

Principle of Economics

Economic Models

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So in chapter 1, we studied a...the ten basic principles of a economic decision making, and now in order to study, the real world decision making by the real world market participants and real world markets, a..

in chapter 2, we will study the principles or the techniques that economists use to analyze a..real world markets.

We will look at two basic models of a real world economies, the circular-flow diagram and the production possibilities frontier, which focuses on the main participants in the economy and the a... the fundamental relationships that exist between these members of a....the economy.

So in the most basic form of the circular-flow diagram we can study the relationship between households and firms.

And we will realize that firms and households interact in two different ways, in two separate markets.

Firms produce output goods, and households consume those output goods.

On the other hand, households also provide certain resources that companies will end up consuming in the product process.

A...we can think that households provide labor, they provide a...investment funds, they provide other inputs that...that a..companies use in the production process.

The most simple representation of the economy is through this, simple circular-flow diagram, we can say that there are two kinds of markets participants, there are two markets in which these a...participants interact with each other, and because it is circular-flow diagram, it is important to realize that all of the flows from this market participants to this market participants should be followed by the same level of flows in the opposite directions.

So the...the one fundamental property of circular-flow diagrams is that all the resources flow in this a...market and there's a balance of flows throughout the diagram.

We could make, you may think that this is not a particularly realistic representation of real market, we are ignoring the role of the government, we are not modeling imports or exports by companies, a...

We are not modeling the financial sectors that provide funding to companies that where a...consumers save a...their money.

Anyway we think that if we are interested in the relationship between let's say firms and banks, we would have to make this diagram more complicated, we could introduce more participants, more flows of resources.

But if we are only interested in the interaction among households and companies, than this representation a surfices.

Another model, which is a... very useful and a... very useful to describing,..a...properties in the real markets is the production possibilities frontier.

This graph shows how much...how much output of several commodities can be produced in the economy, with a given amount of a..inputs factors of the production and the available technology.

A... this graph shows us that with a particular amount of a...inputs and with a particular technology used in production, there is certain trade-off that the economy can make between the productions of let's say cars and let's say computers.

We would say that if the economy is producing point on this production possibilities frontier, we would say that the a...economy is producing efficiently, it is getting the most output it can, from the available inputs and technology.

We would say that point such as C is not feasible, not available, because we cannot achieve it, we cannot produce it, with the amount of available inputs and technology.

On the other hand, point such as D is feasible, but it is not efficient, because the economy can strictly improve its situation by producing more of either of commodities.

And I want you to think that a....production possibilities frontiers can be drawn for different segments of economy, we can... we can describe the..these a trade-off in production for an entire company, or we can a..draw a production possibilities frontier for household, or for a company, or for one individual.

Even in the production decisions of an individual person, the person can decide how much of .how much time to spend on one activity, how much time spend on another activity, and there is a limited amount of output that can be produced.

Another thing to a...point out about production possibilities frontier is that they don't have to have this particular shape always.

This particular shape of production possibilities frontier implies something about the particular a....production process taking place.

A... this shape implies that there is a diminishing return to using inputs in one particular activity.

Notice how the... the shape of production possibilities frontier is a..concave and if we think of moving between points on this production possibilities frontier.

We would realize that the more, of course we produce, the more and more incrementally we have to give up of computers to produce each additional unit of cars.

So we would say that this production possibilities frontier shows us diminishing marginal returns in a different situation with different two goods under analysis we might have increasing returns technology where the more the society produce particular commodity the less of the other commodity has to be given up and we could also of course have a constant returns technology for which the trade of between producing good 1, good 2 is always the same.

And, once we describe the production, situation between two goods and the economy, we can analyze what happens if the amount of inputs in the economy changes or if the technology used in the production process improves we can say that as the technology in the production process improves more of both goods maybe available and the production possibilities frontier would expand.

We can also study what happens if the technology in the production of only one of these goods improves.

We can say that from existing production possibilities frontier if the technology used in the production of cars improves but the technology in the production of computers stays unchanged, production possibilities frontiers might expand only in one direction.

So when you are reading about these two models of economies the circular flow diagram and the production possibilities frontier, I want you to think how this models would change if we introduce a new level of complexity if we changed, if we added a new level of interaction between market participant or if we changed something in the production process of the commodities.

One important side note about production possibilities frontier is that it only depends on the amount of available inputs and technologies, it does not depend on preferences of members of the society, and it does not say anything or it does not depend on prices of inputs or output goods.

In particular, we cannot say anything about the comparison of point A and point B.

We can only say that both of this points are efficient and feasible, we would have to say something more about what consumers prefer to buy or what companies prefer to sell to decide whether point A or point B would be produced at the end.

You should think that this graph shows us the production possibilities frontier but in the market solution, what ends up for being produced also depends on consumer's preferences.

You may think that this graph also shows us the consumption possibilities frontier.

And it is up to consumers to decide if they want to be on this part of the graph or this part of the graph.

So, to summarize, the production possibilities frontier shows us nicely the affects of scarcity of inputs of production.

It shows us the concept of efficiency, we know which production bundles are efficient, which bundles are not efficient.

It shows us the trade-offs that produce a space and producing one commodity relative to another commodity.

It shows us the concept of the opportunity cost what has to be given up, how many units of one commodity have to be given up to produce in additional unit of the other commodity.

Depending on the shape of the production possibilities frontier, we might have diminishing returns in production with bowed out, concave shape, or we might have increasing returns in production with bowed in concave shape.

And we can introduce Economic growth by studying what happens if the technology used in production improves or the available inputs in the economy change.

Okay? We will continue using these two models in the following chapters in particular in chapter 3, we will use the production possibilities frontier to study trade between different countries or different companies.

And through the production possibilities frontier, we will show the benefits of trade to all trading partners