

Discussion of “Go Big or Buy a Home: Student Debt, Career Choices and Wealth Accumulation”
by Marc Folch and Luca Mazzone

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Overview

“What are the implications of higher levels of student debt on life cycle decisions?” In particular, on career choice and homeownership?

Method:

1. IV regression: instrument student debt with within-college variation in institutional grants.
2. Quantitative life-cycle model.

Results: more student debt \Rightarrow households...

1. Choose ‘shallower’ careers (high initial wages, low growth)
2. Are less likely to go to grad school
3. Buy houses **sooner**

A simple 2-period model

HH chooses career ($\beta \in \{B, G\}$) and housing ($H \in \{0, 1\}$) to max:

$$U = \log(c_1) + \log(c_2) + \log(v_H)H$$

Budget constraints:

$$c_1 = w_1(\beta) - pH - d, \quad w_1(B) = 1, w_1(G) = w^- < 1 \quad (1)$$

$$c_2 = w_2(\beta), \quad w_2(B) = 1, w_2(G) = w^+ > 1 \quad (2)$$

\Rightarrow simple analytic expressions for indirect U , parameter ranges for each β, H choice.

A simple 2-period model: career choice

HH goes to grad school ($\beta = G$) if:

$$d < d_{\beta}^* = \begin{cases} \frac{w^- w^+ - 1}{w^+ - 1} - p & \text{if } H = 1 \\ \frac{w^- w^+ - 1}{w^+ - 1} & \text{if } H = 0 \end{cases}$$

Implications:

- ▶ Given H , less likely to go to grad school as debt rises.
- ▶ $d_{\beta}^*(H = 1) < d_{\beta}^*(H = 0)$: given debt, homeowners less likely to go to grad school.

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Why? No saving/borrowing, so grad school \Rightarrow lose c_1 , gain c_2 .

- ▶ Both higher d and $H = 1$ **also** reduce c_1 , so increase $U'(c_1)$.
Going to grad school is \therefore more expensive in utility terms.

A simple 2-period model: housing choice

HH buys a house if:

$$d < d_H^* = \begin{cases} w^- - \frac{pv_H}{v_H - 1} & \text{if } \beta = G \\ 1 - \frac{pv_H}{v_H - 1} & \text{if } \beta = B \end{cases}$$

Implications:

- ▶ Given career choice, less likely to buy a house as debt rises.
- ▶ $d_H^*(G) < d_H^*(B)$: given debt, those with grad school less likely to buy a house than bachelor grads.

Why? No saving/borrowing, so buy a house \Rightarrow lose c_1 , gain v_H .

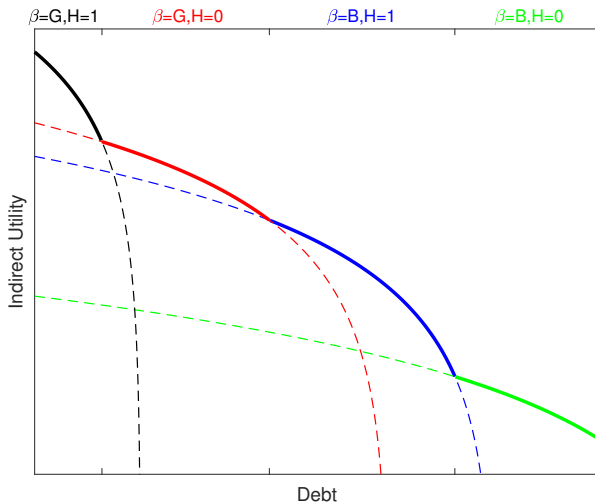
- ▶ Both higher d and $\beta = G$ **also** reduce c_1 , so increase $U'(c_1)$.
Buying a house is \therefore more expensive in utility terms.

Effects of a rise in debt

Very low $d \Rightarrow \beta = G, H = 1$.

Very high $d \Rightarrow \beta = B, H = 0$.

Intermediate values?

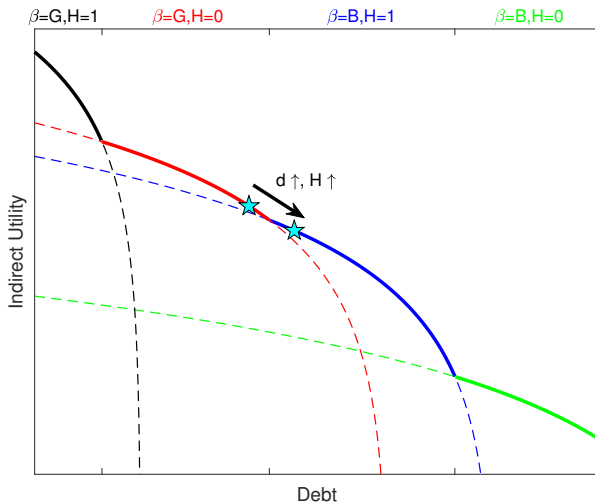


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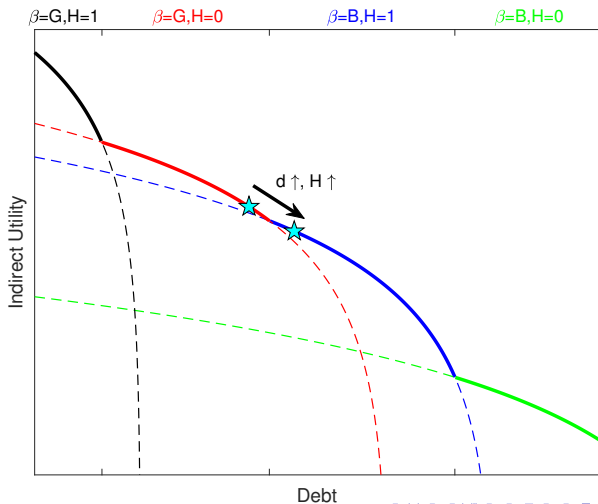
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Effects of a rise in debt

Works if U cost of $\beta = G \uparrow$ faster with d than U cost of $H = 1$.

$U'(c_1)$ rises faster for lower c_1 , so this happens if monetary cost of $\beta = G >$ that of $H = 1$: if $1 - w^- > p$.

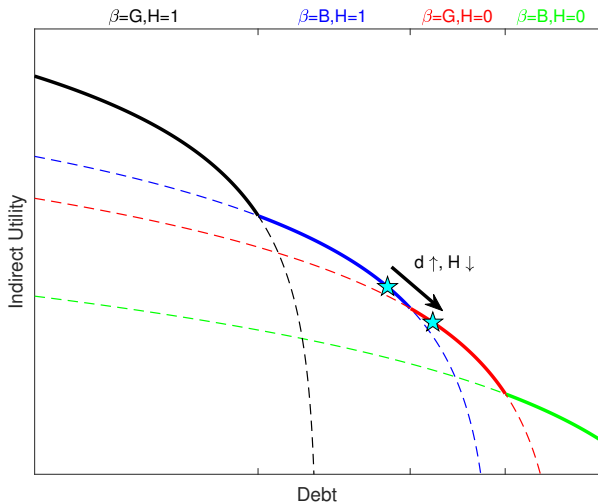


Effects of a rise in debt: alternative (higher w^- , lower w^+)

Very low $d \Rightarrow \beta = G, H = 1$.

Very high $d \Rightarrow \beta = B, H = 0$.

Intermediate values?



Simple Model Takeaways

Results driven by $U'(c_1)$, and the interaction of two cliff-edges.

- ▶ Both grad school and homeownership increase period 2 utility.
- ▶ With middling debt you can't afford both, so pick one based on benefits to period 2 utility and **period 1 utility costs**.
- ▶ If $d \uparrow$ increases utility cost of grad school faster than of housing, at some threshold swap grad school for housing, so $d \uparrow \Rightarrow H \uparrow$

Doesn't work with (two) continuous choices: at no point does $d \uparrow$ cause the (utility) cost of housing to fall.

For $d \uparrow \Rightarrow H \uparrow$ need discrete career decision. Actually remove the potential for the reverse possibility ($d \uparrow \Rightarrow$ start grad school) if allow continuous housing choices.

Comments I

- 1) Intuition of model could be clearer, esp. for the housing results.
 - ▶ Really a composition effect - driven by those for whom $d \uparrow$ pushes them to abandon grad school.
 - ▶ Unsurprising then that $d \uparrow \Rightarrow H \downarrow$ if focus only on bachelors (table 11).
 - ▶ Can you test this in the empirical section?

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- 2) Address Mezza et al (2020 JOLE) (who find $d \uparrow \Rightarrow H \downarrow$).
 - ▶ Why are their results different?
 - ▶ Is it \because they include postgrad debt? So if bachelor debt $\uparrow \Rightarrow$ switch $G \rightarrow B$, total $B + G$ debt falls? (footnote 15)
 - ▶ Or is it that the 'compliers' affected by your instrument are marginal grant recipients, who have high ability and high pre-existing debt - exactly the people on the cusp of grad school but for whom debt might prevent enrolment?
 - ▶ Can you replicate their results in simulated data from your model?

Comments II

3) Sensitivity to calibration?

- ▶ In simple model, only get the results in a small part of the sample space.
- ▶ So results could be sensitive to calibration in the big model as well?
- ▶ e.g. if set home production to replacement rate rather than poverty line.
- ▶ Allowing choice of house size could help - it does in the simple model.

4) Homeownership is the variable in the data you match least well with the model.

- ▶ Shame, since the really striking result of the paper is on homeownership.
- ▶ Sacrifice fit on other dimensions if you can then hit this better?

Comments Other

1) On a first read, I worried about what happens if another asset is available (since r^+ set so low).

- ▶ I don't think it matters - it's the same as allowing a continuous human capital investment, but since $w_2 \gg w_1$ would want to borrow not save, so hit borrowing constraint.
- ▶ The language of human K being a “relatively better investment” than housing was what got me worried I think - intuition from simple model helped me here.

2) Regression: why not use full college FEs, rather than FEs for the 6 categories?

3) Regression: why limit to the most recent cohort? Doesn't data go back to the 1990s?

Comments Other

4) Calibration: log-normal not a great fit for parental transfers given the excess zeros in the data. Check nothing major changes if you use a more realistic distribution?

5) Calibration: why assume $\text{Corr}(a, d) > 0$ but $\text{Corr}(h_0, d) = 0$? My prior is you leave bachelor with more human capital if you are higher ability, so $\text{Corr}(h_0, a) \gg 0$ - and so $\text{Corr}(h_0, d) > 0$.

6) Policy evaluation: equilibrium effects matter. House prices will react to debt forgiveness or income-based repayment roll-out. Take into account (or at least discuss) if taking policy section seriously.