Handout 12 - ECON 101 (Fall 2026)

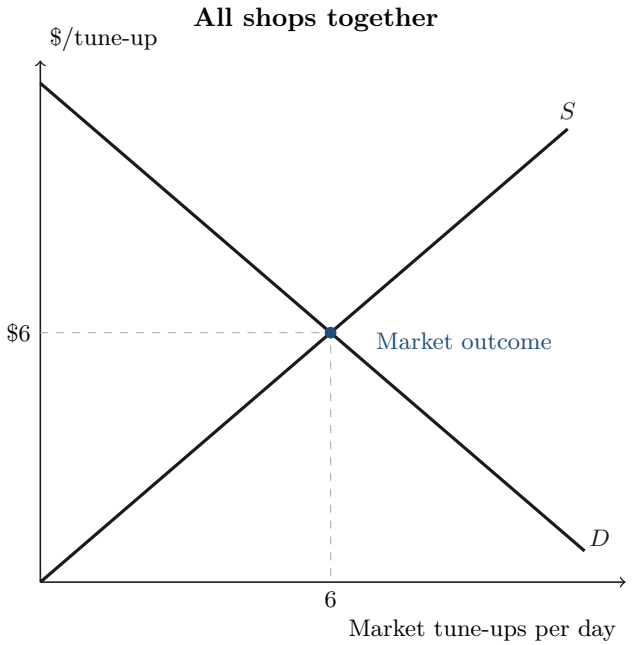
Firm Market Structures

1 The Market and One Shop Face Different Demand Curves

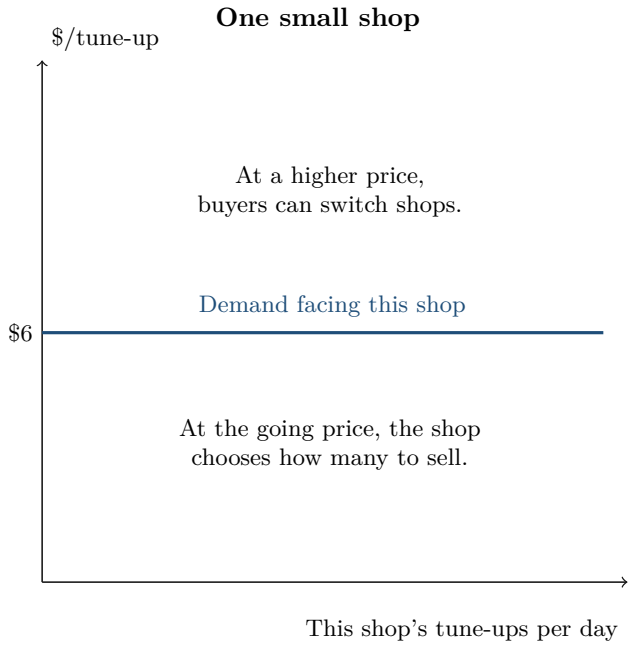
Suppose a campus bike shop offers standard tune-ups. The market includes all the shops offering this service. **Market demand** tells us how many tune-ups buyers want from all shops at each price. **Firm demand** tells us how many tune-ups buyers want from just one shop at each price it might charge. Which curve you need depends on whose choice you are studying.

1.1 The market sets a price that one small shop takes as given

Start with a simplified competitive market. Many small shops sell identical tune-ups, and customers can readily switch shops. The going price is \$6. A single shop can sell its feasible output at that price. If it asks for more, customers can get the same tune-up for \$6 elsewhere.



A higher price leads buyers to purchase fewer tune-ups in the market. Here, six sell at \$6.



Demand facing the shop is flat at the market price. The right panel shows the quantity for this shop alone.

1.2 The alternatives available to buyers shape a firm's demand

If customers see the shop as different from its rivals, some may stay after a price increase. This ability to raise price without losing many sales is **market power**. As in Handout 5, ask how readily buyers can switch. In an oligopoly, also ask how rivals might respond.

Market structure	What a buyer can choose
Perfect competition	The same product from many small sellers.
Monopolistic competition	Similar products with differences buyers care about.
Oligopoly	Products from a few sellers that pay attention to each other's choices.
Monopoly	One seller in the defined market. Alternatives may exist outside it.

Where to revisit the material. Textbook §§14.1–14.2, pp. 352–359. Module 12 slides, PDF pp. 13–32. Worksheet 12 Q1, Q3, and Q6. Textbook references use Stevenson and Wolfers, *Principles of Microeconomics*, 3rd ed. Slide numbers count PDF pages.

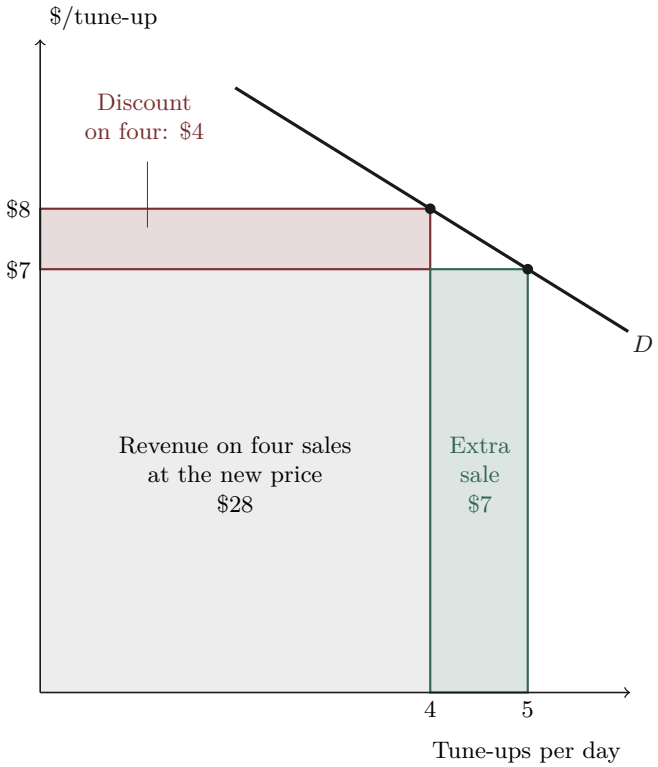
2 Selling More Can Reduce Revenue on Existing Sales

Now suppose one seller serves the whole tune-up market and charges the same price to every customer. Its demand is the market demand from page 1. The seller can attract an extra customer by lowering its price. That price cut also applies to the tune-ups it would have sold anyway.

2.1 Separate the revenue gained from the revenue given up

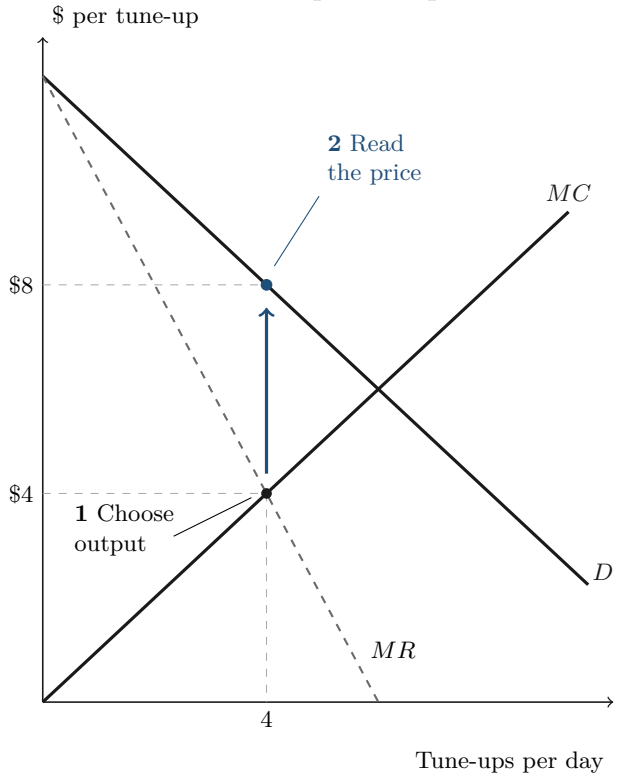
Compare selling four tune-ups at \$8 each with selling five at \$7 each. The new tune-up brings in \$7. The four earlier sales each bring in \$1 less, so the seller's total revenue rises by only \$3, from \$32 to \$35 per day.

The change from four to five sales



\$7 gained − \$4 given up = \$3 extra revenue. The narrow strip across the four earlier sales is the discount effect.

The firm's output and price



Read output where $MR = MC$. At that quantity, move up to demand to find the price customers pay.

2.2 Marginal revenue tells the firm how much one more sale adds

A price taker can sell another service at the going price. Its marginal revenue equals that price. In the left panel, the discount on existing sales makes the extra revenue smaller than the price of the additional service.

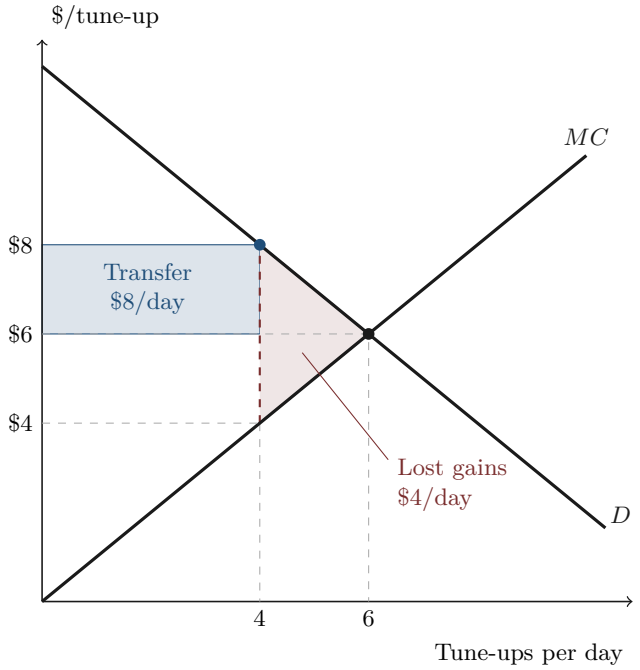
The right panel uses smooth curves to show the decision at the margin. The seller expands while **marginal revenue** (MR) exceeds **marginal cost** (MC). At four tune-ups per day, both are \$4 per additional tune-up. At that output, buyers pay \$8 on demand. The \$4 marginal revenue there describes a tiny increase in output. The \$3 on the left measures the change over a full tune-up. Marginal revenue falls with output here, so the extra revenue over that full step is smaller.

Where to revisit the material. Textbook §14.2, pp. 357–363. Module 12 slides, PDF pp. 34–55. Worksheet 12 Q2 and Q4–Q7. Handout 5, p. 2, uses revenue rectangles to explain price changes.

3 Market Power Can Leave Gains from Trade on the Table

Keep the same tune-up demand and the same marginal cost of serving the market in both cases. Assume there are no other social costs or benefits and no fixed costs in this example. Without market power, six tune-ups sell for \$6 each. The single seller from page 2 chooses four at \$8.

3.1 A higher price and fewer trades have different effects

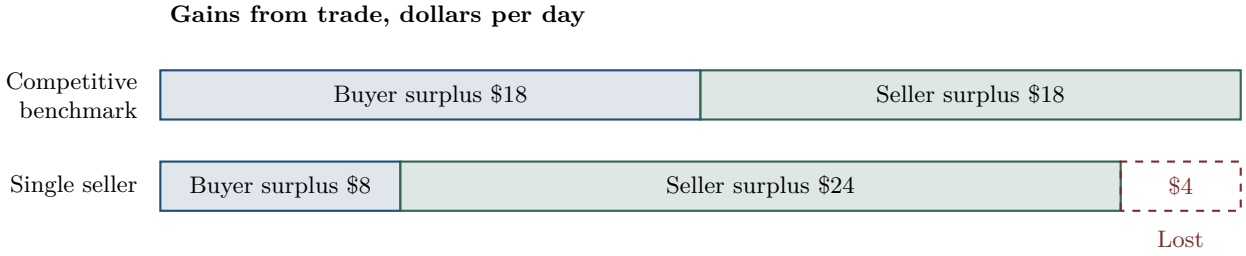


On the four sales that still happen, each customer pays \$2 more. The \$8 extra that buyers pay goes to the seller. It changes who gets the gains from these trades.

Between four and six, buyers' willingness to pay on demand exceeds the additional cost of the service. Those trades would create gains for buyers and sellers together. Because they disappear, their gains are lost. This is the **deadweight loss**.

At six, the two curves meet and the gain from the marginal tune-up is zero. The lost gains taper to zero there, giving the shaded region its triangular shape. Its area is $\frac{1}{2} \times 2 \times \$4 = \$4$ a day.

3.2 The seller gains even as the total falls



Buyers' surplus falls by \$10 and seller surplus rises by \$6, so total surplus falls from \$36 to \$32 per day. The seller accounts for the discount it would give existing customers by cutting the price. For society, that discount would transfer money from the seller to buyers. The gains from the additional trades are what make six tune-ups efficient in this example.

Fixed costs can change whether the benchmark is financially viable. A water network, for example, can be expensive to build while supplying one more gallon costs very little. Charging that low marginal cost per gallon can encourage efficient use of the network, yet leave too little revenue to pay for building it. Chapter 14 explores this trade-off under natural monopoly.

Where to revisit the material. Textbook §§14.3–14.4, pp. 363–370, and Chapter 14 Study Problems 11 and 15. Module 12 slides, PDF pp. 57–65. For policy and natural monopoly, see slide PDF pp. 67–83. Handout 7, pp. 2–3, explains how to separate transfers from lost gains.