The Theory of Comparative Advantage

Topic 3

Learning Objectives

- Address three fundamental economic questions
- Understand the concept of the production possibility frontier.
- Interpret slopes of the PPF as marginal costs.
- Understand the theory of comparative advantage.
- See why it is comparative, not absolute, cost advantage that matters for economic development.

Production

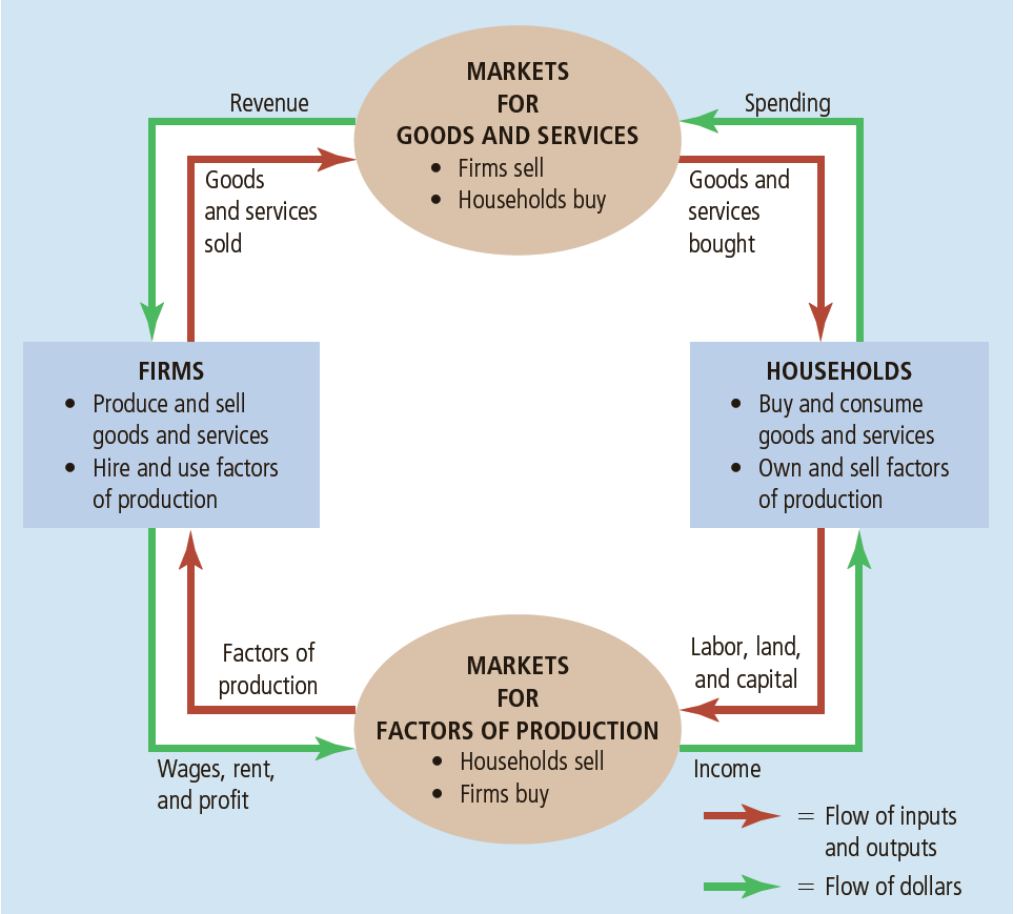
- Production
  - The process that transforms input (factors of production) into output (goods and services).
- Factors of production used to create different goods and services are broadly categorized as either:
  - Land
  - Labor
  - Capital

Primary decision-making entities

- Households (What to consume?)
  - primary economic objective is to obtain benefits from consuming goods and services.
- Firms (What to produce?)
  - primary role is to produce goods and services for consumption by households.
- Thus, firms produce output consumed by households.
- Furthermore, households interact with firms by providing labor and other inputs for the production process.

The Circular Flow Diagram

- Depicts the interaction between households and firms.
- In other words, it illustrates the fundamental movements of resources between households and firms.



N.G.Mankiw (2016). Principles of Microeconomics. 8th Edition. CENGAGE Learning.

Three Fundamental Economic Questions

- Thinking about how a society uses its scarce productive resources, three fundamental questions must be addressed:
  - What to produce? - Production decision
  - How to produce? - Resource use decision
  - For whom to produce? - Distributional decision
- How societies answer these three questions is reflected in their economic system.
- Economic system reflects the rules and methods put in place by a society to determine what goods are produced, how they are produced and for whom they are produced.

Economic Systems

- Whether we categorize economic systems by resource allocation mechanism or political ideology, the following three are consistent:
  - Planned economy/ Socialism
  - Mixed economy
  - Market economy/ Capitalism
- Commonalities among different economic systems are four primary institutions:
  - Households
  - Firms
  - Markets
  - Government

Economic Systems – Ctd.

- Planned Economy/ Socialism
  - Socialism is defined by government ownership of resources and relies upon centralized decision making to allocate productive resources.
  - For example:
    - North Korea, China, Cuba, Nicaragua, Venezuela
- Communism
  - economic system in which the means of production are collectively owned by all of the people in a society (without intervention by a government or state).

Economic System – Ctd.

- Mixed economies
  - blending elements of market economies with elements of planned economies, free markets with state interventionism, or private enterprise with public enterprise.
- Social Market Economics
  - Balances the freedom of the market with equitable social development.
  - Access to finances, health, and education are regulated by government.
  - For example:
    - European Union

Economic System – Ctd.

- Market Economy/ Capitalism
  - Capitalism is defined by private ownership of resources, and relies upon decentralized decision making in free markets to allocate productive resources
  - For example
    - United States
- Consumer Sovereignty
  - the freedom for an individual to choose to purchase (or to choose to not purchase) a good or service at a price determined in a free, unfettered market
- Robert Bosch
  - I don't pay good wages because I have a lot of money; I have a lot of money because I pay good wages.

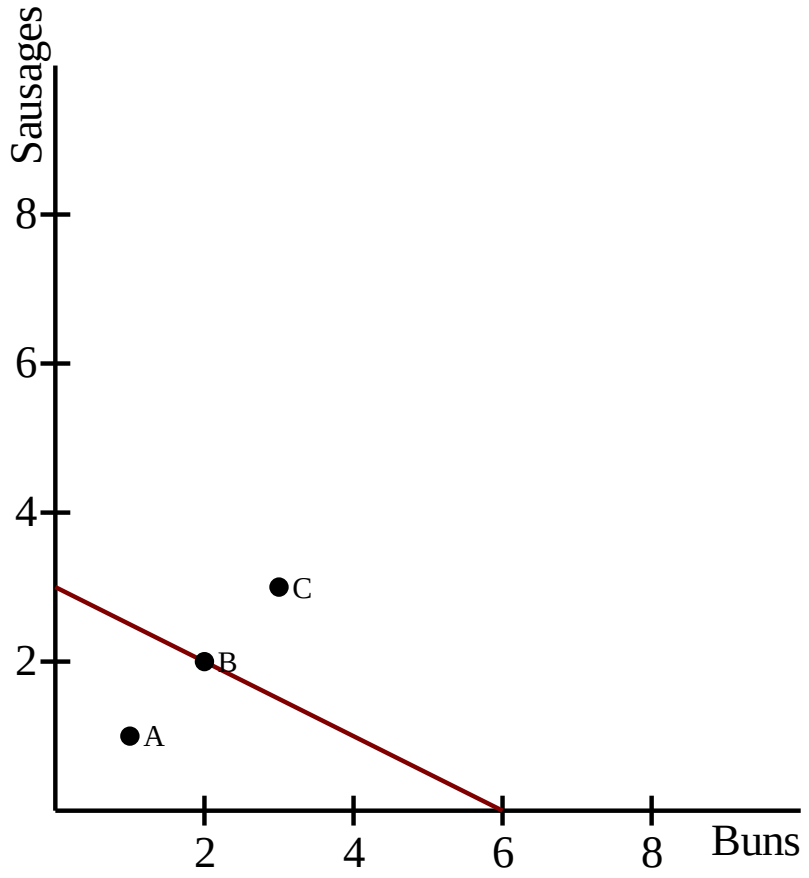
The Production Possibility Frontier

- Scarcity imposes a constraint on society's use of productive resources.
- Thus, society faces tradeoffs regarding the level of production of different goods.
- The tradeoffs in production that confront a society can be illustrated by a Production Possibilities Frontier.
- Production Possibilities Frontier
  - a curve summarizing the limits of production that a society faces by illustrating the maximum amount of one good that can be produced for every possible level of production of another good.

The Production Possibility Frontier – Ctd.

- Assume an economy with 3 workers that only produces two goods, buns and sausages, so they can consume hot dogs. One worker can either produce 1 sausage or 2 buns.

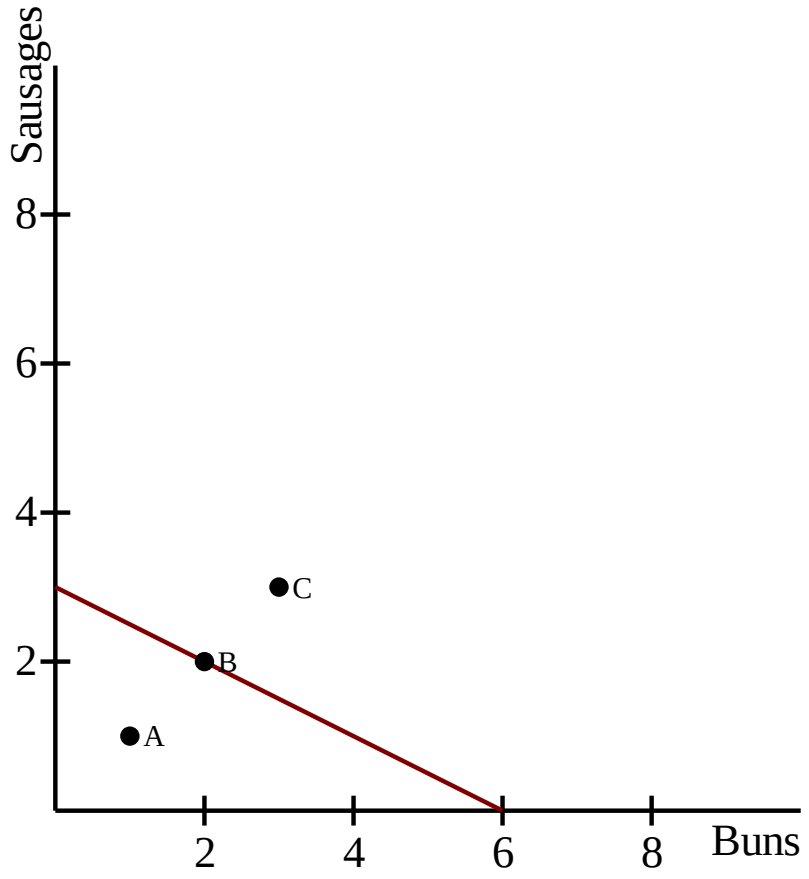
Sausages	Buns



The Production Possibility Frontier – Ctd.

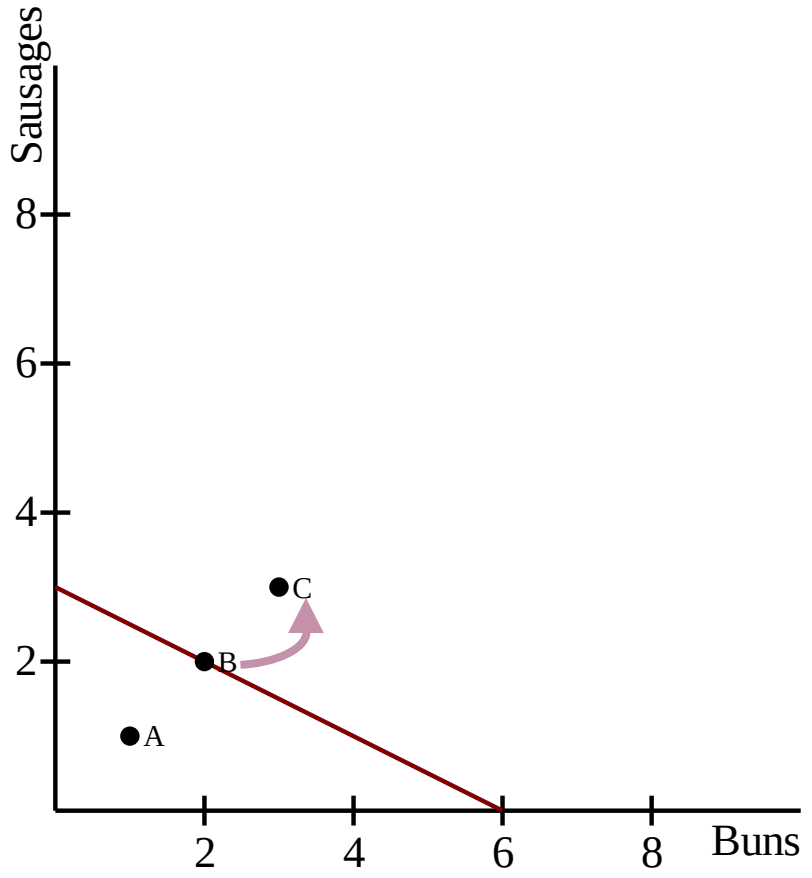
- Assume an economy with 3 workers that only produces two goods, buns and sausages, so they can consume hot dogs. One worker can either produce 1 sausage or 2 buns.

Sausages	Buns
3	0
2	2
1	4
0	6



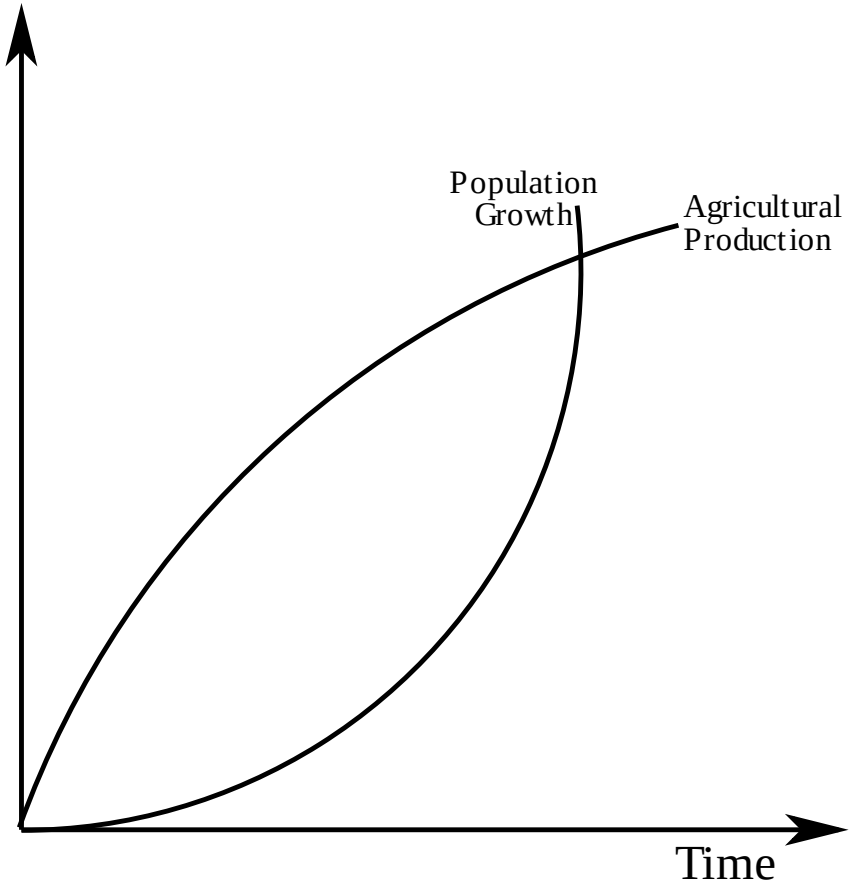
The Production Possibility Frontier – Ctd.

- How to increase consumption per capita?
  - Thomas Malthus' Congestion Hypothesis
  - David Ricardo's Theory of Comparative Advantage



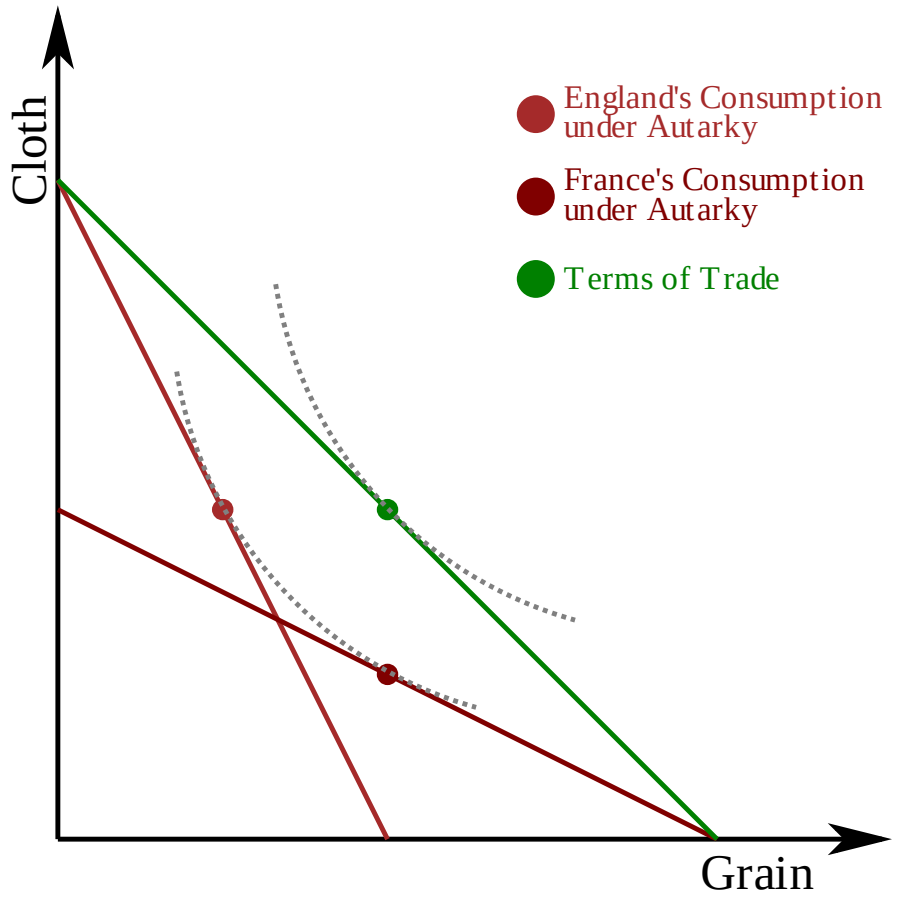
Thomas Malthus' Congestions Hypothesis

- Population will eventually outgrow the available productive capacity.
- Because agricultural production is subject to diminishing returns, ever less productive land will have to be exploited. Population growth, on the other hand, occurs exponentially.
- Boom and bust cycles are therefore inevitable.

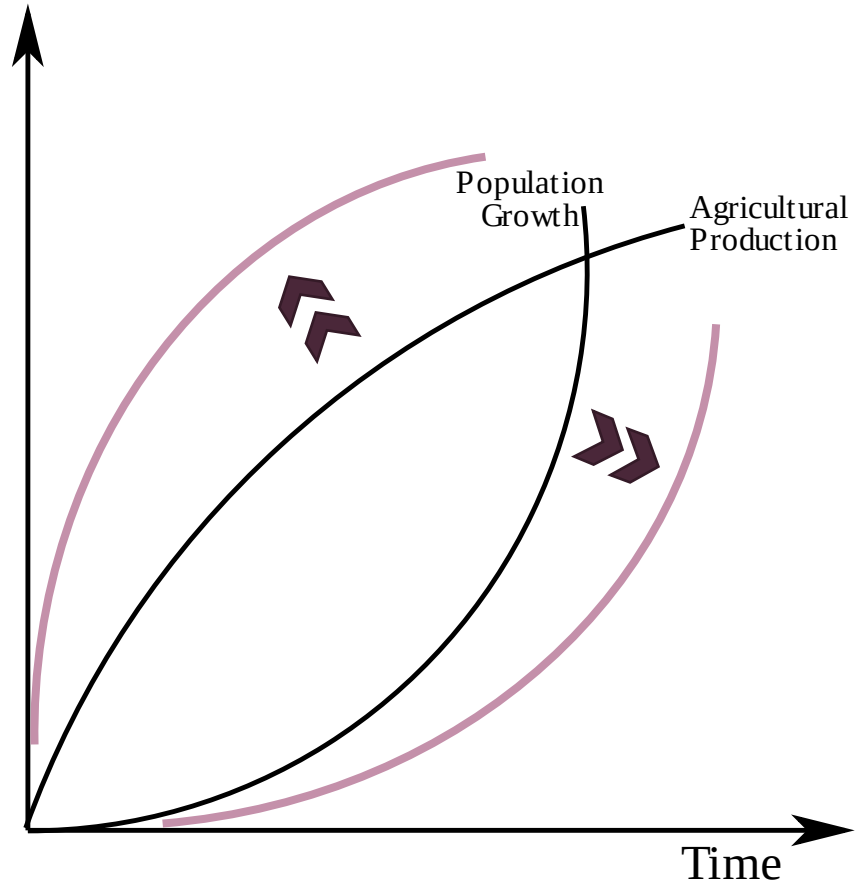


Ricardo's Theory of Comparative Advantage

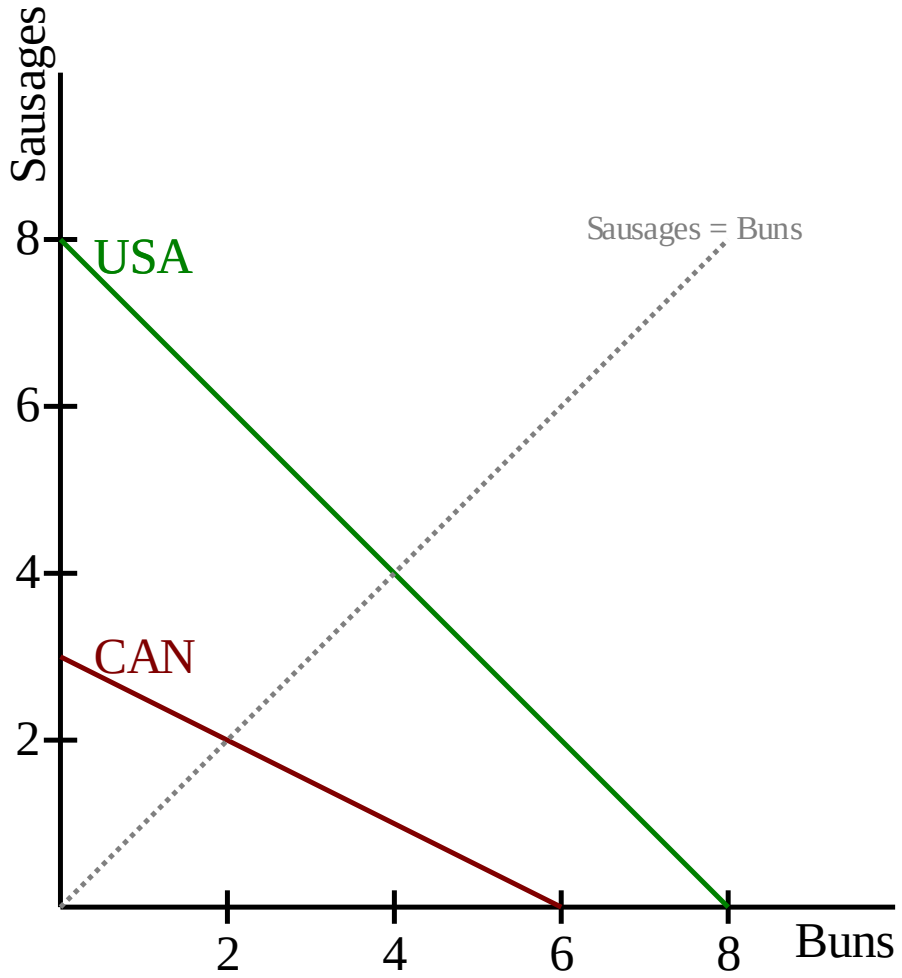
- If countries participate in international trade, all benefit from gains from trade; thus, consuming more than they produce.
- Trade will still occur even if one country has an absolute advantage in all products.



Ricardo vs. Malthus



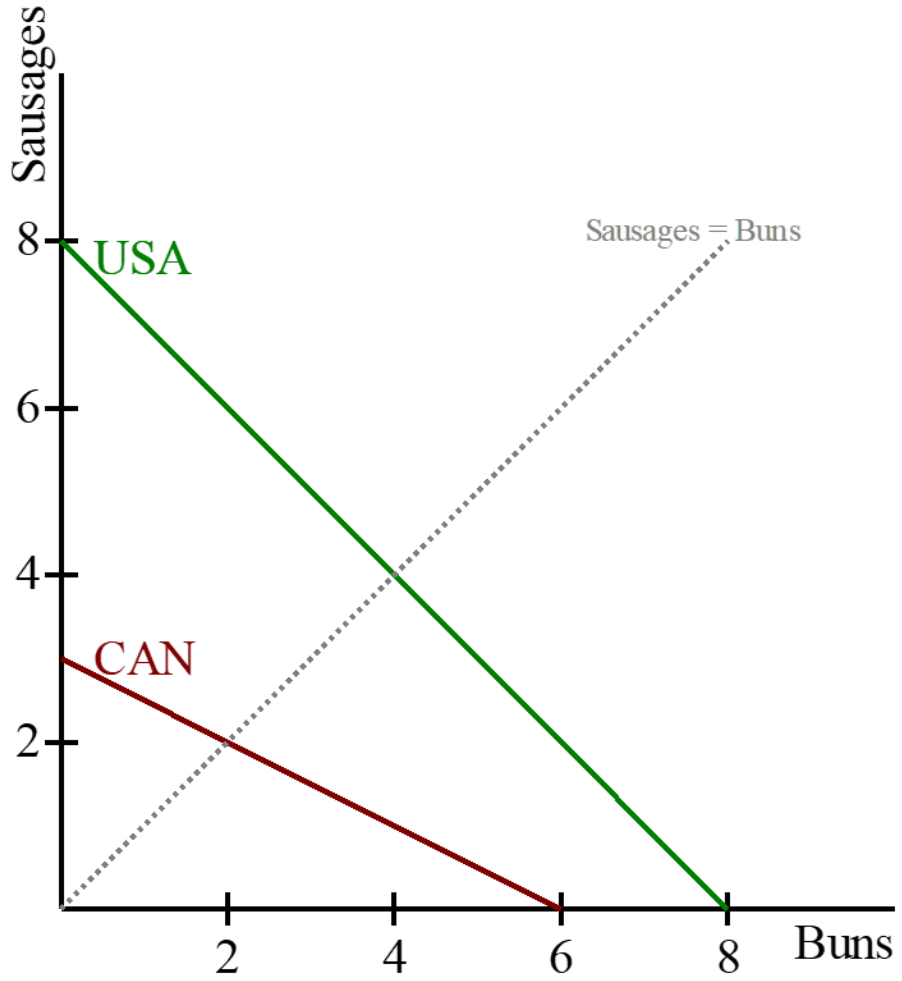
Theory of Comparative Advantage



The Production Possibilitiy Frontiers

- CAN
  - 3 workers
  - One worker can produce either one sausage or two buns
- USA
  - 8 workers
  - One worker can produce either one sausage or one bun
- Because both countries want to consume hot dogs, they always need to produce the same number of sausages and buns.

Theory of Comparative Advantage – Ctd.



Production and Consumption under Autarky

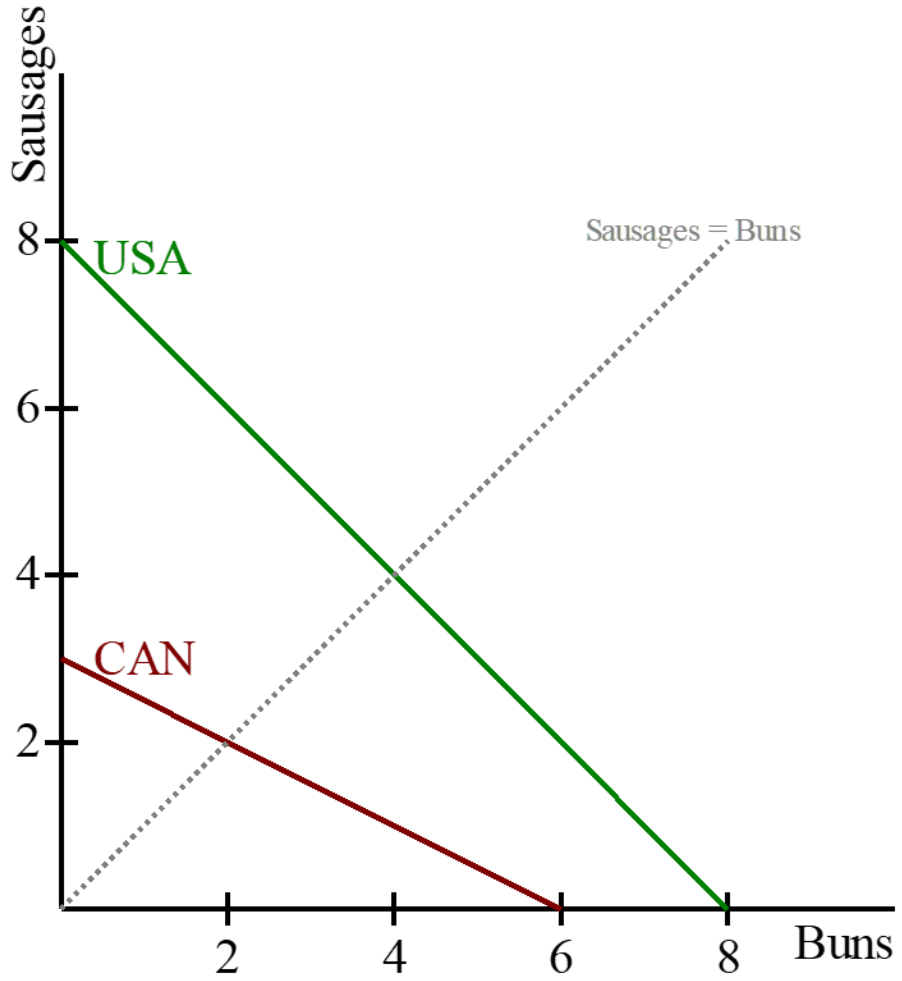
Sausages	Buns

Sausages	Buns

USA

CAN

Theory of Comparative Advantage – Ctd.



Production and Consumption under Autarky

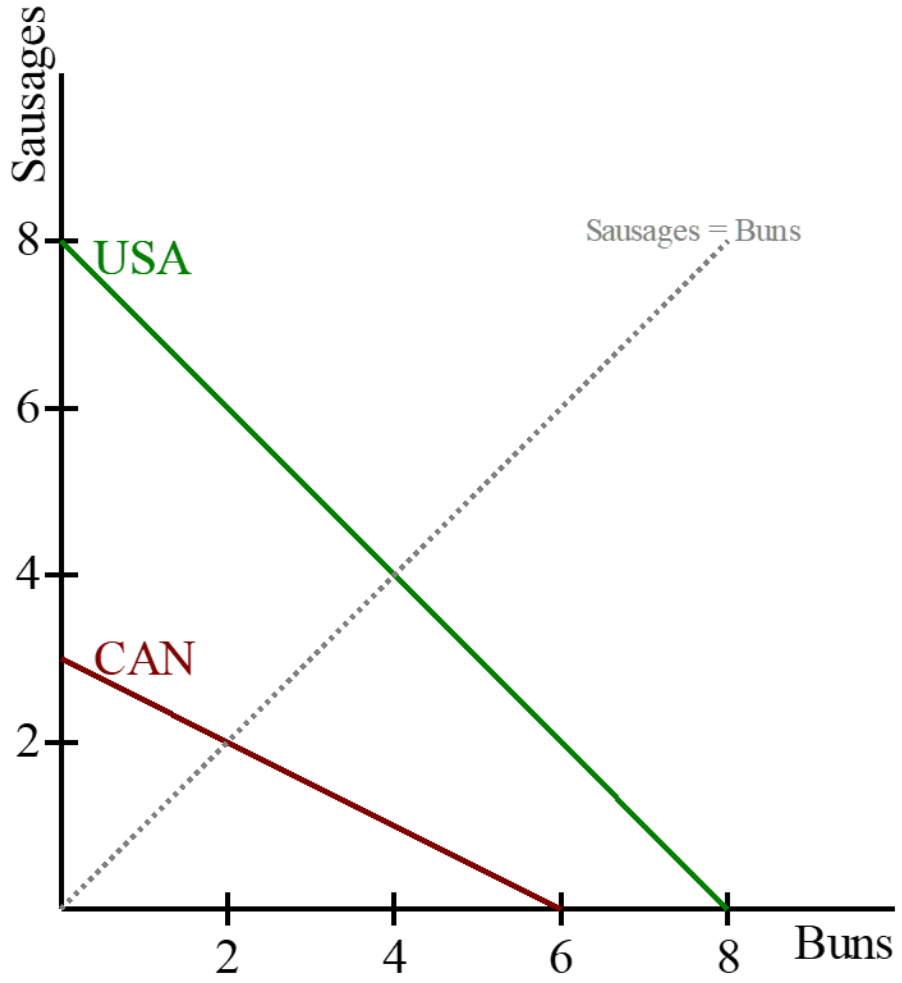
Sausages	Buns
8	0
7	1
6	2
5	3
4	4
3	5
2	6
1	7
0	8

USA

Sausages	Buns
3	0
2	2
0	6

CAN

Theory of Comparative Advantage – Ctd.

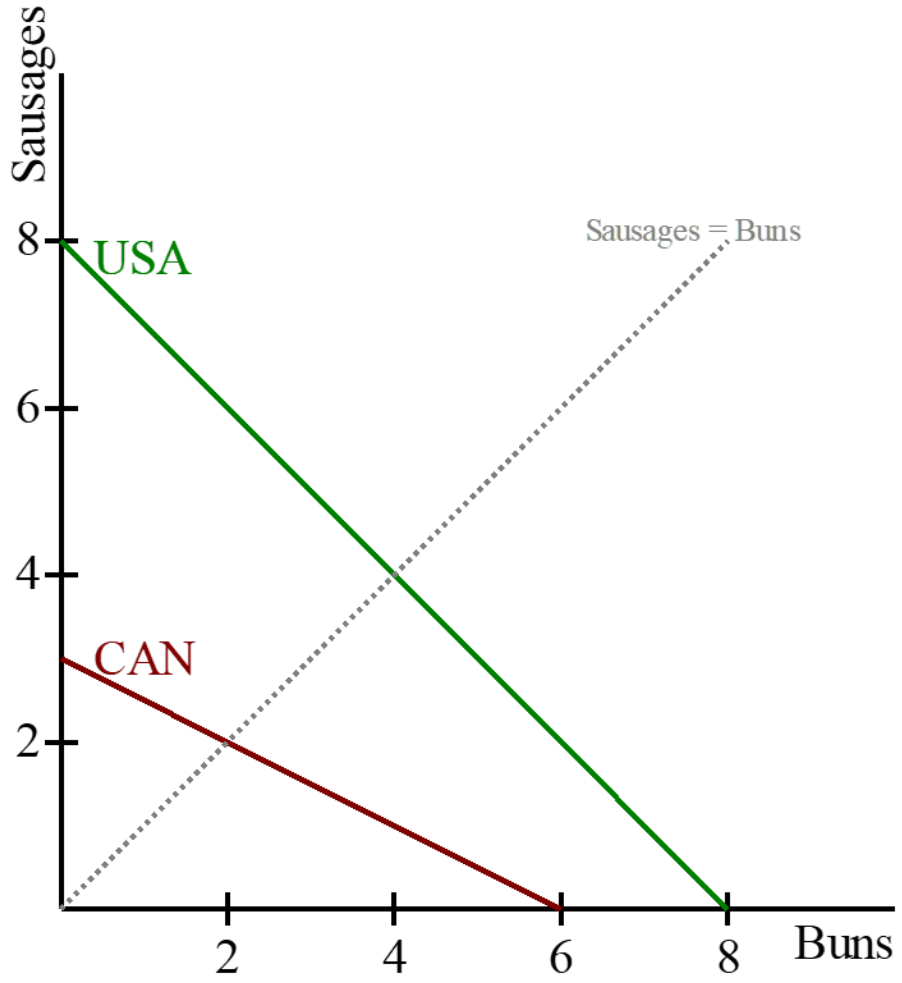


Identification of the Comparative Cost Advantage

- How many sausages do you have to forgo in order to produce one extra bun?
- How many buns do you have to forgo in order to produce one extra sausage?

Opportunity Cost	USA	CAN
Of producing one extra bun		
Of producing one extra sausages		

Theory of Comparative Advantage – Ctd.

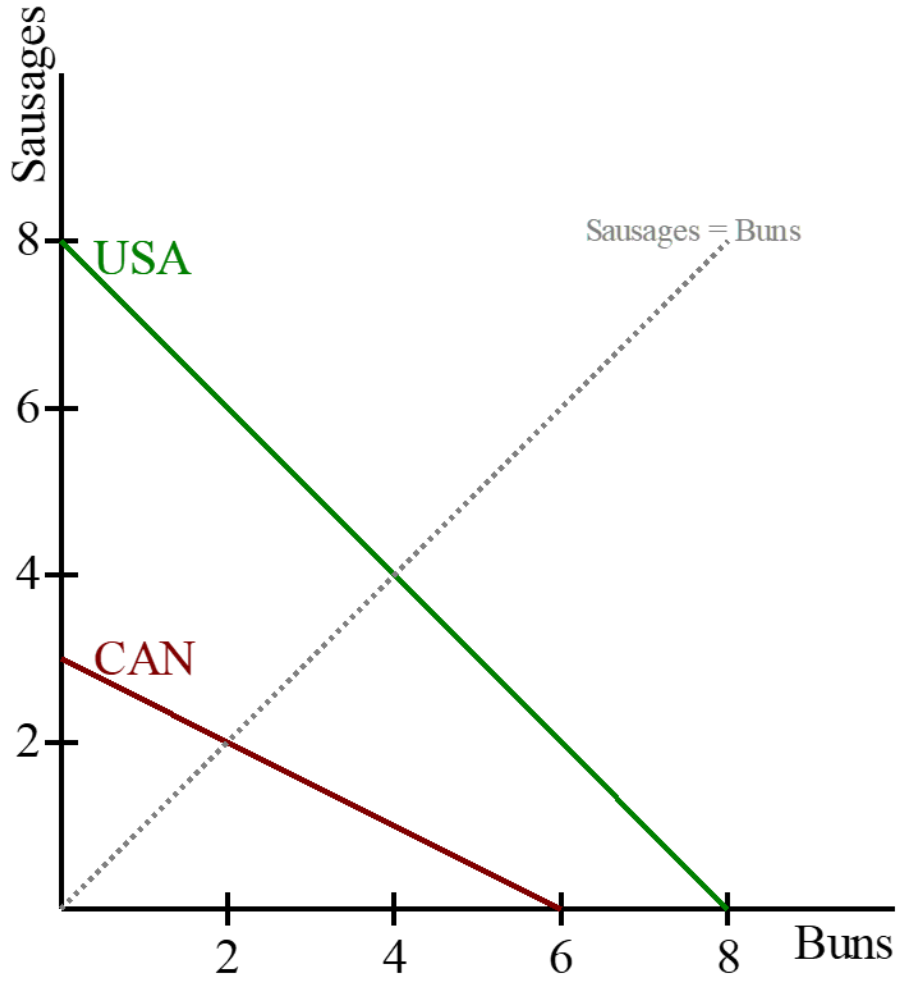


Identification of the Comparative Cost Advantage

- Since Canada can produce buns comparatively cheaper, Canada has a comparative cost advantage in producing buns.
- Since USA can produce sausages comparatively cheaper, the USA has a comparative cost advantage in producing sausages

Opportunity Cost	USA	CAN
Of producing one extra bun	1 sausage	½ sausage
Of producing one extra sausages	1 bun	2 buns

Theory of Comparative Advantage – Ctd.

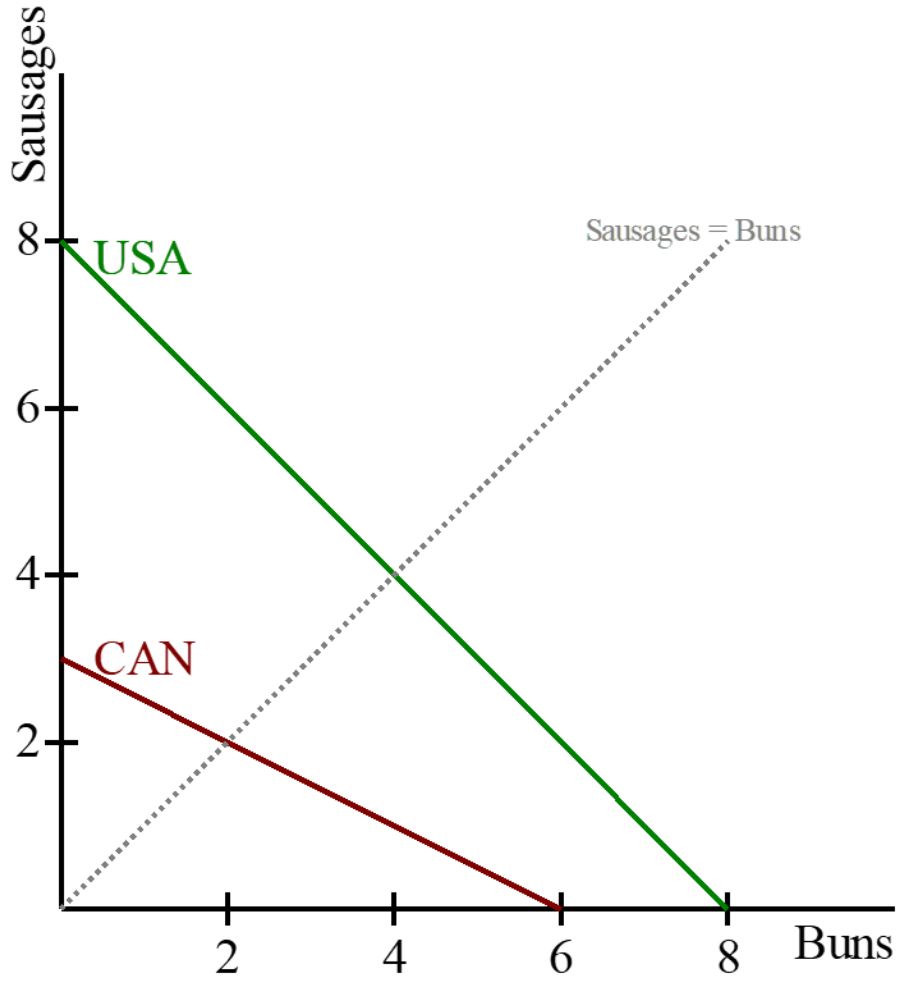


Production under Specialization

- Canada specializes in producing buns, the USA specializes in producing sausages
- Assume that the USA and Canada agree to specialize and trade such that each country receives the autarky consumption levels of hot dogs plus half of the joint additional production of hot dogs.

Country	Sausage	Bun
USA		
CAN		
Total		

Theory of Comparative Advantage – Ctd.

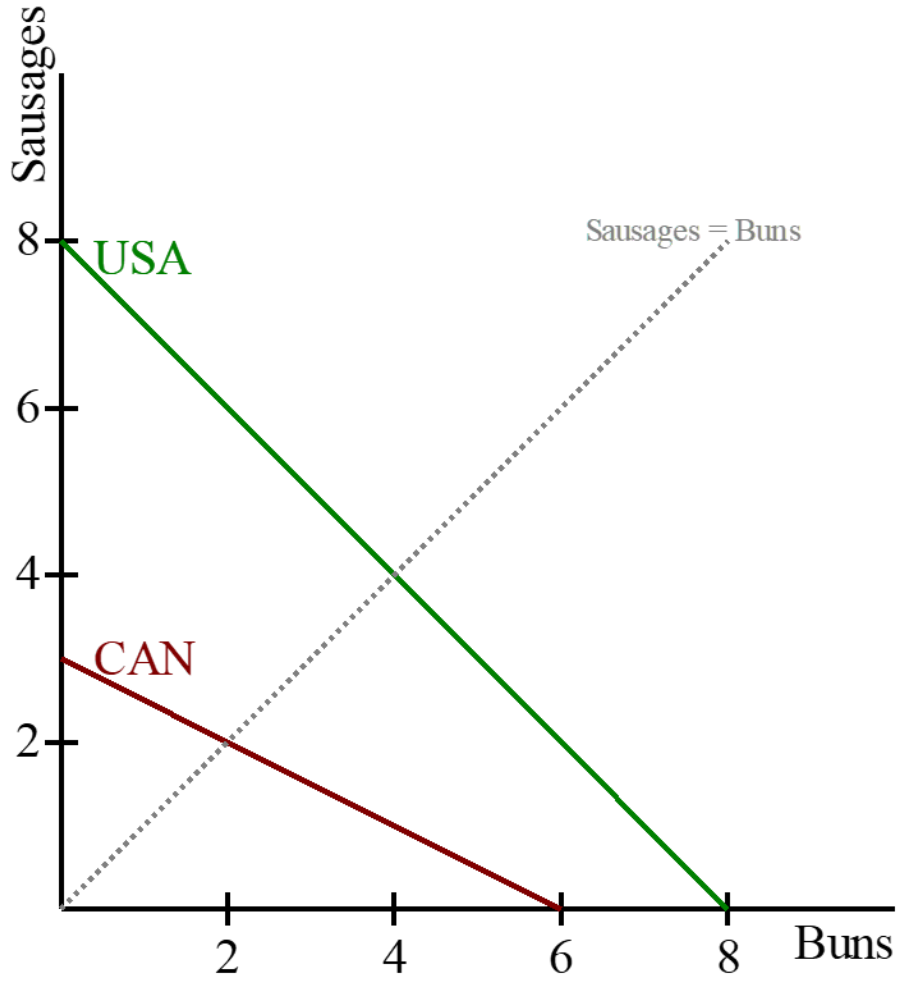


Production under Specialization

- Canada specializes in producing buns, the USA specializes in producing sausages
- Assume that the USA and Canada agree to specialize and trade such that each country receives the autarky consumption levels of hot dogs plus half of the joint additional production of hot dogs.

Country	Sausage	Bun
USA	7	1
CAN	0	6
Total	7	7

Theory of Comparative Advantage – Ctd.

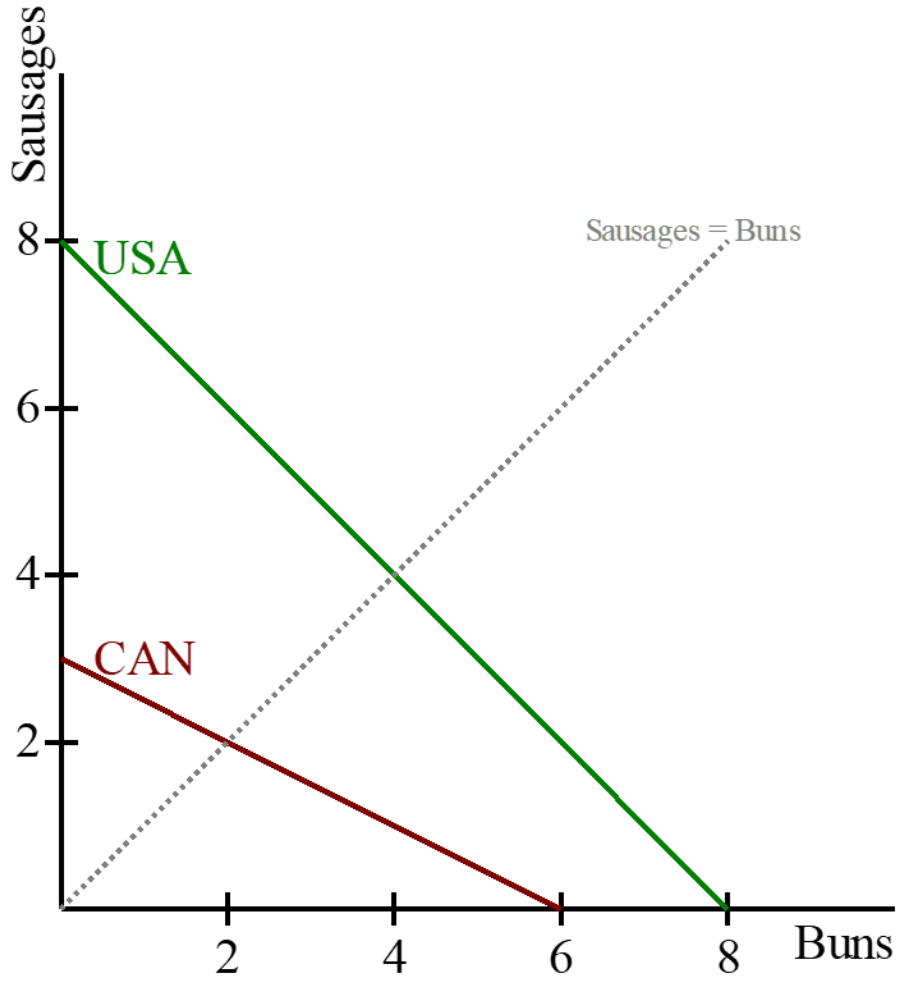


Consumption after Trade

- Assume that the USA and Canada agree to specialize and trade such that each country receives the autarky consumption levels of hot dogs plus half of the joint additional production of hot dogs.
- Thus, Canada and the USA trade how many sausages and buns?

	Under Autarky		Under Trade	
Country	Sausage	Bun	Sausage	Bun
USA	4	4	7	1
CAN	2	2	0	6
Total	6	6	7	7

Theory of Comparative Advantage – Ctd.



Production under Specialization and Consumption after Trade

- Together, Canada and the USA can produce one hot dog more than under autarky.
- Thus, Canada trades 3 ½ buns for 2 ½ sausages.
- Or, the USA trades 2 ½ sausages for 3 ½ buns.

	Under Trade		After Trade	
Country	Sausage	Bun	Sausage	Bun
USA	7	1	4 ½	4 ½
CAN	0	6	2 ½	2 ½
Total	7	7	7	7

Theory of Comparative Advantage Summary

- The theory of comparative advantage is one of the most fundamental theories in economics.
- It shows that trade is not a zero-sum, but positive sum game.
- Understanding the theory of comparative advantage requires understanding the concepts of a production possibility frontier, marginal opportunity costs, comparative cost advantage, specialization, and trade.
- The theory of comparative advantage is not only an economic theory, but also a peacebuilding theory.
- Why would countries who can increase their consumption levels through trade go to war with each other?

Summary

- The **circular flow diagram** illustrates the fundamental movements of resources between households and firms.
- Considering the scarcity of productive resources, every society has to make three fundamental decisions: **Production, resource, and distributional decision**.
- A society's **economic system** reflects how they address these three questions.
- The **PPF** illustrates the maximum amount of one good that can be produced for every possible level of production of another good.
- The **Theory of Comparative Advantage** shows that if countries participate in international trade, all benefit from gains from trade.