EC9AA TERM 3: LECTURES ON ECONOMIC INEQUALITY

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Supplement 1 to Slides 2: A General Model of Occupational Choice

A GENERAL MODEL OF OCCUPATIONAL CHOICE

Production with capital and occupations.

- Population distribution on occupations n (endogenous).
- Physical capital k.
- Production function y = F(k, n), CRS and strictly quasiconcave.
- Training cost function x on occupations:
- incurred up front.
- parents pay directly, or bequeath and then children pay.







A BENCHMARK WITH NO OCCUPATIONAL CHOICE

Financial bequests (at rate r) + just one occupation (wage w).

Parent with wealth y selects $b \ge 0$ to

 $\max U(c) + \delta[\theta V(y') + (1-\theta)P(y')].$

- Child wealth $y' \equiv w + (1+r)b$, increases in y.
- Converges to limit wealth $\Omega(w, r) < \infty$.
- This needs $\theta < 1$.
- Could depend on initial *y* (as in non-concave Ramsey model); we exclude that.







In Phase I w is linear in x: there is $w_0 > 0$ such that

$$w(x) = w_0 + (1+r)x \text{ for all } x \le \frac{\Omega(w_0, r)}{1+r}$$

All families in Phase I have the same overall wealth $\Omega(w_0, r)$.

In Phase II, w follows the differential equation

$$w'(x) = \frac{U'(w(x) - x)}{\delta[\theta U'(w(x) - x) + (1 - \theta)P'(w(x))]}$$

with endpoint to patch with I: $w(x) = w_0 + (1+r)x$ as $x \downarrow \frac{\Omega(w_0,r)}{1+r}$.

Families located in Phase II have **different wealths and lifetime consumptions**.

Closer look at Phase II

$$w'(x) = \frac{U'(w(x) - x)}{\delta[\theta U'(w(x) - x) + (1 - \theta)P'(w(x))]}$$

- Shape comes from **Euler equation**:
- depends fundamentally on preferences
- technology only serves to pin down baseline w₀ (remember remark on scaling)









