Discussion: Insurance in Human Capital Models with Limited Enforcement by Krebs, Kuhn and Wright (KKW)

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Overview

• This paper:

  • Microfoundation for uninsurable human capital risk
    • Limited enforcement + non-pledgeable human capital →
    • Consumption cannot be fully contingent on good human capital shock

  • Clever characterization of optimal contracts
    • Linear human capital technology + CRRA utility →
    • Portfolio choice problem

• Find large welfare losses from incomplete insurance

  • HH would pay 3.5% of consumption annually to pledge human capital
  • And a lower bound - imposes leverage constraint on pledged household
Comments

- What about the investment margin?
  - Welfare calculation holds human capital constant
  - If allowed to vary, welfare gain is infinite in this model

- Has policy solved this problem already?
  - Student loans cannot be forgiven in bankruptcy
  - Stock of human capital non-pledgeable, but flow confiscated through tax offsets and garnishment
  - Lose access to future aid
Comment One: Investment Margin

Toy three period model:

- \( u(c_1, c_2, c_3) = \log c_2 + \log c_3 \)
- Deterministic returns, \( h_2 = x_1, h_3 = h_2 + x_2 \)
- Linear production \( y_t = w \min\{h_t, H\}, w > 1 \)
- Net interest rate is zero
- Borrow to finance in period one: \( b_2 = h_2 \)
- Household can default in period two
  - Retain \( h_2 \)
  - Lose access to borrowing
- No default in period three
The Investment Margin

• Under commitment, \( h_2 = b_2 = H \)

• Without commitment, period two values under repayment and default:

\[
V^{RP}_2(h) = \max_{b'} \log \left( wh - (H - h) - h + b' \right) + \log \left( wH - b' \right)
\]

\[
V^{DF}_2(h) = \max_{h' \leq H} \log \left( wh - (h' - h) \right) + \log(wh')
\]

• By inspection:
  - \( V^{RP}_2(H) = 2 \log(wH - 0.5H) < 2 \log(wH) = V^{DF}_2(H) \)
  - So \( h_2 < H \), but
  - \( V^{RP}_2(0) > V^{DF}_2(0) \), so \( h_2 > 0 \)
  - Can further verify a single intersection
The Investment Margin

Values at Period Two

- With commitment, \( h_2 = H = 5 \)
- Without commitment, \( V_{2}^{RP}(h^*_2) = V_{2}^{DF}(h^*_2) \)
Relating to KKW

- A similar margin must be at play in KKW, except $H = \infty$

- Is there a way to keep tractability and finite $H$? Or another functional form with optimal scale?

- Interesting questions:
  - Correlation between family wealth and schooling expenditures if $h_{2,i} = b_{2,i} + p_i$ (Lochner and Monge)
  - Lower interest rates on student loans?
  - Increasing grants?
Shifters of $V_{2}^{RP}$

Increasing parental contribution, government grants, or reducing rates shifts $V_{2}^{RP}$ upward without changing $V_{2}^{DF}$. 

![Graph showing values at Period Two for different scenarios: Default, Repay p=0, and Repay p = 0.8.](attachment:image.png)
Comment Two: Legal Institutions

- In the US, formal bankruptcy does not expunge student loan debt.
- Informal bankruptcy subjects the borrower to punishments:
  - Wage garnishment - Government takes \( \max\{0, \min\{0.15w, w - w\}\} \)
  - Tax refund offsets - Government refuses to pay tax refund. Not really the issue in this paper.
- Together these two policies would seem to alleviate much of this friction.
- Would affect insurability in KKW in addition to investment margin.
- Question of calibration - is all student loan debt unsecured?
Effect of Wage Garnishment in Toy Model

Garnishing wages shifts $V_2^{DF}$ downward without affecting $V_2^{RP}$
• Very nice paper!

• Model could address even more questions

• Convinced me that US student loan policy may be well considered!

• Nagging question - which student loans are subject to this friction in reality?