The background of the slide is a wide-angle aerial photograph of a city during the day. In the foreground, there are several large, well-maintained green fields, possibly golf courses or parks. A major highway with a multi-level interchange cuts through the center of the image. In the middle ground, a dense urban area with numerous buildings, including office complexes and residential houses, is visible. The sky is clear and blue.

Unit 1

Demand Curves (Ch. 2)

9/18

ECON 323 – MICROECONOMIC THEORY – DR. STRICKLAND



Introduction

In this chapter, we'll look closer at the **demand curves** we derived in chapter 5.

- Determinants of demand
- Demand curves vs. inverse demand curves
- Elasticity



Demand

Demand: the consumer's desire to purchase a good/service

What matters for demand?

1. Price **LAW OF DEMAND:** $P \uparrow, Q \downarrow \quad \because \quad P \downarrow, Q \uparrow$
2. Income/wealth
3. Tastes/preferences
4. Prices of other goods
5. Number of consumers (if examining market demand)

Demand Curves

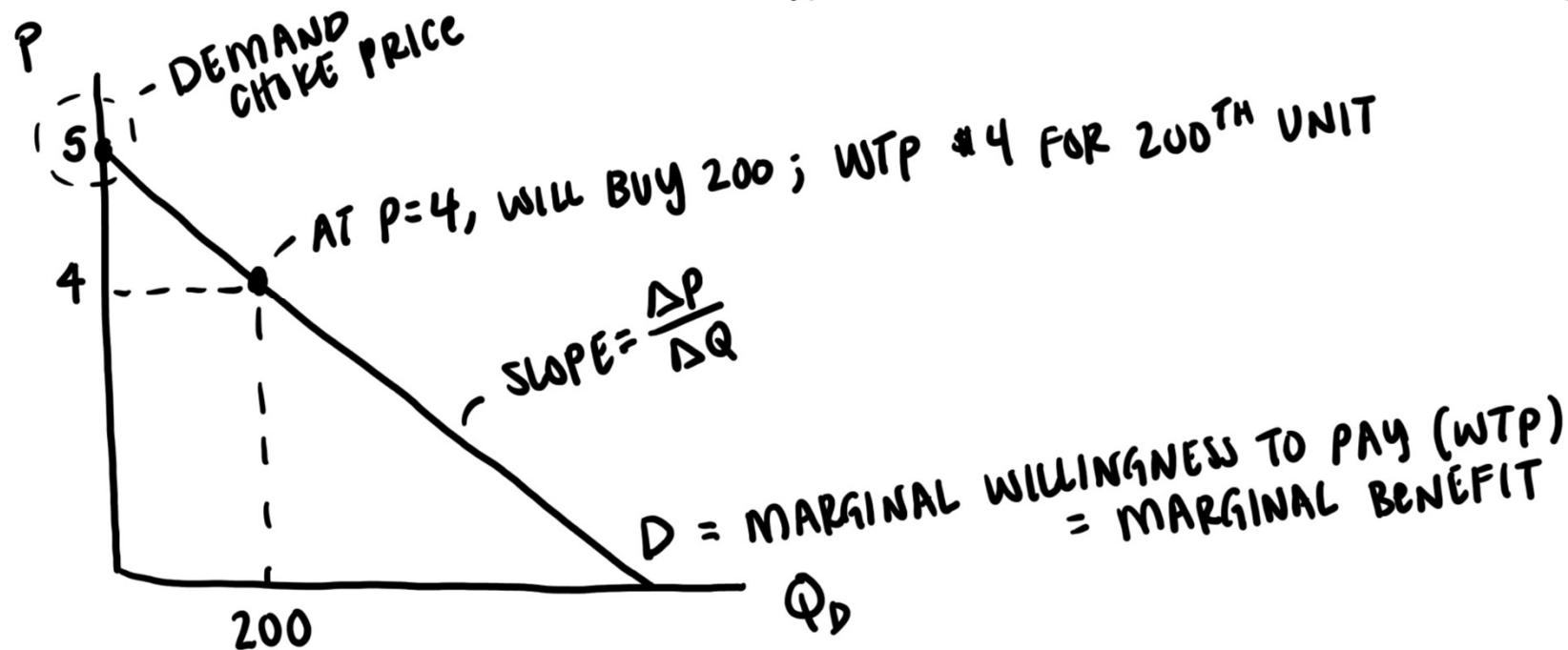
A demand curve isolates the effect of price on demanded QUANTITY $y = mx + b$

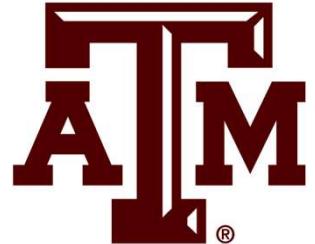
- Economists plot the **inverse demand curve**

DEMAND CURVE: $Q_D = f(P)$ ex. $Q_D = 1000 - 200P$

INVERSE DEMAND CURVE: $P = f(Q_D)$ ex. $P = 5 - 0.005 Q_D$

* WHAT
WE GRAPH





Price Elasticity of Demand

Price elasticity of demand: the percentage change in quantity demanded divided by the percentage change in price

$$\epsilon_D = \frac{\% \Delta Q_D}{\% \Delta P} = \frac{\Delta Q_D / Q_D}{\Delta P / P} = \boxed{\frac{\Delta Q_D}{\Delta P} \cdot \frac{P - \text{old}}{Q_D - \text{old}}}$$

* ELASTICITY
BTWN 2 PRICES

$$\frac{\Delta Q_D}{\Delta P} = \frac{1}{\Delta P / \Delta Q}$$

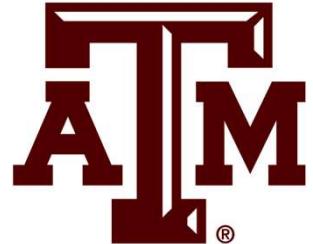
$\frac{\Delta P}{\Delta Q}$ is SLOPE INVERSE DEMAND

$$\epsilon_D = \frac{1}{\text{SLOPE}} \cdot \frac{P}{Q_D}$$

{ OF INVERSE demand}

* ELASTICITY AT A PRICE

Characterizing Price Elasticity of Demand



When price elasticity of demand is high...

- Elastic $|\epsilon_D| > 1$
- Infinitely high? Perfectly elastic $|\epsilon_D| = \infty$

$$\epsilon_D = \frac{\% \Delta Q_D}{\% \Delta P} \Rightarrow$$

A 1% $\Delta P \Rightarrow \epsilon_D \%$
e.g. $\epsilon_D = -2$

When price elasticity of demand is low...

- Inelastic $|\epsilon_D| < 1$
- Zero? Perfectly inelastic $|\epsilon_D| = 0$

UNIT ELASTIC: $|\epsilon_D| = 1$