Trade-offs and Trade

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Models

- A **model** is a simplified representation of a real situation that is used to better understand real-life situations.
- Models are useful because they allow economists/analysts to study one variable at a time
- In order for models to be useful, we must hold other variables constant
- The **other things equal assumption** means that all other relevant factors remain unchanged

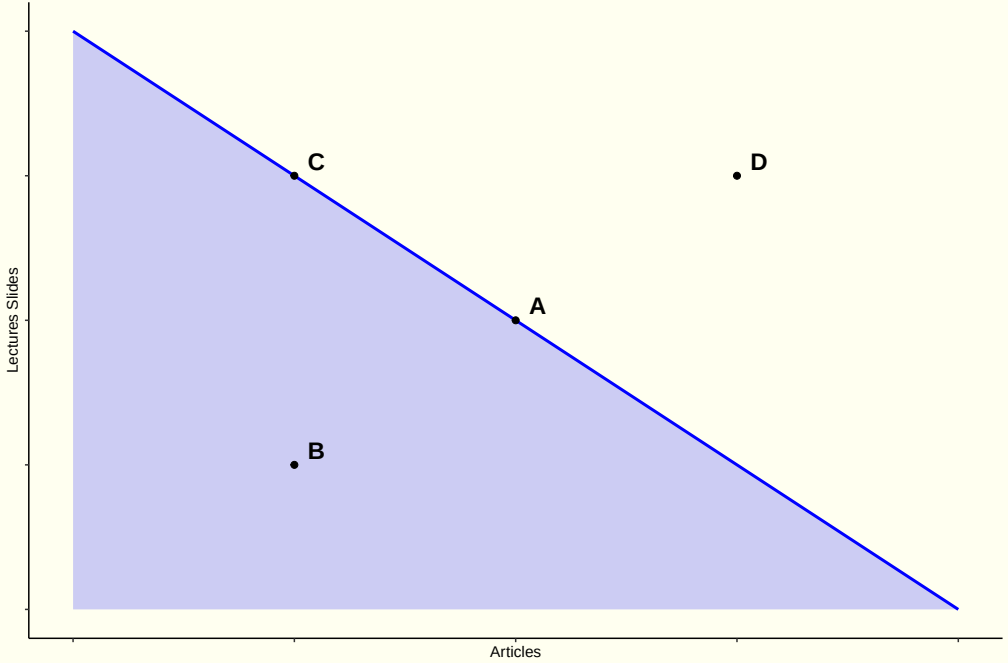
Useful Models

- Possibility Frontier
- Comparative Advantage
- Circular Flow Diagram

The Production Possibility Frontier

The **production possibility frontier** illustrates the trade-offs facing an economy that produces only two goods. It shows the maximum quantity of one good that can be produced for any given quantity produced of the other.

Production Possibility Frontier (PPF)



Efficiency

An economy is *efficient* when there are no missed opportunities.

- At point A, Craig is maximizing his time spent writing articles & making lecture slides
- Even at point C, which is a different combination between articles and lectures, he is operating efficiently
- Notice at point B, Craig can either be doing more writing articles or more making lectures. At B, he is inefficient

Efficiency

However, production efficiency is only one element of efficiency. Efficiency also requires that the economy allocate its resources so that consumers are as well off as possible.

- Let's consider A & C again
- Both points represent productive efficiency
- Craig prefers to write articles to some extent,so he prefers A
- C is inefficient from the point of the view as the economy as a whole
- A is said to be *allocatively efficient* as well

Efficiency for the economy as a whole requires *both* efficiency in production and efficiency in allocation

Opportunity Cost

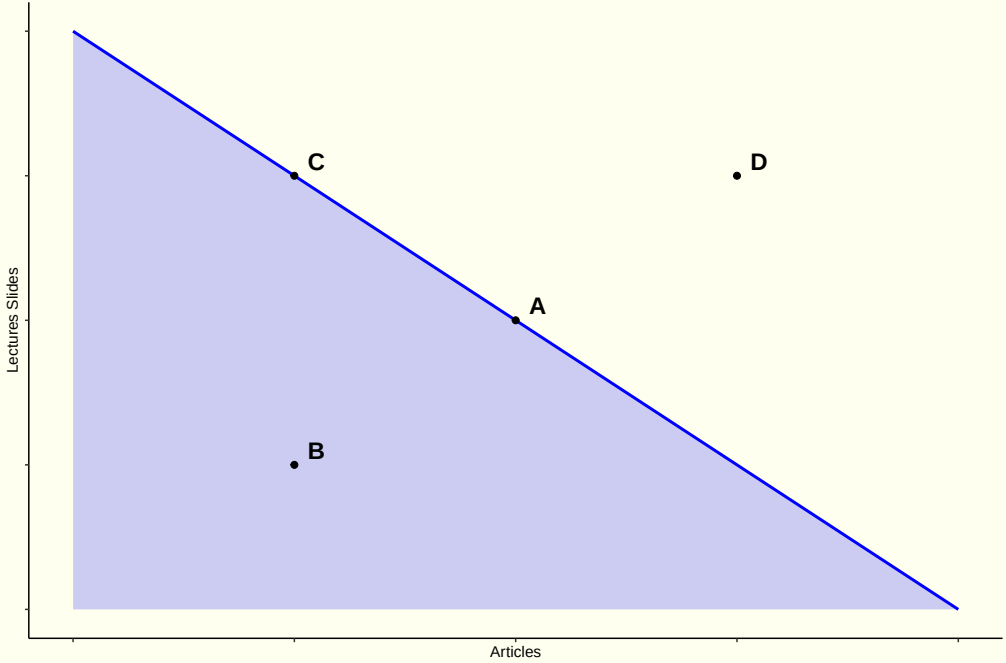
The PPF also reminds us that the true cost of any good is not only the price you pay for it, but what you must give up in order to obtain the good in addition to money — the *opportunity cost*

Opportunity Cost

Suppose at A, Craig writes 3 articles and makes 10 lecture slides, and at C he writes 2 articles and makes 15 lecture slides. Then, from moving from A to C, he makes 5 more lecture slides and makes one fewer lecture slides.

- The opportunity cost of the 5 lecture slides is the 1 article not written. Then each 1 lecture slide has an opportunity cost of $1/5$ articles.

Are the Opportunity Costs Always the Same?



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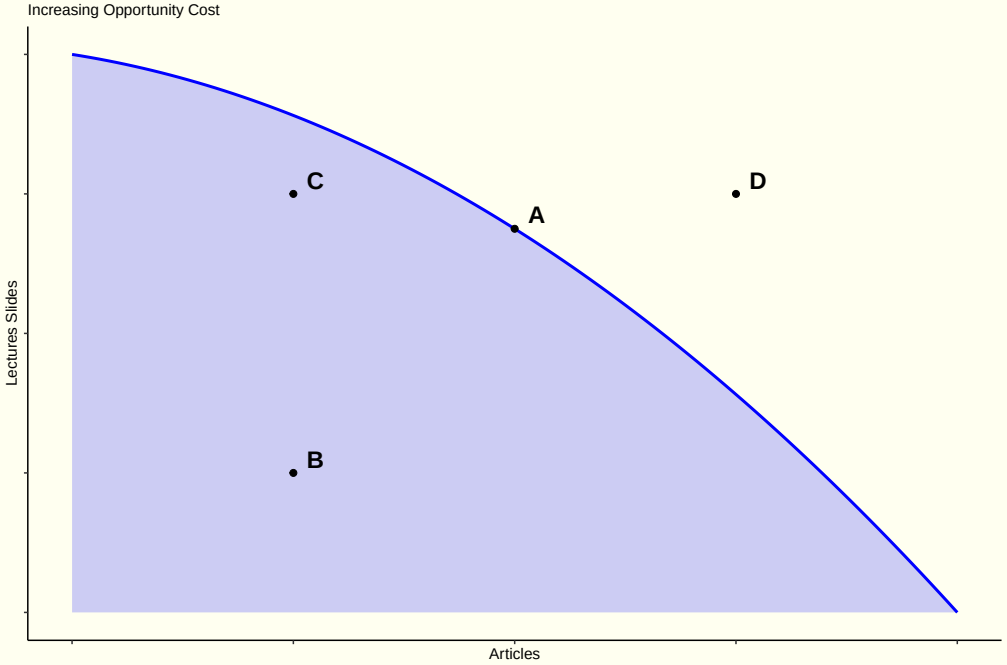

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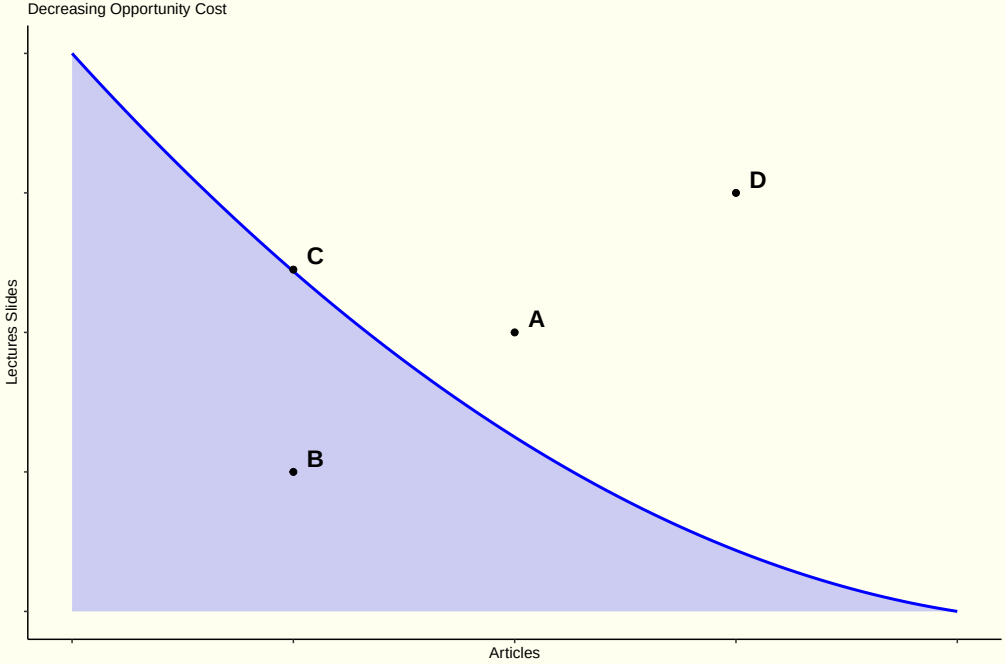
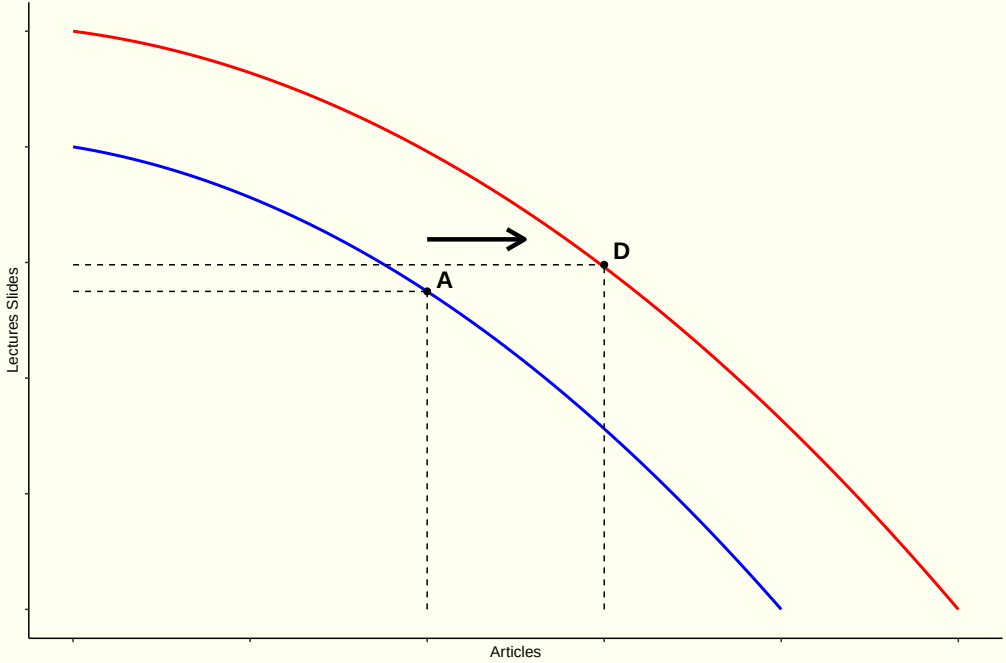


Economic Growth

Economic Growth - the growing ability of the economy to produce goods and services

- *Economic expansion* means being able to produce more of everything —or certainly less of nothing
  - Increase in the **factors of production** —the resources used to produce goods and services
  - **Technology** —the technical means for producing goods and services

Economic Growth

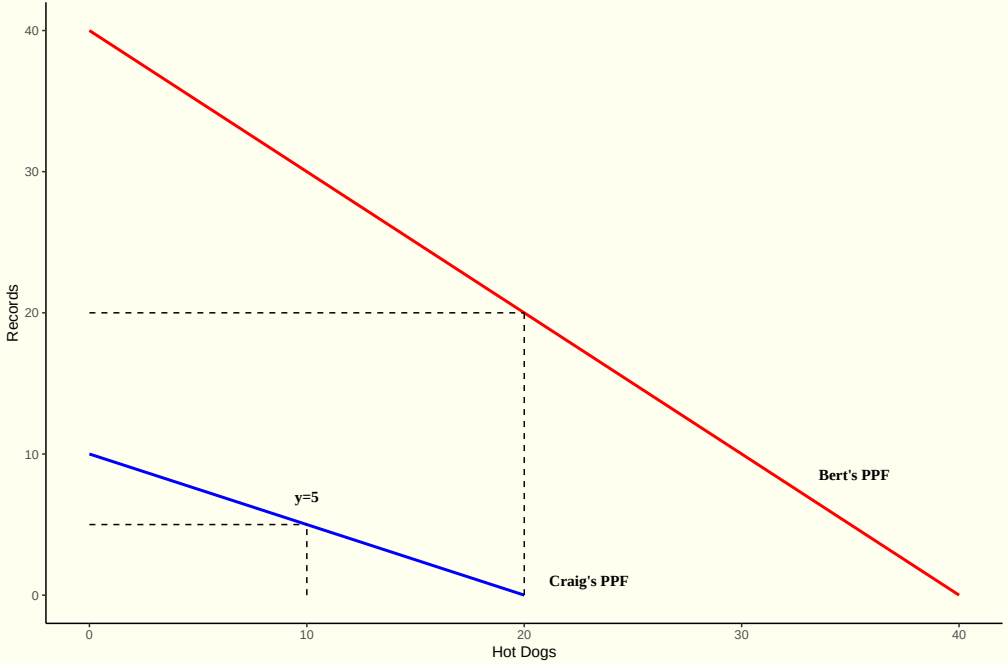


Comparative Advantage and Gains From Trade

Gains from trade - mutual gains that individuals can achieve by specializing in doing different things & trading with one another

- The model of *comparative advantage* highlights the importance of the gains from trade

Bert's and Craig's PPF



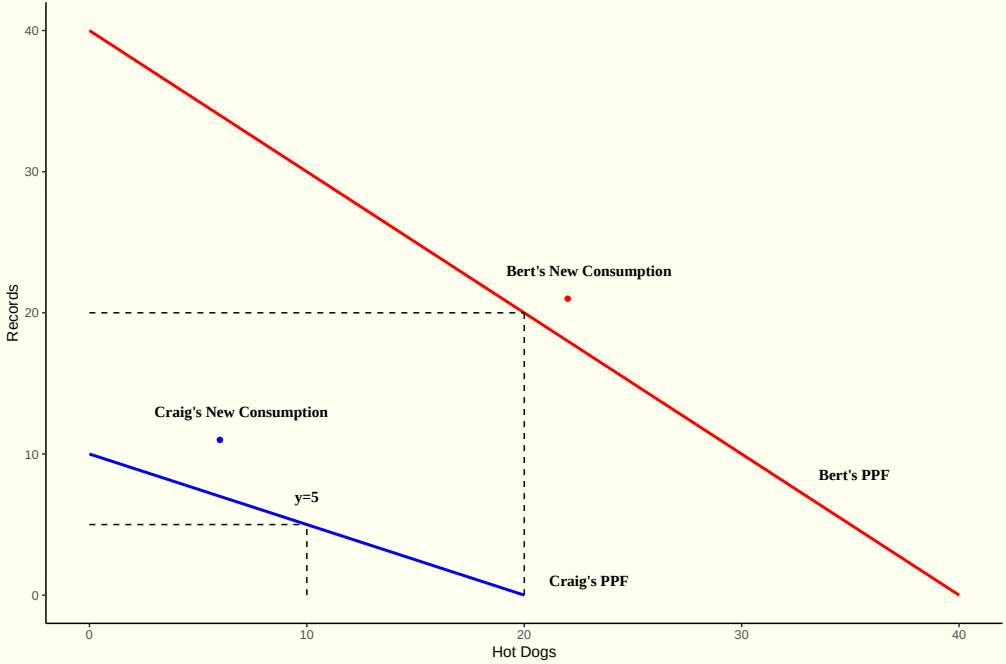
Bert's and Craig's Opportunity Costs

	Bert's Opportunity Cost	Craig's Opportunity Cost
One record	1 hot dogs	2 hot dogs
One hot dog	1 record	1/2 records

How a Couple Pals Gain from Trade

		Without Trade		With Trade		Gains From Trade
		Production	Consumption	Production	Consumption	
Bert	Records	20	20	28	22	+2
	Hot Dogs	20	20	12	21	+1
Craig	Records	5	5	0	6	+1
	Hot Dogs	10	10	20	11	+1

Bert's and Craig's PPF



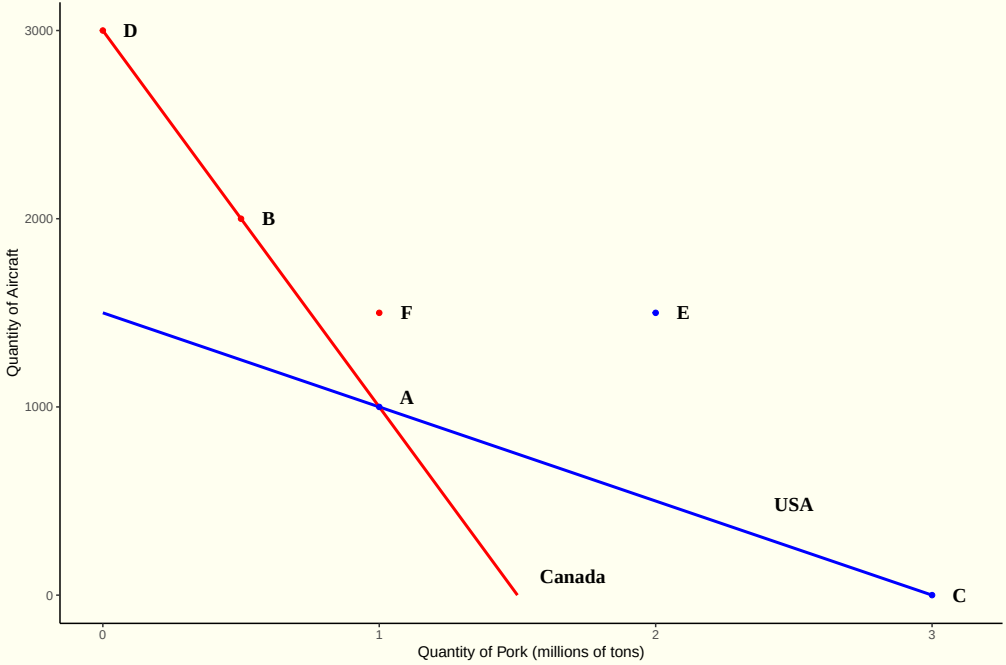
Conclusion

- Bert has an **absolute advantage** in the production of both hot dogs and records.

- Cregg has a **comparative advantage** in the production of hot dogs.
- An individual has an **absolute advantage** an in activity if he or she can do it better than other people.

- An individual has a **comparative advantage** in producing something if the opportunity cost of that production is lower for that individual than other people.

Comparative Advantage & International Trade



Transactions: The Circular Flow Diagram

- In our previous economy with C & B, they **barter** with each other
- In general exchange occurs with use of a medium, e.g. cash
- In economies with cash, a **circular flow diagram** succintly exhibits how the transactions take place.

Factor markets ultimately determine an economy's **income distribution**.

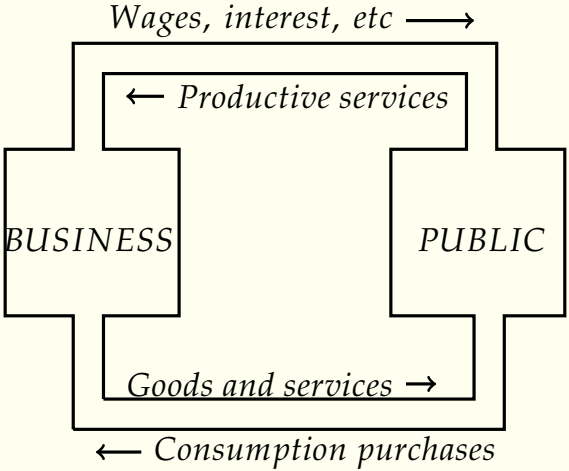


Figure 1: Samuelson's circular flow diagram

Drawbacks of the Circular Flow Diagram

- The distinction between firm and HH isn't always clear.
- Firm-to-firm sales aren't really captured
- Government isn't accounted for

Check Our Understanding

In Italy, an automobile can be produced by 8 workers in one day and a washing machine by 3 workers in one day. In the United States, an automobile can be produced by 6 workers in one day, and a washing machine by 2 workers in one day.

Check Our Understanding

a. Which country has an absolute advantage in the production of automobiles? In washing machines?

b. Which conutry has a comparative advantage in the production of washing machines? In automobiles?

c. What pattern of specialization results in the greatest gains from trade between the two countries?

Positive vs Normative Economics

There are different kinds of questions an economist can answer:

1. How much revenue will the tolls on the state turnpike yield next year?
2. How much would that revenue increase if the toll were raised from \$1 to \$1.50?
3. Should the toll be raised, bearing in mind that a toll increase will reduce traffic and air pollution near the road but will impose some financial hardship on frequent commuters?

Positive vs Normative Economics

Analysis that tries to answer questions about the way the world works, which have definite right and wrong answers, is known as **positive economics**.

Analysis that involves saying how the world *should* work is known as **normative economics**.

Positive economics is about *description*, normative economics is about *prescription*.

Positive Economics

Much of an economist's time is spent on positive questions. Even within positive economics, there are considerable differencs.

Question 1 was a prediction or **forecasting** question.

Question 2 was a *what if question*.

Models are tremendously helpful in answering "what if" questions. Positive questions are falsifiable, i.e. they can be proven right or wrong.

Normative Economics

There are in general no "right" answers to normative questions.

Normative economics deals in ethics and politics.

However sometimes policies can be ranked, e.g. urban growth boundaries vs. exclusionary zoning.

When and Why Economists Disagree

When economists (rarely) agree on an issue, it often goes uncovered.

When economists disagree, the disputes are often exaggerated to political extremes

In general when differences of opinion arise, it is due to a couple differences

- Model differences
- Value differences

Check Our Understanding

Normative or Positive?

a. Society should take measures to prevent people from engaging in dangerous personal behavior.

Check Our Understanding

Normative or Positive?

b. People who enage in dangerous personal behavior impose higher costs on society through higher medical costs.