I. BACKGROUND: BASIC CONCEPTS FROM ECONOMICS

INTRODUCTION
This background section gives some concepts that are useful for thinking about choices that face an individual, or an entire society.

A. OPPORTUNITY COST
The opportunity cost of any decision or action is the value of the next best alternative that the decision forecloses. For normal money transactions, this is the same as “cost” in the ordinary sense:

Example 1.
What you give up when you hand over $30 for a concert ticket is the $30, and the next best thing you would have spent the $30 on.

Example 2 (more complicated):
A young woman with a high school education and a great serve has the choice of becoming a tennis pro or work on an assembly line, earning $16,000 per year.

If she cares only about the money, the opportunity cost for her to become a tennis pro is the $16,000 she gives up, and she should do it if she can earn more than $16,000 in tennis.

But suppose she has the skill to be a tennis pro earning $100,000. Then if she decides to work on the assembly line, or maybe enlist in the army, her opportunity cost of doing either of those things is the $100,000 per year that she can earn as a tennis pro.

The above examples focus only on money. We should not limit the analysis in that way.

It is OK to use objective financial data alone to measure opportunity cost if the person making the decision cares only about the money, and not about other aspects of the alternatives.

Example 3 (Includes non-monetary considerations):
The opportunity cost for the tennis player to turn pro is $16,000 only if
- $16,000 is what she could earn in her next best alternative job, and
- she is indifferent between the two jobs apart from the levels of pay.

If playing tennis is so much fun that she would gladly sacrifice $4,000 per year in cash for the privilege of playing tennis rather than working on the assembly line, her opportunity cost to play tennis would be $12,000, not $16,000.

If tennis is so demanding that she would demand an extra $10,000 to accept the discipline and hard work, rather than work on an assembly line, what would her opportunity cost be to play tennis?

Note that only she can judge the appropriate level of payment for her to take one job rather than the other. It is subjective, not objective. This means that no outside observer can tell whether she is making the right choice. If she chooses job A at $12,000 when she could have also had job B at $16,000, an outsider can infer that the extra benefits from job A are worth (at least) $4,000 to her, if she didn’t make a mistake. If she chooses job C at $25,000 when her alternative was job B at $16,000, we can infer that any extra benefits from B relative to C are worth less than $9,000 to her – again if she didn’t make a mistake. But we can’t tell if she made a mistake.
Example 4 (Only non-monetary considerations):

Suppose you have to choose between watching a football game on TV and watching a movie at the same time on another channel. The opportunity cost of watching football is missing the movie, and the opportunity cost of watching the movie is missing the football game. You would want to pick the one with the (lower / higher) opportunity cost.

Example 5

What is the opportunity cost of attending the University of Minnesota?

B. Economic Profit and Accounting Profit

Unfortunately, the professions of accounting and economics have grown up using two different definitions for profit.

For an economist, profit = revenue minus opportunity cost.

For an accountant, profit = revenue minus financial costs paid to non-owners.¹

Opportunity cost of owners’ capital, the risk they take, and the time they put into the business is included in accounting profit, not in economic profit.

One result of this difference is that an economist says that the owner of an unincorporated business would be happy to stay in business with zero profit — because revenues earned then cover all of the opportunity cost. No business owner would be happy to keep operating if accounting profits were zero, though: There would be no return to the owner’s capital, or compensation for the risk she takes, or for her time.

Example 1: Corn farmer

The opportunity cost to the farmer includes the opportunity cost of his own time (and of any other unpaid family members who work on the farm), the opportunity cost of his own capital invested in the farm (on which he could otherwise earn interest by investing the money) and the return to his risk-taking, because the returns to farming are highly uncertain and people demand extra compensation to be willing to take the risk. So a farmer that earns zero (economic) profit is still being fully compensated for all of his work, his capital, and his risk-taking. A farmer that earns zero accounting profit is not compensated for any of those.

¹ There is an exception in the case of corporations. Any fair market payment made to a shareholder as salary, if she also works for the company, or to pay for goods and services, if she is a supplier to the company, would be treated as a cost. All payments not made to the owners in their capacity as owner are subtracted from revenues to calculate accounting profits.
LERNER, CH. 1: ECONOMICS IS ABOUT PEOPLE

A definition of economics:

- Economics consists of studying how all the things that people in general want are produced and made available to them, and how this might be done better. (Lerner, p. 4)
  - “People in general” means that economics does not (often) concern itself with particular individuals, as psychology does.
  - Not concerned with the technology of production (that is engineering).
  - Concerned with whether production is efficient (not wasteful).
  - But, more important, concerned with whether the right things are being produced.

Most of the decisions a society makes about what will be produced and who will get it are decided through markets. Markets are what we call the institutions that lead to setting of prices and delivery of goods from those who have them to those who want them. So a lot of economics consists of understanding how markets work, how well they work, and why they sometimes fail to work well. But markets are important only as a tool that people in general use to help achieve their wants.

Government, too, is significant only as a tool that people in general use to help achieve their wants – often as an institution that substitutes for markets where markets don’t work well, and often as an institution that interferes with the operation of markets, trying to make them work better, or to transfer income from one group to another.

C. LERNER, CH. 2, 3: WHAT IS A FAIR PRICE? WHAT IS THE CORRECT PRICE?

“Fair” depends a lot on what you’re used to (e.g., fuels).

Is the size of profit a good test for what is fair? No.

- Example 1: Suppose I rent my oil land to you. If the price of oil doubles, I’ll double the rent. Your profit won’t go up.
  - The value of my oil land doubles. My rent payments will go up in dollars, but as a % of the value of assets it won’t go up.
- Example 2: Suppose I produce the oil myself. If the price of oil doubles, the value of my oil land doubles.
  - My profit will go up in dollars, but as a % of the value of assets it won’t go up.

Economists don’t judge prices on whether or not they are fair. They judge them on whether or not they are efficient.

- “the purpose of prices is to help our economic system make available to every consumer what he prefers without diminishing the satisfaction of other consumers.”
  (Lerner, p. 9)

Prices help achieve efficiency in 2 ways: In deciding who gets the goods that are produced (allocation of goods) and in deciding what goods to produce.

- For allocation of goods: If everyone faces the same prices, and can buy as much as he wants at those prices, those who want something the most will get it.
- That is efficient, but maybe not fair.
- When everyone faces the same price,
The last grapefruit that you and I buy is worth the same to each of us, even if I love grapefruit and you rarely eat them.

The last $1 you spend on each good brings you the same satisfaction ("marginal utility").

Lerner breaks down "efficient" into "genuine" and "correct."

- A genuine price is one that clears the market (amount demanded is equal to the amount available, or supply = demand).  
  Recall example of car in short supply with excess demand at list price.  
  Can you think of other examples?
- A correct price is one that leads to the right amount being produced.

The correct price equals marginal cost

- Then price signals the value of the resources that went into production.
- At the margin, each dollar’s worth of resources produces goods that consumers value at $1.
- Understand distinction between average and marginal cost and reason why we focus on marginal cost. (Lerner, pp. 17 – 18)
- Note: “marginal cost” must be defined as “marginal opportunity cost” for this rule to make sense.

D. THE PRINCIPLE OF CONSUMERS’ SOVEREIGNTY

The principle of consumer sovereignty is that goods are worth what buyers are willing to pay for them.

At the margin, $1 spent on any good is equally valuable to the consumer. With consumer sovereignty, we accept that judgment, based on the prices paid by the consumer. It means that the economist doesn’t normally make value judgments about what things are worth to consumers, but accepts the evidence given by the choices they make in the market place.

Economics starts from market prices to value goods, except where there is a good reason not to.
E. LERNER, CH. 4: WHAT IS A FAIR WAGE?

Just as for other prices, the wage (the price for labor) cannot be judged as fair or unfair. The important question is whether or not the price is “efficient,” i.e. both “genuine” and “correct.”

- A genuine wage is one that clears the market (amount of labor demanded is equal to the amount available, or supply = demand).
- Imposing a legal minimum wage that is above the genuine, market-clearing wage, means that there will be people who want work at the current wage who cannot find it.
- Note 1: Those who get the jobs at minimum wage will benefit. Those who are left out will be harmed. And buyers of what they produce will pay a higher price.
- Note 2: Be sure you understand Lerner’s discussion (pp. 21 – 22) of changes in the economy that can require a change in the genuine wage.

- A correct wage is one that reflects the worker’s contribution to output (no exploitation).
- Note: the concept of “correct wage” is not listed on the syllabus; it is a bit complex, and we may not spend enough time on it for you to understand it fully.

- Here’s the basic idea:
  - If the wage is genuine, any employer will hire workers to the point where the last dollar of wage paid gives just $1 of benefits to the employer.
  - If the wage is also correct, the last dollar of benefits to the employer also measures the last dollar of benefits to the consumer who buys the product.
  - In other words, the last dollar spent on wages gives the consumer benefits worth $1.

- Lerner gives the extension of this reasoning to cases where several different inputs are combined to produce a single output, or indeed to produce many outputs from the same production process (gasoline and heavy oils or tars, or beef and hides and gelatin from cattle).

- The reasoning gets a bit more complex, but the conclusion is the same:
- Prices or wages for inputs are genuine when the last $1 spent on the input brings benefits to the employer of $1.
- Prices or wages for inputs are correct when the last $1 spent on the input brings benefits to the consumer of $1.

Note: What Lerner calls “genuine” prices and wages are usually called “market clearing” prices and wages.

What Lerner calls “correct” prices and wages are usually described by saying that price equals marginal cost.

Information content of prices

Prices that are genuine and correct convey a great amount of information about changes in scarcity of goods.

- If gasoline becomes more scarce the price goes up, signaling consumers to conserve.
At the same time the rise in price signals producers to expand their production, if they can.

If new inventions lower the cost of production for computers their price falls, signaling consumers that it's OK to buy more.

The consumer doesn’t need to know why prices are changing; the change in scarcity is automatically signaled through the price.

If demand shifts and prices are genuine, the price will change, signaling to producers that buyers want either more or less of what they are producing.

The producer doesn’t need to know why prices are changing; the change in demand is automatically signaled through the price.

At the same time, those buyers whose own demand was unchanged are given a signal that the good has become more easily available (if some buyers cut their purchases) or more scarce (if some buyers increased their purchases).

No newspaper reports, faxes, newsletters, or phone calls are needed. Changes in scarcity are communicated through changes in prices.

And the price changes convey an automatic incentive to conserve or buy more. No law is needed to restrict demand when goods get more scarce, or increase it when more plentiful.

**Summary**

If as a consumer I pay attention to how I spend my money, and face genuine prices (given my budget)

- Then the last dollar I spend on each good gives me the same satisfaction.

If prices are correct (producers set price = marginal cost)

- Then the last dollar’s worth of inputs used in producing every good brings the same satisfaction to consumers.
- Prices correctly signal the relative scarcity of different goods, and changes in that relative scarcity.

**F. LERNER, CH. 5: WHAT IS WRONG WITH MONOPOLY?**

“Monopoly” means that there is a single seller of a good.

“Monopoly power,” really the subject of the chapter, means that there are restrictions on the number of sellers.

An industry with “monopoly” is contrasted with one that is “competitive”.

Probably you don’t know any firm that is really competitive, in the economist’s sense.

- A competitive firm (in the economist’s sense) doesn’t have to compete (in the normal sense) to sell as much as it wants. It decides how much to sell, and just sells it at the market price.
  - Wheat farm, dairy farm, or sugar beet farm
  - Owner of small oil field or a single well

*Marginal revenue (MR)* is the extra revenue a firm gets from selling one extra unit.

- For a competitive firm, $MR = price.$
For a firm with monopoly power, $MR$ is below price.

Whenever there is monopoly power:

- The producer can’t sell as much as she wants to without lowering the price or going to extra expense through promotions or advertising.
- The last unit of output that a producer sells brings a price that is above the marginal revenue.
- The producer gets the highest possible profit by expanding output whenever marginal revenue is above marginal cost.
- So it stops expanding output when marginal revenue equals marginal cost.
- The last unit of output that a producer sells brings a price that is above the marginal cost of production (see graph on next page).
- The firm with monopoly power sets a price that is not correct.
  - $1$ of society’s resources used by a firm with monopoly power brings benefits worth more than $1$ to the consumer.
  - $1$ of society’s resources used by a competitive firm brings benefits worth just $1$ to the consumer.
  - Consumers would be better off if we could transfer some resources from competitive firms to firms with monopoly power, expanding their output.
  - The goal for efficient use of resources would be that the last $1$ worth of society’s resources, wherever they are spent, should bring benefits worth just $1$ to the consumer.

This chain of reasoning gives one situation where the market is not efficient. This gives a potential role for the government:

- Antitrust laws that sometimes keep firms from combining to form a monopoly.
- Regulation of other firms which hold “natural monopolies”.

A second possible failure of efficiency in markets that may justify a role for government: *External effects.*
There is an external effect if you are directly affected by my consumption or by my firm’s production.

⇒ Pollution

⇒ You benefit from my consumption (flower garden?)

Extreme case of external effect: **Public good.**

⇒ A public good is one for which everyone else can consume it without meaning that there is less for me.

⇒ Examples: Radio and TV signals, sidewalks and parks (if not too crowded), national defense, research.