

Consumer Choice and Market Demand

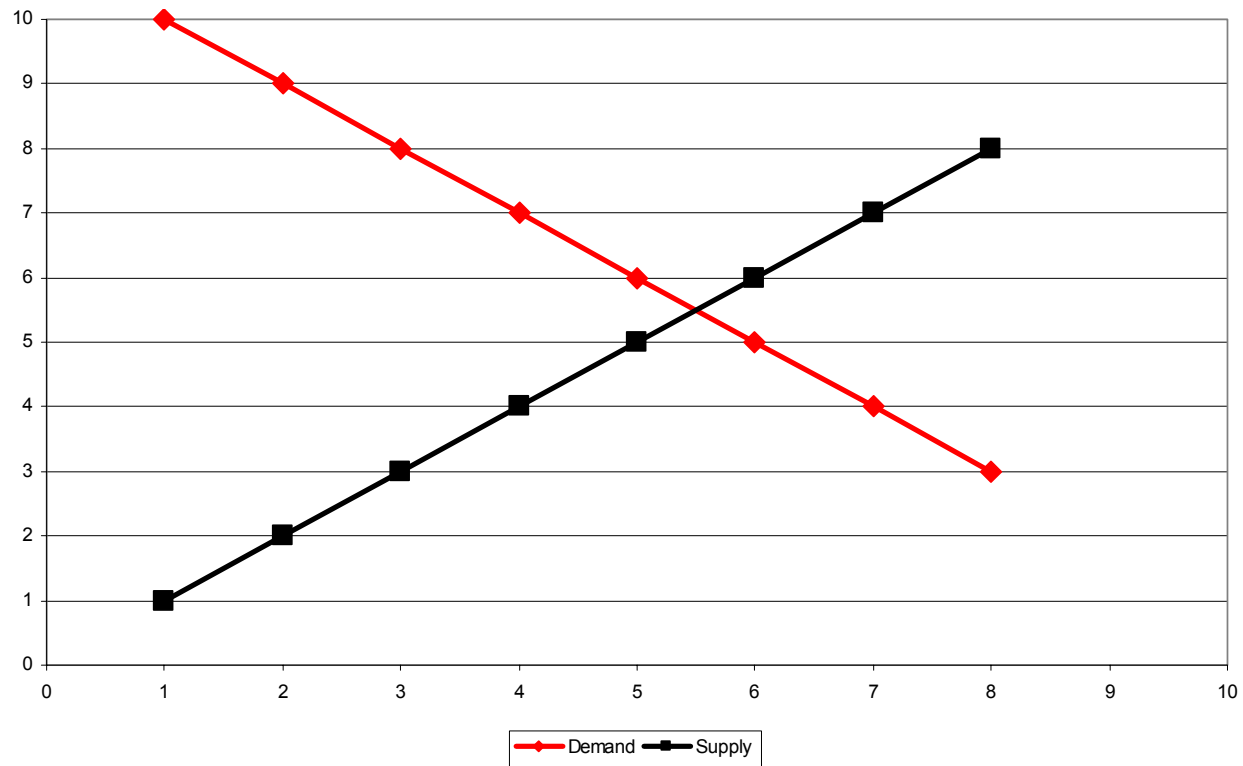
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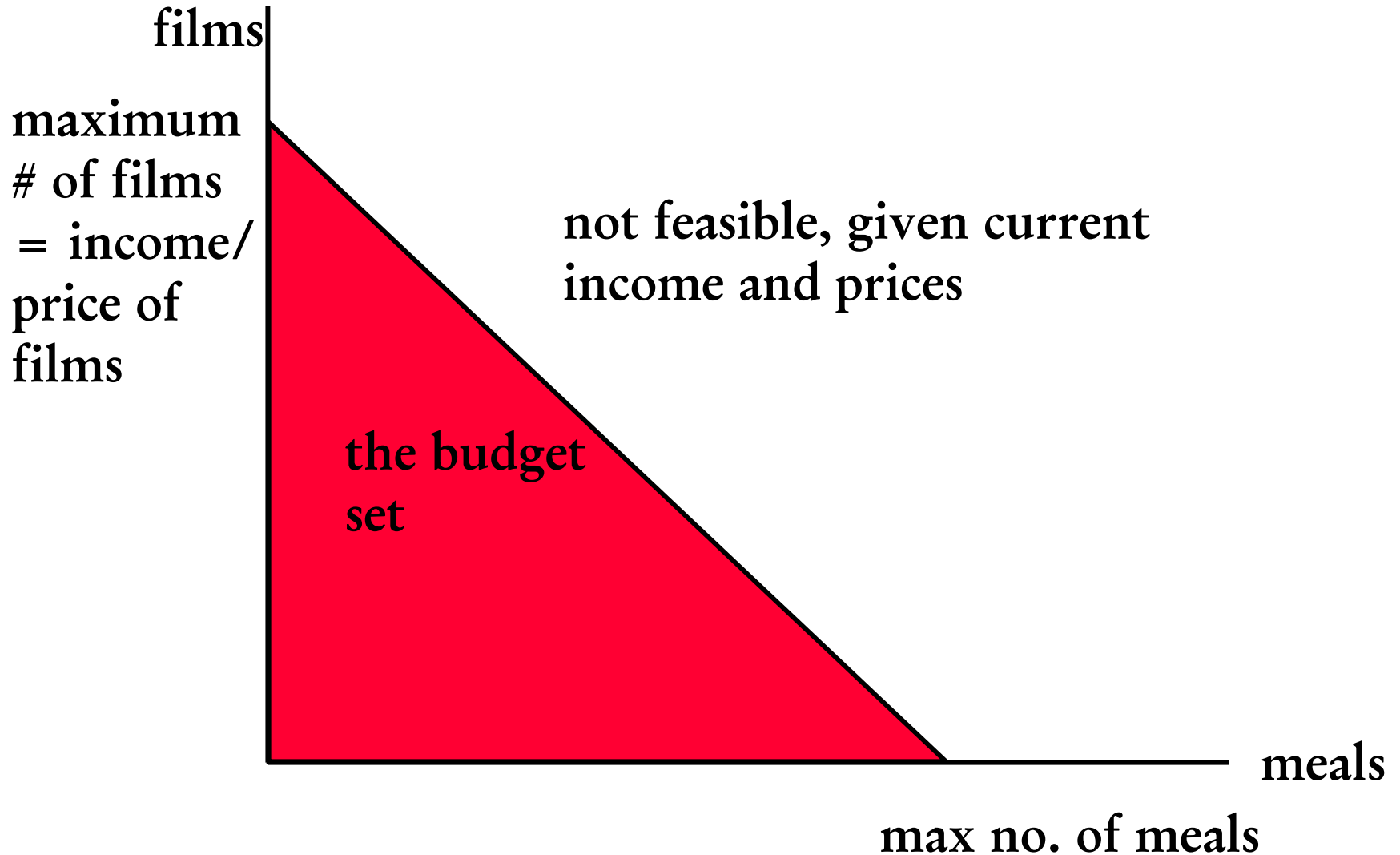
the market for t-shirts



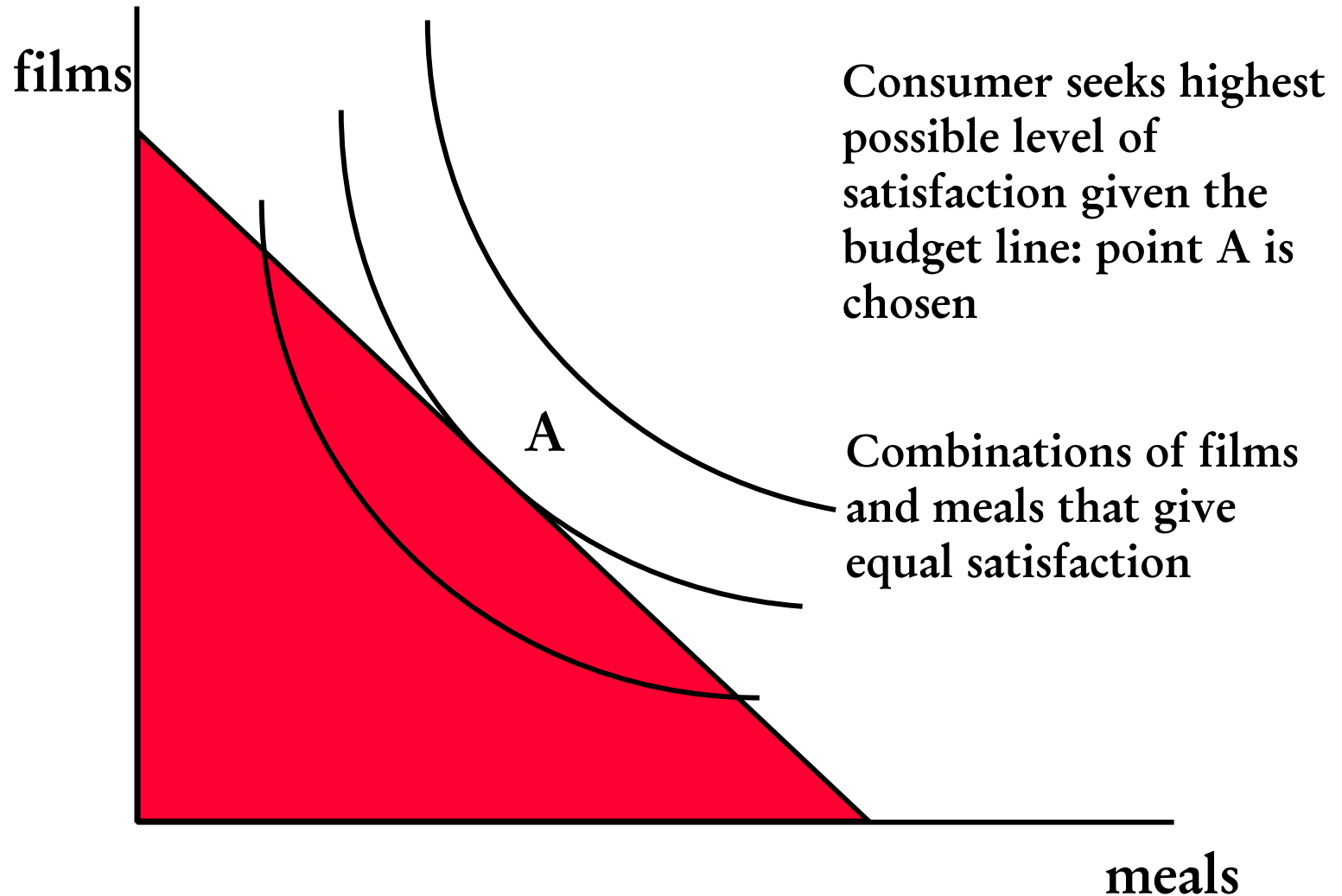
outline

- what determines the demand for a good?
 - the household budget
 - the price of the product
 - the price of other products
 - consumer tastes
- how does a change in income affect demand?
 - normal, luxury, necessity, inferior and Giffen goods
- how does a change in price affect demand?
 - substitution and income effects

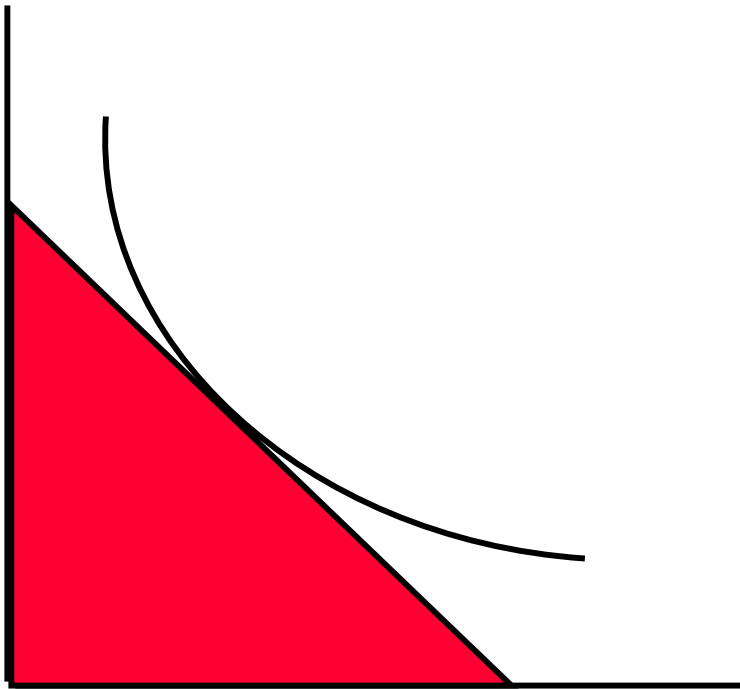
the budget line



indifference curves

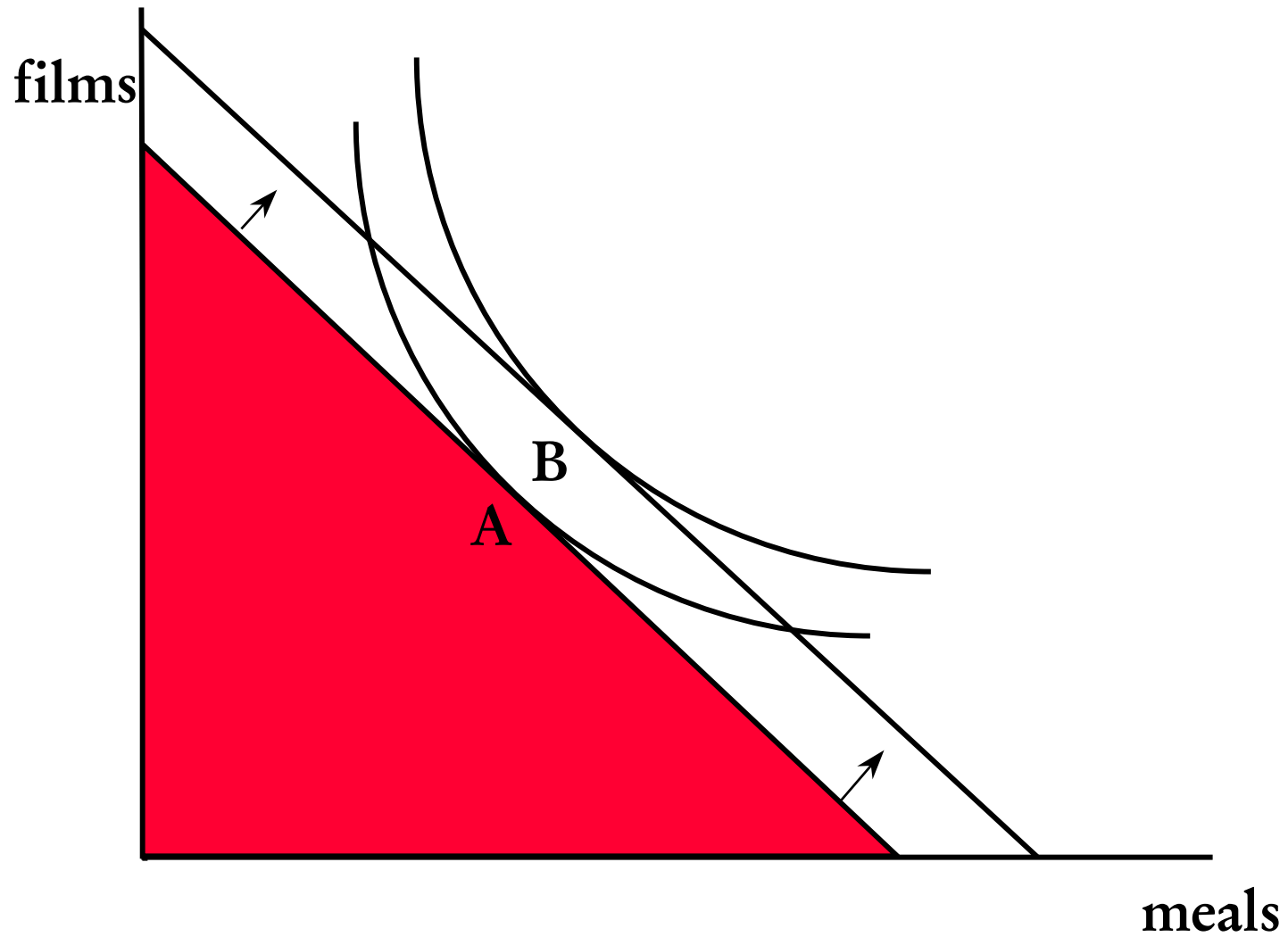


market and personal exchange rates



- The slope of the budget line reflects the trade-off between the goods given by relative prices: the market exchange rate. This is usually called the price-ratio.
- The slope of the indifference curve reflects the trade-off between the goods given by relative preferences: the private exchange rate. This is usually called the marginal rate of substitution.
- Everyone consuming the good has the same private exchange rate, regardless of their preferences.

a rise in income



income elasticity of demand

- measures sensitivity of demand to changes in income
$$\frac{\% \text{ change in demand for a good}}{\% \text{ change in income}}$$
- good is:
 - *normal* if elasticity is positive
 - *luxury* if greater than 1
 - *necessity* if less than 1
 - *inferior* if elasticity is negative

estimates of income elasticities

• Tobacco	-0.50
• Fuel and Light	0.30
• Food	0.45
• Alcohol	1.14
• Clothing	1.23
• Durables	1.47
• Services	1.75

Source: Begg et al., page 67, taken from Muellbauer (1977).

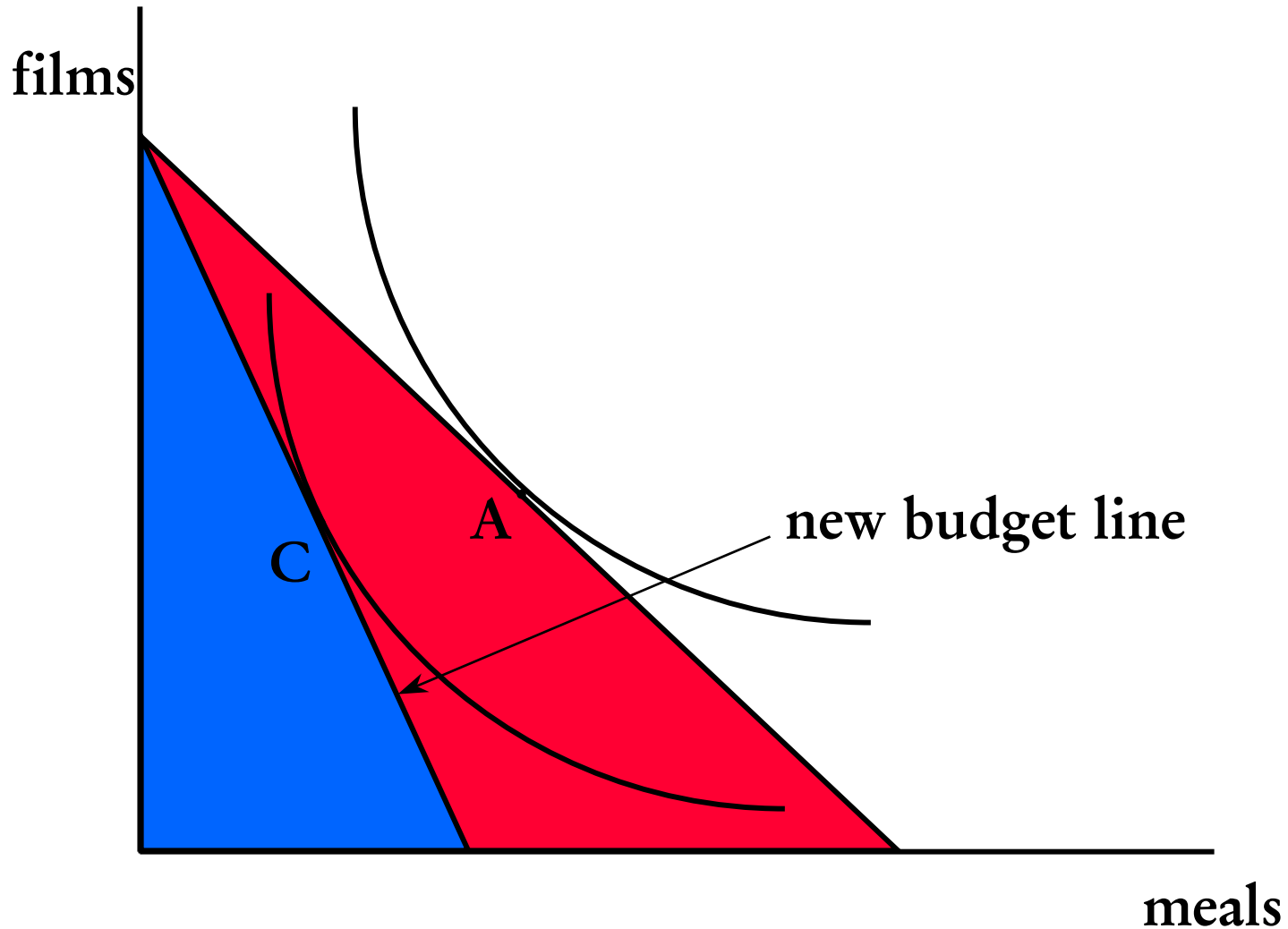
effect of general inflation

- suppose that all prices, and income, increase in the same proportion
- what happens to demand?
- nothing
 - tastes do not change
 - the budget line remains in the same place

a rise in price of one good

- suppose the price of meals increases, while income and the price of films remain constant
- the budget line rotates inwards
- can still buy as many films as before, but not as many meals
- budget line rotates with price rise

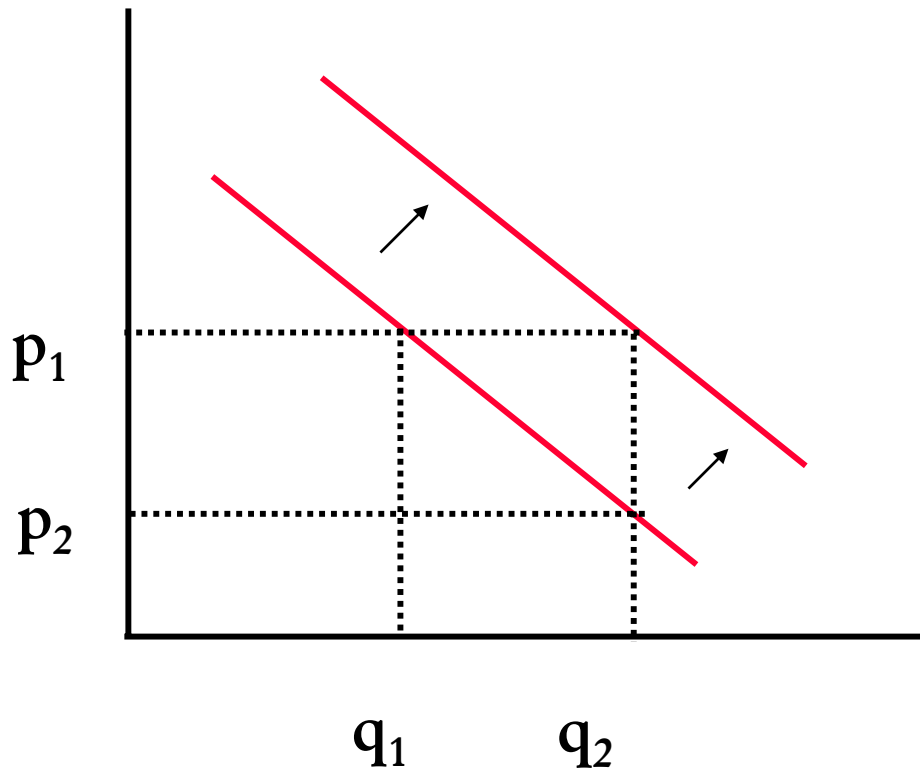
budget line rotates with price rise



substitution and income effects

- the rise in price causes demand for meals to fall for *two* reasons:
- meals are more expensive relative to films
 - *the substitution effect*
- the customer's real income has fallen
 - *the income effect*
- the substitution effect is always negative
- the income effect can be positive or negative
 - normal, inferior and Giffen goods
- for a normal good, both effects are negative. Hence, for a normal good, the demand curve always slopes downwards.

the demand curve



- A reduction in price yields a movement *along* the demand curve. A change in income or tastes, or the prices of other products, will shift the demand curve.
- Demand could rise from q_1 to q_2 either because price has fallen from p_1 to p_2 , or because the demand curve has shifted out.

measures of sensitivity to price

- the slope of the demand curve tells us how much demand changes in response to a change in the price
- own-price elasticity of demand
$$\frac{\% \text{ change in quantity of } \textit{meals} \text{ demanded}}{\% \text{ change in price of } \textit{meals}}$$
- cross-price elasticity of demand
$$\frac{\% \text{ change in quantity of } \textit{films} \text{ demanded}}{\% \text{ change in price of } \textit{meals}}$$
 - positive for substitutes, negative for complements

cross-price and own-price elasticities

	<u>Cigarette Elasticities</u>		
	Per Day	Participation	Per Day Among Smokers
Cigarettes	-0.32	-0.18	-0.14
Beer	-0.14	-0.19	0.04
Income	-0.13	-0.09	-0.01

	<u>Beer Elasticities</u>		
	Per Day	Participation	Per Day Among Drinkers
Cigarettes	0.50	0.39	0.12
Beer	-0.97	-0.73	-0.23
Income	0.19	0.19	0.02

Source: Decker and Schwartz, 2000

own-price elasticity and spending

- if elasticity = -1, spending is constant
- if elastic (elasticity < -1),
 - total spending rises as price falls
 - total spending falls as price rises
- if inelastic (elasticity > -1)
 - total spending rises as price rises
 - total spending falls as price falls
- If the elasticity is zero, the demand curve is vertical. If the elasticity is infinite, the demand curve is horizontal. If the elasticity is -1, the demand curve is a rectangular hyperbola.

Brazilian coffee exports

	1993	1994	1995
Price \$/lb	0.9	2.0	2.1
Quantity	113.0	102.0	85.0
Total Revenue	101.7	204.0	178.5

summary

- theory of consumer choice analyses the responses of customers to income and price changes
- these responses are measured by elasticities, which can be estimated
- The effect of a price rise on the demand for a good depends upon the balance between the substitution and income effects
- Theory of consumer choice doesn't just apply to goods and services, can also be used to think about the allocation of time, labour supply decisions and saving behaviour
- useful for businesses and policymakers

syndicate topics

- if people don't spend their lives solving mathematical problems, why do economists pretend that they do?
- what other shapes could indifference curves take?
- do demand curves always slope downwards?
- is it better to give asylum seekers cash or food vouchers?
- if interest rates rise, do consumers save more?
- if the government introduces an energy tax, how, and by how much, should the government compensate pensioners?
- if income tax rates fall, will workers work harder?