



Default risk and private student loans: Implications for higher education policies



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ABSTRACT

In recent years, the proportion of students facing a binding constraint on government student loans has grown. This has led to substantially increased use of private loans as a supplementary source of finance for households' higher education investment. A critical aspect of the private market for student loans is that loan terms must reflect students' risk of default. College investment will therefore differ from a world in which government student loans, whose terms are not sensitive to credit risk, are expanded to no longer bind. Moreover, beyond simply crowding out private lending, expansions of the government student loan program will feed back into default risk on private loans. The goal of this paper is to provide a quantitative assessment of the likely effects of the private market for student loans on college enrollment. We build a model of college investment that reflects uninsured idiosyncratic risk and a well-defined life-cycle that is consistent with observed borrowing and default behavior across family income and college preparedness. We find that higher government borrowing limits increase college investment but lead to more default in the private market for student loans, while tuition subsidies increase college investment and reduce default rates in the private market. Consequently, higher limits on government student loans have small negative welfare effects, while tuition subsidies increase aggregate welfare.

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1. Introduction

More than half of undergraduate students in the United States borrow to finance their college education and an increasing number of students borrow the maximum available in the government student loan program (Berkner, 2000). This has led to substantially increased use of private loans as a supplementary source of finance for households' higher education investment. In fact, undergraduate borrowing from nonfederal sources peaked at 25 percent in 2007–2008 (College Board, 2014). This is important to policy makers because as more funds are borrowed for student loans (from all sources), the repayment process becomes complex, especially in light of recent policy changes in both the government and private student loan markets.¹ In fact, default rates on all forms of student loans have increased in the past decade (refer to Fig. 2 in the Appendix). The goal of this paper is to provide a quantitative assessment of the likely effects of the private market for student loans on college enrollment in order to better assess the effectiveness of higher education policies.

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¹ Section 1.2 includes a discussion about recent policy changes in the government and private market for student loans.

A critical aspect of the private market for student loans is that, unlike in the government student loan market, loan terms must reflect students' risk of default. Eligibility, interest rates and loan limits in the private market, all depend on credit scores. In addition, default in the private market affects credit risk and in turn, results in worse loan conditions. The rise of student loans originating in private credit markets suggests that individual credit risk may affect college investment. In particular, individuals with good credit may not be constrained in their college investment by limits on Federal student loans since they can access the private market, whereas the opposite may be true for those with bad credit. Moreover, beyond simply crowding out private lending, expansions of the government student loan program will feed back into default risk on private loans. More generally, higher education policies may affect the distribution of borrowers, and as a result, may have different implications for default behavior, credit risk, and consequently welfare.

This discussion raises the following question: What are the implications of the private market for student loans in the presence of public funding for student loans? In answering this question, we shed light on two additional issues: How important are credit risk and the private student loan market for college investment? How do borrowing and default behavior in both the government and private markets for student loans vary across individual characteristics? To our knowledge, this is the first paper to quantify these effects in a model that is able to replicate observed patterns in borrowing and default behavior in student loans. We demonstrate the importance of accounting for the interaction between government and private student loan markets when studying higher education policies.

We develop a general equilibrium heterogeneous agents life-cycle model where agents differ with respect to an index of ability (or college preparedness), resources (expected family contributions for college), and credit risk type which summarizes the likelihood of default, all of which are observable. We assume that ability, credit type, and family income are positively correlated and that the returns to college increase in ability (consistent with the data). Students can invest in college and use expected family contributions, intra-family transfers and student loans to finance their college education. Students borrow from the government student loan program, where eligibility conditions depend on their expected family contributions and college costs. Depending on their financial need, students may face a binding borrowing limit on Federal student loans. These students can turn to the private credit market to finance the rest of their college costs. Private creditors assess individual default risk based on credit type and offer type-contingent credit terms.

In order to provide a credible laboratory for our policy counterfactuals, we ensure that our benchmark economy is consistent with borrowing and default behavior in the data. First, students from high-income families invest more in their college education, but borrow less than those from low-income families. In addition, default rates among rich students are lower than those of poor students. The same holds true for students with more college preparedness (or innate ability): high ability students have higher college enrollment rates, lower borrowing levels and lower aggregate default rates than those with low ability. As for credit type, we are the first to document that college investment is higher for students with good credit compared to those with bad credit.

We study the policy implications of the importance of credit risk for college investment and the interaction between the government and private student loan markets. Specifically, we analyze the 2008 increase in borrowing limits that the U.S. government student loan program implemented. Undergraduate students can now borrow \$31,000 over the course of their undergraduate education, up from \$23,000. Using our model, we find that this policy induces an increase in college investment by almost 10 percent, and students borrow more from the government and less from the private market. At the same time, an increase in the borrowing limit by the government induces a change in the riskiness of the pool of borrowers, which adversely affects the private market for student loans and results in higher default rates (7.8 percent compared to 3.1 percent in benchmark). Consequently, the lending terms in the private market become less favorable to compensate for greater default risk in equilibrium and the cost of default is transferred to borrowers via higher interest rates. We find that these effects have important welfare implications. In particular, in a partial equilibrium analysis where interest rates do not adjust with an increase in default risk, the model overstates the (positive) welfare impact of the policy (+0.12 percent). However, when the interaction between the private and the government sectors are accounted for in general equilibrium, the welfare gain induced by the government policy is completely negated so that welfare is lower with high government borrowing limits compared to the benchmark economy, albeit the loss is small (−0.04 percent).

We then compare the effects of increasing government borrowing limits in the government student loan program to a set of budget-neutral tuition subsidies (equal, need-based and merit-based subsidies). Our main results are two-fold. First, we find that tuition subsidies lead to more college investment *and* higher aggregate welfare compared to higher government borrowing limits. This result hinges on the fact that, unlike higher government borrowing limits, subsidies increase college investment without increasing the default risk in the private market for student loans. Therefore, interest rates in the private market are lower under a tuition subsidy compared to an environment with higher government borrowing limits. Our second result is that merit-based tuition subsidies lead to larger welfare gains than need-based subsidies, even though need-based subsidies encourage more college investment. Compared to the higher government limits policy, merit-based subsidies reduce default risk in both the government and private markets since they increase college enrollment rates among high-ability students. Need-based subsidies, on the other hand, induce a smaller decline in default risk in the private market and an increase in default risk in the government student loan program. In this case, low-income students are more likely to invest in college and borrow relatively more to finance their college education. Consequently, the welfare gain induced by merit-based subsidies is 0.45 percent compared to 0.35 percent with need-based subsidies.

Our results suggest that if the goal of education policy is to improve aggregate welfare, then merit-based tuition subsidies are preferable to both need-based subsidies and higher government borrowing limits, as merit-based subsidies

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