

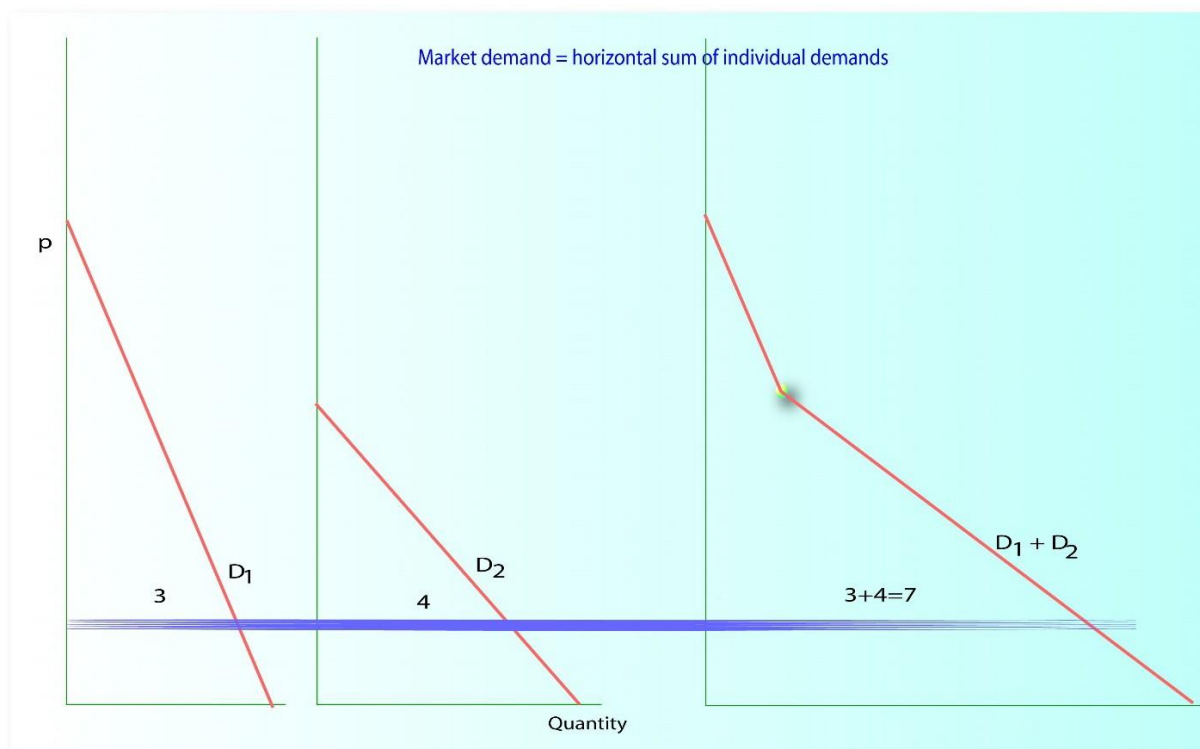


## WILLINGNESS-TO-PAY

**Willingness-to-Pay (WTP) is the maximum price that a consumer would pay to buy a product. Based on the Law of Demand, an individual buyer's WTP declines with the product volume. WTP varies across consumers given differences in income, prices of substitutes, prices of complements, and preferences.**

For those who understand both individual and market demand curves, at a given output, the height of the demand curve equals WTP by either the individual or the market. (See Figure 1 below.)

Figure 1. Height of Demand Curve shows WTP



Source: Iowa State Economics

So, the vertical axis measures WTP in US dollars (or Chinese Yuan, Euros, etc.). The height depends on preferences, availability of substitutes, and complements.

**Question:** How are high-tech industries influencing world-wide demand for electricity?

**Answers:**

1. Demand is increasing because of the shift to EVs.
2. Demand is increasing because of greater demand for computing power from AI, cryptocurrencies, and data storage.



Differences in WTP motivate sellers to develop *price discrimination* strategies:

- Sellers may offer quantity discounts whereby the marginal price for additional units is lower than the average price. In high-tech settings where marginal costs are low, sellers are willing to supply additional output at low marginal prices.
- Sellers may charge difference prices across consumers using information about their profiles, different marketing channels, product differentiation, location, and timing.

Air fares, which vary tremendously even within the same class of service, provide insights about WTP and price discrimination. Individual fares depend on the day of the flight, the time of the



flight, return flights, refundability, and up-to-the-minute information on the number of seats sold.<sup>1</sup> Public policies concerning price discrimination differ and continue to change.<sup>2</sup>

Sellers never have full knowledge of WTP for individuals or for groups of buyers. Going forward sellers, unless restricted, will use abundant amounts highly personal information to make inferences about WTP. Sellers will also continue to use fundamental economics:

- WTP for products with good substitutes is lower than for products that embody valued innovations, e.g., greater speed, new content. Introductions of new products often include introductory prices. Rivals then decide whether to cut prices or accept loss of sales.
- WTP for durable products depends on the stock of durables held by consumers. A consumer who holds a recent version of a product or service may be unwilling to upgrade to a newer version offered by the same seller or to add a rival's service. Pricing strategies may, as a result, include discounts for trade-ins.
- When WTPs differ within and across individual product lines, even when sellers lack good information on WTPs, they may benefit by offering product bundles and by offering menus of discrete product offerings.

#### REFERENCES:

1. [Hal Varian, Price Discrimination \(1987\)](#)
2. [Michael Knetter, Price Discrimination by U.S. and German Exporters, The American Economic Review \(1989\)](#)
3. [Willingness to Pay](#), [priceintelligently.com](http://priceintelligently.com)

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<sup>1</sup> How can airlines charge such divergent prices? Your Professor is old enough to remember when tickets could be resold. Ted Snyder could use a ticket issued to Vivek Jain. Unsurprisingly, when concerns about airline security emerged, airlines were most willing to prohibit such resale. In general, price differences cannot exceed the “costs of resale” broadly defined.



<sup>2</sup> Regulators and courts often exhibit a preference for “single price” strategies whereby a seller specifies the price and consumers decide whether to buy and how much to buy, but other policy considerations include whether price discrimination increases output.