Credit Constraints, Debt, and Uncertainty in the Market for Education

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Governments and individuals spend considerable and growing sums on education

Source: *Digest of Education Statistics, 2010.*
- Somebody has to pay these costs
  - taxpayers
  - institutions/donors
  - students/parents
- The way educational investments are financed affects social mobility, the distribution of income, and economic growth and development
US Context

- Major changes in the labor market over past several decades
  - rising average returns to college in labor market since early 1980s
  - increase in uncertainty and risk in labor market, especially in recent recession

- Major changes in the education sector over past few decades
  - rapidly rising net tuition levels
  - increase in demand for student loan programs
  - significant increase in private lending since early 1990s
  - after declining for 15 years, default rates have risen since 2005
US Tuition Levels Since 1981

Average Tuition & Fees in US 1981 to 2011 (Current $)

Source: College Board, Trends in College Pricing 2011 (Table 4a).
Student Loans 2000-01 to 2010-11

For detailed background data and additional information, please visit http://trends.collegeboard.org.

Types of Loans
In 2010-11, nonfederal loans, which usually have less favorable repayment terms than federal loans, constituted only about 7% of education borrowing. From 2005-06 through 2007-08, nonfederal loans accounted for about a quarter of this borrowing.

FIGURE 4
Growth of Federal and Nonfederal Loan Dollars in Constant 2010 Dollars, 2000-01 to 2010-11

NOTE: Nonfederal loans include loans to students from states and from institutions, in addition to private loans issued by banks, credit unions, and Sallie Mae.

Earlier editions of Trends in Student Aid have not included estimates of institutional loan volume and have excluded some types of student loans made by states. However, Figure 4 includes estimates for these loan sources for all years. Percentages may not sum to 100 because of rounding.

SOURCE: Table 1.

Source: College Board, Trends in Student Aid 2011.
Federal Student Loan Cohort Default Rates

National Student Loan Cohort Default Rates 1987-2009

Percent

0 5 10 15 20 25

Two Main Problems Today

- Some students face limited resources/credit, affecting their education choices
- Others have difficulties with high debt levels

What are the implications for student loan policies?
Credit Constraints

- Someone is credit constrained if...
  - they cannot borrow as much as they would like to cover current expenditures
- Credit constraints are potentially important for college, since many youth would like to borrow against higher future earnings
  - can cause individuals to forego good investments
  - being constrained does not necessarily mean youth cannot pay tuition bills
- Credit constraints arise due to difficulties in enforcing repayment
  - college students have little collateral
Implications of Credit Constraints for Education

Compared to rich/unconstrained, youth that are poor/constrained should:

- under-invest in their education
  - acquire too little schooling
  - attend lower quality schools
- work more during school
- delay college entry to accumulate savings
- have low levels of consumption while in school
Evidence on the Importance of Credit Constraints in Education

- Little evidence credit constraints affected schooling in early 80s (Keane and Wolpin ’01, Carneiro & Heckman ’02)
- Evidence suggests increased salience of constraints today:
  - significant increases in the share of dependent students ‘maxing out’ their federal student loan opportunities – from 4% in 1989-90 to 31% in 2003-04 (4-yr public)
  - doubling in family income – college attendance gradients for recent cohorts NLSY79 NLSY97 (Belley & Lochner ’07)
  - able low-income students work much more than their high-income counterparts (B&L ’07)
  - an additional $10,000 in housing equity raises college enrollment by 0.7 percentage points, with larger effects among lower income families (Lovenheim ’11)
- Changes in family income – college quality relationship mixed (B&L ’07, Pavan & Kinsler ’11)
- Weak effects of income on college delay (B&L ’07)
Caveat: Maybe Poor Kids Just Don’t Like School

- One explanation for the observed positive relationship between family income and schooling is that higher income families place greater value on education
  - poor kids don’t go because they don’t like (or understand the value of) school

- Not clear why this relationship would have strengthened so much since the early 1980s

- Increase in net returns to schooling should have weakened the income – attendance relationship in the absence of borrowing constraints
Adolescent Skills/Abilities

- Empirical studies find that differences in adolescent achievement explain much of the relationship between socioeconomic background and college-going.
- Recent studies consider the development of these achievement levels through early investments by families and schools.
Main Lessons on Early Borrowing Constraints & Investments

Due to dynamic complementarity in human capital production, policies in one period affect investment decisions in other periods:

- difficult to make up for early investment deficits with later policies
- dynamic complementarity + early borrowing constraints $\rightarrow$ early investment policies can have larger impacts than college-age policies
- ignoring early investment responses underestimates impacts of college-age policies
Labor market risk is an important factor that can also discourage schooling (Johnson 2013)

- youth may forego opportunities with a high expected return due to large downside risk

Demand for credit may be much higher with explicit (or implicit) insurance/forgiveness mechanisms

- effects of loan limits may depend on repayment policies and labor market risk

Important to think about ‘insurance’ and credit together in today’s economy
Some Facts on Debt and Default

- Some students do borrow a lot...
  - 10% of undergraduates earning a BA in 2007-08 had borrowed over $40,000

- But, most do not
  - roughly 1/2 of BA recipients had less than $10,000 in student loans
  - roughly 1/3 had no student debt

- Nearly 15% of students default within the first three years after school

- Default rates vary a lot by type of institution & degree
  - other personal characteristics also matter, but little is known for current cohorts
Total Debt Levels Among Recent Graduates

Figure 1. Percentage Distribution of Loan Debt Among Undergraduate Certificate and Degree Recipients, 2007-08

<table>
<thead>
<tr>
<th>Degree Level</th>
<th>No Debt</th>
<th>Less than $10,000</th>
<th>$10,000 to $19,999</th>
<th>$20,000 to $29,999</th>
<th>$30,000 to $39,999</th>
<th>$40,000 or more</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bachelor’s degree</td>
<td>14%</td>
<td>19%</td>
<td>15%</td>
<td>9%</td>
<td>10%</td>
<td></td>
</tr>
<tr>
<td>Associate degree</td>
<td>52%</td>
<td>23%</td>
<td>14%</td>
<td>6%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Certificate</td>
<td>37%</td>
<td>34%</td>
<td>21%</td>
<td>5%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>41%</td>
<td>20%</td>
<td>18%</td>
<td>11%</td>
<td>6%</td>
<td>6%</td>
</tr>
</tbody>
</table>

Source: National Postsecondary Student Aid Study (NPSAS) 2007-08
Note: Includes U.S. citizens and residents. PLUS loans, loans from friends and family, and credit card debt are not included. Components may not sum to 100 percent due to rounding.

Federal Student Loan 2-Year Cohort Default Rates

National Student Loan Cohort Default Rates 1987-2009
Federal Student Loan 2-Year Cohort Default Rates

Cohort Default Rates for Federal Stafford Loans, FY 2009

Percent

Public Institutions  Private Institutions  Proprietary Institutions

2-3 Year  4-year
What do these patterns mean?

- Do some students borrow too much?
  - borrow more than they could reasonably expect to be able to repay?
  - walk away from their debts too quickly?
- Or, is some default to be expected (and desirable) given an uncertain labor market?
  - an implicit form of loan forgiveness/insurance
Policy Questions and Implications

- With labor market uncertainty, need to consider tradeoff between enforcing repayment and providing insurance against a bad labor market
- Two key policy questions:
  - How should loan limits vary across individuals, institutions, or majors?
  - How should repayment levels depend on income and other factors?
- Answers to these questions have important implications for who attends college as well as personal welfare after school
- Can look to economics literatures on optimal contracting with limited commitment and private information
  - want to provide as much ‘insurance’ as possible
  - nature of this insurance depends on the market failure
What should an ‘optimal’ loan program look like?

- Imperfect enforcement
  - implies upper limits on borrowing should be linked to earnings potential due to threat of default
  - payments increase one-for-one with income at low levels but more slowly at higher levels where default is a threat
  - with incomplete contracts, default is the only form of insurance

- Moral hazard – unobserved effort
  - insurance limited by elasticity of effort to net income
  - payments increasing less than one-for-one in income

- Income costly to observe
  - payments increase one-for-one with income at low levels when income verification is triggered
  - repayment independent of income for high earnings

- Adverse selection – unobserved abilities
  - use loan limits and repayment schedules to separate types
  - limits capacity for insurance
Overview of Current Federal Student Loan Environment

- Homogeneous loan limits for all undergraduates with higher limits for graduate students
  - limited variation by need but not by repayment potential

- Main current repayment plans:
  - Standard/Extended Repayment – fixed payments for 10-/25-year term
    - forbearance, deferment
    - default (triggers collection costs, wage garnishment)
  - ‘Pay as You Earn’
    - standard payments for high earners
    - low earners pay 10% of discretionary income
    - remaining debt/interest after 20 years is forgiven
Is the Current System Optimal?

- Imperfect enforcement
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Summary and Open Questions
Summary

- Significant rise in the costs of and returns to college appears to have increased the demand for credit beyond the supply available from government programs
  - private lenders stepping in, but probably not enough for some
- More and more students are facing difficulties managing their student debts after school
- Providing credit for education requires repayment enforceability and raises other incentive problems
- It is important to consider these problems when designing government loan systems
- Also important to recognize that constraints at early ages may be more of a concern than at college-going ages
Open Questions

- How much credit should individuals get?
- What factors should credit depend on?
- How should repayments be structured?
  - commitment problems
  - moral hazard problems
  - adverse selection and extent of *ex ante* heterogeneity vs. *ex post* uncertainty
- To what extent should student credit and other social insurance programs be integrated?
- What role should government vs. private lending play?
Figure 2a: College Attendance by AFQT and Family Income Quartiles (NLSY79)
Figure 2b: College Attendance by AFQT and Family Income Quartiles (NLSY97)