

Problem Set III
Econ 350, Winter 2021
James J. Heckman
Due February 3rd, 2021
This draft, January 26, 2021

- I. Answer the questions embedded in the “Rate of Return Continuation Values and Option Values in a Simple Dynamic Model” handout.
- II. How can you identify the “psychic costs” of schooling? (Hint: see the handout, “Notes on Identification of the Roy Model and the Generalized Roy Model.”)
- III. What is “the” rate of return to schooling? How do agent information sets determine it? What is the relationship between the rate of return to schooling and the internal rate of return?
- IV. In a competitive model with heterogeneous workers and single-worker firms with productivity differences, suppose workers have scalar skill s , but workers differ in the amount they possess. Derive the equilibrium pricing equation. Use the Cobb-Douglas-Pareto example of “Notes on Differential Rents and the Distribution of Earnings.”
 - (a) Explain (derive) how the shape of the earnings function depends on the distribution of firm and worker endowments. When is it linear?
 - (b) Can profit and wage functions both be convex and increasing?
 - (c) How does this model explain rising wages for workers employed in more productive firms? How do superstar firms and workers emerge?