

## **The Market Failure for Student Loans**

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### **Abstract**

Scholars have argued that the unique nature of an investment in education results in a market failure for student loans. This market failure is said to exist despite the empirically established, attractive risk-return profile of educational investments. This paper reviews the literature on school loan market failure and argues against the market failure hypothesis. It also suggests that the most significant threat to the school loan market is a failure to properly define and protect a borrower's property rights to his own future income. Finally, it makes the case that protecting property rights and eliminating loan subsidies should result in a healthier market for educational funding.

## **Introduction**

A young person's most valuable asset is typically his ability to apply his skills in the workforce to earn a stream of future income: what economists commonly call human capital. Starting with the work of Schultz (1961) and Becker (1967), scholars have recognized the economic value of building human capital through education. While experience has shown that free markets in the buying and selling of traditional forms of capital have done wonders for economic growth, the market for student loans is still dominated by federal programs. Eighty percent of the total school loan volume originates from federal programs; of this, 84% comes courtesy of the Stafford loan program, which sponsored a total of \$52.6 billion worth of loans during the 2004-2005 school year.<sup>1</sup>

This government intervention in the marketplace comes in spite of the attractive risk-return characteristics of an investment in education. In a meta study involving 98 countries, Psacharopoulos and Patrinos (2004) estimate that the rate of return to investments in higher education is 19% per year (see Table 1), easily exceeding the long run real rate of return on U.S. equities of about 7% (Siegel, 1998). What's more, this return is typically achieved with low levels of risk. Judd (2000) and Davis & Willen (2000) find that future income streams resulting from educational investments are low in volatility when compared to traditional investments such as equities and some classes of debt. In addition, the risk is not highly correlated with other classes of investment (Judd, 2000), which implies that investors should be willing to accept lower rates of return from these uncorrelated assets due to the superior portfolio diversification they provide (Sharpe, 1964). With both a high rate of return and low risk,

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<sup>1</sup> Total federal aid to post-secondary education expenses is estimated to be \$94.4 billion. This includes Stafford, Perkins and PLUS loan programs as well as \$18.6 billion in direct grants. These totals are compiled by the College Board (2006) or are available from the Department of Education at <http://www.ed.gov/about/overview/budget/studentloantables/index.html>.

mutually beneficial gains from trade should be available between the lender who provides capital and the borrower who has an opportunity to make the educational investment.

Table 1  
Returns to Investment in Education  
By Level, Latest Year, Averages by Per-capita Income Group (%)

Per-Capita Income Group	Mean Per-Capita Income	Rate of Return		
		Primary	Secondary	Higher
High Income	\$22,530	25.6	12.2	12.4
Low Income	\$363	25.8	19.9	26.0
Middle Income	\$2,996	27.4	18.0	19.3
World	\$7,669	26.6	17.0	19.0

Source: Psacharopoulos and Patrinos (2004)

The two most common justifications for the current government involvement in the student loan market are the existence of a market failure and positive externalities that make the privately funded level of educational attainment socially sub-optimal (Patrinos, 2000; Poterba, 1996). While some economists consider positive externalities to be a type of market failure, this paper focuses on a stricter interpretation.<sup>2</sup> Specifically, market failure theories include

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<sup>2</sup> Hall (2006) examines arguments for and against positive externalities to education. He concludes that establishing a causal link between education and external societal benefits has proved elusive and that the costs of government intervention to remedy any market imperfections may exceed any hoped-for benefits.

information asymmetries that produce an adverse selection problem for lenders, and a student borrower's insufficient collateral to use for securing loans. This paper discusses the relevance of market failure theories to the ability of private markets to adequately fund post-secondary education. It suggests that borrowers only lack collateral if they are unable to use their most valuable asset, human capital, when collateralizing loan contracts.

After discussing the two market failure theories, this research will examine recent evidence suggesting that the market for student loans is actually far from failing. Studies aimed at establishing whether or not student borrowers are constrained from obtaining sufficient funding due to credit constraints have proven inconclusive. Furthermore, non-governmental involvement in the loan market has increased substantially in recent years, validating the ability of private markets to meet educational funding needs. The paper will conclude by emphasizing the importance of a true free market in educational funding.

## **Theories of Market Failure for Student Loans**

### *Adverse Selection*

As described in Akerlof's (1970) classic model of the market for lemons, when two parties engage in trade with asymmetric information, a market failure can result. Asymmetric information is said to produce an adverse selection problem in which cost-conscious consumers of some products are unable to distinguish "good" products from "bad," and hence inevitably end up with the bad because sellers of the bad product have a lower reserve price. Stiglitz and Weiss (1981) extend adverse selection to the credit market by devising a model of debtor-creditor interaction in which borrowers, each with an investment project, have private information about the quality of the project that is unobservable to the lender. They argue that due to a borrower's private information, the market could reach an equilibrium that results in the supply of credit being constrained.

Such a model, if it accurately captures the dynamics of the student loan market, should detract from the ability of private markets to sufficiently fund educational investments. However, adverse selection is unlikely to create credit constraints in the student loan market for two reasons. First, in a competitive equilibrium with lenders entering the market until economic profits equal zero, lenders cannot stop at the student who sets marginal profit equal to the marginal cost of funding because with true asymmetric information, they cannot identify which student provides that threshold return. As a result, they may actually over-invest, allowing some of the profitable borrowers (good students) to subsidize the defaulters (de Meza and Webb, 1987). As such, asymmetric information can actually increase the level of investment in education beyond socially optimal levels.

Furthermore, material asymmetric information may not be present for student borrowers. Evidence actually suggests that students in their earlier undergraduate years lack specific knowledge about their earnings capacities after graduation, and gain more than half of the knowledge they do accumulate in college in their senior year (Betts, 1996). This suggests that prospective creditors have superior knowledge of the job market as compared to borrowers. If adverse selection impacted creditors significantly, one might also expect them to make special efforts to identify risk factors on a student-by-student basis. However, lenders base loan pricing on FICO scores and the school attended (Murad and Prackup, 2006), and generally do not consider other potentially relevant information such as field of study or course grades.

#### *Lack of Borrower Collateral*

Generally speaking, collateralized loans have lower interest rates than uncollateralized ones because of the extra security provided to lenders. If student borrowers are unable to offer collateral for their loans, interest rates might exceed the rate of return

of the educational investment, making schooling unfeasible. Johnstone (2000) describes the nature of the perceived problem:

...the buying and selling of claims on goods and services—that is, the borrowing and lending of money—depends so fundamentally on the certainty of repayment. Without this certainty, the lender will either not part with his claims at all, or will do so only at a high price (i.e. very high interest rate) so that the premiums of those who do repay can cover the inevitable losses from those who do not. The certainty of repayment, in turn depends either on the reputation, or credit-worthiness, of the borrower, or on the pledge of recoverable assets, or collateral, equivalent to the value of the loan, that the lender can claim (with the support of the law) in the event that the borrower does not repay.

Although student borrowers are often asset poor, they are typically human capital rich. For this reason, borrowers should only lack collateral if they are legally prohibited from using future income when negotiating borrowing arrangements. Under the current bankruptcy laws and legal rules restricting wage garnishments, borrowers are granted significant but not complete ability to exchange their future income in loan contracts. For most consumer loans, bankruptcy law gives borrowers an irrevocable right to discharge claims to future income, making human capital an unsuitable asset to use as collateral. Because bankruptcy law deprives borrowers of complete ownership of, and hence, the freedom to contract with this asset, it drives up borrowing costs for uncollateralized consumer loans. Adler, Polak and Schwartz (2000) and Gropp, Scholz and White (1997) provide respective theoretical and empirical demonstrations of how bankruptcy law increases borrowing costs.

Fortunately, policy makers in the U.S. have taken some steps to protect the school loan market from the ill effects of bankruptcy.

The Bankruptcy Abuse Prevention and Consumer Protection Act of 2005 included a provision that protects student loans issued by for profit lenders from discharge in bankruptcy.<sup>3</sup> Although this change does mitigate the impact of bankruptcy on a creditor, bankruptcy courts can still grant hardship discharges that can drive up borrowing costs as lenders account for the additional risk. However, in general the impact of hardship discharges seems to be modest because courts have set a fairly high bar for hardship, indicating that bankruptcy law as it stands grants creditors reasonable protection (Pardo and Lacey, 2005). Any future changes to bankruptcy law that weaken the ability to enforce contracts would likely increase borrowing costs and ultimately decrease funding availability.<sup>4</sup>

Perhaps more important are the significant federal and state limits placed on wage garnishment. Federal statutes limit garnishment for consumer loans to 25% of the borrower's disposable income, and many states have much lower limits.<sup>5</sup> For example, New York caps garnishment at 10% of gross income while South Carolina, Texas and Pennsylvania disallow garnishment completely. Some overextended debtors may in fact prefer garnishment to filing formal bankruptcy because a bankruptcy filing may require surrendering some assets to creditors. Dawsey and Ausabel (2004) find a negative correlation between state garnishment restrictions and the total number of bankruptcy filings and suggest that since about half of all credit card charge offs occur without a bankruptcy discharge, garnishment can be viewed as a form of informal bankruptcy. Because relief from student loans is difficult to obtain through bankruptcy, one would

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<sup>3</sup> See section 11 U.S.C. § 523(a)(8) of the U.S. Bankruptcy Code. Previously only nonprofit lenders or loans guaranteed by nonprofits were protected from bankruptcy discharge.

<sup>4</sup> On June 7, 2007, Senator Dick Durbin introduced legislation that would make private for-profit loans once again dischargeable in bankruptcy.

<sup>5</sup> Title 15, Chapter 41, Subchapter II § 1673. Note that garnishment for wages due to unpaid federally issued or guaranteed student loans is limited to 10% of disposable income. Higher Education Act, (P.L 102-164; 20 U.S.C. § 1095(a)).

expect a higher rate of substitution of formal bankruptcy by garnishment or informal bankruptcy for student borrowers.

Leniency in the face of student hardship is not universally bad, but a natural trade-off exists between on one hand providing insurance to borrowers who fall on hard times, and on the other ensuring that creditors are repaid so borrowing costs can remain low for the pool of current and future students. Specific data on student loans and garnishment is not available; however, if the current restrictions are significant for lenders, we might expect to see higher borrowing costs for students.

### **Recent Evidence**

If a market failure for student loans exists, then relatively poor students should have more difficulty in undertaking an educational investment when compared to their wealthier counterparts. Empirical studies aimed at determining whether asset-poor students face credit constraints have produced mixed results. Card (2001) uses an instrumental variables approach to find that marginal returns to schooling for students from poor families are higher than previous estimates based on ordinary least squares approaches. He concludes that high marginal returns that go uncaptured are evidence of credit constraints. Kane (1994) estimates that poorer families are more price sensitive for tuition and suggests this as evidence for credit constraints. One problem with these approaches is that they often fail to account for other relevant explanatory variables such as student ability. Carneiro and Heckman (2002) control for test scores and the family's income in the student's younger formative years, finding that "at most 8% of American youth are subject to short term liquidity constraints that affect their post-secondary schooling." Furthermore, Cameron and Heckman (2001) establish that tuition price sensitivity is no longer detectable once student ability is taken into account.

Interestingly, although some studies find evidence for credit constraints, these constraints have not measurably affected

educational outcomes. Keane and Wolpin (2001) study 11 years of survey data to explore whether the positive correlation between parental schooling and their children's level of educational attainment is caused by higher natural ability that is passed down or by wealth transfers that enable more spending on education. They find that although credit constraints appear to exist, they do not impact schooling decisions. Commenting on this counterintuitive result, they write:

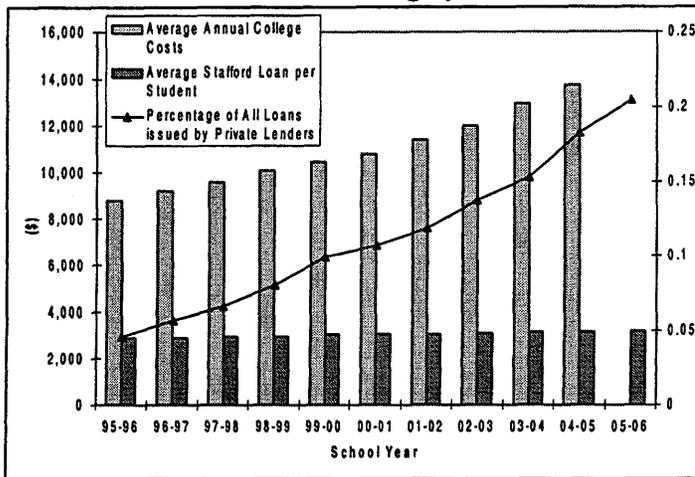
The finding that borrowing constraints are tight yet have little effect on school attendance decisions may seem surprising. Certainly, both the economics and public policy literatures on college financing have taken for granted that if borrowing constraints exist they would have substantial effects on enrollment for low income youth. In contrast, we find borrowing constraints have their primary effects on other choices made by youths. Specifically, the relaxation of borrowing constraints induces students to work less and consume more while in college.

Recent trends in the school loan market also cast doubt on the market failure hypothesis. A survey of major private lenders by the College Board (2006) indicates that the volume of private loans issued in the 2005-2006 school year was \$17.3 billion, or about 20% of all post-secondary education loan volume in the U.S. As shown in Figure 1, this is a full 15 percentage points higher than ten years earlier.

Some of the recent private involvement in the loan market has been driven by the high cost of college tuition, which has been increasing at a 5.2% annual rate over the last 10 years (U.S. Department of Education). This growth in college costs has outstripped the \$5,500 annual borrowing limit for Stafford loans, which has not changed in the last decade. Private lenders have essentially filled the gap between federal loan limits and borrower

needs (Figure 1), aided by increases in the sophistication of the capital markets that service school lenders. The securitization of school loans through companies such as Sally Mae and First Marblehead has provided a conduit for capital market flows into education. In 2006, fully \$16.6 billion of the \$17.3 billion in private loans were securitized by lenders and resold in the capital markets (Faynzilberg et al., 2007).

Figure 1  
Student Borrowing by Year



Sources: College Board (2006) and U.S. Department of Education

### Conclusion and Gains from a Free Market for Student Loans

Although the student loan market is traditionally thought to suffer from inherent market failures due to the unique nature of the investment, recent evidence disputes the existence of these failures. Traditional explanations fall short in a legal environment that protects freedom of contract, and involvement of private lenders in the market has been increasing rapidly. These developments suggest

the potential for free markets to fund even larger portions of aggregate investment costs in post-secondary education. Apart from the obvious benefit of reducing the burden for taxpayers, a free market for educational loans could yield additional benefits for both students and society.

Hayek (1945) famously wrote about the importance of prices in signaling information about the value of resources. One input to the student's educational decision is the availability and the interest rate of funding, which he can interpret as a sort of price. In our current system, interest rates under federal programs are not sensitive to investment risk because repayment is guaranteed by the government. If interest rates were set by supply and demand, the cost of borrowing could help students make more efficient educational decisions. Lochner and Monge-Naranjo (2002) looked at a survey of 11,000 college graduates and found that the default rate for students who majored in health professions was 2.1%, while for public affairs and social services majors it was 9.0%. These significant differences in loan performance would be reflected in the interest rates charged to borrowers, helping to guide students into vocations with the highest labor market demand.

A free market in educational funding might also stimulate innovation, such as income contingent loans.<sup>6</sup> As originally proposed by Friedman (1962), an income contingent loan specifies that a borrower repay a predetermined percentage of his income over a number of years rather than a fixed periodic payment, allowing borrowers to adjust monthly payments to their current income. This type of arrangement may well be preferred for risk average borrowers (Shiller 2003; Lleras 2004). With this and other innovations, the market for educational funding would begin to resemble the diversity of arrangements observable in traditional investment markets.

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<sup>6</sup> Income contingent loans are sometimes called human capital contracts.

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