Life in Shackles? The quantitative implications of reforming the educational financing system

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— Aggregate technology:

\[ Y_t = \Phi K_t^\phi [Z_t N_t]^{1-\phi} \]

- \( N_t \) denotes a composite human capital factor:

\[ N_t = \sum_{l} \eta_t h_t l_t \]
Q.1 (normative): How should we finance and/or insure risky human capital investments? **Degree-tax.**

Q.2 (positive): Who wins from any given policy change? **Intergenerational comparisons are key.**
Simplified environment. Helpful to characterize dynamics in a transparent way.

- No families. No transfers. No initial heterogeneity.
- No borrowing, except for schooling.
- Production: perfect substitution of education-specific (effective) labor
✓ Example of ‘equity financing’ of risky human capital investments (Friedman, 1962)

✓ Transitional dynamics with slow moving stocks (human and physical capital) as in Heckman, Lochner and Taber (1998a, 1998b)

✓ Welfare analysis for different cohorts (and ability) groups

✓ Clear illustration of the role of progressive taxation as a risk-sharing device
1. Risky HC investments: could the existing tax system be viewed as imperfect equity-financing under a ‘Comprehensive Taxation’ scenario?

2. K versus HC.

3. Empirical question: how should one design ‘HC-contingent’ taxation?
Progressive labor taxes as ‘human capital levies’?

- Benchmark entails a flat labor tax.

- US tax system does (imperfectly) link human capital achievement to marginal taxes.

  · Positive question: To what extent does existing US tax-system imply human-capital contingent taxation?

    · Counterfactual analysis to compare the flat tax benchmark to a system similar to the one observed in the US

  · Any good examples of targeted human-capital taxation in other countries?
Human versus Physical Capital

- Two ways of smoothing marginal utility over life-cycle: HC and financial wealth

  - Simple but informative counterfactual: how changing taxes on K affects HC accumulation and equilibrium outcomes

    - Relative tax wedge on any smoothing technologies will affect its relative use! (See early research by Levhari and Weiss, 1974; Heckman, 1976; Eaton and Rosen, 1980)

    - HC vs physical capital: mix may be key for welfare!

  - Question: could one design a loan-repayment system based on both human and physical capital?

  - Tax physical capital when large distortions occur upon taxation of labor earnings?
Implementing a ‘Degree Tax’

- Degree-tax: based on years of education in the model

  - How would one go about designing such a tax?
    - Imperfect correlation between length of education and returns
    - Should repayment be contingent on duration or returns?
    - Would such a system significantly alter incentives to pursue high-return degrees?

  - Some discussion of different possibilities and/or existing programs (anywhere) would make results even more compelling