Summary thoughts before first midterm in 2010: Fall 2011

Oct 5, 2011

These are the notes I wrote up for the class before the midterm, but all of class time was spent answering questions.

If you have a question, write it out now and hand it in.

Details on the midterm: 43 questions designed to make you think, will start the exam row by row, don't cheat

(My daughter, who is in H.S., ran into a girl in the bathroom who, before an exam, was writing answers on her stomach and thigh.)

Bring photo id but nothing with a battery. If I see a phone, calculator, computer, or whatever, your exam will be confiscated.

Let’s start simple

Imagine a society that consists of only two individuals, you and the person next to you.

Imagine you enter into a trade (good X for good Y). What do we know about the trade?

> Voluntary, so the trade would not happen if it made either party worse off (both are likely better off)
>
> The trade is efficiency increasing, but does not necessarily achieve efficiency. (The trade makes some members of society better off, and no member (there are only two) worse off.)
>
> Before the trade the allocation of stuff was inefficient
>
> Unless trading is restricted, trades will continue until there are no more gains from trade, at which point efficiency is achieved.

How would you define efficiency?

The allocation of resources and goods is efficient if all reallocations that would make one or more members of society better off require that other members of society be made worse off.

Said the other way, if it is possible to reallocate resources or goods and make some members of society better off without making other members worse off, the current allocation is inefficient.

In a world of production, there will be gains to trade if there are comparative advantages.

Put simply, if producers specialize in the production of commodities in which they have a comparative advantage, and then trade with each other, more total stuff can be produced.

Make sure you understand comparative and absolute advantage.

If the prices of commodities are flexible, including the price of commodity X, the market equilibrium for commodity X will often be efficient (the efficient amount of resources will be allocated to the production of X, the efficient amount of X will be produced, and the X produced will be efficiently allocated among society's members)

However, an important condition for the competitive market equilibrium to be efficient is that there are no significant **external** effects associated with the production or consumption of X.

There is an external consumption effect if the consumption of X by an individual affects others, either negatively or positively.

There is an external production effect if the production of X affects other producers, or consumers.

X can be a good or an activity.

Examples of external consumption effects include second-hand cigarette smoke and other types of pollution produced by individuals consuming things (e.g., loud stereos and a ugly couch in your front yard), congestion from driving, drunk driving, being an obnoxious drunk, having a pretty garden in your front yard that makes the neighbors better off, wearing clothes that affects others, and smoking weed in a way that affects others (positively or negatively)

Pollution is a primary example of a negative production effect (oil spills, carbon and other types of emissions into the air, emission into the water, etc.)

What would be an example of a positive external production effect? The classic example is the bee-keeper and the orchard.

If the external effect is positive, to achieve efficiency want government intervention to encourage more production and consumption

If the external effect is negative want government intervention to encourage less production and consumption

Put simply, markets with flexible prices will tend towards efficiency if there are no significant external effects.

But if there are significant external effects the equilibrium in these markets will tend to be inefficient.

If in the absence of government intervention, the market equilibrium is inefficient we say that “the market is failing” – “market failure”

If the market is failing, intervention in the market (typically by the government) is required to achieve efficiency.

In our examples in class, the presumption was that the market for taxis and apartments in NY City would be efficient absent government intervention

But that the market for fireplaces in Aspen would be inefficient unless the government intervened.

The difference caused by the implicit assumption for taxis and apartments that there are no significant external effects from taxi rides or apartment living (not necc. true).

And that for fireplaces in Aspen their consumption has significant external effects (air pollution)

Put simply, the market outcome is often the efficient outcome, but not always.

As an aside, note that markets are not designed to achieve fairness, so we might dislike a market equilibrium that we feel is inequitable, but we would not deem this unfairness a market failure.

We introduced the concept of equilibrium

A group of individuals is in equilibrium if each individual is doing the best they can given what everyone else is doing.

In such a situation, no one has an incentive to change their behavior. That is why it is called an "equilibrium"

Sometimes the equilibrium will be efficient, sometimes it won't

For example, the equilibrium of our divorce game was inefficient.

But often market equilibriums are efficient.

Consider equilibrium in a society that consists of only you (a one-person society)

You, personally, are in equilibrium when you are doing the best you can given your constraints.

The economic theory to predict how individuals behave

Economists assume that an individual has preferences, that the individual faces constraints, and that the individual chooses the most preferred bundle that he can afford.

In more detail:

An individual can rank bundles of goods (stuff: goods, activities and levels of non-market commodities) in that she can say, for any two bundles, which bundle she prefers. This is what economists mean when they say the individual has preferences

The individual is constrained, constrained by income, prices, time, culture, the law, etc. That is, there are a lot of bundles that the individual cannot consume.

Of the bundles the individual can consume, economists assume he consumes the one that he ranks the highest from among the bundles he can afford.

Put simply, economists assume individuals are rational

Because of constraints, there are costs. Constraints are caused by scarcity (there is a limited amount of stuff and time). By cost, economists mean opportunity cost (what you give up when you choose to do A rather than B).

In class we will build models to explain how much producers will produce/supply, but we have not done that yet.

We have specified industry supply functions, but not discussed where they come from.

We introduced demand and supply curves (these curves for commodity X describe what the players in the market for X want to do wrt X).

We showed that if price is flexible, price will adjust until demand =supply at the equilibrium market price.

Talked a bunch about movements along demand and supply curves vs. shifts in these curves, and what would cause either the demand curve or the supply curve to shift.

We investigated how shifts in supply or demand would affect the equilibrium price and quantity.

Underlying everything we did is the notion of a model

Another name a model is a theory

A model has three components:

Variables and their definitions

Assumptions

And predictions

Variables are things that can take different values—things that vary. Variables are either exogenous or endogenous. The variables you want you model to explain are the endogenous variables in you model; the intent of the model is to explain the levels of the endogenous variables. Exogenous variables are variables that one assumes affect the levels of the endogenous variables in your model but whose levels are determined outside of your model.

"en" means inside and "exog" means outside, as in determined inside or outside of the theory.

(Variables that are endogenous (exogenous) in your model might be exogenous (endogenous) in my model.)

Variables are defined. That is, for each variable there is a statement of what the variable represents and how it is measured.

Assumptions are specified relationships between the variables. (They do not have to be true.) Einstein's $E=MC^2$ is an example of an assumption

Predictions (hypotheses) are of the form "if …. Then …"

Predictions follow logically from the assumptions

We defined what we mean by an economic system and talked about different types of economic systems.

Put simply, an economic system is a **mechanism**, or group of mechanisms, that a society uses to allocate resources and goods. That is, a mechanism that determines what will be produced, how it will be produced, and who will get what.

We talked about different types of economic systems

E.g. market mechanisms and command and control.

We live in a mixed economy where markets are an important mechanism but other mechanisms should as the household and the government make many of the allocational decisions.

Economists often like to look at decisions on the margin.

Should I eat one more french fry?

Should I watch TV for one more hour?

Should I buy another pair of shoes?

(Thinking mathematically, economists often assume continutity.)

In deciding whether to consume one more unit, economists assume the additional unit is consumed if the benefits of consuming it, to the individual, are greater than the cost to the individual

Some decisions are more marginal than others.

Whether to drink another diet coke is obviously a decision that can be viewed as a marginal decision. It is easy to drink one more or less diet coke.

One might think marginally about whether to smoke another cigarette, but one might also conclude marginal analysis in terms of each additional cigarette is not appropriate because cigarettes are addicting: maybe whether one smokes another cigarette is not a choice.

Suicide does not lend itself to marginal analysis

While whether to get married a second time can be viewed as a marginal decision, marriage is a lumpy commodity.

So, while looking at decisions on the margin (should I do a little more or a little less) is often very insightful, it is not always possible to consume a little more or a little less of a commodity.