

Chapter 03 Interdependence and the Gains from Trade

- 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.
- Such interdependence is possible because people trade with one another.
- In subsequent chapters, we examine how an economy coordinates the activities of millions of people with varying tastes and abilities.
- As a starting point for this analysis, in this chapter we consider *the reasons for economic interdependence*.

3.1 A Parable for the Modern Economy

- Two goods - meat & potatoes
- Two people - cattle rancher & farmer

3.1.1 Production Possibilities

Panel (a) shows the production opportunities available to Frank the farmer and Ruby the rancher. Panel (b) shows the combinations of meat and potatoes that Frank can produce. Panel (c) shows the combinations of meat and potatoes that Ruby can produce. Both production possibilities frontiers are derived assuming that Frank and Ruby each work 8 hours per day. If there is no trade, each person's production possibilities frontier is also his or her consumption possibilities frontier.

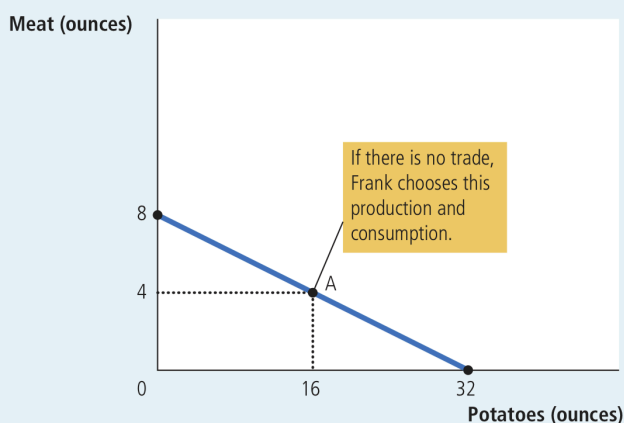
FIGURE 1

The Production Possibilities Frontier

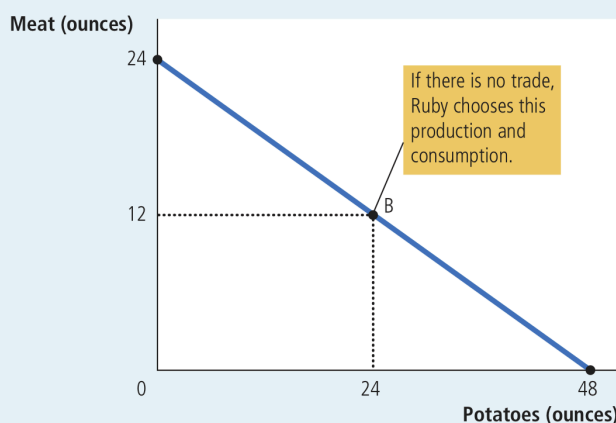
(a) Production Opportunities

	Minutes Needed to Make 1 Ounce of:		Amount Produced in 8 Hours	
	Meat	Potatoes	Meat	Potatoes
Frank the farmer	60 min/oz	15 min/oz	8 oz	32 oz
Ruby the rancher	20 min/oz	10 min/oz	24 oz	48 oz

(b) Frank's Production Possibilities Frontier



(c) Ruby's Production Possibilities Frontier

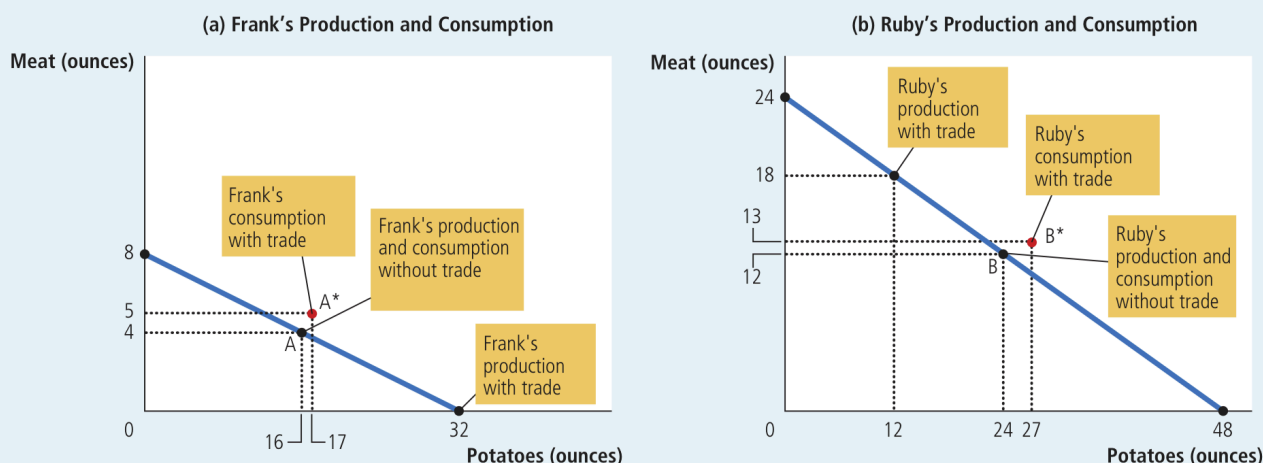


3.1.2 Specialization and Trade

The proposed trade between Frank the farmer and Ruby the rancher offers each of them a combination of meat and potatoes that would be impossible in the absence of trade. In panel (a), Frank gets to consume at point A* rather than point A. In panel (b), Ruby gets to consume at point B* rather than point B. Trade allows each to consume more meat and more potatoes.

FIGURE 2

How Trade Expands the Set of Consumption Opportunities



(c) The Gains from Trade: A Summary

	Frank		Ruby	
	Meat	Potatoes	Meat	Potatoes
Without Trade:				
Production and Consumption	4 oz	16 oz	12 oz	24 oz
With Trade:				
Production	0 oz	32 oz	18 oz	12 oz
Trade	Gets 5 oz	Gives 15 oz	Gives 5 oz	Gets 15 oz
Consumption	5 oz	17 oz	13 oz	27 oz
GAINS FROM TRADE:				
Increase in Consumption	+1 oz	+1 oz	+1 oz	+3 oz

3.2 Comparative Advantage: The Driving Force of Specialization

3.2.1 Absolute Advantage

- The ability to produce a good using fewer inputs than another producer does.

3.2.2 Opportunity Cost and Comparative Advantage

- The ability to produce a good at a lower opportunity cost than another producer.
- Possible to have an absolute advantage in both goods, impossible to have a comparative advantage in both goods.
 - Since the opportunity cost of one good is the inverse of the opportunity cost of the other

3.2.3 Comparative Advantage and Trade

- Developed by David Ricardo, who was inspired by Adam Smith's book

- Trade can benefit everyone in society because it allows people to specialize in activities in which they have a comparative advantage.

3.2.4 The Price of the Trade

- For both parties to gain from trade, the price at which they trade must *lie between the two opportunity costs*.

3.3 Applications of Comparative Advantage

3.3.1 Should Serena Williams Mow Her Own Lawn?

- Rather than mowing her own lawn, Serena should make the commercial and hire Forrest to mow the lawn. As long as Serena pays Forrest more than \$50 and less than \$30,000, both of them are better off.

3.3.2 Should the United States Trade with Other Countries?

- Imports
 - Goods produced abroad and sold domestically
- Exports
 - Goods produced domestically and sold abroad
- Each country has many citizens with different interests. International trade can make some individuals worse off, even as it makes the country as a whole better off.
- International trade is not like war, in which some countries win and others lose. Trade allows all countries to achieve greater prosperity.