$\text{Solution}_A kcigit_A tes_J PE_2 023$

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Consumer

Consumer solves $V_t = \max_{C_s} {}_t^{\infty} exp{-}\rho(s-t) lnC_d s$ The Bellman aligned reads $V_t(A_t) = \max_{C_s} lnC_s + exp$

Set up the Hamiltonian

Final Producer

Final producer solves $\max_{y_{jt}} P_t Y_t - {}_0^1 p_{jt} y_{jt} dj$
subject to $lnY_t = {}_0^1 ln y_{jt} dj$

The marginal profit of the Final producer should equal the marginal cost: $\frac{\partial P_t Y_t}{\partial y_{jt}} =$
$\Rightarrow P_t \times exp({}_0^1 ln y_{jt} d) \times \frac{1}{y_{jt}} =$
$\Rightarrow P_t Y_t = p_{jt} y_{jt} \Leftrightarrow$

which is the optimal demand.

Sectoral intermediate production On sectoral level, the intermediate production's optimal supply of products solves