

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

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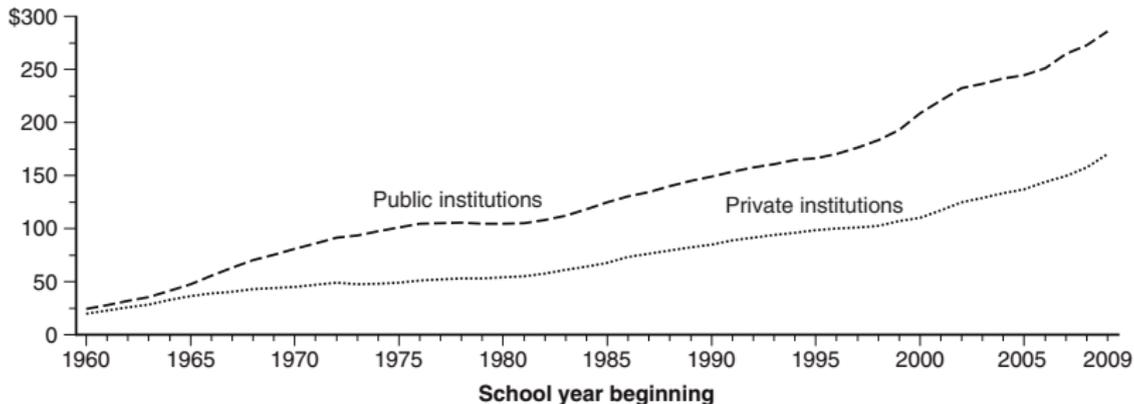
University of Western Ontario

*2013 Policy Summit*

Federal Reserve Bank of Cleveland

## Governments and individuals spend considerable and growing sums on education

**Total expenditures, in billions of constant 2008–09 dollars**



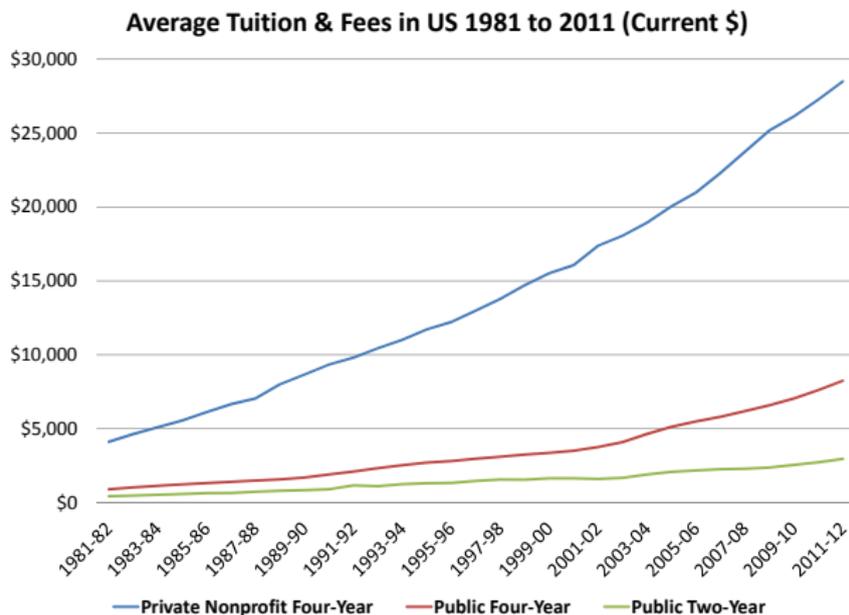
Source: *Digest of Education Statistics, 2010*.

- 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

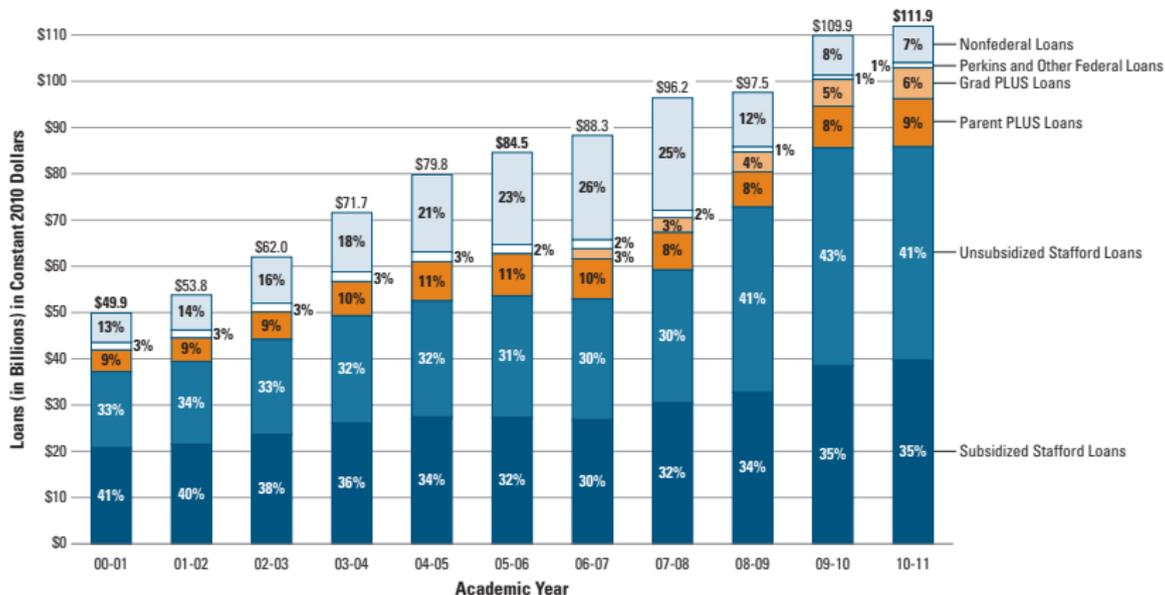
# US Tuition Levels Since 1981



Source: College Board, *Trends in College Pricing 2011 (Table 4a)*.

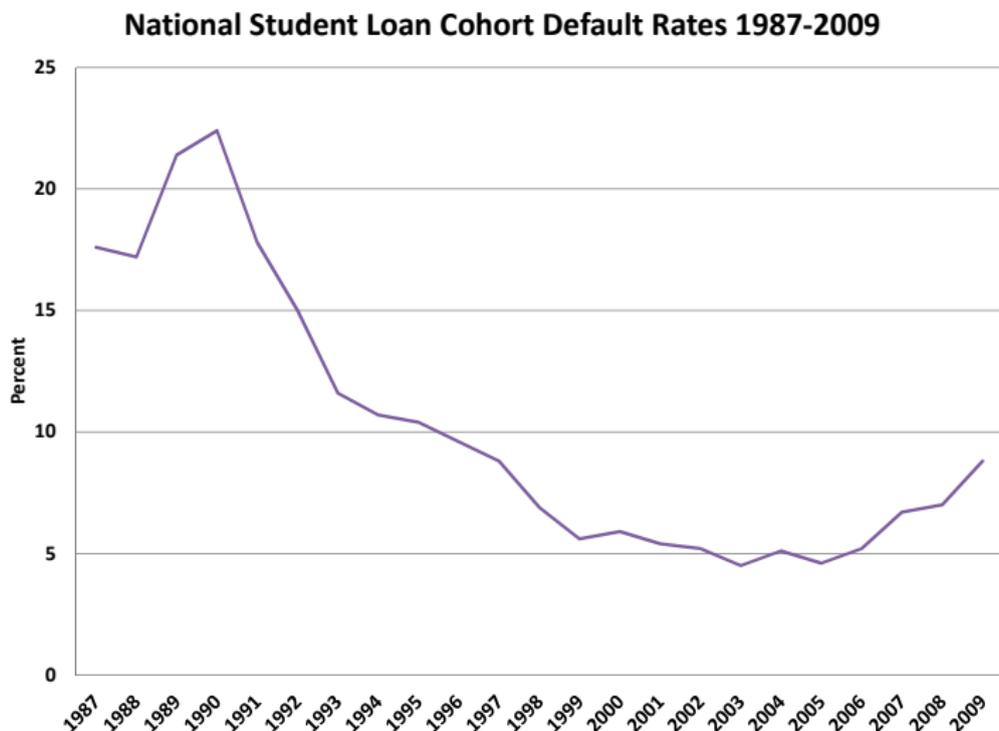
# Student Loans 2000-01 to 2010-11

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



Source: College Board, *Trends in Student Aid 2011*.

# Federal Student Loan Cohort Default Rates



## 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
  - Cunha (2007), Cunha & Heckman (2007), Cunha, Heckman & Schennach (2010), Caucutt & Lochner (2011), Del Boca, Flinn and Wiswall (2011)

## 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 Uncertainty, Credit Constraints, and College-going

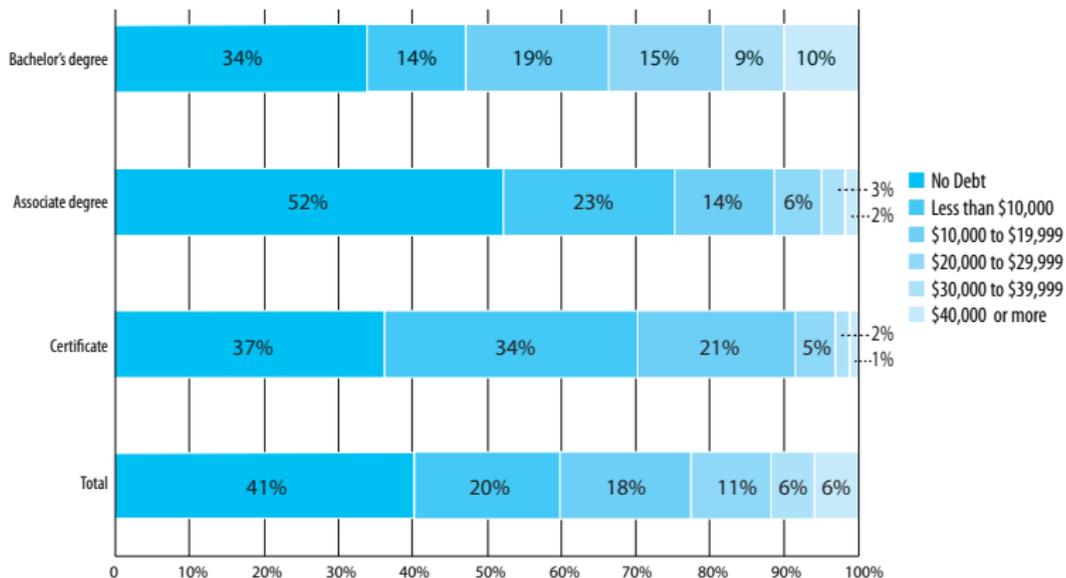
- Labor market risk is an important factor that can also discourage schooling (Johnson 2013)
  - youth may forego opportunities with a high expected return due to large downside risk
- Demand for credit may be much higher with explicit (or implicit) insurance/forgiveness mechanisms
  - effects of loan 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

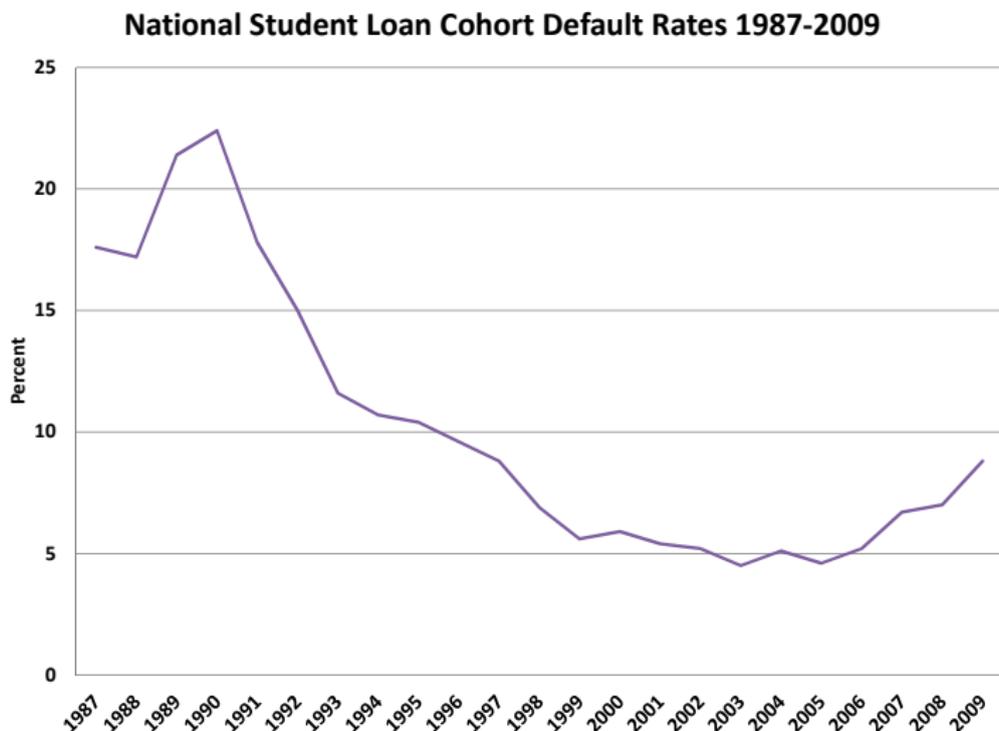


**Source:** National Postsecondary Student Aid Study (NPSAS) 2007-08

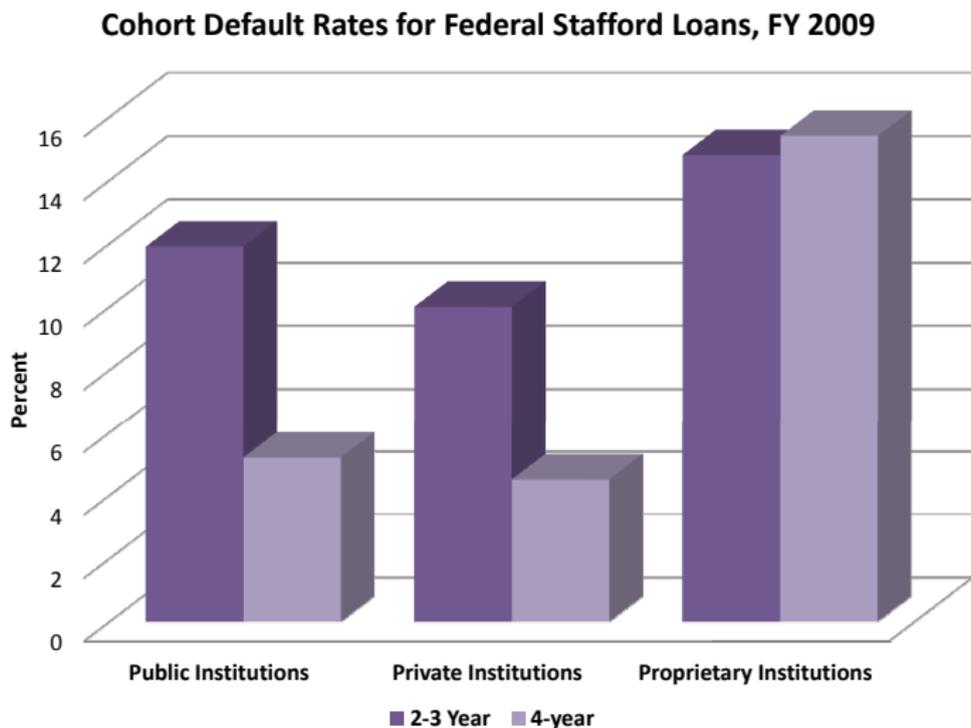
**Note:** Includes U.S. citizens and residents. PLUS loans, loans from friends and family, and credit card debt are not included. Components may not sum to 100 percent due to rounding.

Source: College Board, "How Much Are College Students Borrowing?" Policy Brief, 2009.

# Federal Student Loan 2-Year Cohort Default Rates



# Federal Student Loan 2-Year Cohort Default Rates



## 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

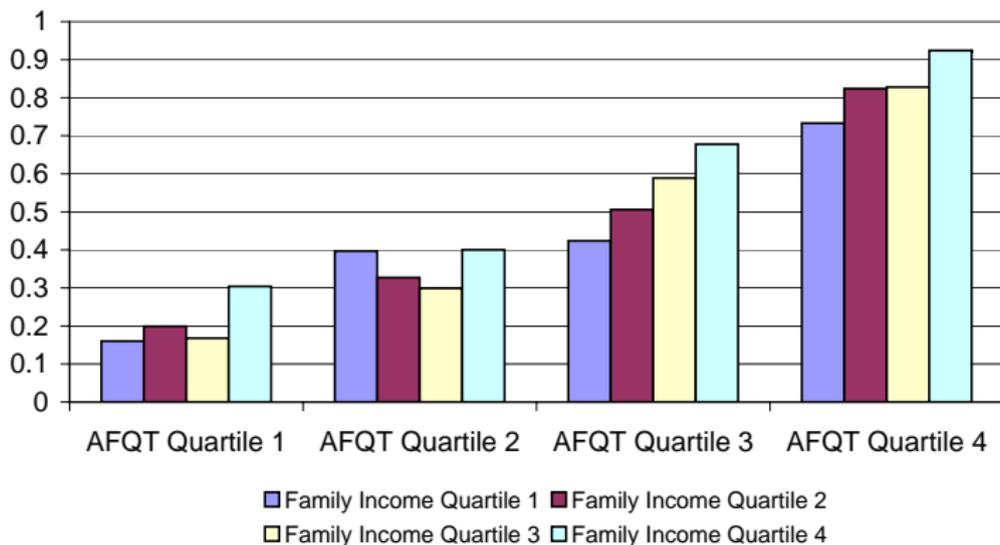
## Summary

- 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)**

