

Ekonomika Mikro (PEK 411)

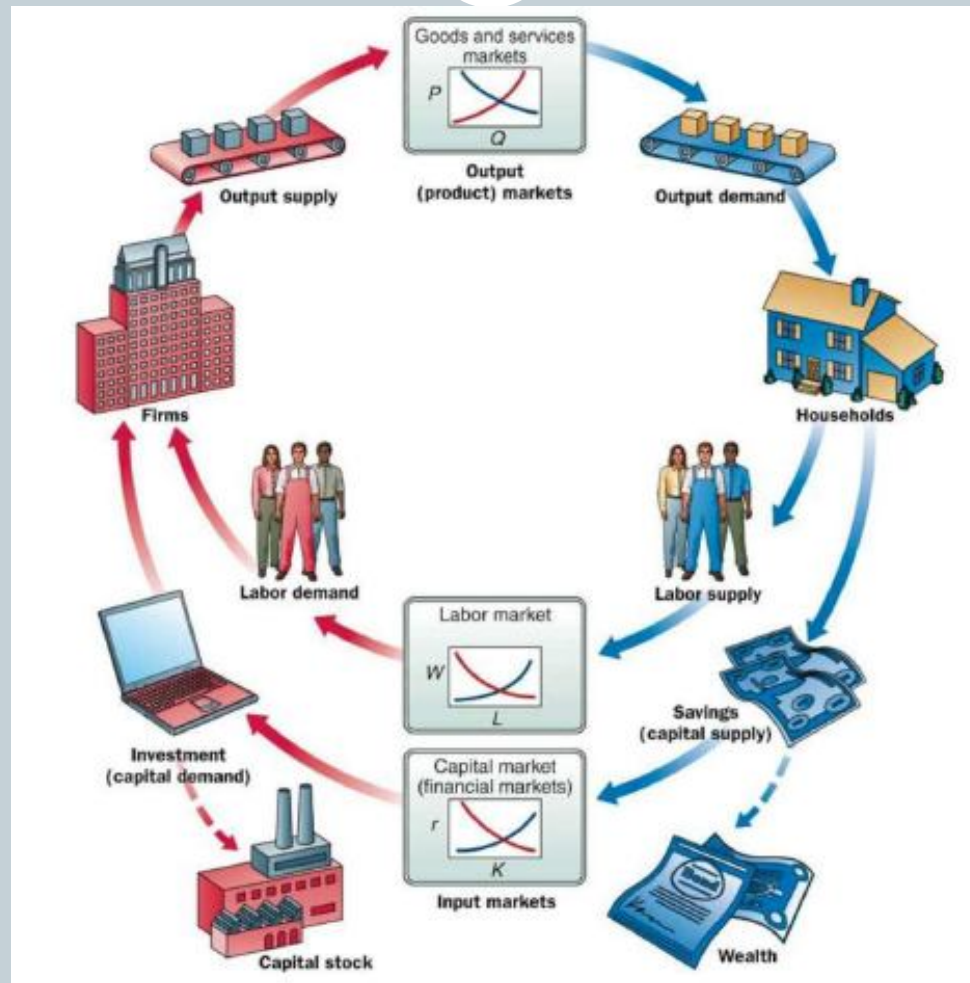
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CHOICES MADE BY HOUSEHOLDS AND FIRMS

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Firm and Household Decisions



Household Behavior and Consumer Choice



- **Household Choice in Output Markets**
- **The Basis of Choice: Utility**
- **Income and Substitution Effects**
- **The Indifference Curve Approach**

The Determinants of Household Demand



- The price of the product
- **The income available to the household**
- The household's amount of accumulated wealth
- The prices of other products available to the household
- The household's tastes and preferences
- The household's expectations about future income, wealth, and prices

The Budget Constraint



Possible Budget Choices of a Person Earning \$1,000 per Month After Taxes

Option	Monthly Rent	Food	Other Expenses	Total	Available?
A	\$ 400	\$250	\$350	\$1,000	Yes
B	600	200	200	1,000	Yes
C	700	ISO	150	1,000	Yes
D	1,000	100	100	1,200	No

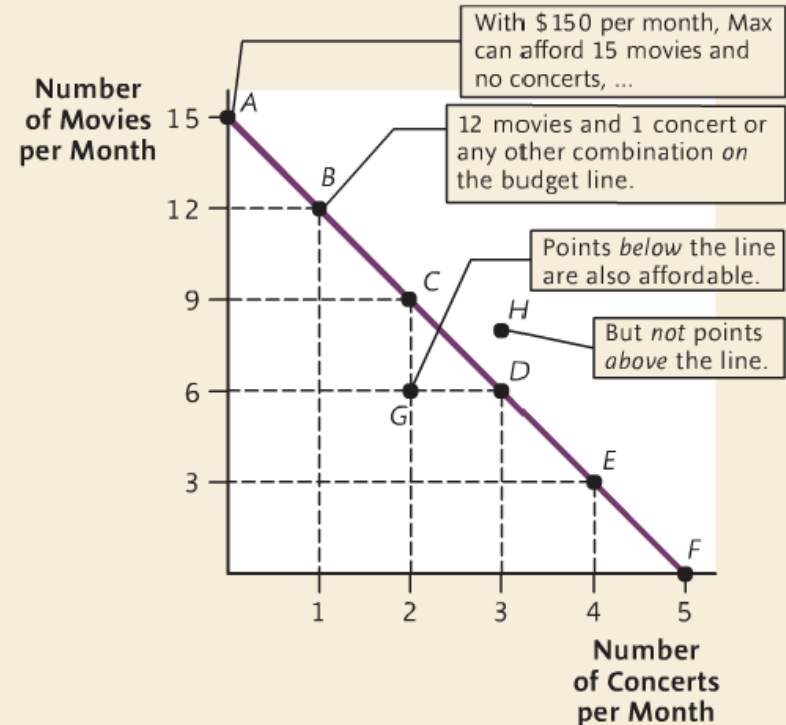
- A consumer's budget constraint identifies which combinations of goods and service the consumer can afford with a limited budget, at given prices.
- Budget constraint: The different combinations of good a consumer can afford with a limited budget, at given price.

The Budget Constraint... cont



Max's Consumption Possibilities with Income of \$150

	Concerts at \$30 each		Movies at \$10 each	
	Quantity	Total Expenditure on Concerts	Quantity	Total Expenditure on Movies
A	0	\$ 0	15	\$150
B	1	\$ 30	12	\$120
C	2	\$ 60	9	\$ 90
D	3	\$ 90	6	\$ 60
E	4	\$120	3	\$ 30
F	5	\$150	0	\$ 0



The slope of the budget line indicates the spending tradeoff between one good and another—the amount of one good that must be sacrificed in order to buy more of another good. If P_y is the price of the good on the vertical axis and P_x is the price of the good on the horizontal axis, then the slope of the budget line is $-P_x/P_y$.

The Equation of the Budget Constraint

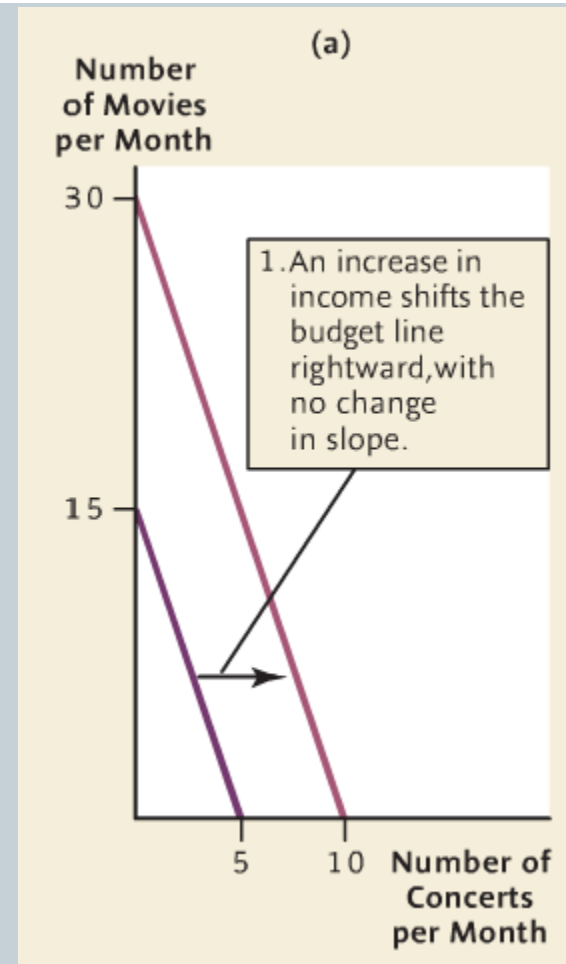


$$P_X X + P_Y Y = I,$$

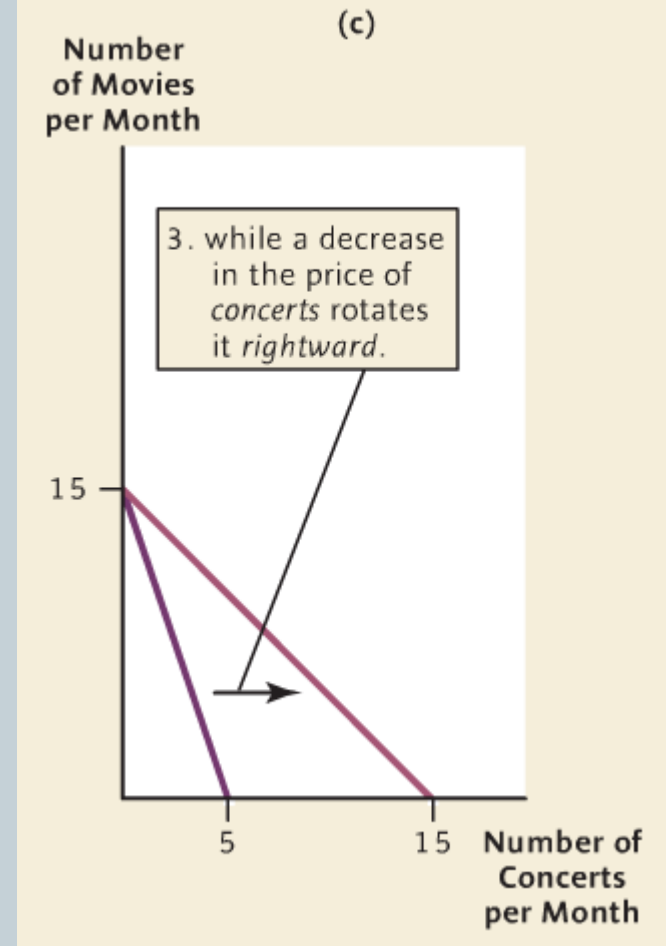
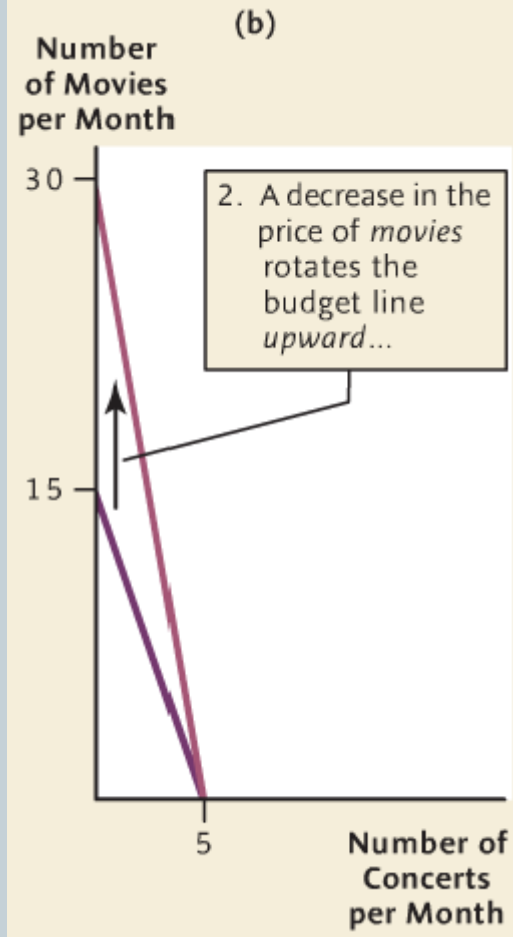
where P_X = the price of X, X = the quantity of X consumed, P_Y = the price of Y, Y = the quantity of Y consumed, and I = household income.³

Changes in The Budget Line

- Change in Income
- Change in Price



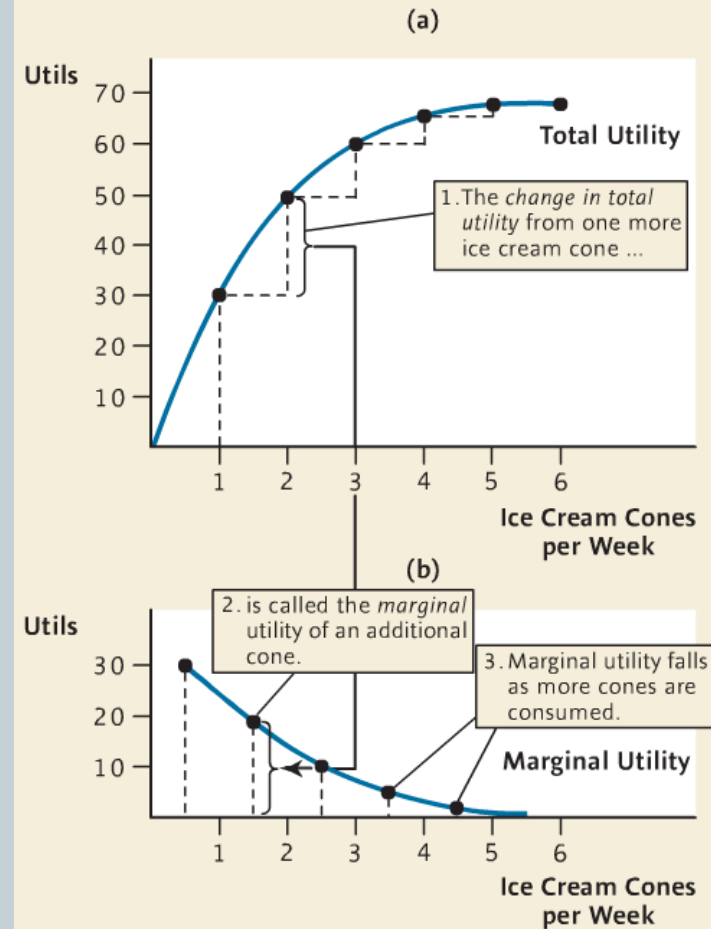
Changes in The Budget Line... cont



Consumer Decision: The Marginal Utility Approach

Lisa's Total and Marginal Utility from Consuming Ice Cream Cones

Number of Cones	Total Utility	Marginal Utility
0	0 utils	
1	30 utils	30 utils
2	50 utils	20 utils
3	60 utils	10 utils
4	65 utils	5 utils
5	68 utils	3 utils
6	68 utils	0 utils



Consumer Decision: The Marginal Utility Approach... cont



- **Marginal Utility (MU):** *The additional satisfaction gained by the consumption or use of one more unit of a good or service.*
- **Total Utility (TU):** The total amount of satisfaction obtained from consumption of a good or service.
- **Law of Diminishing Marginal Utility:** The more of any one good consumed in a given period, the less satisfaction (utility) generated by consuming each additional (marginal) unit of the same good.

Allocating Income to Maximize Utility



Income = \$150 per month

CONCERTS at \$30 each

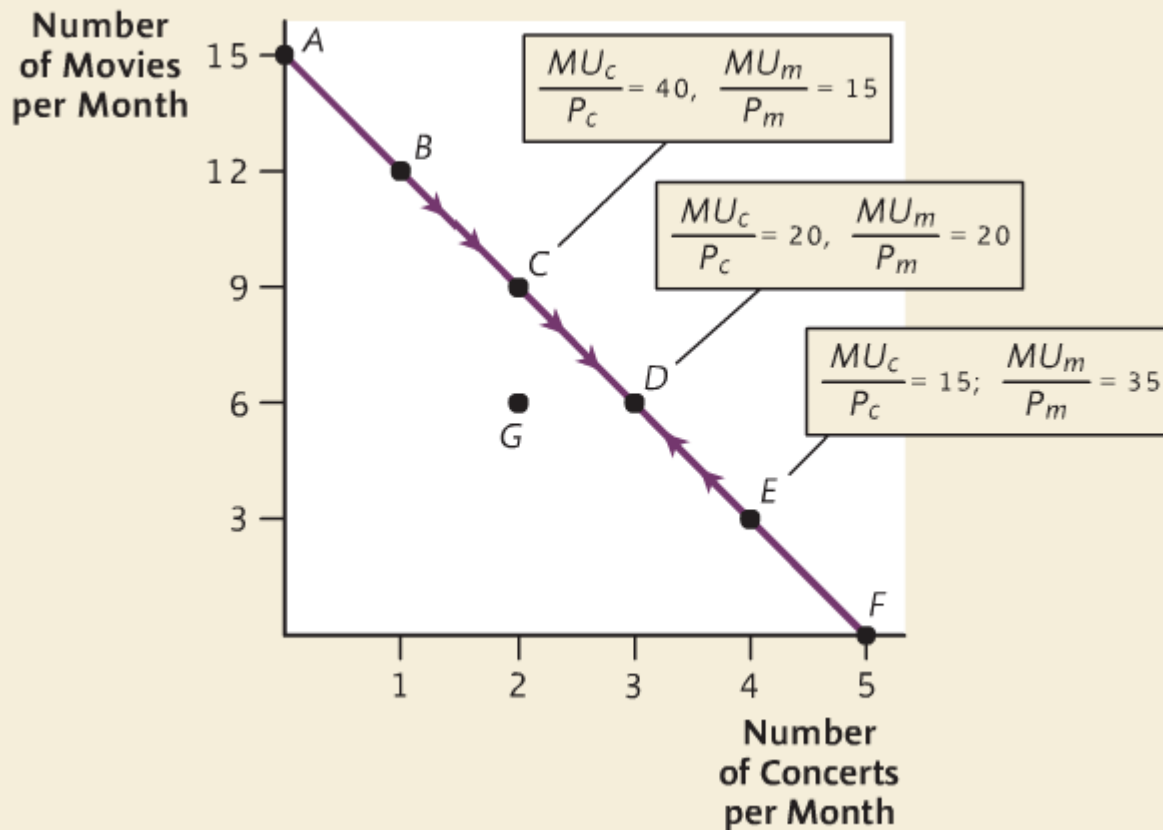
MOVIES at \$10 each

(1) Point on Budget Line	(2) Number of Concerts per Month	(3) Marginal Utility from Last Concert (MU_c)	(4) Marginal Utility per Dollar Spent on Last Concert $\left(\frac{MU_c}{P_c}\right)$	(5) Number of Movies per Month	(6) Marginal Utility from Last Movie (MU_m)	(7) Marginal Utility per Dollar Spent on Last Movie $\left(\frac{MU_m}{P_m}\right)$
A	0	—	—	15	50	5
B	1	1,500	50	12	100	10
C	2	1,200	40	9	150	15
D	3	600	20	6	200	20
E	4	450	15	3	350	35
F	5	360	12	0	—	—

Allocating Income to Maximize Utility... cont

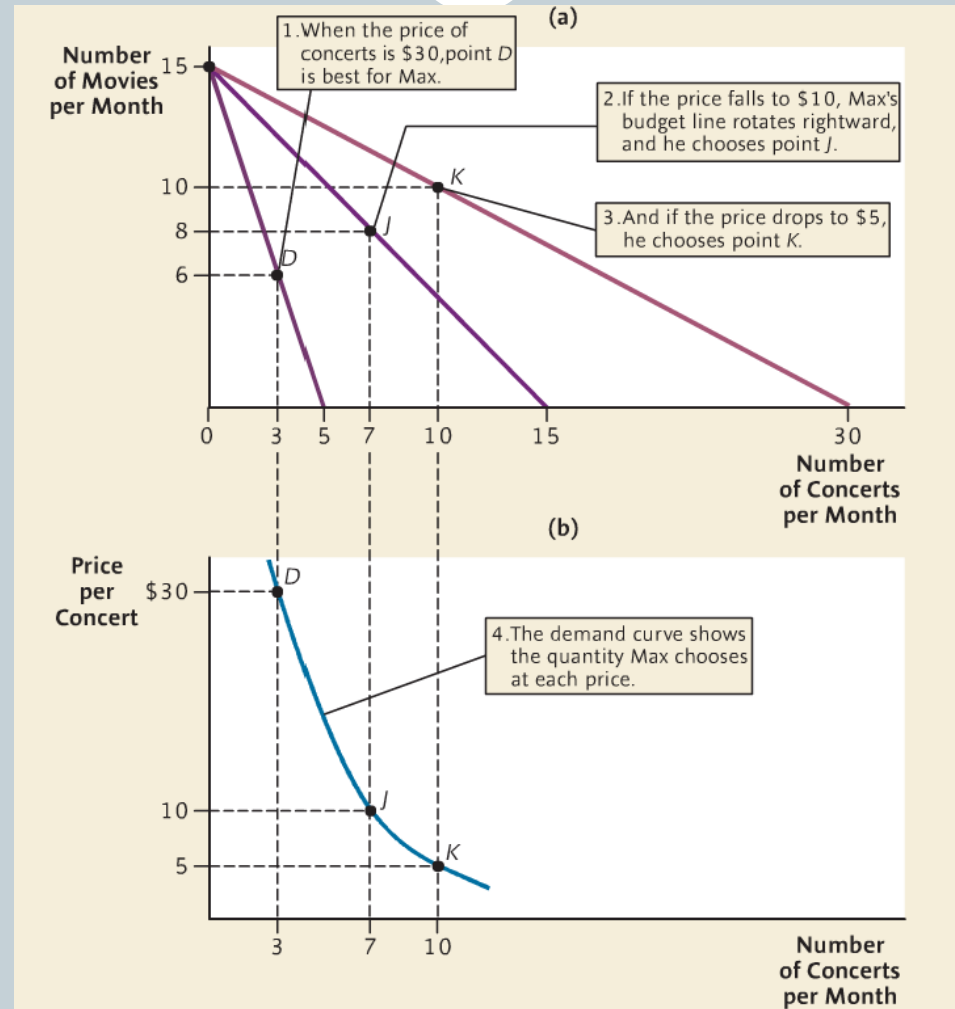


utility-maximizing rule: $\frac{MU_X}{P_X} = \frac{MU_Y}{P_Y}$ for all goods



diamond/water paradox A paradox stating that (1) the things with the greatest value in use frequently have little or no value in exchange and (2) the things with the greatest value in exchange frequently have little or no value in use.

Deriving the Demand Curve



INCOME AND SUBSTITUTION EFFECTS

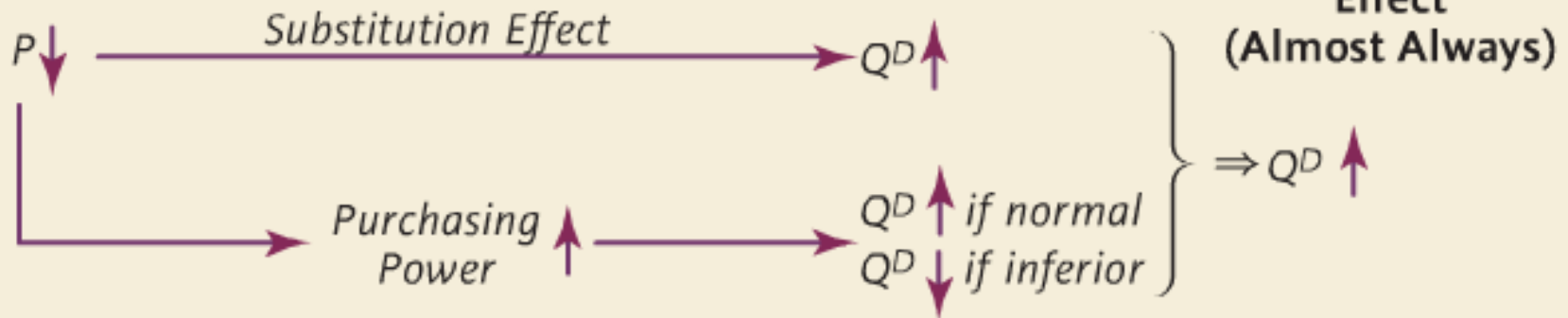
- “Great news! Now that Pepsi is cheaper, my income has greater purchasing power. I am, in effect, richer than I was. Because I am richer, I can buy both more Pepsi and more pizza.” (This is the income effect.)
- “Now that the price of Pepsi has fallen, I get more pints of Pepsi for every pizza that I give up. Because pizza is now relatively more expensive, I should buy less pizza and more Pepsi.” (This is the substitution effect.)

GOOD	INCOME EFFECT	SUBSTITUTION EFFECT	TOTAL EFFECT
Pepsi	Consumer is richer, so he buys more Pepsi.	Pepsi is relatively cheaper, so consumer buys more Pepsi.	Income and substitution effects act in same direction, so consumer buys more Pepsi.
Pizza	Consumer is richer, so he buys more pizza.	Pizza is relatively more expensive, so consumer buys less pizza.	Income and substitution effects act in opposite directions, so the total effect on pizza consumption is ambiguous.

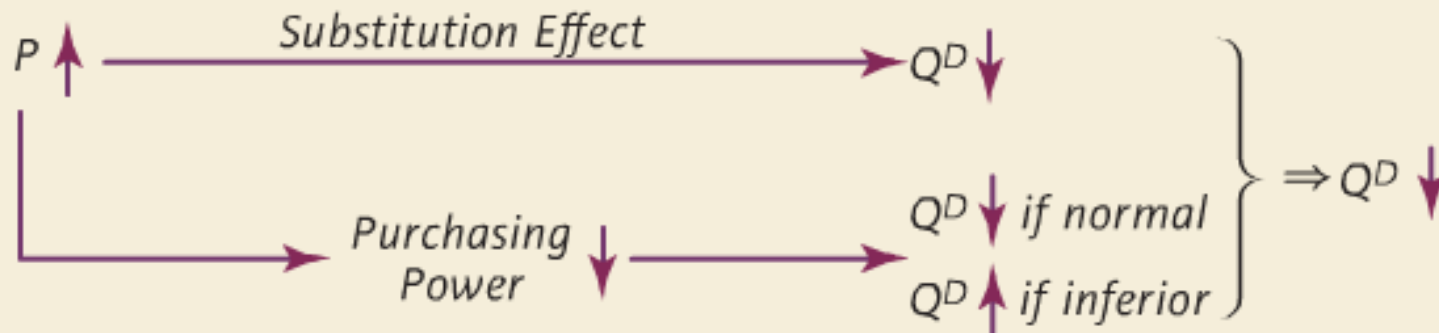
INCOME AND SUBSTITUTION EFFECTS... cont



Price Decrease:



Price Increase:



The Indifference Curve Approach



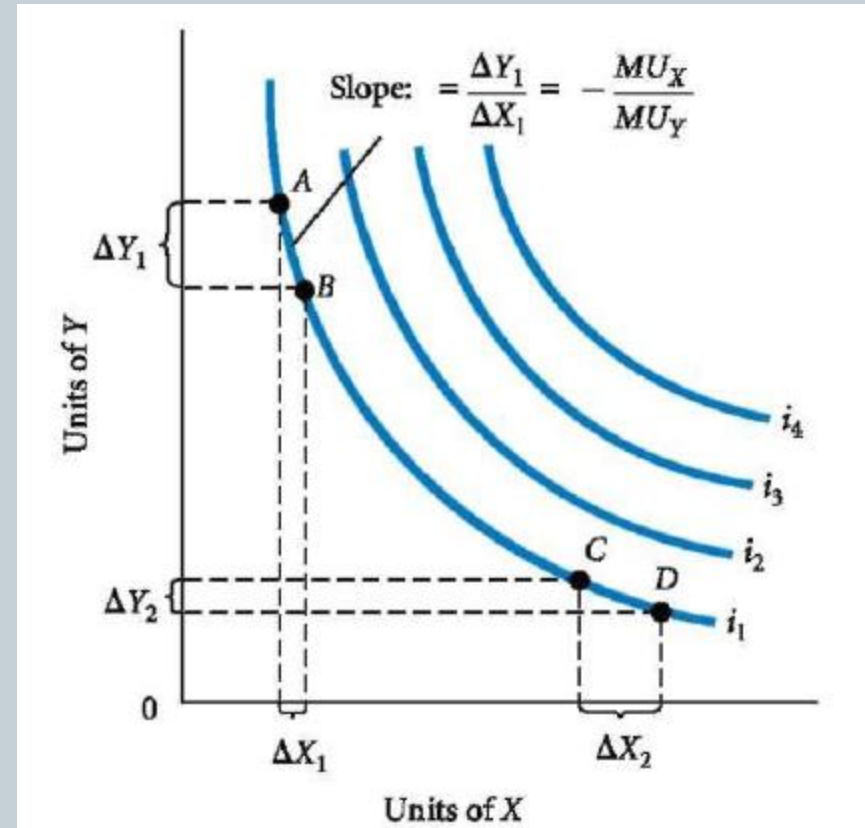
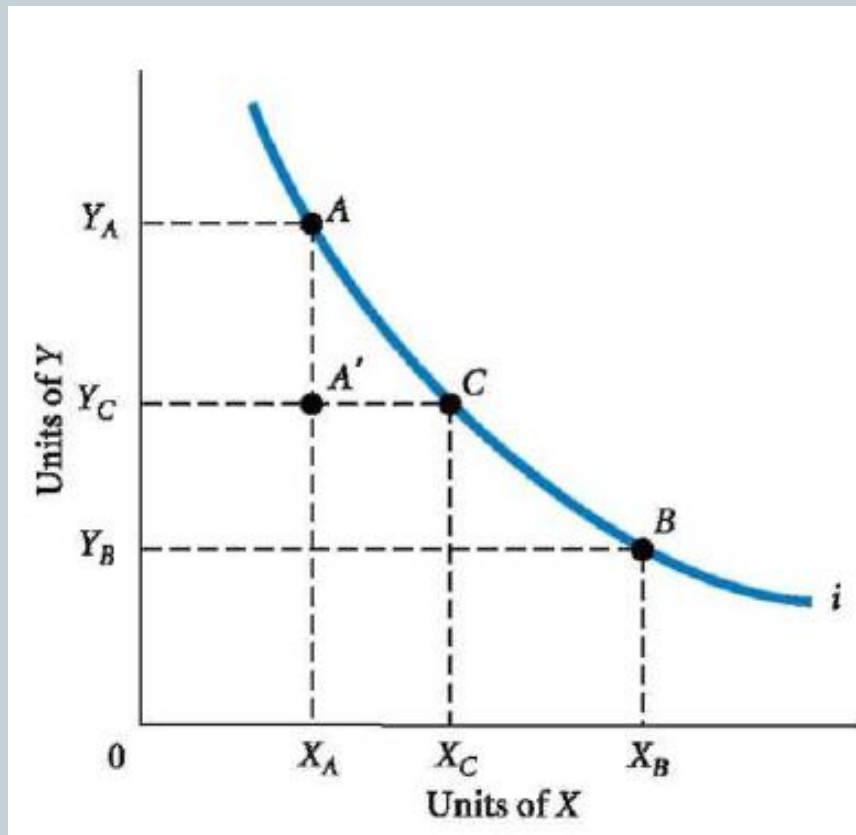
- NEXT MEETING

ASSUMPTIONS

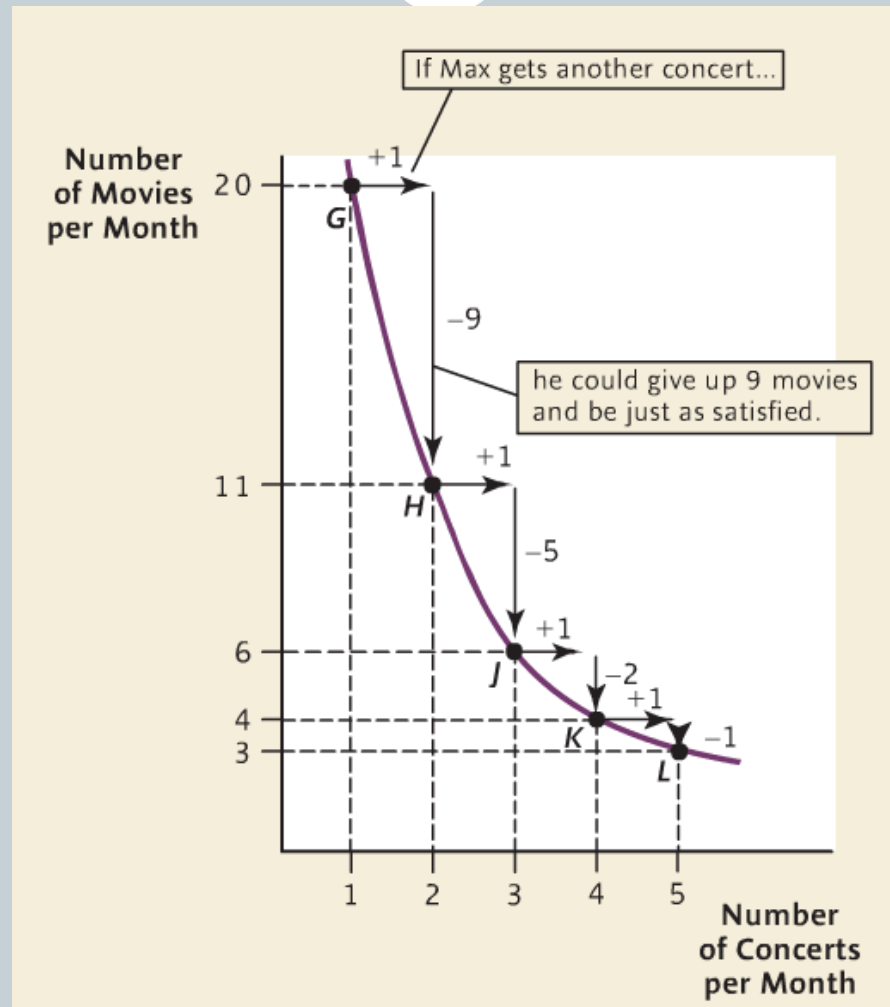


- We assume that this analysis is restricted to goods that yield positive marginal utility, or, more simply, that "more is better."
- The **marginal rate of substitution is defined as** MUX/MUY , or the ratio at which a household is willing to substitute ***X for Y***.
- We assume that consumers have the ability to choose among the combinations of goods and services available.
- We assume that consumer choices are consistent with a simple assumption of rationality. If a consumer shows that he prefers ***A to B and subsequently shows that he prefers B to a third alternative, C, he should prefer A to C*** when confronted with a choice between the two.

DERIVING INDIFFERENCE CURVES



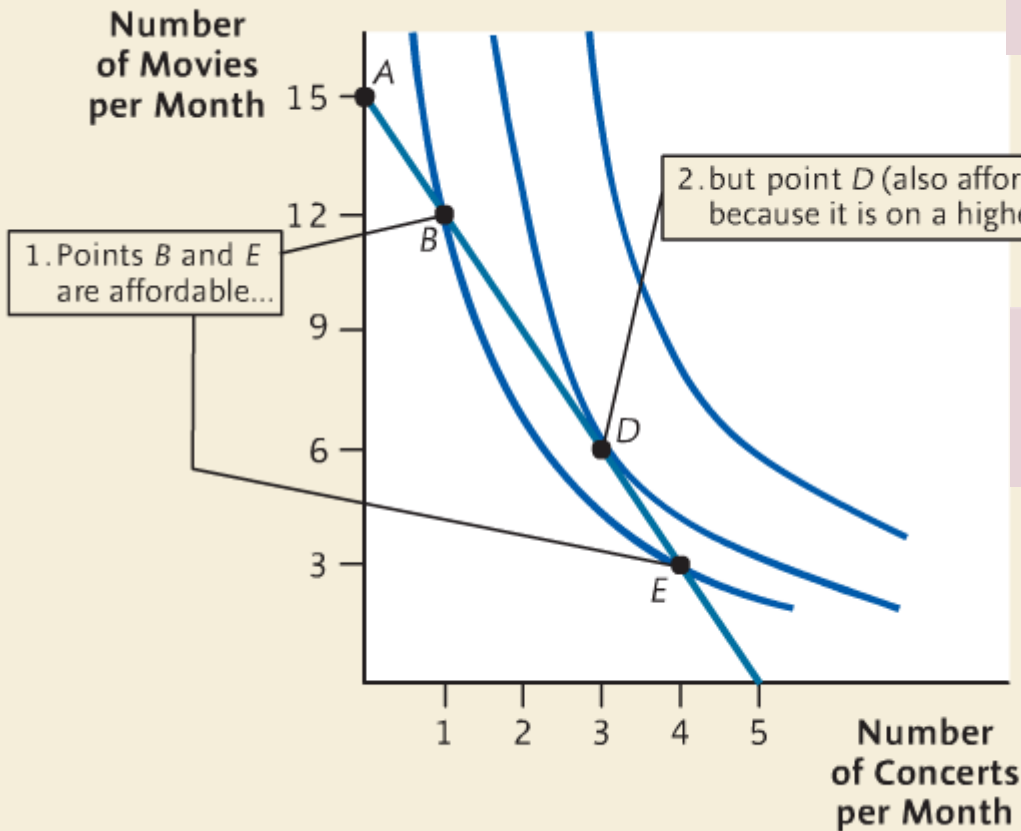
The Marginal Rate of Substitution



Consumer Decision Making

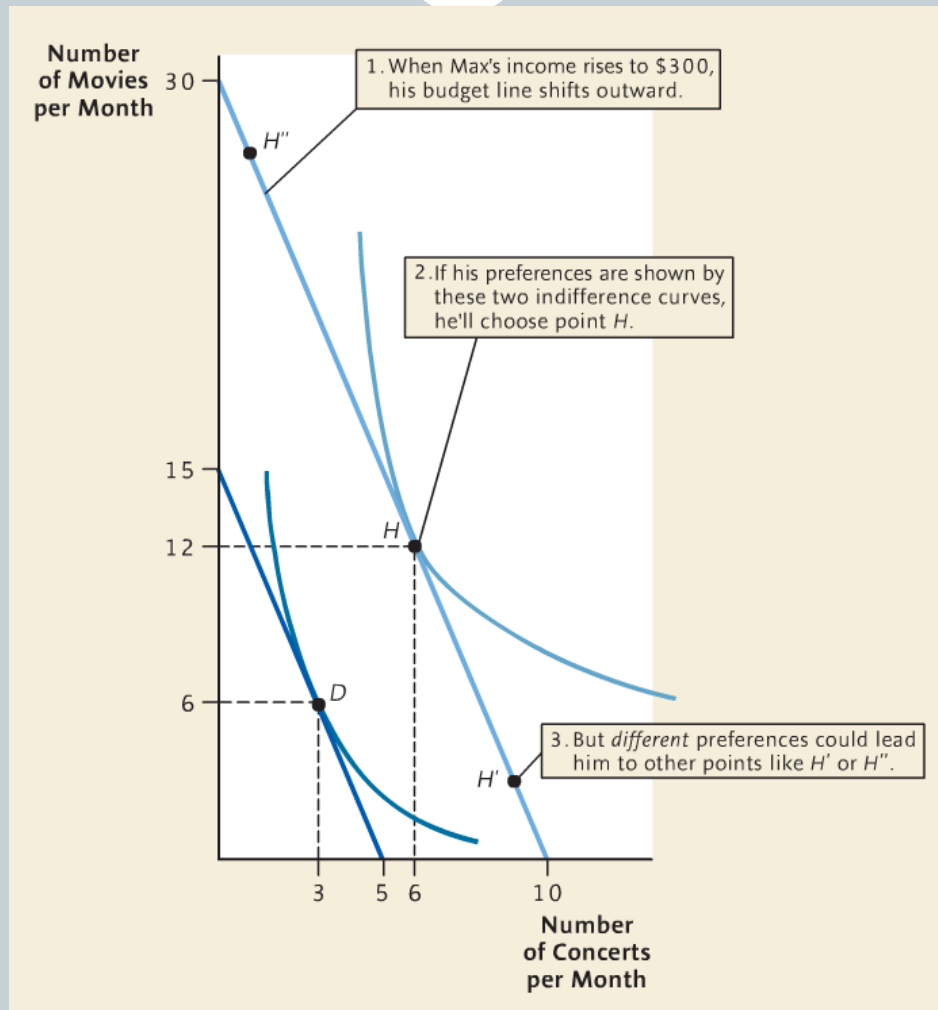


The optimal combination of goods for a consumer is the point on the budget line where an indifference curve is tangent to the budget line.

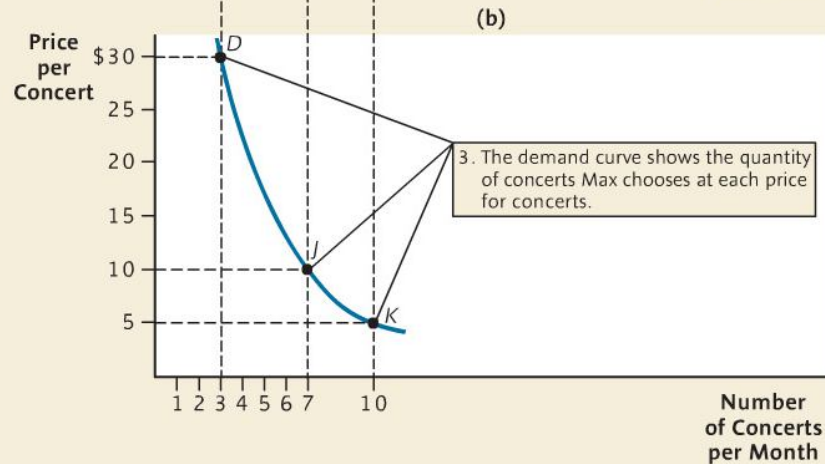
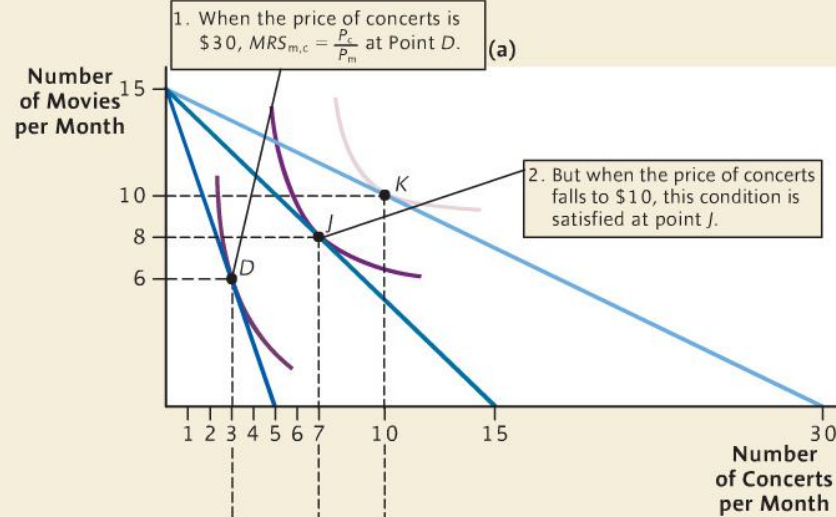


The optimal combination of two goods x and y is that combination on the budget line for which $MRS_{y,x} = P_x/P_y$.

What Happen When Things Change?



Deriving the Demand Curve



INCOME AND SUBSTITUTION EFFECTS

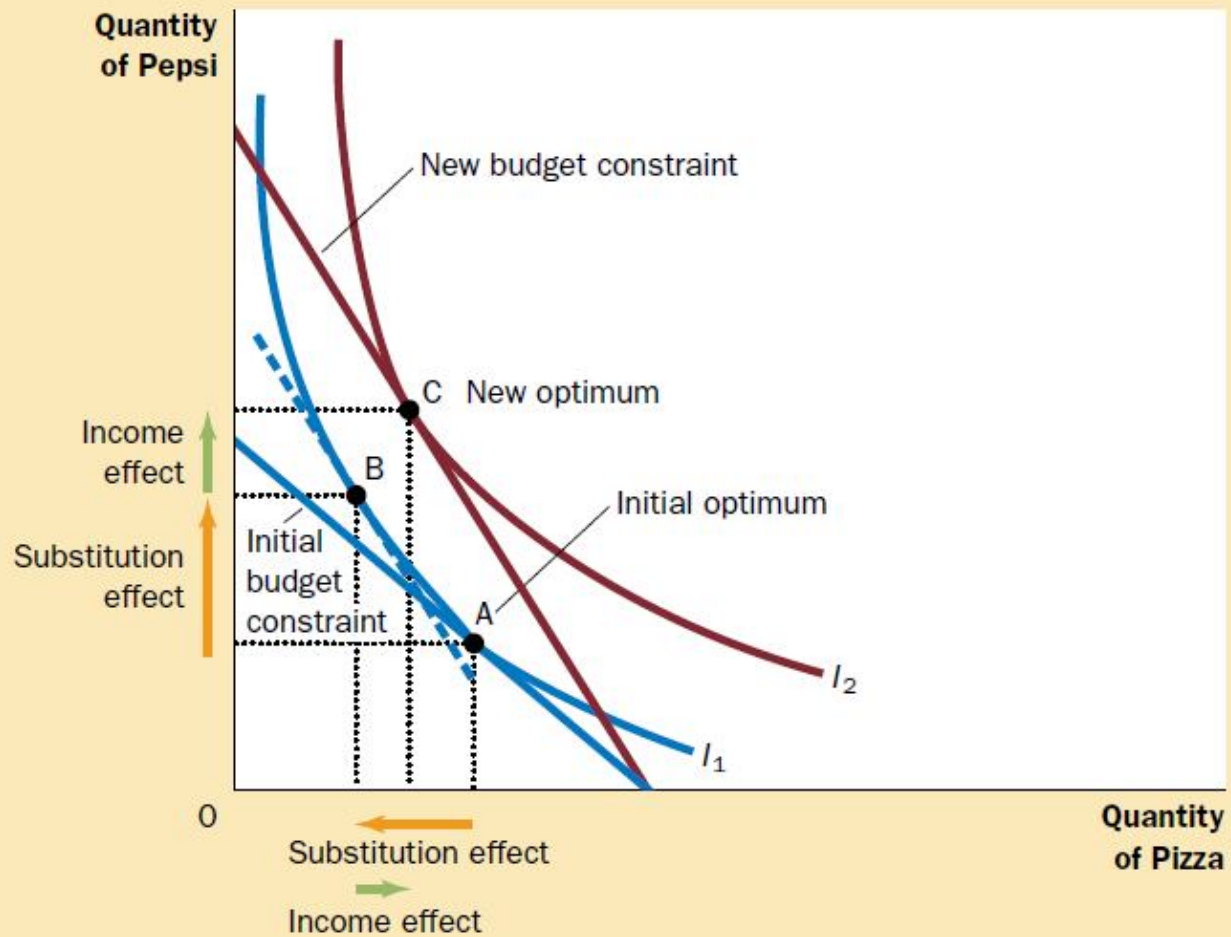
- “Great news! Now that Pepsi is cheaper, my income has greater purchasing power. I am, in effect, richer than I was. Because I am richer, I can buy both more Pepsi and more pizza.” (This is the income effect.)
- **income effect:** *the change in consumption that results when a price change moves the consumer to a higher or lower indifference curve*
- “Now that the price of Pepsi has fallen, I get more pints of Pepsi for every pizza that I give up. Because pizza is now relatively more expensive, I should buy less pizza and more Pepsi.” (This is the substitution effect.)
- **substitution effect:** *the change in consumption that results when a price change moves the consumer along a given indifference curve to a point with a new marginal rate of substitution*

Income and Substitution Effects When the Price of Pepsi Falls



Good	Income Effect	Substitution Effect	Total Effect
Pepsi	Consumer is richer, so he buys more Pepsi.	Pepsi is relatively cheaper, so consumer buys more Pepsi.	Income and substitution effects act in same direction, so consumer buys more Pepsi.
Pizza	Consumer is richer, so he buys more pizza.	Pizza is relatively more expensive, so consumer buys less pizza.	Income and substitution effects act in opposite directions, so the total effect on pizza consumption is ambiguous.

INCOME AND SUBSTITUTION EFFECTS... cont



A Giffen Good



A GIFFEN GOOD.

In this example, when the price of potatoes rises, the consumer's optimum shifts from point C to point E. In this case, the consumer responds to a higher price of potatoes by buying less meat and more potatoes.

