

Problem set #5: Econ325
 Due Date: April 20, 2000
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1. Parental pre-school investment has long-term consequences in a child's schooling achievements and in labor market performance. Explain how. (You should incorporate the material from the Entwisle paper posted earlier on the course site).
2. We have already analyzed the schooling choice problem of an individual when (s)he is sixteen or so, given his/her parental investment, i.e., given β . Now we formulate how parental investment in children's education (both preschool and up to age sixteen) is determined. Assume simply that if parents invest h in a child's schooling and his/her ability is τ , then the child will earn $w_2(h, \tau)$. We further assume that the form of this earning function is given by $w_2(h, \tau) = H_0(\tau) h^\sigma$, $0 < \sigma \leq 1$. (As discussed in the class, the above relationship is after taking into account the effect of parental investment in the child's optimal schooling choice, which depends on this investment, h). Recall the associated utility maximization problem discussed in the class:

$$\max_h u(w_1 - h) + \gamma U(w_2(h, \tau))$$

Assume Cobb-Douglas utility specification $u(c) = \ln c$ and $U(w_2) = \ln w_2$. Recall that γ represents the degree of parental altruism towards children and assume that $0 \leq \gamma \leq 1$. Derive the optimal h . How does the optimal h relate to parental earnings w_1 , the innate ability of the child τ , and the degree of parental altruism γ ? Derive the intergenerational income dynamics equation

$$\ln w_2 = \alpha_0 + \alpha_1 \ln w_1 + \epsilon$$

where, ϵ absorbs the terms involving τ and γ . What are the values for α_0 and α_1 ? What is a good measure of social mobility in the above equation? What factors are detriment to social mobility in the above economy?

3. How to measure health status? What are the consequences of poor health status?
4. What is meant by human capital approach to health? Using this approach, how would you evaluate the economic burden of a disease such as Malaria which causes high mortality and morbidity in most tropical countries, and especially in Africa? (Just sketch how you will do it). What is wrong with the human capital approach to health? What are the different ways health care services are provided in various countries, and what kind of health care would you suggest for a poorer country with high incidence of infectious disease such as malaria or aids? Explain the pros and cons of your suggestion.