

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:

$$N_t = \sum_I \eta_t h_t l_t$$

- **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