

2. Thinking like an economist

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Intro

- ▶ More introductory materials
- ▶ Terminology



- ▶ Simplified version of the real world ("toy economy")
 - ▶ Abstract from many inessential features
 - ▶ The degree of simplicity depends on questions at hand
 - ▶ A "more realistic" model is not necessarily good
 - ▶ "Everything should be made as simple as possible, but not simpler."
 - ▶ "Any intelligent fool can make things bigger, more complex, and more violent. It takes a touch of genius – and a lot of courage – to move in the opposite direction."

Model

- ▶ There are dozens of models
 - ▶ interested in many issues
 - ▶ features crucial to one issue may be unimportant to others
 - ▶ ex) monetary policy is not important to long-run growth of economy
- ▶ Often, built with different assumptions
 - ▶ Again, depend on questions at hand



Micro vs. Macro

- ▶ Economics is studied on various levels
- ▶ Microeconomics
 - ▶ The study of how individual households and firms make decisions and how they interact in markets
- ▶ Macroeconomics
 - ▶ The study of economy-wide phenomena, including inflation, unemployment, and economic growth
- ▶ Microeconomics and macroeconomics are closely intertwined because changes in the overall economy arise from the decisions of individual households and firms.
- ▶ Because microeconomics and macroeconomics address different questions, each field has its own set of models which are often taught in separate courses.
 - ▶ Same for other sub-fields such as international trade, labor, environmental, financial, public finance, auction, education, health, and so on



Positive vs. Normative analysis

▶ Positive statements



- ▶ Attempt to describe the world as it is
- ▶ Descriptive

▶ Normative statements



- ▶ Attempt to prescribe how the world should be
- ▶ Prescriptive

- ▶ Positive statements can be evaluated by examining data & evidence, while **normative statements involve personal viewpoints.**

- ▶ Positive views about how the world works affect normative views about which policies are desirable.

- ▶ Example of a discussion of minimum-wage laws:

- ▶ “Minimum-wage laws cause unemployment.”
- ▶ “The government *should* raise the minimum wage.”



- ▶ Much of economics is positive; it tries to explain how the economy works. But those who use economics often have goals that are normative. They want to understand how to improve the economy.

An example of a simple economy



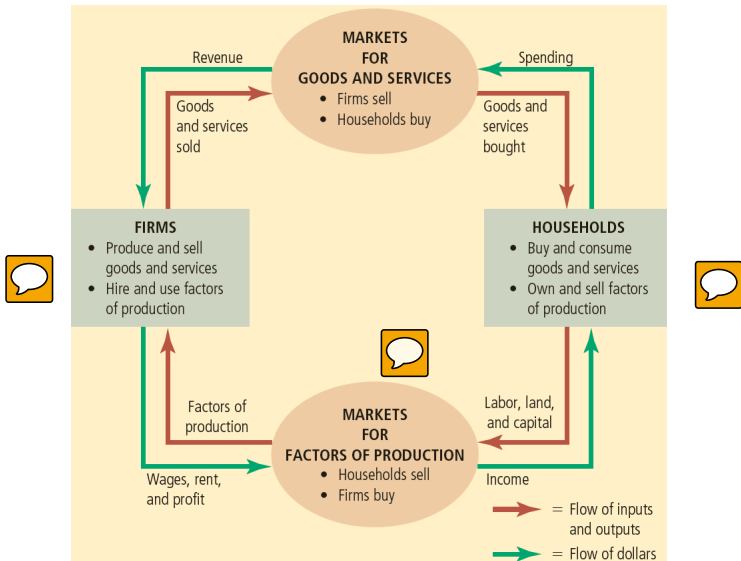
- ▶ Circular-flow diagram
 - ▶ simple graphical representation of an economy
- ▶ Decision makers (economic agents)
 - ▶ Firms and Households
- ▶ Markets (two)
 - ▶ For goods and services
 - ▶ For factors of production (labor, capital, land, ...)



An example of a simple economy

- ▶ Firms
 - ▶ Produce goods and services
 - ▶ Use factors of production
- ▶ Households
 - ▶ Own factors of production (workers + capitalists)
 - ▶ Consume goods and services
- ▶ Firms and households interact in markets
- ▶ Markets for goods and services
 - ▶ Firms are sellers
 - ▶ Households are buyers
- ▶ Markets for factors of production
 - ▶ Firms are buyers
 - ▶ Households are sellers

An example of a simple economy



An example of a simple economy





It is perhaps too simple?

- ▶ Many of the sales firms make are not to households but to other firms (and themselves)
- ▶ No government
- ▶ No financial markets

Another example

▶ Households: (workers + capitalists)

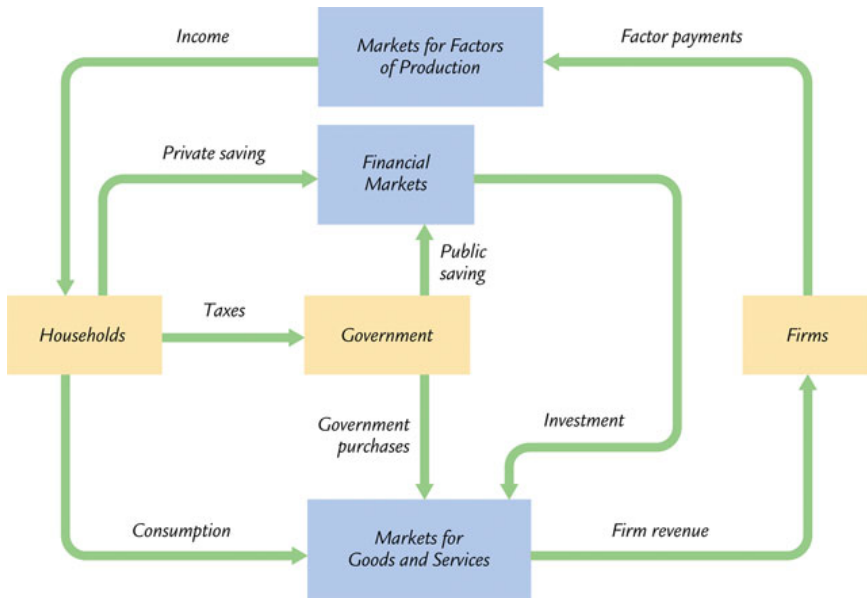
- Receive income by supplying L and K in factors markets 
- Make consumption in markets for goods and services
- Pay taxes to government 
- Save and supply the saving in financial markets
- Make investment using the fund obtained from financial markets

▶ Firms:

- Rent factors from factors markets
- Receive revenue by selling goods in markets for goods and services

▶ Government:

- Receive taxes (T)
- Make purchases (G)
- If $T > G$ save, If $T < G$ borrow from financial markets



The Production Possibility Frontier (PPF)

- ▶ PPF gives all possible combinations of output that the economy can possibly produce
 - ▶ Given the available
 - ▶ Factors of production
 - ▶ Production technology
- ▶ We will use PPF to illustrate some basic economic ideas (remember the *Ten Principles*?)
 - ▶ trade-off, opportunity cost, efficiency, economic growth, specialization & gains from trade
- ▶ We will consider a simple case: an economy with two goods, apples and computers
 - ▶ Enable us to show trade-off graphically
- ▶ In this case, PPF is a graph that shows the maximum quantity of one good that can be produced for any given quantity produced of the other

PPF - A linear (or constant opportunity cost) case

- ▶ Two extreme cases:
 - ▶ produce 20 computers and 0 apples
 - ▶ produce 0 computers and 40 apples
- ▶ In-between cases:
 - ▶ To produce one more computer, we must give up two apples – regardless of output mix
- ▶ PPF can be represented by a straight line


Efficiency



- ▶ Infeasible outcomes (outside PPF)
- ▶ Feasible but inefficient outcomes (inside PPF)
- ▶ Feasible and efficient outcomes (on PPF)
 - ▶ efficient if there are no missed opportunities
 - ▶ there is no way to produce more of one good without producing less of the other



Trade-off and Opportunity Cost

- ▶ Once we have reached the efficient points on the frontier, the only way of producing more of one good is to produce less of the other
- ▶ PPF shows
 - ▶ A trade-off that society faces
 - ▶ Opportunity cost of producing one good 
- ▶ In our example, the opportunity cost is constant
 - ▶ The opportunity cost of an additional computer in terms of apple is always the same – no matter how many apples (and computers) the economy is now producing – and vice versa
 - ▶ This doesn't have to be the case
- ▶ The opportunity cost is given by the (absolute value of the) slope

Trade-off and Opportunity Cost

Non-linear case



- ▶ In reality, PPF is seldom linear
 - ▶ Opportunity costs are not constant
 - ▶ Opportunity costs change as the mix of output changes
- ▶ Increasing opportunity cost
 - ▶ The more computers we produce, the more apples we have to give up to make an additional computer, and vice versa
 - ▶ Resource specialization
- ▶ PPF is a bowed-out curve rather than a linear line
- ▶ The opportunity cost is still given by the (absolute value of the) slope



Economic Growth



- ▶ Economic growth is represented by an expansion of the economy's production possibilities
 - ▶ outward shift of PPF
- ▶ Basically two sources of economic growth
 - ▶ increase in economy's factors of production
 - ▶ progress in technology
- ▶ Technological innovations have been a crucial force behind economic growth

Gains from Trade

- ▶ *"Consider your typical day. You wake up in the morning and pour yourself juice from oranges grown in Florida and coffee from beans grown in Brazil. Over breakfast, you watch a news program broadcast from New York on your television made in China..... You drive to class in a car made of parts manufactures in more than a dozen countries around the world....."*
- ▶ *"Every day, you rely on many people, most of whom you have never met, to provide you with the goods and services that you enjoy."*
- ▶ Why such interdependence?
- ▶ Why do people specialize and trade with one another?
 - ▶ Not out of generosity
 - ▶ No dictatorship
- ▶ Instead, people provide you with the goods and services they produce because they get something in return
 - ▶ i.e. there are gains from trade
- ▶ We will see why people (with free will) *choose* to specialize and trade through the lens of PPF.