

Externalities

... so far there are no externalities

Proposition. The competitive equilibrium in this economy is equivalent to the optimal policy by a monopolist expert.

Sketch of proof. (1) Write Bellman equation for monopolist. (2) Define price $p_t = 1/\Phi'(i_t/k_t)$. (3) Show that prices etc. are as in competitive eq.

Intuition: In competitive equilibrium experts do affect prices by their choices (payout and investment), but they are isolated from prices because they don't trade given equilibrium prices.