

x

0 5 2

$$\frac{d}{du_L} J_L(u_L, R(u_L)) = 0$$

$$R(u_L) = \underline{m}u_L + \underline{c}$$

$$\frac{d^2}{du_L^2} J_L(u_L, u_F) < 0$$

$$J_L(u_L, R(u_L)) = (u_L - 1) * (2 - u_L + 0.3R(u_L))$$

$$\frac{d}{du_L} (u_L - 1) * (2 - u_L + 0.3R(u_L))$$

$$= (1)(2 - u_L + 0.3(mu_L + c)) + (u_L - 1)(-1 + 0.3m)$$

$$= \underline{2 - u_L + 0.3mu_L + 0.3c} - \underline{u_L + 0.3mu_L} + \underline{1 - 0.3m} = 3 - 2u_L + 0.6mu_L + 0.3c - 0.3m$$