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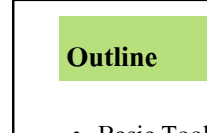
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Neoclassical Trade Theory

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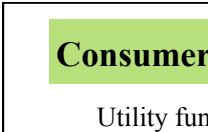
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Outline

- Basic Tools
 - Consumer Behavior Theory
 - Production Theory
 - Edgeworth Box Diagram and PPC
- Gains from Trade in Neoclassical Theory
 - Autarky Equilibrium
 - Production and Consumption Gains from Trade
- Offer Curves and Terms of Trade

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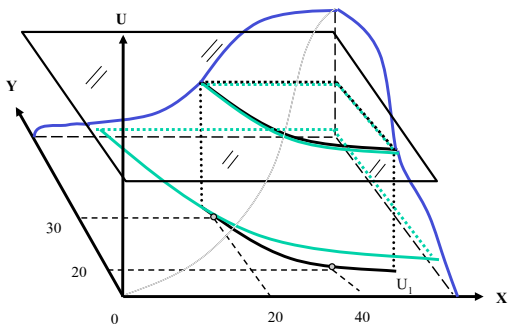
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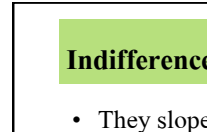
Consumer Behavior Theory

Utility function: $U = U(X, Y)$



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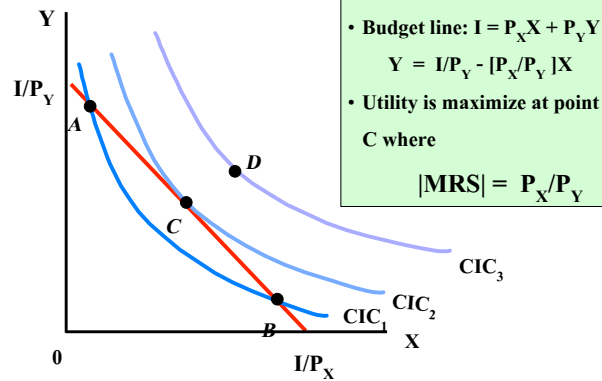
Indifference Curves: Properties

- They slope downward to the right.
 - Goods are substitutable
 - If F rises, C must fall to maintain the same U_1 .
- Any basket lying northeast of an IC is preferred to any on the IC
- Convex to the origin
 - Variety is preferred to extreme
- Indifference curves can not cross
- Continuous: no gaps

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Utility maximization



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Aggregating Individual Preferences

- In order to aggregate individual preferences into community preferences without any problems, we need to assume that preferences are identical and **homothetic** or the **proportion of consumption bundle does not vary with income**.
- Homothetic preferences imply that the summation of all individual demand is equal to the demand of a representative individual with the summation of all individual income or

$$\sum_j^n D_j(P_1, P_2, I_j) = D(P_1, P_2, I) \text{ where } I = \sum_j^n I_j$$

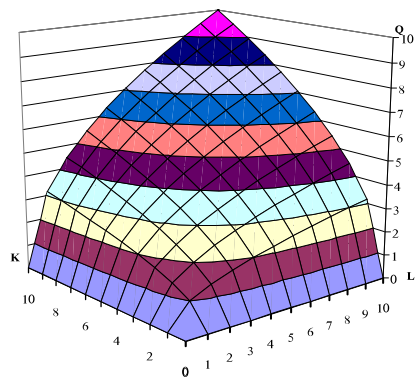
Assume: Income distribution does not change the total demand

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Production Theory

$$X = F(K_X, L_X), \quad Y = G(K_Y, L_Y)$$

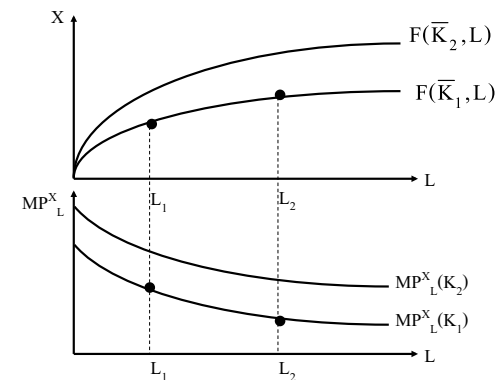


C1

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Production Theory

$$X = F(K_X, L_X),$$



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Production Theory

- Production function

$$X = F(K_X, L_X), \quad Y = G(K_Y, L_Y)$$

- Constant returns to scale or homogeneous of degree 1

$$X = F(K_X, L_X)$$

$$Y = G(K_Y, L_Y)$$

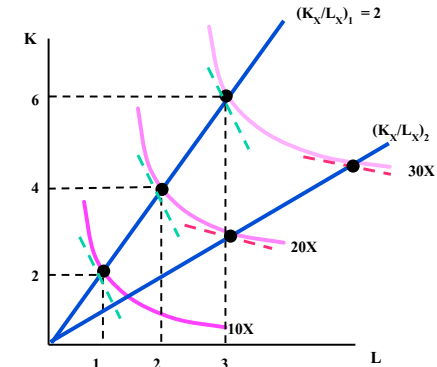
the output grows at the same rate as the rate of both inputs

- Average products, marginal products, and MRTS are constant along the ray from the origin

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Production Theory

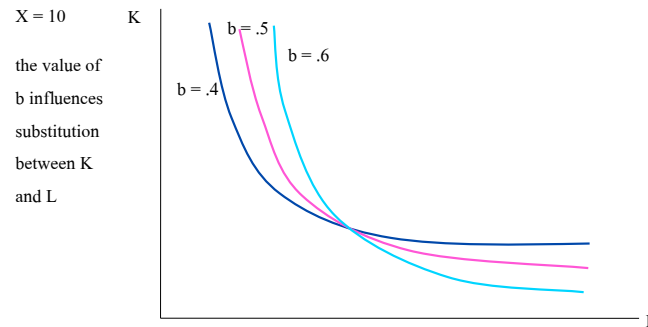


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Production Theory

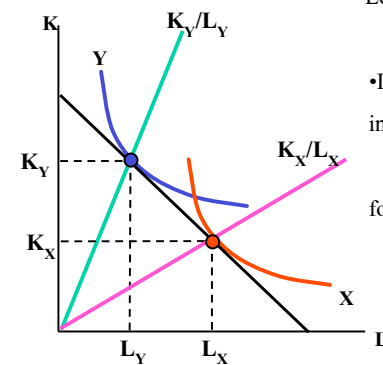
- From $X = L^b K^{(1-b)}$, $K^{(1-b)} = X/L^b \rightarrow K = [X/L^b]^{1/(1-b)}$



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Production Theory



- Least cost combination requires

$$MRTS^X = w/r = MRTS^Y$$

- If Y production is capital intensive relative to X,

$$K_Y/L_Y > K_X/L_X \text{ for any } w/r.$$

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