Building an Empirical Basis for Improving Student Loan Policy: Understanding the sources of default and delinquency among student loan borrowers

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Today I will discuss the sources of default and delinquency among student-loan borrowers, drawing heavily upon a paper Constantine Yannelis and I wrote a year ago. In that paper, we analyzed data maintained by the Departments of Education and Treasury for purposes of administering federal aid programs.

Our basic conclusion was that high rates of student loan delinquency were primarily due to the expansion of credit at institutions and to students who were at high risk of struggling with their loan burdens to begin with. For instance, before and during the recession, enrollment increases at for-profit schools, and higher rates of borrowing among community college students increased default rates over the last few years. The rise in defaults could have been anticipated based on historical experiences of borrowers at those institutions and the characteristics of the students that were borrowing.

Today I will offer a summary of that work, and describe related work examining an earlier student loan market crisis in the late 1980s. I will also examine the ongoing expansion in credit among graduate students, parents, and independent undergraduate students that has left some borrowers with very large debts, which will burden borrowers (or taxpayers) for years to come.

I will focus almost exclusively on outcomes like default and delinquency, and will largely ignore the major benefits of pursuing higher education, such as higher lifetime incomes, lower rates of joblessness, and better health and wellbeing. I used to say, unconditionally, that more people should go to college, and while I still believe that, I now feel the need to qualify that statement: more people should go to college, but they should carefully choose the institutions they attend, how much they spend, and how much they borrow. The goal of the work I summarize today, and of previous projects that I have contributed to, such as the College Scorecard, is to improve financial aid policies and to inform students so they can make better school choices. My hope is that more students will go to college, especially to institutions where they are likely to succeed.

To begin with, I will discuss the first student loan repayment crisis in the late 1980s, where student loan defaults first spiked.

According to our calculations, default rates hit their all-time peak over 25 years ago, at levels far higher than today. This chart (Slide 2) shows the 3-year cohort default rate of borrowers entering repayment on

their last loan each year. In 1990, the default rate hit 35 percent (based on how we measure default rates in our paper, which is slightly different from how ED calculates them). In contrast, for today's crisis, 3-year default rates are about 18 percent. This first crisis provides a simple introduction for understanding today's trends.

This chart (Slide 3) shows the number of new institutions entering as participants in the loan program each year. Many institutions first appear in 1970, when the data first begins. There is another surge in 1980/1981, when the loan program expanded, and eligibility rules changed to allow more institutions (and students) to qualify to participate in Title IV loans. As the chart shows, the entry of hundreds of new institutions continued late into the 1980s.

Unfortunately, the institutions that entered in the mid- to late-1980s included many low-quality institutions, some of which appeared to be designed solely to profit from the loan program. These included many for-profit institutions offering distance-learning programs. The students at these new institutions defaulted at sky-high rates, soon after separating from the school.

You can see this phenomenon in the red line in the chart on Slide 4. The red line shows the average 3-year default rates of all students that *ever* borrowed to attend each institution, based on the year that the institution began participating in the loan program. For instance, institutions that participated starting in 1970 had average 3-year default rates of about 7 percent over the subsequent 45 years (these are schools that you have heard of, and appear in national rankings). Indeed, most of the institutions that began participating prior to 1980 have subsequently had strong student loan outcomes.

But during the 1980s, there was a large influx of institutions where students would default at high rates. For instance, institutions that entered in 1986 and 1987, on average, had 30 percent 3-year default rates over their lifetime of participation in the loan program. I emphasize that this is an average; some institutions had vastly higher default rates.

Prior to the 1980s, there were very few schools one needed to borrow to attend. Those schools were selective, had relatively cheap tuition, and had successful students. As a result, the student loan program worked well without underwriting student loans. In effect, the admissions committees at selective schools provided the underwriting. But certain entrepreneurial institutions saw an opportunity in the lax underwriting, and quickly their admissions departments became marketing departments, which lead to high default rates.

How was this crisis resolved? Congress implemented tough new accountability standards for schools and students. It enacted the 85/15 financing rule, cohort default rate rules, and automatic wage garnishment for delinquent student loan debt. These rules barred most of the worst performing schools from participating in the program and led to an exodus of low-quality schools from the program.

This chart (Slide 5) shows exits from the student loan program—the number of schools that ceased to participate each year. You can see that several hundred institutions, mostly for-profit schools, were forced out, with more than 300 exiting in 1991.

The remaining schools were mostly the original selective public and private institutions, and a few high-quality for-profit schools. After the exodus of low-performing schools and the implementation of tougher borrowing rules, default rates fell to the low levels that would continue for many years.

Today's loan crisis is conceptually similar in that it involves a substantial lending expansion at high-risk institutions and to higher-risk borrowers in areas where accountability was relatively weak or had eroded.

For instance, in our work last year, Constantine and I showed that the increases in default could largely be traced to increases in enrollment at 1) existing for-profit schools, where essentially all students borrowed, and 2) increases in the share of students who borrowed at community colleges, where historically, very few students took out loans.

Slide 6 shows the number of first-time borrowers by the type and selectivity of the institution where they first borrowed to attend. For instance, the dark blue bands are the number of first-time for-profit borrowers each year, and the second dark band is the number of 2-year public/private borrowers—mostly community college students.

First, you can see a substantial increase in the number of for-profit borrowers in the late 1980s and the subsequent contraction in the early 1990s in the early boom and bust. More recently, the rise in for-profit borrowing starts to accelerate in the early 2000s, in part because of the changes in accountability and eligibility rules. Borrowing surges at these institutions during the recession.

The magnitude of this influx is large. Slide 7 shows the number of borrowers entering repayment on their loans in 2000 and 2011, the peak recession cohort. In 2000, there were only 237,000 for-profit borrowers starting to repay their loans. In 2011, there were almost 1 million.

As a result, in 2011, for-profit students represented more than 31 percent of borrowers leaving school and starting to repay federal loans that year, even though they made-up only nine percent of all postsecondary students and 25 percent of all active federal borrowers. Combined with students from two-year institutions, almost half of borrowers in their first years of repayment were borrowers who last attended a for-profit or community college.

My suspicion is that institutions have large effects on student outcomes, and thus the change in the composition of institutions—more students going to high-default rate schools—mattered directly for worsening student outcomes. That contention is difficult to prove because students are highly segregated by income and ability at American colleges. For instance, it is hard to know whether Harvard students do well because of the quality of their education or because of the selectivity of its admissions committee. However, there is growing evidence that suggests that school quality matters for outcomes like completion and earnings. It is thus likely that these changes in composition contributed directly to higher default rates.

Additionally, students at for-profit and two-year schools were higher-risk borrowers to begin with. They were disproportionately drawn from low-income families and higher-poverty neighborhoods. For instance, Slide 8 shows that while the median parental income of dependent borrowers at four-year public and private institutions was about $68,000, it was about $49,000 at two-year schools and $30,000 at for-profit institutions.

Slide 8 also shows that borrowers from for-profit and two-year schools were also more likely to be older, to be "independent" of their parents for aid purposes, and to be first generation borrowers. Hence, they may have less ability to draw upon their families for experience and support during times of hardship. In addition, they were less likely to complete a degree, especially a four-year degree. All these factors are associated with a higher risk of student loan default.

I also do not want to minimize the role of bad luck—labor market conditions were poor, and they were especially detrimental for the types of students attending for-profit and community colleges, who often struggled in the labor market before they even enrolled. But the recession's largest effect was not on ability to pay due to poor labor market conditions, but on enrollment patterns driving-up borrowing at higher-risk schools and students.

Slide 9 shows that almost 30 percent of borrowers at for-profit and community colleges who left school in 2011 defaulted within three years, compared to 13 percent of undergraduate borrowers at four-year public and private institutions, and three percent of graduate borrowers.

All told, a majority of the increase in default rates could be traced to the increase in for-profit and community college borrowers. Graduate students and students at 4-year public and private institutions, for instance, did not experience a substantial increase in default nor a substantial decline in their post-enrollment earnings.

Since writing that paper a year ago, we've examined another dimension along which credit expanded substantially over the last few years: the increase in debt burdens among groups of borrowers who have historically been relatively low-risk, including parents, grad students, and certain undergraduate borrowers. The increase in debt is closely related to increases in federal loan limits, and the subsequent increase of borrowers who are able to borrow large amounts. As a result, a small portion of borrowers have incurred loan balances that are well above any seen in historical experience.

These borrowers do not default at high rates, so there is not a timely and salient indicator of distress that we can observe among borrowers at say, for-profit schools. But repayment rates for these large-balance borrowers have slowed; many express that their burdens are too large; and the composition of borrowers with larger balances, in terms of how they accumulated their loans and the type and quality of schools they attended, has shifted substantially over time. This credit expansion thus has many similarities to the changes that led to high default rates among undergraduate borrowers.

To illustrate these changes, this Slide 10 shows the average annual disbursement of loan dollars per active borrower for undergraduate, graduate, and parent borrowers in real (inflation adjusted) terms, each year. Recent borrowers have taken on more debt each year than borrowers in the past. After the elimination of annual and lifetime limits for PLUS borrowers, annual borrowing amounts among graduate and parent borrowers surged. The average parent now borrows more than $15,000 a year, and the average grad student almost $25,000. Most such borrows borrow for multiple years.

There are also modest increases in loan limits for undergraduates, especially for independent undergraduate borrowers. You can see these limit increases in the early 1990s and after 2007. This means that certain undergraduate borrowers could accumulate larger balances than in the past, which may be indicated by loan limits applying to dependent borrowers.

The consequence is that historically high numbers of borrowers owe very large amounts in federal loans. Slide 11 shows that for the cohorts entering repayment in 2014, over 42 percent owed more than $25,000, about 18 percent owed more than $50,000, and almost 6 percent owed more than $100,000. Prior to the early 1990s, it was simply impossible to incur such large debts, and even in 2000, it was extremely rare.

One concerning implication is that while borrowers leaving school with more than $50,000 of debt made-up only 18 percent of borrowers in 2014, they owed more than 55 percent of that cohort's debt. That's not just true of this repayment cohort. A mere 13 percent of borrowers had balances over $50,000, but

those borrowers owed about half of the 1.1 trillion dollars of outstanding student debt in 2014. That means that a very large share of federally-directed investment, including the associated economic and financial risks, is concentrated among a relatively small share of the borrowing population.

On the bright side, there are lots of reasons why these borrowers, as a group, are likely to be a good credit risk. Historically, and to a large extent today, they are graduate and professional borrowers, tend to have very favorable labor market outcomes, and disproportionately come from higher-income family backgrounds just because of who attends selective colleges and graduate programs. For instance, slide 13 shows that 35 percent of all student debt is owed by students who go on to be in the top 20 percent of the income distribution. Historically, and on average, they are a low-risk group.

Indeed, in the past, they have very low default rates. Slide 14 illustrates a familiar pattern showing that most borrowers who default owe relatively small balances. Among borrowers with more than $100,000 of debt in the 2000s, fewer than 8 percent defaulted within 5 years of entering repayment.

So, why should we be concerned?

First, the levels of debt are simply outside of our historical experience, and so it is difficult to project what the implications are. If the previous charts are not compelling, I could give you more illustrations. It appears, for instance, that there are roughly 170,000 students and parents who each owe more than $250,000 in federal student loans. They represent almost 5 percent of the total federal portfolio, or about $54 billion dollars.

Second, even though borrowers with large balances are unlikely to default, when they do default, there is a lot of money at stake. Even though borrowers with less than $25,000 of debt shown on Slide 14 make-up 85 percent of borrowers in default, they represent only half of balances in default. Most defaulted debt is associated with large balance-borrowers.

On the one hand, the credit supplement to the federal budget reports that graduate and parent loans are not subsidized (at least, according to federal scoring rules for federal loans), and that recoveries on defaulted loans are high. This suggests that defaulted loans do not cost anything to the government. On the other hand, these projections may prove incorrect, either because historical experience is not a good indicator of future experience, or because in the future, high-balance borrowers will have substantial debt forgiven under income-based repayment plans or public-sector loan forgiveness. Given patterns of enrollment in income-based plans and associated revisions to budget projections, this scenario seems relatively likely. If this is the case, the fiscal costs could be much larger.

A third concern is that the composition of borrowers with large balances has changed in ways that has close parallels to the changes among undergraduate borrowers, but without leading to an acute crisis demanding the attention that defaults among, say, for-profit borrowers has. Slide 15 shows the share of borrowers with large balances based-on how they accumulated their loans. Historically, large-balance borrowers were almost exclusively graduate students. Now, about 30 percent of the 2014 repayment cohort with loans over $50,000 are independent borrowers with only undergraduate loans, and 18 percent are parents.

I was surprised that undergraduate borrowers could accumulate such large balances. But consider that loan limits have increased, more loans are unsubsidized and accrue interest while in school, students may take more years to graduate, and more undergraduate borrowers are independent. A surprising number of undergraduates now end up with more than $50,000 of federal debt.

The types of schools large-balance borrowers attend have also changed. Slide 16 shows that almost 25 percent of borrowers with large balances last borrowed to attend a for-profit school either as an independent undergraduate or as a graduate student. The share of borrowers who had attended 4-year private institutions declined correspondingly.

These compositional changes are similar to those that led to high default rates among small-balance borrowers. It seems unlikely that these recent cohorts are going to have the same lifetime earnings as, for instance, borrowers pursuing professional degrees a decade ago. But the compositional changes are clearly not resulting in high rates of default in this population.

Does the absence of default imply that outcomes are good? For instance, is it an indication of low risks, or instead, that default rates are not a good indicator of the long-run costs of these loans?

One indication that it is the latter is the fact that there is more heterogeneity in repayment rates across institutions for graduate loans or parent loans as there is among undergraduate loans. Slide 17 compares 5-year institutional repayment rates calculated by Federal Student Aid from the population of loans entering repayment in 2009. The repayment rate is defined as the share of the original principal balance entering repayment in 2009 that has been paid down by 2014, by institution for each type of loan. I have grouped them into deciles of institution based on number of borrowers.

The chart shows that at the bottom 10 percent of institutions, parent PLUS borrowers owed 30 percent more in 2014 than in 2009. In the second-lowest decile, the average parent repayment rate was zero. Because parent loans can be deferred while the students are still enrolled, many parents seem not to make payments and to let the interest accumulate. These borrowers may not even be eligible to default within five years.

Compared to undergraduate borrowers, repayment rates for parents are lower, largely because repayment is often deferred while the student is in school. Similarly, repayment rates for graduate students are slower because they typically choose longer amortization schedules. However, the chart shows that the variation across institutions in graduate and parent repayment rates is just as large as the variation in repayment rates across undergraduate institutions. Further, this chart minimizes the actual variation across borrowers because it presents data at the institution level averaged over groups of many schools—at each school, some borrowers fare better and some worse.

In other words, even if the average outcome of graduate or parent borrowers is positive, the marginal cost of some loans at certain institutions and to certain borrowers may be very large.

In other work, we have found that repayment rates at 5 years appear to be a strong indicator of the longer-term performance of a loan, correlate with other measures of loan outcomes like default or negative amortization, and relate to other institutional outcomes such as the labor market success of students. The wide variation in repayment rates across institutions may also be of concern because it indicates that some borrowers will struggle with their loans far into the future.

This leads to a final observation, which is that we lack publicly available and timely indicators of the financial health of borrowers beyond the cohort default rate. Obviously, there is little public information on loan outcomes for parents, graduate borrowers, or independent undergraduate borrowers by institution. Even if cohort default rates were available, they are unlikely to be useful for large-balance borrowers, because large-balance borrowers disproportionately tend to select into income-based repayment or extended payment plans, and otherwise generally manage to avoid default. Indeed, I fear

that the cohort default rate, which features heavily in our accountability system and in public disclosures, is no longer going to be a useful measure of institutional strength or loan performance because of the rising enrollment in income-based repayment plans.

To summarize, the increase in default rates is largely explained by changes in the composition of borrowers, especially the entry of borrowers from for-profit and community colleges. One important response has been to strengthen the accountability at those institutions. The gainful employment rules, the borrower defense rules, the strengthening of accreditation, and efforts in disclosure and consumer outreach (like the College Scorecard), have substantially reduced borrowing at higher-risk institutions and steered students elsewhere. Indeed, several of the lowest-quality, highest-risk institutions have been forced out of the program.

However, similar expansions in student loan debt to higher-risk borrowers are occurring elsewhere, especially among graduate borrowers and parent borrowers. The fiscal and economic implications of the expansion are, as of yet, unclear, but concerning. Today's large balance borrowers appear quite different from borrowers of the past, suggesting that risks may be changing. Those risks are difficult to measure and assess with publicly-available data. Because we are not measuring these risks, we do not have the basic building blocks needed to construct the accountability systems necessary for preventing and reducing the incidence of costly outcomes.

Thank you. I look forward to our discussion.