing had increased over time, there is every reason to believe that this figure would be somewhat higher for today’s graduates. Australia’s figure is derived by taking average annual HECS debt and multiplying by four. UK figures are also disputed – the figure in table 6 is the one provided by HM Government, but a number of private surveys put the figure well above where government administrative data suggests it is. Based on information provided to the authors by Claire Callendar, an expert on UK student loans, we have chosen to use the Government’s figures over those from other surveys.

VII. Calculating Debt Burdens

The final two tables in this paper show how the various loan program features end up affecting borrowers in practice. Table 7 shows comparative data on student debt-to-income ratios and debt service burdens, as they apply to students with average debt loads and average post-graduation incomes.

Table 7: Average Debt-to-Income Ratios and Debt Service Ratios

	Average Debt at Graduation	Estimated Avg. Annual Income of Recent University Graduates	Debt-to-Income Ratio	Estimated Avg. Monthly Payments	Estimated Avg. Monthly Income of Recent University Graduates	Estimated Avg. Debt Service Ratio
Australia	\$14,697	A\$38,000	38.7%	\$126.67	A\$3,166	4%
Canada	\$18,900	C\$38,000	50%	\$209.83***	C\$3,166	6.6%
Germany*	€5,600	€41,136	13.6%	€105.00	€3,428	3.1%
Netherlands	€8,700	€28,000	31%	€60.29	€2,333	2.6%
New Zealand	\$15,930	NZ\$44,510	36%	NZ\$236.15	NZ\$3,709	6.4%
Sweden	230 000 SEK	290 400 SEK	79%	914.36 SEK	24200 SEK	3.8%
United Kingdom†	£8800	£22,000	40%	£90	£1833	2.9%
United States**	\$19,300	US\$34,100	57%	US\$108.00 – US\$189.68***	US\$2842	3.8 – 6.7% **

At 2004 PPP, \$1Cdn = US\$.78 = A\$1.08 = €.75 = NZ\$1.17 = SEK 7.46 = £.48

** Under a strict 20-year amortization scale, German students' repayment rates would be about €37/month, or just over one percent of monthly income; however, there is a minimum payment of €105/month.*

*** The lowest figure is for "graduated" repayment over 25 years; the highest figure is for "standard" repayment over ten years. Burdens of other repayment options, including income-contingent loans, fall between these two figures.*

**** Canadian and American borrowers also benefit from tax credits which would lower their repayment amounts somewhat. In Canada, a student paying \$209.83 per month would receive tax credits that would lower his/her payments by approximately \$18/month, which would make "net" payments approximately \$191.83/month. In the United States, the size of the tax deduction tax deductions would depend on the interest paid (which is a function of the length of amortization period) and the student's tax bracket; assuming a 10-year repayment period and a 15 percent tax rate, the reduction would be on the order of \$14/month.*

The first and second columns of Table 7 simply restate data first presented above in Table 6. The third column divides the first column by the second to arrive at a single cross-nationally comparable figure for debt-ratios of graduates with "average" debts and incomes. Debt-to-income ratios of this kind are technically not accurate measures of debt burden in that they represent a stock versus flow comparison. Nevertheless, this type of ratio is often used to represent the burden of national or household debt, and

indeed within Canada is a rule of thumb used in calculating the suitability of borrowers for mortgages (mortgage applications are usually denied if the debt-to-income ratio exceeds 40 percent).

There is considerable variation between countries in debt-income ratios, from a low of 13.6 percent in Germany (where loans are small in size and hard to obtain) to a high of over 70 percent in Sweden (where loans are large and carry no needs test). Most countries have debt-to-income ratios of between 30-40 percent, while Canada is at 50 percent and the US is at 57 percent.

The fourth column shows the monthly payments expected on an “average” debt, following the various national loan repayment conditions that are shown in Table 5. Column 5 restates column 2 – annual income – in monthly terms. Column 6 divides column 4 by column 5 in order to determine the average debt service ratio (that is, the fraction of monthly pre-tax income required to service a debt) in each country, given average debts and average incomes. This is perhaps the best measure of how debt actually affects graduates. New Zealand and Canada have the highest rates of debt burden at over 6 percent. Australia and Sweden are somewhat lower at between 3.8 – 5 percent. The United States has a range of possible debt burdens between 3.8 and 6.7 percent, reflecting the fact that students can—under the Direct Lending program—choose both the length of time over which a loan can be amortized (anywhere between 10 and 25 years) and the type of repayment program (standard amortization, graduated, or income-contingent). Germany is next at 3.1 percent, followed by the UK at 2.9 percent. The debt repayment burden is lowest in the Netherlands at 2.6 percent of pre-tax income.

The real effect of different countries’ debt repayment management schemes is probably best explored by comparing the difference between debt-income ratios (column 3) and debt burden ratios (column 6). The rank order of countries in debt burden is very different in these two columns; New Zealand, for instance, which has a relatively low debt-to-income ratio, has a very high debt burden ratio. Conversely, Sweden, which has a very high debt-to-income ratio, has a very low debt burden ratio.

There are two principal reasons for the divergence of outcomes between the debt-burden measure and the debt servicing measure. The first, and probably most important, is the rate of interest charged on student loans. It is no coincidence that the three countries with the highest debt-service ratios are also the three countries with the highest interest rates – indeed, the only three countries that use revenue from student loan interest to cross-subsidize other aspects of the loan system.

The second important factor here is the length of the repayment period. Most countries allow students a relatively long period to repay their loans – 15 years or more. In the case of Canada and some of the American programs, the short period of time to repayment is another factor pushing up the monthly repayment burden. Even here, however, a distinction needs to be made. In the US, the individual can reduce monthly payments by extending the loan period; Canadian borrowers, on the other hand, do not have this privilege and this makes an enormous difference to their monthly debt-servicing charges. For instance, if Canadian borrowers could extend their payments to 15 years their monthly payments would drop by 25 percent, thus bringing debt repayment burdens down under 5 percent of income.⁶

Table 7 is useful in dealing with averages, but it is important to remember that most students are not at the average. Table 8 therefore extends the analysis somewhat to look at different national systems where debt and income are either higher or lower than average. For the purposes of this exercise, we have stipulated that “high” and “low” graduate income refer to situations where income is 133 percent and 66 percent, respectively, of the average graduate income portrayed in Table 8, while “high” and “low” debt refers to debt that is 150 percent and 50 percent, respectively, of the average debt reported in Table 8.

Table 8 – Estimated Debt-Service Ratios for Various Debt and Income Scenarios

	High Income, Low Debt	High Income High Debt	Average Debt, Average Income	Low Income, Low Debt	Low Income, High Debt
Australia	6%	6%	4%	0%	0%
Canada	2.6%	8.0%	6.6%	5.2%	0%
Germany	2.3%	2.3%	3.1%	4.6%	4.6%
Netherlands	1.0%	2.9%	2.6%	2.0%	5.9%
New Zealand	7.3%	7.3%	6.4%	4.5%	4.5%
Sweden	1.8%	5% *	3.8%	3.6%	5% *
United Kingdom	4.4%	4.4%	2.9%	0%	0%
United States**	1.3-2.5%	4.2-7.6%	3.8 - 6.7%	2.8-5.0%	8.6-15.3%

N.B. Low debt = 50 percent of average debt and high debt = 150 percent of average debt; low income – 66 percent of average income and high income = 133 percent of average income

⁶ The total amount of interest paid over the life of the loan would, however, rise. Objections on this score could of course be eliminated by providing an extended repayment period as an option rather than a mandatory feature of the repayment program – those borrowers that preferred lower total interest payments costs to lower monthly interest payments could remain on the existing 9.5 year plan. Currently, extensions of the repayment period to 15 years are only available to those borrowers who have been receiving interest relief for considerable periods of time – i.e. only to the very poorest.

** Under the standard formula, repayment for “high debts” would be 5.4 percent of income at “high income” and 10.8 percent of income at “low income”; however Swedish student aid caps repayments at 5 percent of income.*

*** Low figure is for “graduated” repayment, high figure is for “standard” repayment. Burdens of other repayment options, including income-contingent loans, fall between these two figures.*

The picture that emerges from Table 8 is a complicated one, but a simple message emerges nevertheless. No single loan program can be considered “attractive” to students regardless of their income and debt levels. Programs that work for one set of borrowers usually do not work well for another. This is another way of saying that the advantages and disadvantages of different student loan debt management systems varies considerably according to one’s income and outstanding debt.

Apart from this simple message, four subsidiary lessons can be learned from this table:

- Given the conditions on debt and income set here, the UK, Australia, and Canada—the three countries with the most generous loan income thresholds—are probably the best places to be if one is a borrower with low income and high debt. Care should be taken in interpreting this, however. Should the Canadian student’s income rise even slightly from the level shown here, he or she would lose eligibility for interest relief and would be required to pay the full amount of the loan. In this case, the debt service ratio would suddenly become the *worst* of the bunch, at just over 16 percent of pre-tax income. Australia, however, because of its generous income thresholds and low initial rates of repayment, does not suffer from this problem.
- High earners have lower debt-service ratios under conventional mortgage-style systems than they do under “hard” income-contingent loan systems. This may be somewhat misleading, however, as some high earners undoubtedly pay more than the required minimum in these programs so as to avoid interest charges. Conversely, of course, this implies that “hard” ICR systems can be much harsher on high-income borrowers than non-ICR systems.
- Low earners generally have lower debt-service ratios in “hard” income-contingent systems than they do in mortgage-style systems. However, as the example of Canada shows, all it would take to change this is a more generous system of income-contingent deferrals. In the Netherlands, New Zealand, the United States, and Germany, the cut-off for assistance is approximately 50 percent, 36 percent, 31 percent, and 28 percent of average graduates’ salaries, respectively, which are too low to help the “low-income student” used in this example.
- In the “worst-case” scenario of having low income and high debt, the United States is clearly the worst place to be – in no other country do repayments of

students in this position exceed 6 percent of income, whereas in the US the proportion can be as high as 15.3 percent .

VIII. Conclusions

The point of this paper is not to comment on whether a particular level of student debt is “too high” or “too low” (points which are largely subjective), or whether or not the prospect of debt is actually a deterrent to study (a point where the evidence is somewhat mixed and certainly varies from country to country). Rather, the intention is to show that while different countries possess very different student debt profiles which can be compared; they also have very different graduate income profiles and very different conditions of student loan repayment which must be taken into consideration in any serious scheme of comparison. Simply measuring student debt is a completely inadequate way of looking at the consequences of student debt.

A comparison which illustrates this point nicely is one between students from Sweden and New Zealand. Swedish students graduate, on average, with much higher levels of student debt than students in other countries, but their debt burdens are comparatively very mild because of the very low interest rates they pay and because of the very long loan repayment period they are afforded. Conversely, New Zealand students do not graduate with enormous amounts of debt in comparative terms, but the high levels of interest, the low income threshold and the high rate of marginal repayment combine to make the loan repayment burden a very heavy one.

Similarly, the fact that a country has a system that is formally “income contingent” seems to make precious little difference in terms of loan repayment burden. Though this may seem surprising to those partisans on either side of the ICR debate, the conclusion is not that surprising – materially, debt burdens are a product of outstanding principal, interest rates and repayment conditions, none of which, technically speaking, are necessarily linked with income-contingency *per se*.

Moreover, how “good” any given country appears to be on student debt varies considerably based on a variety of factors, including an individual student’s income and outstanding debt. Germany and the Netherlands might be seen as “good” in terms of having low student debt, but the actual debt burdens of low-income graduates are considerably worse than they are in countries such as the UK, Australia and – at least among highly indebted borrowers – Canada as well.

The lessons for any countries looking to lighten student debt burdens via changes in debt repayment mechanisms are fairly clear. They are:

- *“Income-contingency” is a panacea only for the intellectually lazy.* Far more important are the amounts of debt issued and the conditions of loan repayment.

- ***Interest rates matter – a lot.*** The main reason why graduates in New Zealand, the United States, and Canada face high debt service ratios is that they all face punishing rates of interest during the repayment period. Curiously, these countries also follow a policy of subsidizing interest while students are in school. It seems likely that all three countries could – at little or no cost to the treasury – ease students’ debt burdens somewhat by imitating their European and Australian counterparts and giving students a single, low-interest rate for the life of the loan.
- ***The length of the repayment period is a key variable.*** The debt burdens of students in some countries are notably less where repayment periods are longer. Where interest is subsidized, this amounts to a progressive subsidy; those students who pay back more money over a longer period of time receive the greatest subsidy. Where interest is not subsidized, longer repayment periods force a trade-off: lower short-term payments can only come at the expense of higher total interest payments over a longer period of time. The US, which allows students to choose their own repayment period, probably has the most sensible policy in this regard, and policy makers in New Zealand and Canada would be wise to examine this relatively cost-free option to improve borrowers’ capacity to repay.
- ***Total debt matters – but less than most people think.*** Debt burden is not, of course, insensitive to total debt issued, but the Swedish example shows that even very high amounts of debt can be easily sustained given generous interest rate and repayment policies. Solutions to student debt that involve blanket reductions in lending can have harmful effects if they result in less money getting into students (as was the case when Australia eliminated the loan component of AUSTUDY without a corresponding increase in grants), or can create windfall gains to the many students who could easily have paid the original, higher debt. This is not to say that governments should deliberately go out and increase student debt; merely to say that reducing student debt directly may not be the most efficient or effective way to help those borrowers most in need of assistance.

In short, details matter when it comes to student loans and student loan repayment. Advocates of particular “silver bullet” solutions to the problem of student debt, such as blanket loan reductions or the introduction of income-contingent loans, are almost always guilty of oversimplifying the burdens that face students and/or the choices that face governments. National differences in student loan repayment policies have created real laboratory experiments that demonstrate the difference that even small program parameter changes can make to the experiences of student loan borrowers. It is in the

interests of students everywhere that policymakers pay closer attention to the results of those experiments.

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Appendix

Country Profiles –

Australia

Canada

Germany

The Netherlands

New Zealand

Sweden

United Kingdom (England & Wales)

United States

Australia

Description: “Student Aid” as it is known in North America, is divided in two systems; one for living expenses and one for tuition. The living expenses system is, as of 2003, completely grant-based. The system for tuition is known as the “Higher Education Contribution System” or “HECS” and is effectively loan-based (although the Australians tend not to view HECS as a “loan” it shares many important features with loans).

Each year, students are charged a “HECS contribution” (effectively a tuition fee) according to the course of studies undertaken. After the end of the period of studies, the sum of these annual contributions must be repaid in an income-contingent manner. No real interest is charged, though the outstanding balance does increase with inflation. Repayment is managed through the Australian Tax System. Students reporting taxable incomes below a certain threshold are not required to make payments. Above the threshold, debtors must repay a percentage of their total income towards their outstanding debt. This percentage increases progressively with earned income. HECS obligations do not discharge and remain with the debtor until death.

HECS contributions can be paid up-front instead of afterwards in an income-contingent manner. Students who choose to pay up-front receive a 25 percent rebate on their fees. The rebate is partially an inducement to obtain contributions without the decade-long wait that accompanies HECS contributions re-paid via income-contingent payments; it is also a way of equalizing the net present value of the payments of early-payers and late-payers (the latter pay less in net present value terms due to the real interest subsidy on the loan).

History: Prior to the 1988 introduction of HECS, tuition was free in Australia and there were no loans (assistance was provided in the form of a grant). The major changes to the HECS system have been changes to the fees rather than the repayment system. The repayment system has seen some minor changes over the years to the threshold rate of repayment, as have the income “bands” in which different percentages of income are required for repayment.

The introduction of income-contingency was part and parcel of the introduction of tuition fees. HECS – with its generous repayment subsidies and very high thresholds beneath which no contribution need be made – was seen as a necessary complement if the introduction of fees was to be credibly depicted as “progressive” (HECS was introduced by a labour government which felt that free fees to university student were actually regressive).

Subsidies During the Study Period: No real interest is charged on loans (outstanding balances increase only by the amount of inflation/CPI). Government subsidy is equal to the difference between the government’s cost of borrowing and the prevailing rate of inflation.

Loan Remission/Forgiveness at Graduation: None

Subsidies During the Repayment Period: No real interest is charged on loans (outstanding balances increase only by the amount of inflation/CPI). Government

subsidy is equal to the difference between the government's cost of borrowing and the prevailing rate of inflation.

Targeting of Subsidies: Subsidies are not targeted. All HECS borrowers receive the same subsidy on an annual basis. Over the course of borrowers' lives, the largest subsidies go to those who were in more expensive courses or stayed in school the longest (and hence had higher debts) and those whose post-graduation incomes remained low for long period of time (and hence paid off their contribution more slowly).

Average Per Student Value of Subsidies: unknown

Total Cost to Government of Loan Subsidy: Approximately \$300 million

Loan Collection Procedure: Debt is collected through the Australian Tax Office.

Maximum Debt Permitted to Carry: None

Average Debt at Graduation: \$A14,697 (estimate)

Income Threshold Below Which No Loans Are Repayable: For the 2004-05 tax year, the threshold is \$A 35,000.

Loan Repayment Rate Above the Threshold: Repayment rates over the threshold are a percentage of total (not marginal) income, as follows:

HECS Repayment Income	Percentage Rate to be Applied
Below \$35,000	Zero
\$35,001 - 38,987	4%
\$38,988 - 42,972	4.5%
\$42,973 - 45,232	5%
\$45,233 - 48,621	5.5%
\$48,622 - 52,657	6%
\$52,658 - 55,429	6.5%
\$55,430 - 60,971	7.0%
\$60,972 - 64,999	7.5%
\$65,000 and above	8.0%

Loan Amortization Period: indefinite

Most Recent Interest Rate on Student Loans: Equal to CPI. Most recent figure is 2.4 percent

Canada

Description: Students who graduate have six months in which to consolidate their various student loans. In practice, loans are repaid on a standard mortgage amortization schedule over 9.5 years (10 years if the 6-month grace period is included). In certain cases, where students run into serious repayment difficulties, the amortization period may be extended over 15 years. Loans are interest bearing at a rate equal to prime plus 2.5 percent. Repayments are made to a company which operates the program on behalf of the Government of Canada.

Interest paid on student loans is rewarded with a non-refundable tax credit of 16 percent. Borrowers in Repayment (BIRs) with high debt-income ratios may apply for Interest Relief (IR) and suspend payments temporarily with no interest accruing. Their 9.5 year term resumes once the student leaves IR, meaning that these students are on repayment plans that take more than ten years to complete. Students who exhaust interest relief may be eligible for Debt Relief in Repayment (DRR), in which a portion of existing principal is written off.

History: The ten-year repayment process has been in place since the program's inception in 1964. Interest relief was introduced in 1984, and expanded in 1995, 1998 and 2000. Debt Relief in Repayment was introduced in 1998, as was the Student Loan Interest Tax Credit.

Subsidies During the Study Period: Zero nominal interest (negative real interest)

Loan Remission/Forgiveness at Graduation: Varies by province. Most recent figures suggest that \$249.9 million was given out in loan remission in 2002-03 to approximately 90,000 individuals (97,889 individual loan remissions were issued, but some students may have received remission from both their provincial governments and the Canada Millennium Scholarship Foundation). This implies that the average loan remission was worth roughly \$2,775 per recipient.

In-Study Interest Subsidy: \$150 million

Subsidies During the Repayment Period:

- a) There are no subsidies built into the loan system, but borrowers receive a non-refundable tax-credit worth 16 cents for every of dollar of interest paid during the year.
- b) For those low-income BIRs who qualify, government will pay the interest while the BIR's debt-income ratio remains high (known as Interest Relief).
- c) Debt Relief in Repayment, which reduces outstanding student debt by 50 percent or \$26,000 (whichever is smaller) for those students who exhaust Interest Relief.

Targeting of Subsidies:

- a) Tax Credits: None. All borrowers receive the same credit. Those who pay more interest (i.e. those who took out more debt) receive a larger amount of subsidy.
- b) BIRs with high debt-income ratios (principally low-income BIRs)

- c) BIR's with chronically high debt-income ratios (i.e. those where interest relief lasts for more than 36 months⁷)

Average Per Student Value of Subsidies:⁸

- a) \$100 annually per student to 706,980 BIRs
- b) \$546 per recipient per year
- c) \$6068 per recipient per year

Total Cost to Government of Loan Subsidy⁸:

- a) \$70 million per year
- b) \$76.7 million per year
- c) \$5.3 million per year

Loan Collection Procedure: The National Student Loans Service Centre (NSLSC), a privately-run organization under contract to the Government of Canada, manages loan collection. BIRs may either send cheques to the NSLSC, or enrol in a pre-authorized payment plan which permits NSLSC to withdraw the required amount on a monthly basis.

Maximum Debt Permitted to Carry: Limits on borrowing in Canada tend to be annual maximums, not per-degree or lifetime limits (although some provinces impose these kinds of limits). In theory, a single student without dependents with 4 years of university, who borrowed for all four years, could incur \$37,000 in debt. In practice, given the way the Canada Millennium Scholarship Foundation and various grant programs work, it is difficult to incur more than \$30,000 in debt over four years. Presence of children and longer periods of study could easily bring this figure to as high as \$100,000 in rare cases.

Average Debt at Graduation: \$18,900 (\$21,500 in CSL zone), as of 2000, but has likely decreased since then.

Income Threshold Below Which No Loans Are Repayable: Because this is a debt-burden-to-income ratio, the threshold depends on both the income level and the size of the debt. For a single student with the "average" amount of debt at present interest rates, the threshold is approximately \$24,000.

Loan Repayment Rate Above the Threshold: Depends on the amount of debt (standard mortgage-style amortization.)

Loan Amortization Period: Generally speaking, 9.5 years.

Most Recent Interest Rate on Student Loans: Prime (4.25% as of Jan. 26, 2005) + 2.5% = 6.75%

⁷ There are some circumstances in which 36 months of IR does not qualify for DRR; in these circumstance, DRR may be delayed for 54 months – however, IR is extended accordingly.

⁸ Values refer only to costs to the Government of Canada. Canada has a largely integrated federal-provincial system of student aid. Adding the costs of provincial government expenditures on these items would add roughly 66 percent to the values shown here.

Germany

Description: Higher education students receive student assistance (Bafög) of which 50 percent is a grant and 50 percent is a loan.

BAfög loans are administered and called in by the Federal Office of Administration (Bundesverwaltungsamt). Students receive a grace-period on repayment which lasts five years (very long by international standards). Loans are interest-free and repayable within 20 years after the start of repayment. Due to low income the repayment period can be extended to 30 years maximum. The obligation to repay begins five years after the expiry of the maximum period of training assistance. At the moment, the minimum monthly rate for repayment amounts to €105. The obligation to repay the loan may be waived if the income of the grantee does not exceed specific tax-free allowances, s/he is caring for a child under the age of 10 or for a handicapped child, or only marginally employed. In addition, students who belong to the best 30 percent of examinees in their year may, on request, be released from the obligation to repay the loan in full (25 percent of their debt can be waived). Finally, no one has to repay more than EUR 10.000 even if the received loans exceed this amount.

Since 2001 advanced students can apply for not means-tested bank loans within a special credit program by the federal “Kreditanstalt für Wiederaufbau” (KfW). The KfW loan has a maximum of €585 per month. The repayment conditions for loans granted by KfW are less generous. There are no merit-based releases and the period of repayment begins only six months after having received the last loan. The loans also bear an interest rate on the basis of Euro Interbank Offered Rate (EURIBOR) plus one percent (currently 4.5 percent).

History: The German BAfög that was established in 1971 has gone through some changes over time. In 1982, the 50 percent grants and 50 percent loans basis was changed into a full interest-free loan system. Since 1984 the best students from each cohort can get part of their debt waived. In 1987, the loan system was changed back to a 50 percent grants and 50 percent loans system. The basic repayment system has remained more or less intact over the past thirty years, however.

Subsidies During the Study Period: Zero nominal interest

Loan Remission/Forgiveness at Graduation: There are three forms of loan remission available.

- A) The first is a blanket forgiveness of loans over €10,000, which has been in place since 2001. The cost of this measure is unknown, though since borrowing is fairly low overall, it does not seem that many people benefit from it.
- B) The second form of loan remission is available to students who are in the top 30 percent academically of their graduating cohort receive remission of between 15 and 25 percent of their debt. Roughly 12,000 students receive this annually
- C) The third form of remission is given to students who complete their programs early. 5,200 students received this in 2003.

Subsidies During the Repayment Period: There are two different subsidies available in Germany:

- A) The interest-rate on loans is zero, which means that real interest is negative.
- B) Borrowers in Repayment (BIRs) who have to care for a child under the age of ten, or for a child with disabilities, or are only marginally employed, have their entire debt waived.

Targeting of Subsidies During the Repayment Period:

- A) All Borrowers in Repayment receive the interest subsidy to the same degree – those who borrowed more heavily therefore receive a larger amount of subsidy.
- B) Those ending up caring for children or in a difficult labour market position get exemption from repayment.

Average Per Student Value of Subsidies in the Repayment Period:

- A) The value of the loan subsidy was worth approximately €186 per borrower in 2004.
- B) Students who received the loan waiver received approximately €1,256 each.

Loan Collection Procedure: Normally students start repaying their debt five years after graduation (for the Bankdarlehen this is 6 months). A central administrative body, not only for student support but for all kind of public services, the Bundesverwaltungsamt, administers the student loans debt and notifies a graduate when repayments have to start and how much. This Bundesverwaltungsamt informs the central bank (Bundeskasse in Düsseldorf) about the debt to be collected. Then the debt will be collected monthly, either by invoice or by authorised automatic withdrawal.

Maximum Debt Permitted to Carry: €10,000, but anything above this is forgiven.

Average Debt at Graduation: After various forms of remission, €5628.

Income Threshold Below Which No Loans Are Repayable: If monthly earnings do not exceed €960, one may defer repayments until one's income rises above the threshold again. The threshold is somewhat higher if the student has a spouse/partner or children.

Loan Repayment Rate Above the Threshold: Mortgage-style repayment with a minimum 105 euros per month.

Loan Amortization Period: In theory, 20 years; however, minimum monthly payments of 105 euros per month plus a maximum debt of 10,000 euros and no interest rates means that in practice it is difficult to repay loans in more than eight years.

Most Recent Interest Rate on Student Loans: zero nominal (negative 2 percent real)

Netherlands

Description: After graduation, borrowers get a grace period of 2 years in which they do not have to make any repayments. After this grace period, the repayment period starts (also for all accumulated interest during study). All student debt must be repaid within a period of 15 years. Repayment happens according to an annuity or mortgage-type schedule. Total debt (including accumulated interest) is calculated which leads to fixed monthly instalments. Over time the monthly instalments can change a little due to changes in the interest rate. The minimum monthly instalment is €45 (so total repayment can be sooner than 15 years in some cases). Students can also voluntarily make additional repayments of any amount over €45, without any additional costs.

If graduates have difficulties in repaying their monthly instalments, they can ask for a means-test (on an annual basis), based on which monthly repayments can be reduced - in some cases, even to zero. Any remaining debt after 15 years is cancelled. Loans are interest-bearing, even when students are in university, with an interest rate of 3.35 percent in 2004 (3.05 percent in 2005).

History: Since the early 1950s, low-income students with excellent academic performance could get interest-free loans. In 1986, all family support, grants and loans were put together in one system of direct support for students, including basic grants for all fulltime students, mean-tested grants for low-income students and voluntary loans for all students. If students run out of grant-entitlements, they can still get three years of full loans financing (was 2 years before 1996). Since 1991, students can also take up additional loans if their parents do not make the expected parental contributions. From 1992 onwards the loans carry interest (to prevent students making a profit with public money). Since 1996, all grants are given as initial loans as well which have to be repaid under the same conditions if students do not meet their study progress requirements.

Subsidies During the Study Period: The government does not subsidize loans, but it does provide them to students at below-market rates (equal to the government cost of borrowing).

Loan Remission/Forgiveness at Graduation: None

Subsidies During the Repayment Period: The government does not subsidize loans, but it does provide them to students at below-market rates (equal to the government cost of borrowing). Loans are forgiven after 15 years.

Targeting of Subsidies: While the loan interest subsidy is not targeted, loan forgiveness is targeted to long-term "poor" borrowers.

Average Per Student Value of Subsidies: Not available.

Loan Collection Procedure: Repayments are made to an arms-length government agency known as the *Informatie Beheer Groep* (Information Management Group; IBG).

Students and graduates communicate with the IBG about getting grants, loans, questions, etc. The IBG calculates the total debt and what the monthly repayment instalments are. Then the graduate writes a monthly cheque or one can have the

required amount automatically withdrawn (in which case the IBG has to be authorised by the debtor.) In the latter case one gets a reduction of €9 per year. If graduates get into default (after 3 cheques have not been paid), the Dutch national debt collection mechanism (with a network of debt collectors and closely tied to the judicial system) is used.

Maximum Debt Permitted to Carry: Technically, there is no maximum but in practice the maximum is roughly €70,000.

Average Debt at Graduation: €8,670

Income Threshold Below Which No Loans Are Repayable: Graduates with low incomes can ask for a means-test. This calculates whether one can repay the required amount, a lower amount or not at all (for the duration of one year). Normally the income of 2 years before is used, except in cases of a serious drawback (at least -15 percent) or unemployment. The means-test also takes into account one's family situation (e.g. having children or not, being married and the income of the partner.)

In 2005 (thus the income of 2003) the income threshold for a single adult (no partner, no children) is €13,870; below that amount one does not have to repay. The capacity to pay with an income of €13,870 is €641 per year or €53 per month. The capacity to pay increases with income: at €15,000/year it is €820 or €68/month; at €20,000/year it is €1950 or €162/month, and so forth.

Loan Repayment Rate Above the Threshold: Depends upon outstanding debt (normal mortgage-style repayments)

Loan Amortization Period: 15 years

Most Recent Interest Rate on Student Loans: 3.05 percent (2005)

New Zealand

Description: Loan repayment is handled by New Zealand's Inland Revenue Department. Borrowers-in-Repayment (BIRs) earning more than NZ \$16,172 (the figure is indexed to inflation – figure here is for 2004/05) must pay 10 percent of all income over this amount towards their loan repayment. No repayment is required by those earning less than \$15,964. Repayments are generally deducted at source by employers. Real interest is charged on the loan.

The scheme has two forms of interest: "base rate" interest (equal to the Government's cost of borrowing) and "interest adjustment" (equal to CPI). BIRs earning less than \$16,172 are not charged base interest (a subsidy known as a "base interest write-off"). BIRs earning more than \$16,172 but whose calculated repayment is less than the accumulating interest on outstanding loans are charged only partial interest (known as a "base-interest reduction") to ensure that the loan balance does not increase over the course of the year (i.e. that "negative amortization" does not occur).

History: Prior to 1992, there were neither tuition fees nor student loans. The present system has existed more or less unchanged since 1992.

Subsidies During the Study Period: Zero nominal interest (i.e. negative real interest) for full-time students. Students studying at less than 80 percent of full-time may receive zero interest subject to an income test; otherwise, they pay the zero real interest (i.e. loans do increase with the cost of inflation).

Loan Remission/Forgiveness at Graduation: None

Subsidies During the Repayment Period: Borrowers whose net income is below the repayment threshold receive a very small subsidy, equal to the difference between the government cost of borrowing and the "interest adjustment rate" (which is actually slightly below CPI). At the moment, this gap is roughly 5 percentage points.

Targeting of Subsidies: Low-income BIRs

Average Per Student Value of Subsidies: Base-interest write-offs worth on average \$575/recipient. Interest reductions worth on average \$520/recipient.

Loan Collection Procedure: Collection handled through the tax system, collected mostly through employer deductions on biweekly pay packages.

Maximum Debt Permitted to Carry: None, although in practice it would be difficult to carry much more than \$NZ 60,000 for four years of study, as maximum assistance is \$7,500 plus \$150 in living expenses per week of study. Longer periods of study would of course increase this.

Average Debt at Graduation: \$NZ 15,930

Income Threshold Below Which No Loans Are Repayable: \$NZ 16,172

Loan Repayment Rate Above the Threshold: 10 percent

Loan Amortization Period: None

Most Recent Interest Rate on Student Loans: 7.0 percent

Sweden

Description: Repayment of Swedish loans is described as a “modified annuity loans system”. It is similar to the “Graduated Repayment Option” offered under the US Direct Loans System. Repayment amounts are calculated annually based on a formula that takes into account a student’s outstanding debt, the prevailing interest rate and an annual escalator.

History: Prior to 1988, student loans were of the mortgage-style variety with fully subsidized interest. In 1988, the country moved to an income-contingent loan system, where loan payments were a flat 4 percent of income (although voluntary repayments could of course be made) with only partially subsidized interest. The plan was changed in 2001.

Subsidies During the Study Period: Government subsidizes interest rate by 30 percent .

Loan Remission/Forgiveness at Graduation: None

Subsidies During the Repayment Period: Government subsidizes interest rate by 30 percent .

Targeting of Subsidies: None. All students receive the same subsidy, so students

Average Per Student Value of Subsidies: Unclear. At graduation, with average debt of 230,000 SEK, subsidy would be equivalent to 1 percent or 2,300 SEK per year, falling thereafter.

Loan Collection Procedure: Payment is normally due quarterly, though monthly procedures can be arranged. Payment is made directly to a government agency (the Swedish National Board of Student Aid) by cheque, or direct deposit arrangements can be made. There is no use of the tax system for collection.

Maximum Debt Permitted to Carry: Maximum regular and supplemental loan entitlement over six years (maximum period of student aid use) is 318,480 SEK; however, use of the additional loan scheme, which covers tuition fees (largely at foreign institutions, since tuition is free in Sweden), certain forms of travel, musical instruments, and personal insurance for studies abroad, is unlimited and could add to this total.

Average Debt at Graduation: 230,000 SEK

Income Threshold Below Which No Loans Are Repayable: Not applicable. All borrowers must at a minimum pay five percent of their income towards their loan repayment.

Loan Repayment Rate Above the Threshold: the required amount of annual loan repayment is calculated according to the following formula:

$$A_t = L \times (r-p) \times \frac{\left(\frac{1+r}{1+p}\right)^n}{\left(\frac{1+r}{1+p}\right)^n - 1} \times (1+p)^{(t-1)}$$

Where:

A_t = Payment for the year

L = outstanding debt at the start of the year

r = interest rate

p = annual percentage increase in repayment base (effectively 2 percent).

n = number of years remaining on the loan

In practice, what this means is that at current interest rates annual payments start at just under 5 percent of outstanding debt, and increase by a little over 2 percent per year thereafter. The formula is sensitive to interest rates, however. If interest rates were to double to 6 percent, the initial payment would increase to about 7 percent of outstanding debt and would increase by more in subsequent years.

If payments become too onerous, one can apply to have them reduced to a maximum of 5 percent of income.

Loan Amortization Period: 25 years

Most Recent Interest Rate on Student Loans: Interest is equal to the government's average cost of borrowing over the three previous calendar years, minus 30 percent subsidy. Currently, 3.1 percent (2004).

United Kingdom

Description: Under the current loan scheme, graduates repay their student debt through an income related repayment system. As of April 1, 2005, they pay 9 percent of all income over £15,000 as student debt repayments. Repayments are collected through the tax system (Inland Revenue; IR), which in the UK means that the employers have to withdraw the amount from a person's gross income and hand it (earmarked) in to the tax authorities.

The Student Loans Company (SLC) works with the Inland Revenue to collect repayments. Repayments are deducted at source by the employer and shown on pay statements. For self-employed students the repayments are collected through the tax self-assessment system. Students may repay earlier than required without additional costs.

History: In 1990 student loans were introduced in the UK for the first time. This was a mortgage-type of repayment system with a 10 years repayment period. The loans were carrying a zero rate of real interest.

This system was changed into the current one in 1999, when all maintenance grants were abolished and turned into loans. Loans retained the zero interest rate. On the advice of Lord Dearing (chair of the influential 1997 Commission of Inquiry into Higher Education), an income-contingent system of repayment was chosen.

Subsidies During the Study Period: Students pay zero real interest.

Loan Remission/Forgiveness at Graduation: None

Subsidies During the Repayment Period: Students pay zero real interest.

Targeting of Subsidies: Graduates who earn the least take the longest period to repay their debt, and therefore will in the end have received the largest indirect subsidies.

All outstanding debt will be cancelled if one dies or reaches the age of 65.

Graduates who never reach the threshold income £15,000 will never repay and get the highest subsidies.

Students who earn little over the threshold only repay their debt very slowly and thus also benefit a lot from the interest subsidies.

Average Per Student Value of Subsidies: Roughly 3 percent of the outstanding value of the loan annually (this is the difference between inflation and the government's cost of borrowing). On an outstanding debt of £8,800 (the average at graduation), this will come to approximately £220.

Loan Collection Procedure: When a student graduates, the Student Loans Company (who deals provides all student loans and grants) indicates to the IR how much debt the graduate has. The IR links this information to one's National Insurance number and provides the information to the employer of the graduate. The employer has to make sure the correct amounts are withdrawn from one's salary and are liable to penalties if they do not provide correct information to the IR. The IR supplies employers with tables showing how much to deduct. The IR notifies SLC at the end of each tax year what

repayments have been made and transfer the money to SLC, who will credit the individual's account.

Maximum Debt Permitted to Carry: Students who live in London can at maximum accumulate a student debt of £15,000 for a 3-year bachelor degree. This is £12,000 for students outside London and £10,000 for students living with their parents.

Average Debt at Graduation: Government estimates student debt at £8,800, although some surveys (notably from financial institutions, such as Natwest) put the number as high as £12,180.

Income Threshold Below Which No Loans Are Repayable: For the old mortgage style loans borrowers can apply for deferment of repayment if their income is less than 85 percent of national average earnings (i.e. less than £1,780 per month in 2003.) On income-contingent loans, the repayment threshold is currently £15,000 per year.

Loan Repayment Rate Above the Threshold: Under the income contingent scheme it is 9 percent of all income above the threshold, thus if earnings increase, total proportion of repayment in terms of total income increases.

Loan Amortization Period: ICR loans have no fixed repayment period. Repayment continues until death or age 65.

Most Recent Interest Rate on Student Loans: 3.1 percent (2004).

United States (ICR stream)

Description: When consolidating their loans, students may choose to consolidate either with a bank/loan guarantee agency or with the government directly through its “Direct Loans” program. Students choosing to consolidate their loans via “Direct Lending” may choose one of four repayment plans, one of which is known as “Income-Contingent Repayment”.

History: The development of the income-contingent loan option and the development of the direct loan system are inter-related. Direct lending, introduced early in the Clinton Administration, was meant to reduce the government cost of lending by eliminating intermediaries (primarily loan guarantee agencies) and administering repayment directly. It also allowed the government to become more experimental with loan repayment schemes. Previously, loans had simply been re-paid on a ten-year mortgage-style basis; under direct lending, three new repayment schedules were introduced: the “extended plan” (a mortgage-style basis but amortization periods stretching from 12 to 30 years), a “graduated plan” where loan repayments increased gradually over a 12-30 year repayment period, and an “income-contingent plan, described below.

Subsidies During the Study Period: Students pay zero nominal interest

Loan Remission/Forgiveness at Graduation: None

Subsidies During the Repayment Period: No subsidies are available directly on the loans; market interest rates are charged. However, interest paid on student loans is deductible from income tax up to a maximum of \$US 2,500 per year. Also, during periods of low-income, subsidized loans may be deferred, during which time zero nominal interest accrues on the loan (unsubsidized loans may also be deferred, but the interest remains the responsibility of the student). Finally, debt forgiveness applies after 25 years.

Targeting of Subsidies: None on the tax deductions: in practice, those with more debt and who are wealthier at the time of repayment will receive greater subsidies. For deferment, the targeting is towards low-income borrowers in repayment. Forgiveness in the US ICR plan targets people who are low-income for very long periods of time.

Average Per Student Value of Subsidies: unknown

Loan Collection Procedure: Monthly payments made to government agency.

Maximum Debt Permitted to Carry: As an undergraduate student in a non-professional stream, \$ US 48,000.

Average Debt at Graduation: \$US 19,300

Income Threshold Below Which No Loans Are Repayable: For a single BIR, \$US 8,050 – except in Alaska and Hawaii where it is slightly higher.

Loan Repayment Rate Above the Threshold: *The lesser of:*

<p>Method 1:</p> <p>Take the amount of debt outstanding and assume calculate monthly payments based on an amortization period of 12 years. Now multiply this monthly amount by an “income factor”, where</p> <p style="padding-left: 40px;">\$10,000 = .55</p> <p style="padding-left: 40px;">\$37,500 = 1.00</p> <p style="padding-left: 40px;">\$110,000 = 1.50</p>	<p>Method 2:</p> <p>Calculate discretionary income by subtracting a “poverty level” (effectively \$US 8050 for single BIRs, but can be adjusted for family size) net income”.</p> <p>Multiply discretionary income by 20 percent and divide by twelve to arrive at a monthly payment.</p>
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At anything other than extremely low incomes or extremely high debt, method A will usually be the smaller number.

Loan Amortization Period: 25 years

Most Recent Interest Rate on Student Loans: Interest is charged based on the government cost of borrowing (yield on a 91-day Treasury Bill) plus 2.3 percent . As of March 2005, Treasury Bills are at 1.44 percent , meaning an interest rate of 3.37 percent .

United States (non-ICR streams)

Description: When consolidating their loans, students may choose to consolidate either with a bank/loan guarantee agency or with the government directly through its “Direct Loans” program. Students choosing to consolidate their loans via “Direct Lending” may choose one of four repayment plans, one of which is known as “Income-Contingent Repayment” and is described in the previous section. The others are the “extended plan” (a mortgage-style basis but amortization periods stretching from 12 to 30 years), the “graduated plan” where loan repayments increased gradually over a 12-30 year repayment period, and the “standard” plan, which is a traditional 10-year, mortgage-style amortization loan. Students who choose not to consolidate via direct loans may only choose the standard program.

History: The development of the income-contingent loan option and the development of the direct loan system are inter-related. Direct lending, introduced early in the Clinton Administration, was meant to reduce the government cost of lending by eliminating intermediaries (primarily loan guarantee agencies) and administering repayment directly. It also allowed the government to become more experimental with loan repayment schemes.

Subsidies During the Study Period: Students pay zero nominal interest

Loan Remission/Forgiveness at Graduation: There are various types of loan remission schemes, nearly all of which forgive portions of debt in return for commitments to perform certain jobs for certain periods of time. The vast majority of these programs are state programs, and hence geographical limitations also apply to the borrower (i.e. one may receive loan remission for becoming a math teacher in-state, but being a math teacher in another state usually results in a loss of eligibility for remission). Most of these programs are very small.

Subsidies During the Repayment Period: No subsidies are available directly on the loans; market interest rates are charged. However, interest paid on student loans is deductible from income tax up to a maximum of \$US 2,500 per year. Also, during periods of low-income, subsidized loans may be deferred, during which time zero nominal interest accrues on the loan. (unsubsidized loans may also be deferred, but the interest remains the responsibility of the student).

Targeting of Subsidies: None on the tax deductions: in practice, those with more debt and who are wealthier at the time of repayment will receive greater subsidies. For deferment, the targeting is towards low-income borrowers in repayment.

Average Per Student Value of Subsidies: unknown

Loan Collection Procedure: Monthly payments made to government agency.

Maximum Debt Permitted to Carry: As an undergraduate student in a non-professional stream, \$US 48,000

Average Debt at Graduation: \$US 19,300

Income Threshold Below Which No Loans Are Repayable: For a single BIR, deferment (equivalent to Canadian Interest Relief, where government pays the interest accruing on

the student loan) may be granted if income is below \$US 8,050 – except in Alaska and Hawaii where the threshold is slightly higher. Thresholds are higher if the borrower has dependents. Forbearance – that is, a suspension of payments during which time interest may capitalize – may be obtained at slightly higher levels of income.

Loan Repayment Rate Above the Threshold: Under the “standard” or “extended” repayment schemes, a mortgage-style amortization applies. Under the “graduated” scheme, an amortization period is agreed at the start of the loan, and payments are made so that repayments increase gradually each year of the loan (in some ways, this is similar to the Swedish system of loans). As a result, rates will vary according to the size of the debt and the length of the amortization period chosen.

Loan Amortization Period: Amortization period under the “standard” repayment stream is 10 years. For direct lending borrowers, or those who have consolidated their loans under the direct lending program, two other options are available: “Extended” and “graduated” repayment, where the amortization period may last anywhere from 12 to 30 years.

Most Recent Interest Rate on Student Loans: Interest is charged based on the government cost of borrowing (yield on a 91-day Treasury Bill) plus 2.3 percent. For 2005, the interest rate is 3.37 percent.

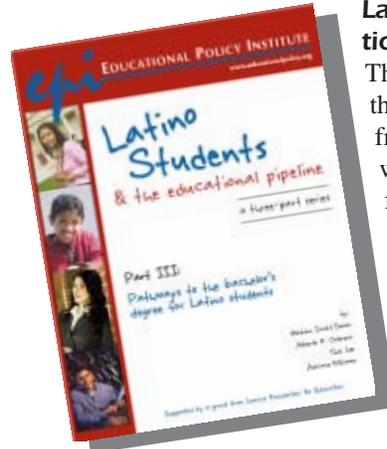


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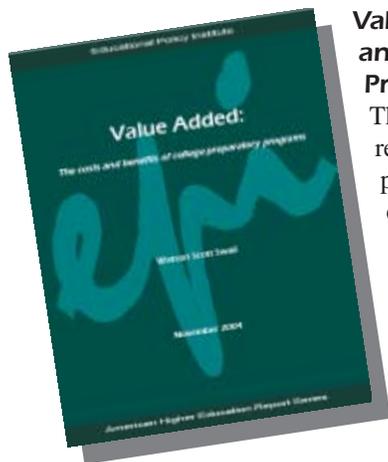
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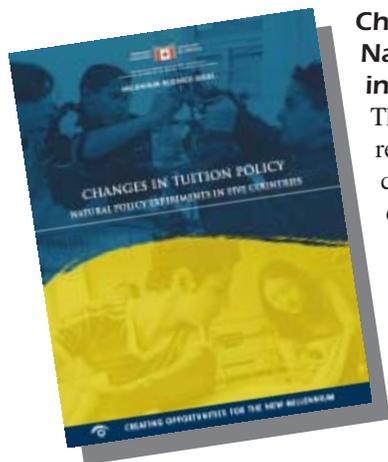
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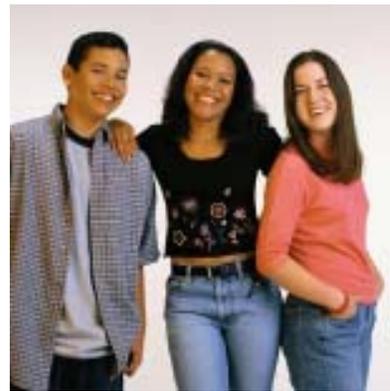


EPICenter/EPICentre

EPICenter is a quarterly report by EPI which provides information on recent research conducted by EPI. A US/international version is distributed out of the DC office, while a Canadian EPICentre is distributed out of the Toronto office.

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