

On generalizing from micro analysis

- Consider the following extremely simple economy. There are two individuals, A and B . Individual A has exclusive access to a valuable resource X . Individual B has exclusive access to a valuable resource Y . Individual A would like to obtain Y from B , and B would like to obtain X from A .
- Each individual sets the price of the respective resource in terms of some unit of account. Let p_x designate the price for X set by A and by p_y the price for Y set by B . Suppose A demands Y_A units of Y and B demands X_B units of X .

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- It is assumed that what each individual spends in buying the resource to which the individual has no access coincides with the income the individual obtains from selling the resource the individual owns. Formally,

$$\begin{array}{ccc} \underbrace{A's \text{ income}} & & \underbrace{A's \text{ expenditure}} \\ \underbrace{p_x \cdot X_B} & = & \underbrace{p_y \cdot Y_A} \\ \underbrace{B's \text{ expenditure}} & & \underbrace{B's \text{ income}} \end{array}$$

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- **Assumption 1.** Income $p_x \cdot X_B$ moves in the same direction as p_x (a conventional justification could be that the demand for X is inelastic). That is,

$$\uparrow p_x \Rightarrow \uparrow (p_x \cdot X_B)$$

- **Assumption 2.** The demand for each resource increases with income (they are normal goods).

$$\uparrow (p_x \cdot X_B) \Rightarrow \uparrow Y_A$$

$$\uparrow (p_y \cdot Y_A) \Rightarrow \uparrow X_B$$

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- **Assumption 3.** The price p_y of Y is not lowered when the price p_x of X is increased.

$$\uparrow p_x \Rightarrow \not\downarrow p_y$$

- **Result.** The demand for X is upward sloping: an increase in the price p_x of X leads to an increase in the demand for X .

$$\begin{aligned} \uparrow p_x &\Rightarrow^{A1} \uparrow (p_x \cdot X_B) \Rightarrow^{A2} \uparrow Y_A \Rightarrow^{A3} \\ &\Rightarrow \uparrow p_y \cdot Y_A \Rightarrow^{A2} \uparrow X_B \end{aligned}$$

**Remarks of
Robert F. Kennedy
at the University of Kansas**
18 March, 1968

[https://www.jfklibrary.org/Research/Research-Aids/Ready-Reference/
RFK-Speeches/Remarks-of-Robert-F-Kennedy-at-the-University-of-Kansas-
March-18-1968.aspx](https://www.jfklibrary.org/Research/Research-Aids/Ready-Reference/RFK-Speeches/Remarks-of-Robert-F-Kennedy-at-the-University-of-Kansas-March-18-1968.aspx)

“Gross National Product counts air pollution and cigarette advertising, and ambulances to clear our highways of carnage. It counts special locks for our doors and the jails for the people who break them. It counts the destruction of the redwood and the loss of our natural wonder in chaotic sprawl.”

“It counts napalm and counts nuclear warheads and armored cars for the police to fight the riots in our cities. It counts Whitman's rifle and Speck's knife, and the television programs which glorify violence in order to sell toys to our children.”

“Yet the gross national product does not allow for the health of our children, the quality of their education or the joy of their play. It does not include the beauty of our poetry or the strength of our marriages, the intelligence of our public debate or the integrity of our public officials.”

“It measures neither our wit nor our courage, neither our wisdom nor our learning, neither our compassion nor our devotion to our country, it measures everything in short, except that which makes life worthwhile. And it can tell us everything about America except why we are proud that we are Americans.”