Passing the Buck: Liquidity, Student Loans and Who Pays for College

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The views expressed are ours and do not necessarily reflect the Federal Reserve Bank of Chicago or the Federal Reserve System
College education in the US is expensive

Source: The College Board, Trends in College Pricing 2022, Figure CP-2
Who pays for college in the United States?

Paying for college is a collective effort:
- State and federal grants
- Endowment-funded scholarships
- **Parents**: savings, borrowing
  - about 40% in 2018-19
  - about 50% in 2021-22
- **Students**: savings, work, borrowing
  - about 27% in 2018-19
  - about 21% in 2021-22
Parental role over time

• Parents cut back on help to their students during the recession

• ... while enrollment increased from 37% of college-age children (18-24) in 2006 to 42% in 2011

• Alternative funding sources?

According to Sallie Mae:

- 2007: Parents paid 45% of college expenses
- 2011: Fallen to 28%
- 2017: Back to 44%
- 2021: Up to 50%
• Decline in aggregate house prices and erosion in home equity during the Great Recession coincides with rapid growth in originations of student loans

• ... just as student loans become more expensive relative to home equity
Non-mortgage debt in Cook County – 2000:2015

2000

Credit cards and auto loans

2006

Home equity in the suburbs

2015

Student loans (almost) everywhere

- Color code represents largest category of non-mortgage debt in each zip code
Questions

• Substitution at household level
  – Did disappearance of home equity during the Great Financial Crisis affect how much students borrowed to finance college?
• If so, are there real effects on students or parents?
  – Did it affect where or whether students attend college?
  – Did changes in student borrowing affect other aspects of college attendance like part-time work and worrying about finances?
  – Did these changes affect how much parents could consume?
• Long-run implications
  – Do these changes have long-term effects on students or parents?
  – Did this wealth shock create a permanent shift in terms of which generation finances acquisition of human capital?
Two views of whether funding sources matter

- If student loans are treated as a joint HH liability, substituting them for home equity insures household consumption

- If financial responsibility is shifted to the student, may end up insuring parents’ consumption at the expense of students, both in the short- and the long run
Need Household-level Panel Data

PSID and Transition to Adulthood Survey (TAS)
- Intergenerational household-level panel survey, biennial
- Covers household expenditures, income, demographics, wealth (including self-reported house price valuations), debts
- TAS (2005-2015) bridges gap between childhood and new household formation, allows us to observe student loans and college enrollment
- We restrict sample to stable homeowners: ~2,400 households in total

New York Fed/Equifax Consumer Credit Panel (CCP)
- Individual-level panel: 5% sample of the population, quarterly
- The 5% sample (primary) is augmented with all individual reports linked to the household of the primary individual in that quarter
- Household composition varies over time
- Covers debts, delinquencies, location
- Almost no demographic information, no income or wealth measures
Empirical design: difference-in-differences

• We are going to exploit two sources of variation to identify the effect of a shock to parents’ home equity on family decisions
  – Decisions: home equity extraction, student loan, working while in college, etc.

• The first source is family composition – is there a college-aged student in a family?
  – Some families have students in college. Others do not.

• The second source is parents’ ability to tap home equity – are there liquid funds that can be used to pay for college?
  – Some families have paid off most mortgage debt and/or saw house prices fall only a little. Others are the opposite.
Families with enrolled students are much more likely to extract equity … unless they have little or no equity left

But families with less equity are more likely to turn to student loans instead.

Can quantify this substitution in a regression framework: for every dollar of home equity not extracted, student debt increases by about 60 cents.
Data in 4 pictures: parents’ and students’ real outcomes

- Being constrained by LTV when enrolling a child in college allows parents to spend less of their income on education
- ... and accumulate more non-housing wealth

- Enrolled students in LTV-constrained families are more like to worry about money
- ... less likely to get parental support
- ... and more likely to work while in college
Other key results

• No effects of the housing wealth shock on whether and where to enroll in college
  – Families with college-age children whose housing wealth takes a larger hit are not any less likely to enroll in college
  – Once enrolled, their students are not any more likely to drop out
  – Their students attend colleges that have a similar sticker price of tuition
  – ... both in absolute dollar terms and as a fraction of their income

• All good news then?
  – Parents’ housing wealth takes a hit, their kids’ take out student loans
  – Parent’s get to maintain their consumption, and kids worry about money more
  – But they still get to go to college, and possibly of similar price (quality?)
Student long-run outcomes

• We turn to credit bureau data to check whether “extra” student debt accumulated due to parental LTV constraints during college-age years affects key outcomes in early adulthood

• Estimate that this extra debt reduces probability of having a mortgage
  – $1,000 more in student loans (due to parents LTV constraints) reduces probability of having a mortgage by age 30 by about 1 percentage point
  – Results are similar to Mezza et al. (2018)

• It also lowers the likelihood of forming a new household by age 30
  – $1,000 more in extra student loans reduces probability of forming own household by about 1.3 percentage points (base 51%)

• But it does not seem to affect the likelihood of an auto loan
Parents long-run outcomes

• Under construction ...

• Evaluate parents’ performance on existing credit obligations
  • Ability to obtain new credit instruments: car loans, mortgages, etc.

• Most interestingly, evidence of lump-sum repayments of student loans by parents
  – Observe a parent taking out a loan – home equity, credit card, or other unsecured credit
  – Observe their student paying down existing debt as lump sum

• So far, no evidence of parents paying off their students’ debt from re-accumulated home equity
Survey evidence on incidence of debt repayment

- Students are typically expected to pay back their loans themselves
- Parents expect students to pitch in for paying back parents’ loans
  - This is education-specific loans not general loans used to pay college tuition
Long shadow of student loans

- Students end up taking loans when their parents’ wealth takes a hit
- Repayment of these loans detracts from student’s ability to save, invest, and consume early in their adult lives
- And it potentially affects their ability to save for their own children’s education
- A long-term (permanent?) shift in which generation pays for education?
Conclusion

• Declines in house prices reduced access to home equity, and shifted some of the burden of financing college to students in the form of student debt

• Shift in financing responsibility appears to have real effects
  – No measurable effect on enrollment
  – Increase in burden on students
    • Work more, worry more about money
    • Less likely to have mortgages, delay household formation
  – Decrease the burden on parents
    • Relatively more non-education expenditures
    • Accumulate non-housing wealth at a higher rate

• More work to do to establish whether parents of the Great Recession students insured own long-term consumption by switching to student loans. Not clear if this transaction has been reversed
Extra slides
Parental support by age

- There is substantial drop off in parents’ propensity to support students past the age of 22
- Can use this fact to test our earlier results on funding sources and real effects
Student debt has grown steadily since 2003

Many reasons behind this:

- Cyclical upswing in enrollment, higher tuition, lower funding levels
- Poorer students and poorer parents

This paper focuses on the latter
All types of students have been borrowing more

**MEDIAN BALANCE OF STUDENT LOANS**

- Source: Looney and Yannelis (BPEA 2015)
Relative Cost of Home Equity and Student Borrowing

Interest Rates by Type of Financing

- For much of the post-crisis period, tapping home equity has been less expensive than accessing even federally subsidized student loans