



Income Elasticity of Demand

Notes

WHAT IS INCOME ELASTICITY OF DEMAND?

- First things first: we use Y as the variable for income. Why? Because "I" is used for investment and "i" is used for interest.
- Income Elasticity of Demand (YED) is a measure of responsiveness of demand (not just quantity demanded) to a change in income.

HOW DO WE CALCULATE YED?

$$YED = \frac{\% \Delta QD \text{ (quantity demanded)}}{\% \Delta Y \text{ (income)}}$$

An example:

Melanie has an increase in annual income from \$60,000 per year to \$66,000. She then increases her annual spending on holidays from \$2,500 to \$3,000. What is her YED for holidays?

- First calculate the %Δ for income: $\frac{6000}{60000} * 100 =$
- Next, calculate the %Δ for qd on spending on holidays: $\frac{+500}{2500} * 100 =$
- Finally, calculate YED: $\frac{+20}{+10} =$

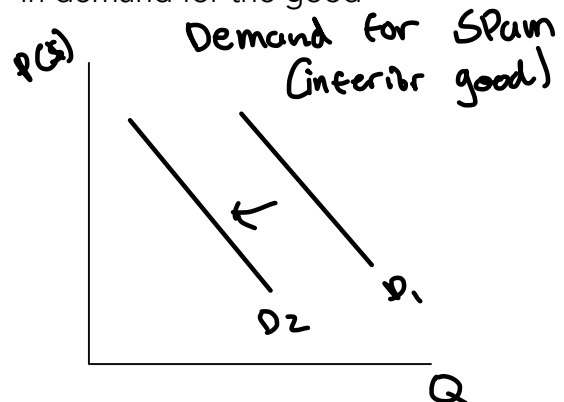
WHAT DO THE VALUES MEAN?

- In YED, the sign (whether positive or negative) matters!

- A positive sign means that the good is normal. An increase in income will lead to an increase in demand for the good.



- A negative sign means the good is inferior.
- This means that an increase in income will lead to a decrease in demand for the good

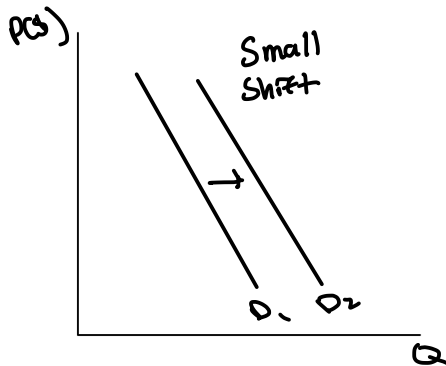


RANGE OF VALUES: NECESSITY GOODS

- If the YED value is positive, but its absolute value is below 1 (aka the value is a decimal), we say the good

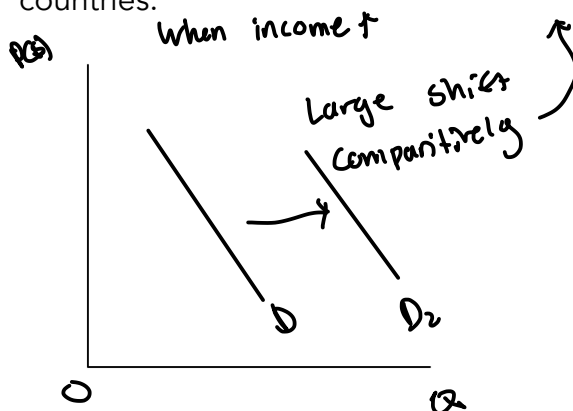
is income inelastic and a necessity good.

- The demand for these goods will change very little if income rises.
- Example: demand for bread



RANGE OF VALUES: SUPERIOR GOODS

- If the YED value is positive, but its absolute value is above 1, we say... the good is income elastic and is a superior or luxury good.
- The demand for these goods will change a significantly if income rises.
- Example: Vacations in other countries.

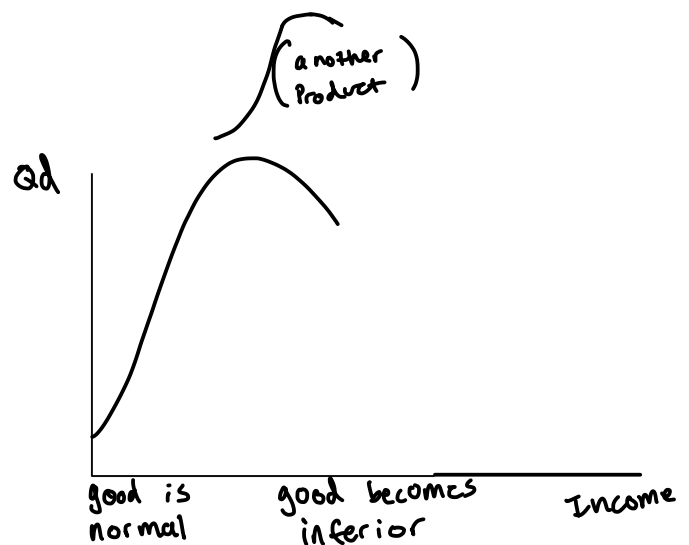


THE RANGE OF VALUES: INFERIOR GOODS

- Inferior goods have a negative YED value because... the demand decreases as income increases
- People switch expenditure from inferior goods they had been buying to superior goods, which they can now afford.
- Example: inexpensive jeans to branded jeans

AN ASIDE: ENGELS CURVE

- An "Engels" curve shows the relationship between income and demand for a product over time.
- As income rises, demand may increase, then become constant, then begin to fall as people buy superior products.



YED VALUES SUMMARY

of	YED Values	Meaning
d		

Inferior	< 0	A given increase in income will lead to a proportionately smaller fall in demand.
Necessity	$0 < YED < 1$	A given increase in income will lead to a proportionately smaller increase in demand.
Luxury	> 1	A given increase in income will lead to a proportionately larger increase in demand.

WHY IS KNOWLEDGE OF YED IMPORTANT?

1. FOR DECISION MAKING BY FIRMS

- For firms, it's important to know about YED when planning which markets to enter and which products to sell.
- Products that have a high YED value will see... *large increases in demand as income levels rise in a country so markets will grow quickly*
- Producers often manufacture multiple versions of their product to appeal to people of different incomes.
- Knowledge of changing incomes will allow them to decrease production of certain products and increase production of others.
- During recessions, firms may... *increase production of an inferior goods since demand is anticipated to rise or remain high.*

2. FOR EXPLAINING SECTORIAL CHANGES IN THE STRUCTURE OF THE ECONOMY

Primary sector: Includes any industry involved in the extraction and production of raw materials such as farming, logging, hunting, fishing and mining.

Secondary sector: Involving the transformation of raw materials into goods.
ie: Steel into cars

Tertiary sector: Supplying of services to consumers and businesses.

- As countries grow, there is a change in the proportion of the economy that is produced in each sector.
- As the economy grows, incomes increase and the demand for primary products (e.g., agricultural goods) does not increase (they have income inelastic demand).
- Extra income tends to be spent on manufactured goods. (i.e., cell phones)
- The output in primary sector is still growing, but output in the secondary sector grows more quickly.
- As a country grows further, the people tend to demand more services, which have high YED values.
- Services such as... entertainment, healthcare and education will grow at a faster rate than products in