

TOPIC 08: LABOR MARKETS AND TRADE

- I. The nature of labor
 - a. Labor is just like any other good. It is less intuitive for us, however, because while we buy many different things, we don't buy labor. We sell labor.
 - b. In the market for labor, the demand curve is made up of hiring firms. The supply curve is made up of potential employees.
 - c. Firms hire people to get work done, which allows them to increase revenue. This is the main reason for the demand for labor.
- II. Demand for labor
 - a. The *marginal product of labor* (MPL) is the additional amount of revenue a firm gets by hiring one more person.
 - i. Note that from the firm's perspective, this is the same as describing what their marginal benefit is.
 - ii. For firms, revenue equals benefit.
 - b. Thus, the demand for labor is the MPL. In the market for factory workers, the demand curve is the MPL for each additional worker that a firm hires.

Workers	Total Revenue	MPL	Workers	Total Revenue	MPL
0	0		5	\$200	
1	\$50		6	\$225	
2	\$95		7	\$245	
3	\$135		8	\$260	
4	\$170		9	\$270	

- c. As always, you produce (in this case hire) until marginal cost equals marginal benefit (or when the wage equals MPL).
 - i. If the wage is \$30, how many people do you hire?
- III. Compensating differentials
 - a. Because high wages can induce people to enter a market, wages rise if there are few people willing to enter a market.
 - i. For example, consider malpractice suits. Doctors are regularly sued for alleged incompetence or poor care, even if these suits are frivolous.

- ii. To combat the threat of suits, doctors increasingly do a lot of paperwork and extra tests. They spend less time interacting with patients and more time doing rather dull work.
 - iii. As a result, the cost of being a doctor has increased, or the supply curve shifts to the left. In order to keep up the same number of doctors, you have to pay them.
 - b. Fun jobs are jobs with lots of people interested in doing them. Thus the wage for that job falls.
 - c. And less fun jobs means there are few people willing to do them. Thus the wage for that job rises.
 - d. A *compensating differential* is a difference in wages that offsets differences in working conditions.
 - i. Thus, dangerous jobs pay more than less dangerous jobs.
 - ii. Boring jobs pay more than exciting jobs.
 - iii. Jobs with lots of flexibility pay less than jobs with little flexibility.
 - e. Professors, given our education level, don't get paid that much. But we have some of the best working conditions in the world.
- IV. The gender earnings gap
 - a. According to Census data¹:
 - i. The median earnings for full-time year-round male workers in 2022 was \$62,350. For all male workers, it was \$52,770.
 - ii. The median earnings for full-time year-round female workers in 2022 was \$52,790. For all female workers, it was \$41,320.
 - b. This results in an earnings gap of about 84 cents (for full-time workers) or 78 cents (for all workers). Why does this roughly 80-cent gap exist?
 - c. People often jump to discrimination is the culprit and while discrimination certainly occurs, the discrimination story has serious explanatory problems.
 - i. On empirical grounds, it doesn't explain other realities of the labor market including:
 1. The earnings gap is virtually non-existent between women without children and comparable men.
 2. The earnings gap is larger for college-educated men and women.
 3. The earnings gap expands as men and women age.

¹ <https://www.census.gov/library/publications/2023/demo/p60-279.html> Table A-7.

4. The earnings gap varies widely by occupation—it doesn't exist at all for pharmacists, for example.
 - ii. On logic grounds, there's tension between discrimination and profit maximization. Labor is often a major cost so why would firms be willing pay 20 percent more to employees just because they're men? It makes sense if customers are strongly bigoted (indeed, discrimination was a major reason for the gender earnings gap over half a century ago), but that's a harder pill to swallow today.
- V. So why a gap?
- a. The problem with the gender earnings gap as often reported is that it doesn't account for the different kinds of choices men and women tend to make. Most obviously, men tend to work in more lucrative occupations, including engineering, economics, and finance.
 - b. There are also significant intra-occupational² differences—even in the same industry, the jobs people take can be very different; hours worked, availability, stress levels, etc. can vary widely.
 - c. In 2023, Claudia Goldin earned a Nobel Prize for her work on women in the labor force and she points to “greedy jobs” as a major culprit for the gender earnings gap.³
 - i. A “greedy job” is a job where the worker is highly specialized and thus there are few workers that can take their place. These jobs tend to have long and/or irregular hours, high levels of competition, strict deadlines, frequent contact with colleagues and clients, and novel problems.
 - d. Why do people take greedy jobs? Compensating differentials! These jobs tend to pay very well and, because of increasing marginal cost (the opportunity cost of people's time goes up the more time you demand), they pay very well even adjusted per hour of work. A job that requires twice as much time will pay more than twice as much, all other things being equal.
 - e. To understand the role of greedy jobs in the gender earnings gap, Goldin encourages us to not think in terms of gender. It's more accurate to think in terms of it as a **gap between mothers and non-mothers**, rather than between men and women.

² “Intra” means within, as in intramural (within a school) or intravenous (within a vein). “Inter” means between, as in international (between nations) or interfaith (between faiths). Inter-occupational differences account for the different occupations men and women tend to work in. Intra-occupational differences account for the different kinds of work men and women do in the same kind of occupation.

³ Goldin's excellent book, *Career and Family*, goes into a great deal of detail on this and other topics. I posted a summary and highlights on Facebook [here](#).

- f. Children are need machines and when a couple has a child (through birth or adoption), someone needs to have the time to take care of the kid. Women (for whatever reason) are more likely to step back from a greedy job. They might still work, but they will be paid less.
- g. Note how the greedy jobs framework answers many questions the discrimination story can't:
 - i. **The earnings gap is virtually non-existent between women without children and comparable men.** Without kids, there's no pressure for women to leave a greedy job.
 - ii. **The earnings gap is larger for college-educated men and women.** A greedy job often requires at least a college degree.
 - iii. **The earnings gap expands as men and women age.** For college-educated women, motherhood tends to begin in the late 20s and early 30s.
 - iv. **The earnings gap varies widely by occupation—it doesn't exist at all for pharmacists, for example.** Sales, management, and administration tend to have many greedy jobs and so the intra-occupational gap is large. Engineering, science, computers have few greedy jobs and so the intra-occupational gap is small.
- h. None of this should be taken as saying that discrimination does not exist—it most certainly does. But mere existence does not translate into being a major factor in explaining the gender earnings gap.
 - i. Roughly one-third of the gap is due to inter-occupational differences.
 - ii. Nearly two-thirds of the gap is due to intra-occupational differences (greedy jobs).
 - iii. The small part that's leftover is discrimination and perhaps also gender differences in negotiation skills.

VI. Absolute Advantage

- a. The nature of wealth
 - i. Jobs, gold, and money are not true wealth (though they are sometimes useful proxies).
 - ii. The key measurement is happiness.
- b. Under free trade, the full benefits of specialization can be realized. In much the same way people divvy up their budgets to buy certain bundles of goods, agents use resources to produce certain bundles of products.

- c. In some countries (or firms or factories), one product is cheaper to create than others. For example, consider five countries and their production possibilities for wine and chocolate.

<i>Country</i>	<i>Maximum Wine (barrels)</i>	<i>Maximum Chocolate (pounds)</i>
France	80	20
Germany	120	240
Switzerland	20	100
Spain	100	100
Italy	80	40

- d. Each of these numbers represents what a country could produce if it dedicated all of its resources to one particular product.
- e. *Absolute advantage*—being able to produce more—is generally how people determine if someone should do something. Notice that Germany can produce more of either good: it has the absolute advantage in both. Does that mean it should do everything? Not necessarily. To understand why, we turn to comparative advantage.

VII. Comparative Advantage

- a. Comparative advantage is based on the ever-present existence of opportunity costs.
- i. It was first described by economist David Ricardo in *On the Principles of Political Economy and Taxation* in 1817.
- b. The question then becomes: which nation sacrifices less? The nation with the lowest opportunity cost has a comparative advantage in producing that particular good.
- c. To find the comparative advantage, divide:

Opportunity cost of Product A

Product A

- i. Appreciate the math here. For every unit the country produces of A, it gives up such and such amount. By putting it in terms of each unit of Product A, the equation considers both how much the country can produce and what the country *could have* produced if it didn't make Product A.
- d. And so we find:

Product A	Country	Math	1 unit costs...
<i>Wine</i>	France	20/80	0.25 pounds of chocolate

	Germany	240/120	2.00 pounds of chocolate
	Switzerland	100/20	5.00 pounds of chocolate
	Spain	100/100	1.00 pound of chocolate
	Italy	40/80	0.50 pounds of chocolate
<i>Chocolate</i>	France	80/20	4.00 barrels of wine
	Germany	120/240	0.50 barrels of wine
	Switzerland	20/100	0.20 barrels of wine
	Spain	100/100	1.00 barrel of wine
	Italy	80/40	2.00 barrels of wine

- e. Because France's opportunity cost for making wine is lower (they sacrifice 0.25 pounds of chocolate, which is the cheapest wine that can be made among the five), France should specialize in wine.
- f. Who has the comparative advantage in chocolate?

VIII. Other applications

- a. Comparative advantage is one of the social science's most counter-intuitive ideas and it has many applications beyond international trade.
- b. *Work*. Good employees recognize the importance of comparative advantage, especially as a starting employee.
 - i. Starting employees get assigned tasks. It's tempting to ask endless detailed questions about what exactly should be done. You want to do a good job, after all, and doesn't your boss know how she wants the task completed?
 - ii. But even if your boss could complete the task faster than you and better than you, your boss has other thing to do that you can't or shouldn't. You have the comparative advantage in this task; by asking endless questions, you're likely to rob your boss of her valuable time. She'll get angry and annoyed with you; she wants you to handle it so she can focus on something else.
 - iii. This doesn't mean you should never ask questions but you should make sure you *have* to ask a question. It's best to try to figure out stuff on your own before you bother someone with more valuable time than you.
- c. *Firms*. New companies are best positioned when they minimize the number of tasks they do that's beyond their core business. Even if the founders are trained accountants or lawyers, it's better to pass that task off to someone else, sometimes another firm entirely, and focus on how the business brings in revenue.

d. *Cities*. Just as countries should specialize, so should cities. It's no surprise that so many successful urban areas had a handful of industries they are known for. Specialization allows for a sizable pool of relevant talent and infrastructure; the city not only gets the comparative advantage but the absolute advantage, too.

IX. Limits

- a. Specialization is a wonderful but it can lead to problems. If you've taken macroeconomics with me, you should see a big one: a lack of diversification.
 - i. The Venezuelan government focused the country's economy on oil production. When the price of oil collapsed in 2014, they didn't have enough money to buy all the things they import. As of 2017, the Venezuelan economy is still in shambles.
 - ii. Natural disasters, changing prices, and technological change are just some of the factors that can harm an overly-specialized economy.
- b. The extent of the market limits the effectiveness of specialization; there is only so much demand for any particular product. This is why large communities have a wider variety of products (ethnic grocery stores, masseurs, fertility clinics, kayaking clubs) while smaller communities don't have many services and other services are provided by the same person (e.g. the local doctor is also the county coroner).
- c. People who have specialized can also get bored; from a management perspective, it's not a bad idea to switch tasks around. What you lose in specialty gains, you can get in enthusiasm.