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Lecture 2

Consumer Choice & Demand

Economics & Society

SMU

Previously in E&S

- ★ Course presentation
- ★ Definition of Economics
- ★ Micro vs. Macro
- ★ Opportunity Cost / Economic vs. Accounting Profit
- ★ Ceteris paribus / post hoc propter ergo hoc fallacy
- ★ Representative agent
- ★ Utility basics
- ★ Graphs & Equations

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Consumer Choice & Demand



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DEMAND

The Law of Demand

Demand

- ★ An **increase in the price of the good** causes:
 - ▶ The **budget line** to rotate inwards
 - ▶ The consumer to find a **new optimal choice** on the new budget line
 - ▶ Where a lower quantity of the good will be **demand**.
- ★ The **law of demand** states that **price** and **quantity** are **inversely related**
- ★ This is due to **two reasons**:
 - ▶ The **income effect**: as the price of a good increases, consumers **cannot afford** to buy the same quantity **unless** they decrease the consumption of something else
 - ▶ The **substitution effect**: as the price of a good increases, consumers tend to **substitute** this good with similar goods whose price remained constant.
- ★ Demand shows the **willingness to pay** for **each quantity**.

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The demand equation

Demand

- ★ The relationship between **price** and **quantity** can be easily described by a **demand equation**, for **example**

$$q = 14 - 2p$$

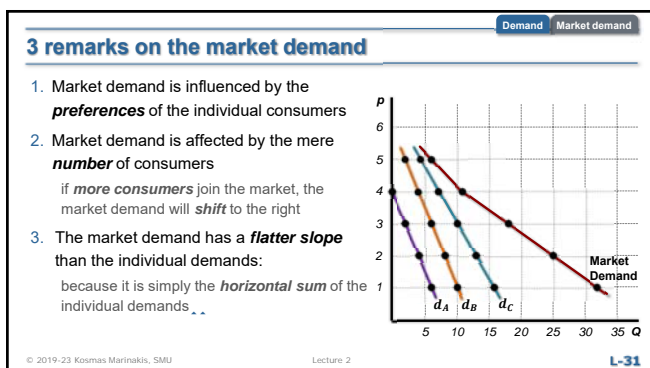
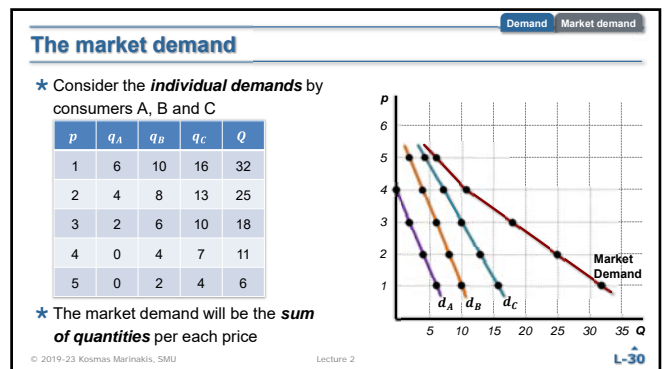
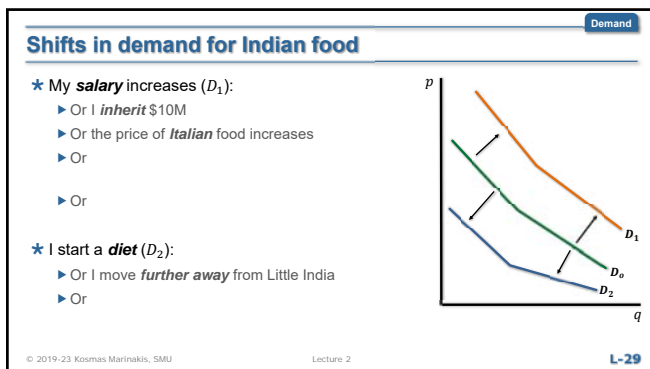
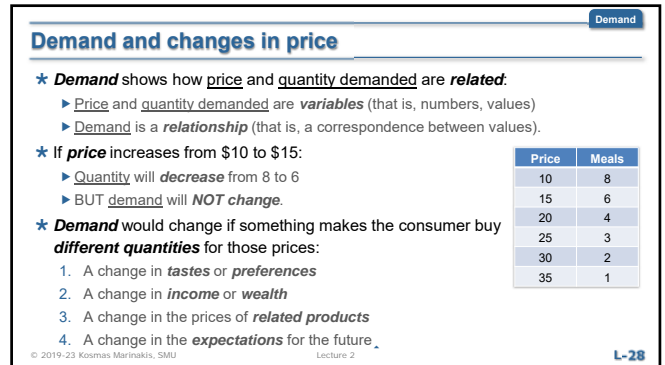
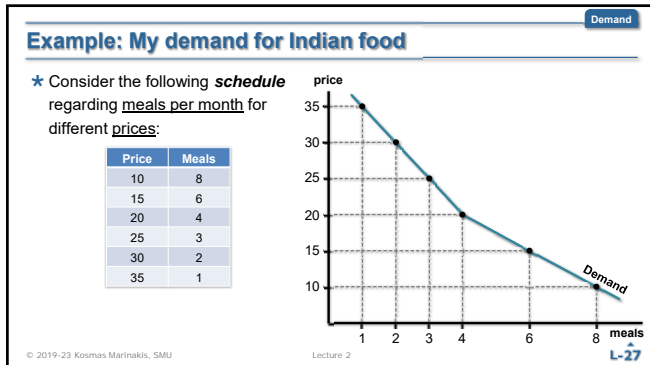
if the item was **free** I would get **14 units** – then for **every dollar increase in price**, I would get **2 units less**
- ★ The easiest way to **estimate** a demand relationship is to **survey** consumers:

"How much would you buy if price was \$5? What if it was \$6, \$7, etc."
- ★ Consumers, **consider** the given **price**, the prices of **competing goods**, their **income** and their **preferences**, calculate their **optimal choice** and come up with a **quantity**.

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External video

In this **CNBC** video, watch how everything from this lecture applies in real world. How the **Covid-19** crisis accelerated the decay in demand of one of the most iconic foods of the century: **milk**.

Why American Farmers Are Dumping Milk
CNBC 15:59

Across America, dairy farmers have dumped countless gallons of fresh, entirely usable milk, because there is no one to buy it.

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Elasticity of demand

The price elasticity of demand

- ★ A demand curve **shows** how quantity demanded responds to changes in price along a **wide range** of prices
- ★ However, usually we **only need** information in the vicinity of the **current** price
- ★ A way to measure the response of quantity to price **at a specific price point** is the **elasticity of demand** (ϵ_d)

ϵ_d **measures** the percentage change in quantity demanded of a good **resulting from** a percentage change in the good's price

$$\epsilon_d = \frac{\% \Delta Q}{\% \Delta p} \quad \text{or} \quad \epsilon_d = \frac{\Delta Q / Q}{\Delta p / p}$$
- ★ The price elasticity of demand will always be **negative**...

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Elasticity of demand

Elasticity of demand – example

$$\epsilon_d = \frac{\% \Delta Q}{\% \Delta p} \quad \text{or} \quad \epsilon_d = \frac{\Delta Q / Q}{\Delta p / p}$$

- ★ Assume that:
 - ▶ Price **increases** from 10 to 12
 - ▶ Quantity responds by **decreasing** from 50 to 45
- ★ Then,

$$\frac{\Delta Q}{Q} =$$
- ★ Thus,

$$\epsilon_d =$$

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Elasticity of demand

Elastic goods

- ★ If a good has $|\epsilon_d| > 1$ it **means that** $\Delta Q / Q > \Delta p / p$
a percentage increase in price will result into a **larger percentage decrease** in quantity
- ★ If, **for example** $\epsilon_d = -2$, it means that:
10% increase in price will **result** in a -20% change in quantity
- ★ When we **increase the price** of an elastic good, the **revenue will decrease**
- ★ If for **example**, price increases from 10 to 11 (10%) and quantity decreases from 5 to 4 (-20%):
 - ▶ Revenue **before**:
 - ▶ Revenue **after**:

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Elasticity of demand

Inelastic goods

- ★ If a good has $|\epsilon_d| < 1$ it **means that** $\Delta Q / Q < \Delta p / p$
a percentage increase in price will result into a **smaller percentage decrease** in quantity
- ★ If, **for example** $\epsilon_d = -0.5$, it means that:
a 10% increase in price will **result** in a -5% change in quantity
- ★ When we **increase the price** of an inelastic good, the **revenue will increase**
- ★ If for **example**, price increases from 10 to 11 (10%) and quantity decreases from 5 to 4.75 (-5%):
 - ▶ Revenue **before**:
 - ▶ Revenue **after**:

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Elasticity of demand

Demand elasticities estimates

Good Category	Price Elasticity
Olive Oil	-1.92
Peanut Butter	-1.73
Ketchup	-1.36
Wine	-1.00
Laundry Detergent	-0.81
Shampoo	-0.79
Potato chips	-0.45
Cigarettes	-0.40

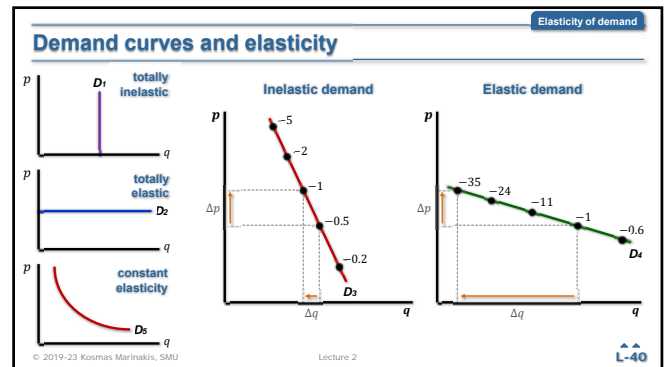
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Elasticity of demand

Determinants of elasticity of demand


1. Availability of **substitutes**:
 - ▶ Consumers are **less willing to tolerate** price increases for goods that can be **easily substituted**
2. **Budget share** spent on the good:
 - ▶ When the total expenditure for the good is a **small share** of the budget, consumers pay **less attention** to the price of the good
3. Available **time to adjust**:
 - ▶ Elasticity of demand tends to **increase over time** as consumers gradually discover alternative ways to cover the need

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Internal video

This video presents Cross-price elasticity and Income elasticity. Everything you need to know with theory and examples.



E&S Video 2 - Cross price & Income Elasticity








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Economics & Society Companion Video #2 Kosmas Marinakis, Ph.D. www.kmarinakis.org/ve In this video, we will talk about Cross ...

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Thank you!

You may stay for consultation or discussion

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