

An aerial photograph of a city landscape. In the foreground, there is a large green golf course with a winding path and a small pond. A multi-lane road curves through the middle of the image. In the background, there are various city buildings, including a prominent white building with a dome, and more green spaces. The sky is clear and blue.

Unit 1

Individual and Market Demand (Ch. 5)

9/9

ECON 323 – MICROECONOMIC THEORY – DR. STRICKLAND

Introduction



How do changes in income/prices affect consumer choice?

The answers to this question help us derive **demand curves**

Income & Choice



Income effect: the change in (optimal) consumption arising from a change in income

- Important: holding preferences and prices *constant*

Varies based on the type of good:

- Normal $\uparrow I \Rightarrow \uparrow Q$
- Inferior $\uparrow I \Rightarrow \downarrow Q$

Income Elasticity



Income elasticity describes how demand changes with income

- Specifically: the percentage change in quantity consumed associated with a percentage change in income

$$\epsilon_I^D = \frac{\frac{\% \Delta Q_D}{\% \Delta I}}{\frac{\Delta Q_D / Q_D}{\Delta I / I}} = \frac{\Delta Q_D}{\Delta I} \cdot \frac{I}{Q_D}$$

Handwritten annotations:

- Under $\% \Delta$: $\frac{\text{New-old}}{\text{old}}$
- Under $\frac{\Delta Q_D}{\Delta I}$: INCOME EFFECT
- Arrow from I to $\frac{I}{Q_D}$: OLD / ORIG. INCOME
- Arrow from Q_D to $\frac{I}{Q_D}$: OLD / ORIG. Q_D

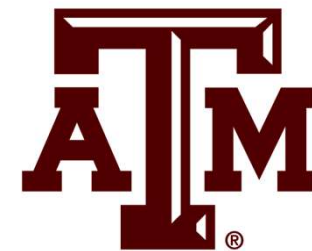
NORMAL GOODS: $\epsilon_I^D \geq 0$

INFERIOR GOODS: $\epsilon_I^D < 0$

e.g. $\epsilon_I^D = 10$

FOR EVERY 1% ↑ IN INCOME,
THERE IS A 10% ↑ IN Q_D

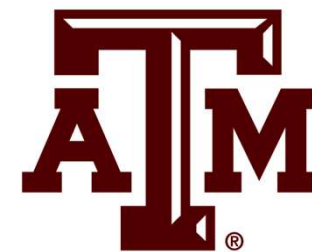
Income & Choice for Normal Goods



Economists further classify **normal goods** into two sub-categories:

- **Necessity goods** $0 \leq \xi_I^D \leq 1$
- **Luxury goods** $\xi_I^D > 1$

Let's practice!



Donna spends her income on massages and time traveling romance novels. Her usual massage costs \$25, and romance novels cost \$8.

When Donna's monthly income is \$240, she gets 8 massages and purchases 5 romance novels. When her income rises to \$282, she gets 10 massages and purchases 4 romance novels.

Determine whether the following statements are true or false:

- a. Massages are normal goods, and time traveling romance novels are inferior goods.
- b. Massages are luxury goods.
- c. Time traveling romance novels are necessity goods.

Let's practice!



$$P_M = \$25, P_R = \$8 \mid I = \$240: M=8, R=5 \mid I = \$282: M=10, R=4$$

ORIG NEW

a. **True** or false? Massages are normal goods, and time traveling romance novels are inferior goods.

b. **True** or false? Massages are luxury goods.

LUXURY: $\epsilon_I^D > 1$

$$\epsilon_I^D = \frac{\% \Delta Q_D}{\% \Delta I} = \frac{\Delta Q_D}{\Delta I} \cdot \frac{I}{Q_D} = \frac{(10-8)}{(282-240)} \cdot \frac{240}{8} = \frac{10}{7} = 1.42 > 1 \checkmark$$

c. True or **false**? Time traveling romance novels are necessity goods.