Handout 11 - ECON 101 (Fall 2026)

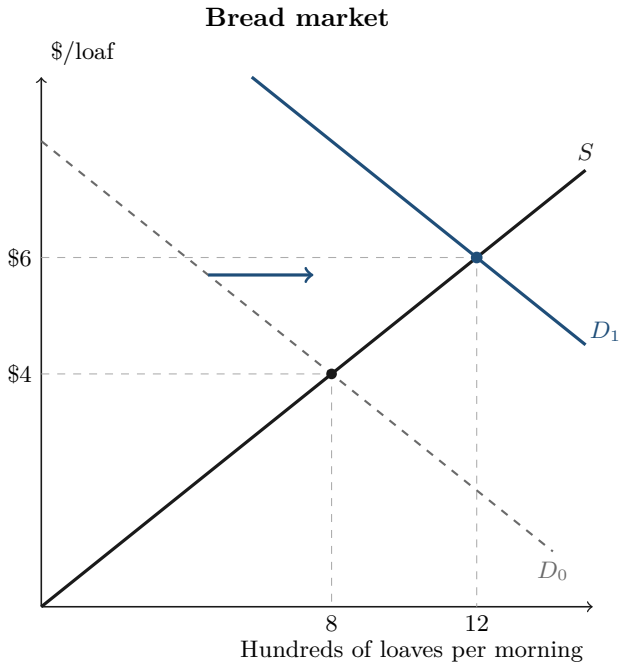
Labor Markets

1 Demand for a Product Creates Demand for the People Who Make It

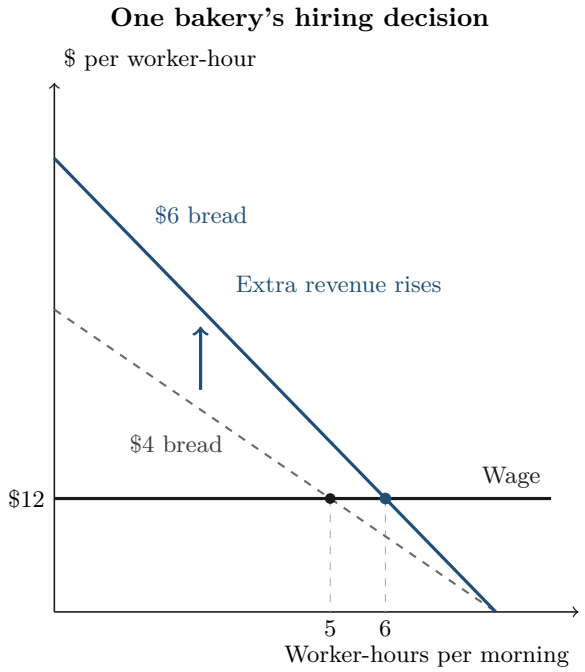
A loaf of bread and an hour of bakery work are traded in different markets. Shoppers buy bread from bakeries. Bakeries buy workers' time. The bread price is dollars per loaf, while the wage is dollars per hour of work. A change in the first market can change hiring in the second.

1.1 Follow a rise in the price of bread

Suppose more shoppers want fresh bread. In the market, demand shifts right and the price rises from \$4 to \$6 per loaf. Now switch to one small bakery. It takes the bread price and the \$12 hourly wage as given. Keep its equipment and other costs fixed as you compare the two bread prices.



More demand for bread raises the market price that the bakery receives.



At the same wage, an additional hour of work is now worth buying.

1.2 Convert extra loaves into extra revenue

Marginal product measures the extra loaves the bakery can make with another hour of labor. **Marginal revenue product** measures the extra revenue from those loaves. In this example, each hour's marginal product stays the same when the bread price rises. Near six worker-hours, the marginal product is two loaves per additional worker-hour. At that point the extra loaves bring in $2 \times \$4 = \$8$ at the old price and $2 \times \$6 = \$12$ at the new price. The higher bread price makes that hour worth its wage.

As the bakery adds hours with the same ovens, extra hours add fewer loaves. The bakery stops where the revenue from another hour just covers the wage. That comparison explains why the lines in the right panel are also the bakery's **labor demand** curves. The bakery's demand comes from what customers will pay for its output. Economists call this **derived demand**.

Where to revisit the material. Textbook §§11.1–11.2, pp. 272–281. Module 11 slides, PDF pp. 5–21. Worksheet 11 Q1. Textbook references use Stevenson and Wolfers, *Principles of Microeconomics*, 3rd ed. Slide numbers count PDF pages.

2 One Worker Can Cut Back While the Occupation Gains Hours

A higher wage makes an hour away from paid work more costly. This is the **substitution effect**, which pushes toward more work. A higher wage also makes the same purchases affordable with fewer hours. If a person wants more time away from paid work when they can afford it, this **income effect** pushes toward fewer hours. Time away from paid work includes studying, caregiving, and rest.

2.1 A higher wage opens up different choices for different people

Suppose three students can pick up shifts at campus bakeries. Compare the hours they would offer at \$14 and \$18 an hour, with their schedules and alternatives otherwise held fixed. All hours are per week.



At the higher wage, A gives up two hours of work and B adds one. Among those already working, hours fall from 12 to 11. C now finds the wage worth the time and supplies four hours. Across the occupation, hours rise from 12 to 15. Participation is a separate choice from how many hours to work once you have a job. People switching in from another occupation can add hours in the same way.

2.2 A raise changes both the reward for working and what a shift can buy

At \$18, an extra hour earns \$4 more than it did before. But A could also earn the old weekly pay of \$112 in a little over six hours. A chooses six hours and earns \$108. The hourly wage rises even though weekly earnings fall. B makes a different choice at the same wage.

This is one reason an occupation's labor supply curve can slope upward even if an individual worker's curve bends backward. Both bars for each student describe choices at different wages in the same occupation. If an alternative job starts paying more, the hours offered to bakeries can change *at the same bakery wage*. That changes the supply curve itself.

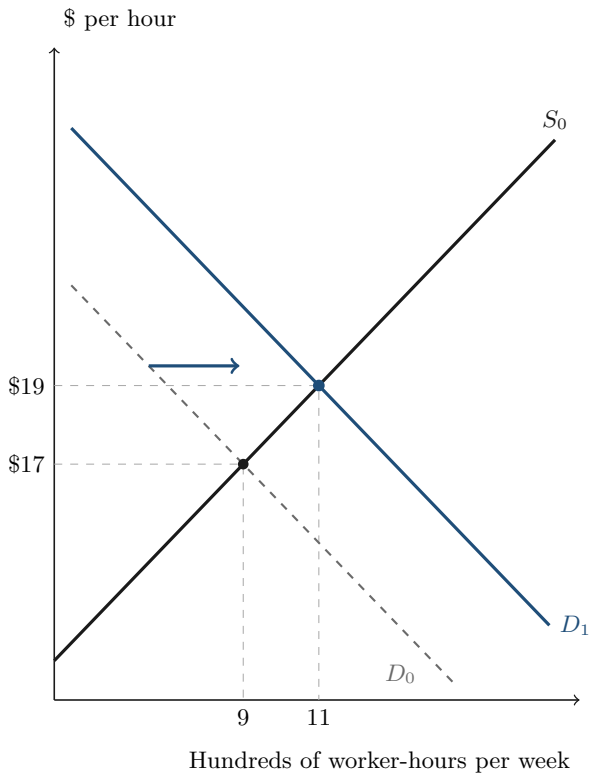
Where to revisit the material. Textbook §11.3, pp. 281–290, and Chapter 11 Study Problems 11–12. Module 11 slides, PDF pp. 23–37. Worksheet 11 Q2 explores one particular hours response.

3 The Same Wage Increase Can Have Different Causes

Consider two possible changes in the market for campus café workers. Each comparison starts at a wage of \$17 an hour and 900 worker-hours per week. The hypothetical markets share the same axes. Each graph changes one curve so you can see what that change does by itself.

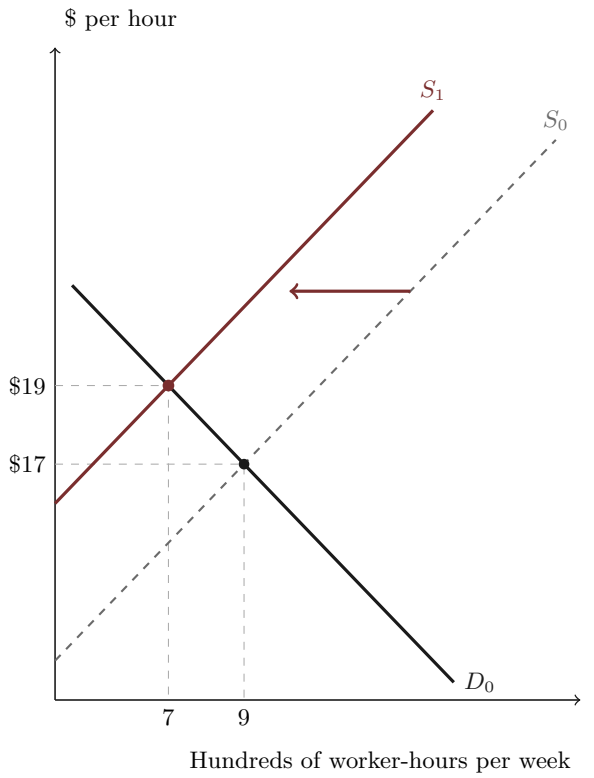
3.1 Look at hours as well as the wage

Workers become more productive



Wage up, hours up. At the old wage, cafés want more hours because an hour of work brings in more revenue.

Working hours become less desirable



Wage up, hours down. At the old wage, workers offer fewer hours when shifts end late at night.

3.2 A wage is one part of a job offer

In the left panel, cafés adopt equipment that makes each extra hour of work more productive at the same output price. With workers' willingness to supply hours unchanged, cafés bid up the wage and hire more hours. In the right panel, cafés switch to later closing shifts. Assume an hour of work brings in the same revenue as before. Workers require more pay to give up their evenings, so supply shifts left. The higher wage offsets an undesirable feature of the job. That is a **compensating wage differential**.

In both cases the wage rises by \$2, but the extra information about hours helps us tell the two stories apart. In an actual market, several things can change at once. A wage comparison across jobs might reflect skills, schedules, bargaining power, discrimination, or a combination. To find out what drives a gap, look for evidence about who is doing the work, what the jobs require, and what alternatives workers have.

Where to revisit the material. Textbook §11.4, pp. 290–293, and §§12.1–12.4, pp. 298–312. Module 11 slides, PDF pp. 39–44 and 49–75. Worksheet 11 Q3 applies the idea of compensating differentials.