

Ten Principles of Economics



Economic Foundations

- Oikonomos is the Greek word for economy meaning “one who manages a household”
 - Scarcity- the limited nature of society’s resources.
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- Economics- the study of how scarce resources are used efficiently and effectively by a society. (How do people behave?) It is a social science because we will study
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- (“Can Crude Oil Future’s Prices Predict Spot Retail Unleaded Gasoline Prices?” By Vance Ginn & Ronald Gilbert)

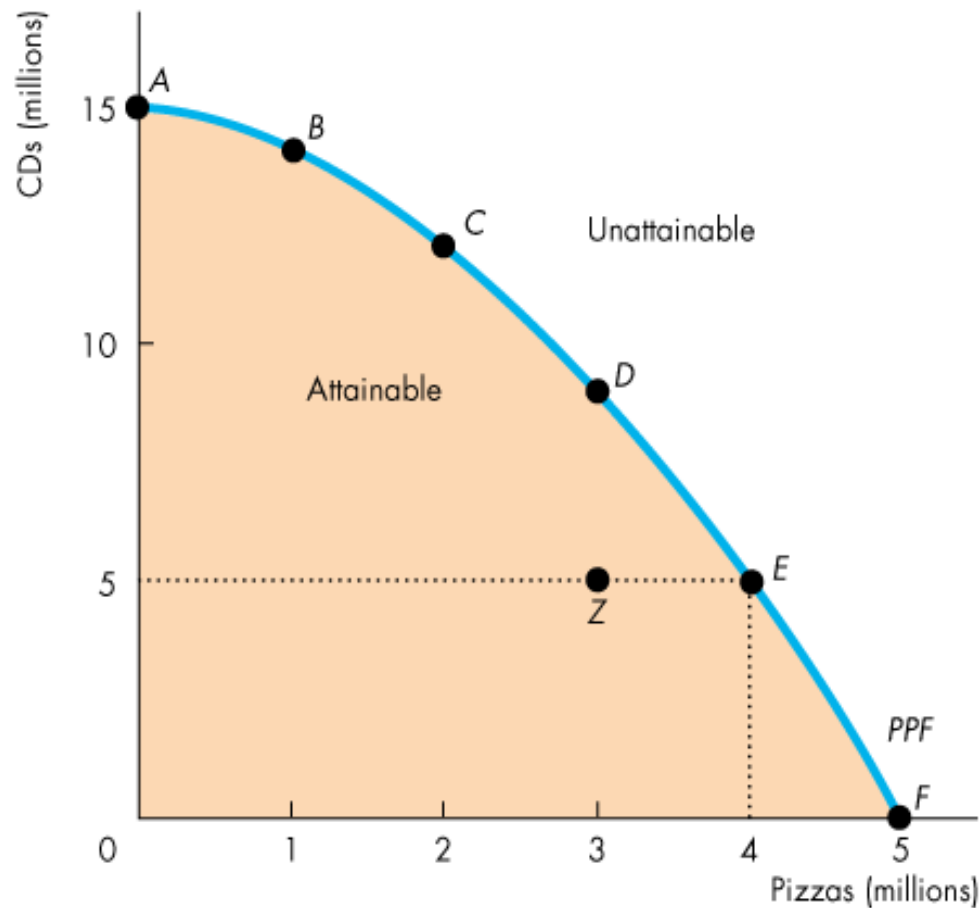
Principle 1: People Face Trade-Offs

- Production Possibilities Frontier (PPF): Graph that shows the possible production levels of two goods that an individual can produce assuming that all else remains constant (*ceteris paribus*).
- Any point inside of the PPF is attainable, but production is inefficient.
- Outside of the PPF is unattainable (scarcity).
 - Points outside of the curve give a higher number of both goods produced, but the resources are not available to produce these.
- Production Efficiency- the property of society getting the most it can from its _____
 - We achieve production efficiency if we cannot produce more of one good without producing less of some other good.
- Equity- the property of distributing economic prosperity fairly among _____

Production Possibilities and Opportunity Cost

- Production Possibilities Frontier

- Figure 2.1 shows the *PPF* for two goods: CDs and pizza.
- Any point *on* the frontier such as *E* and any point *inside* the *PPF* such as *Z* are attainable.
- Points outside the *PPF* are unattainable.
- “There is no such thing as a free lunch”- Milton Friedman.



Principle 2: The Cost of Something is what you give up to get it

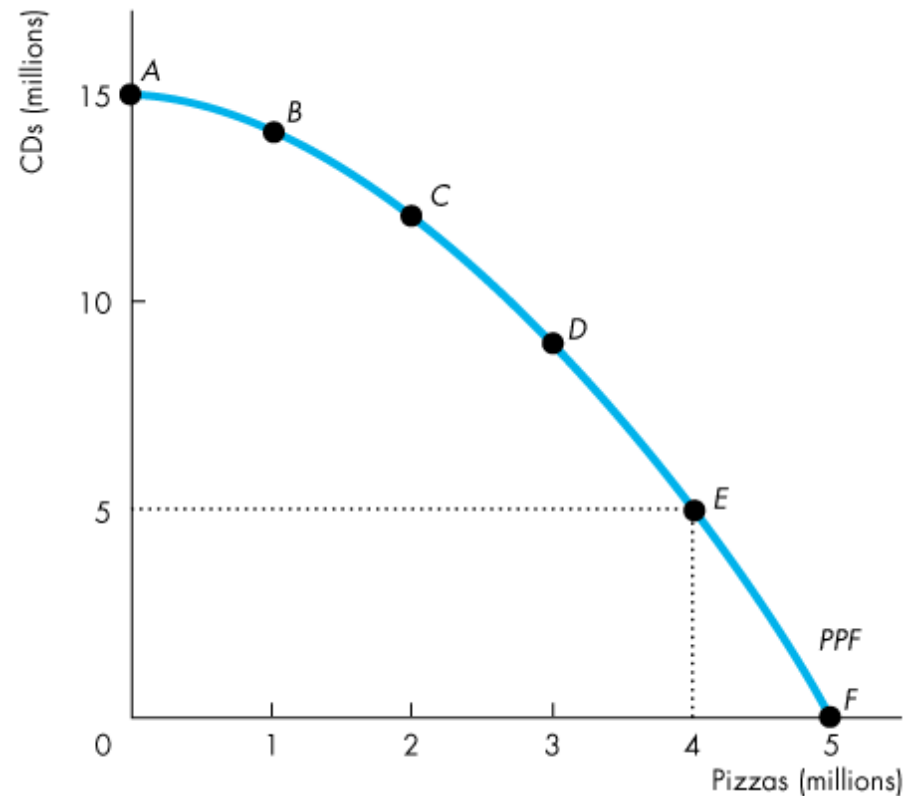
- Opportunity costs-(Broken Window Fallacy video)
 - Definition: the cost of the next best alternative that you forego in any decision that is made
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- In the previous example: the opportunity cost of producing an additional CD is a reduction in the number of pizzas produced _____

Principle 2 continued

- Opportunity cost is a ratio: (decrease in the quantity produced of one good/ increase in the quantity produced of another good)
 - Moving from point E to D by decreasing production of pizza by 1, you can increase production of cds by 3.
 - In other words, 1 Pizza = 3 CDs
 - Solving for CD, we get 1 CD = (1/3) Pizza
 - So the opportunity cost of a 1 cd is (1/3) of a pizza. Or the opportunity cost of 1 pizza is 3 cds.
 - They are (always) inverses of one another.
- _____: the opportunity cost of producing a certain good or service increases as the quantity of that good or service increases.

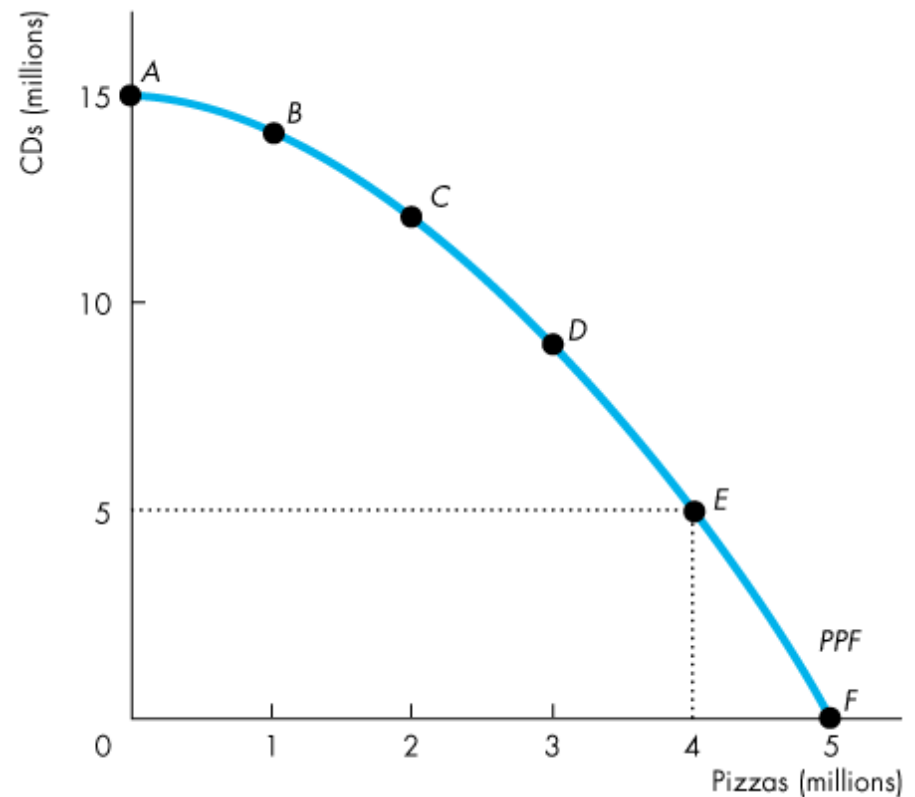
Production Possibilities and Opportunity Cost

- Opportunity Cost
 - The *PPF* makes the concept of opportunity cost precise.
 - As we move down along the *PPF*, we produce more pizzas but the quantity of CDs we can produce decreases.
 - The opportunity cost of a pizza is the CDs forgone.



Production Possibilities and Opportunity Cost

- In moving from *E* to *F*, the quantity of pizzas produced increases by 1 million.
- The quantity of CDs produced decreases by 5 million.
- The opportunity cost of producing the fifth 1 million pizzas is 5 million CDs.
- One of these pizzas costs 5 CDs.

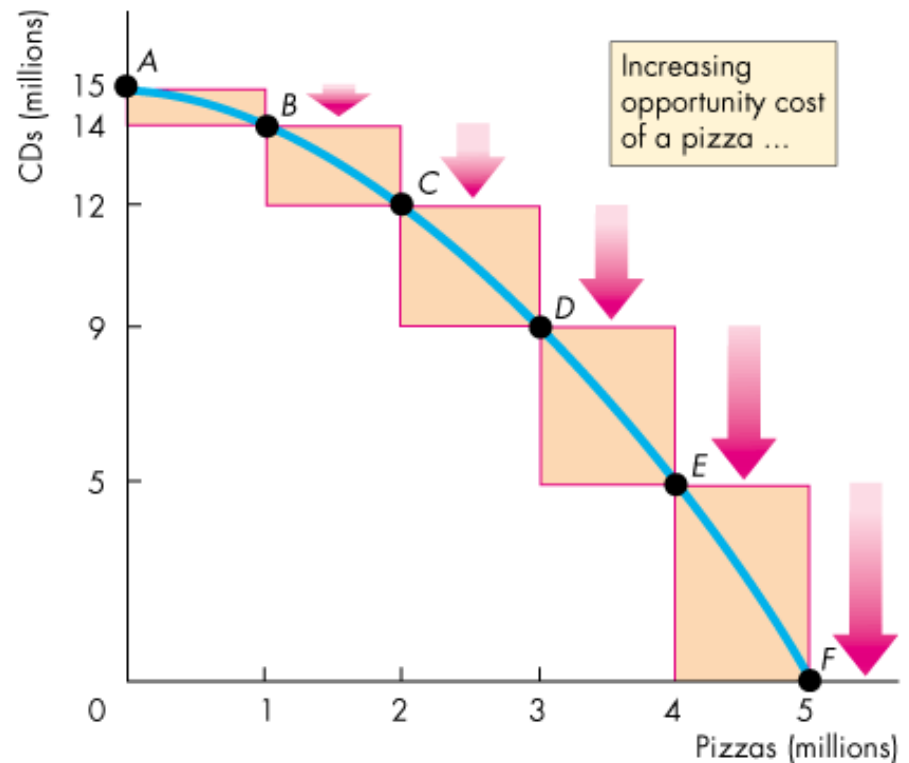


Principle 3: Rational People think at the margin

- Rational People: people who systematically and purposefully do the best they can to achieve their objectives by
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- Rational expectation of different behaviors was first noted by Robert Lucas.
 - Different than *Irrational Exuberance* by Robert Shiller (book on the dot com bubble in the 90s)
 - Marginal changes (video): small incremental adjustments to a plan of action.
 - Marginal Costs: the _____ of producing one more unit of a good or service.
 - Marginal Benefit: the benefit received from consuming one more unit of a good or service that they are willing and able to pay for.
 - Compare marginal benefits and costs (e.g. Adam Smith's (Father of Economics) water-diamond paradox)

Opportunity Cost of Pizza

- Figure 2.2 illustrates the marginal cost of pizza.
- As we move along the *PPF* in part (a), the opportunity cost of pizza increases.
- The opportunity cost of producing one more pizza is the marginal cost of a pizza.



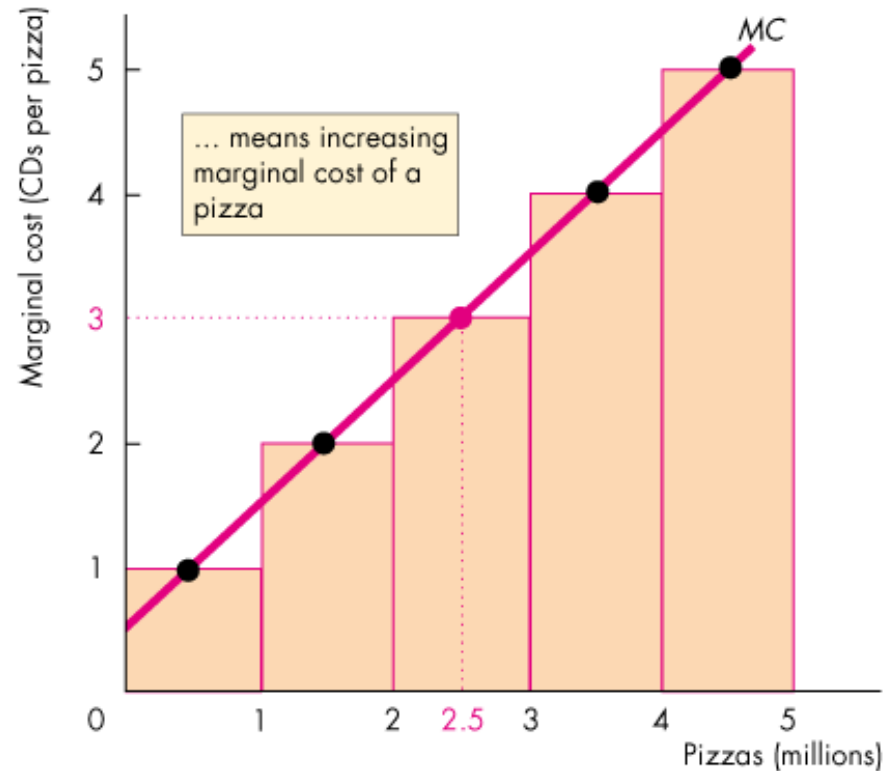
(a) *PPF* and opportunity cost

Increasing Opportunity Cost

- In part (b) of Fig. 2.2, the bars illustrate the increasing opportunity cost of pizza.

-The black dots and the line labeled *MC* show the marginal cost of pizza.

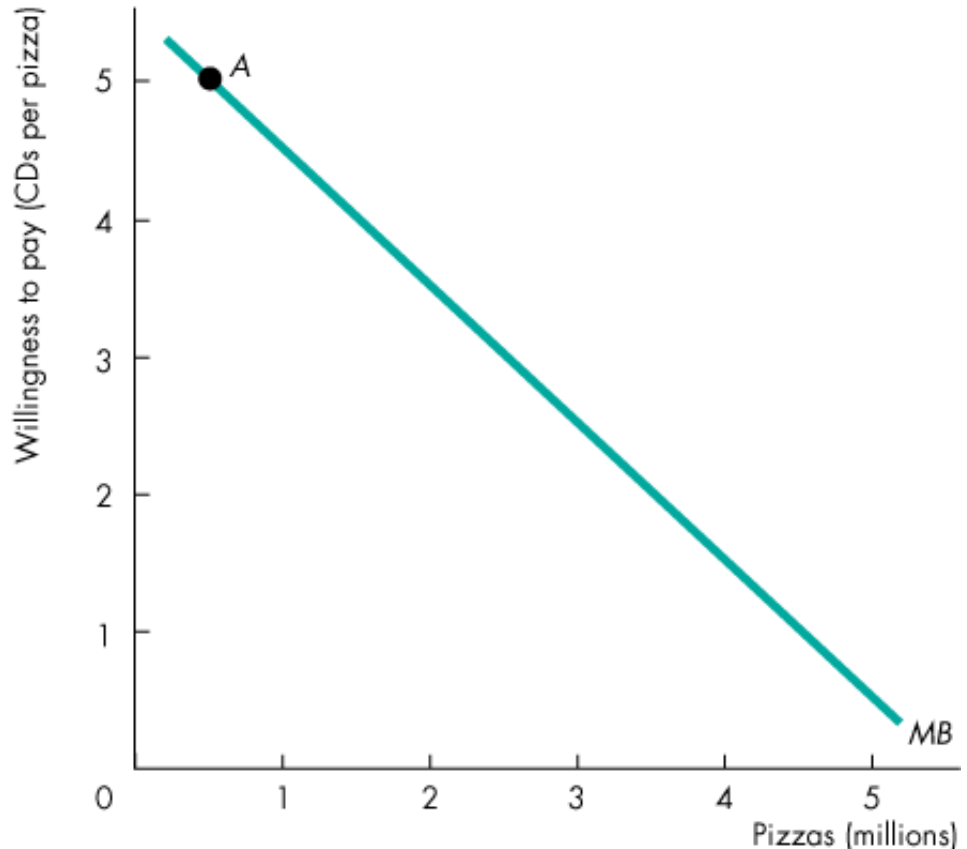
The *MC* curve passes through the center of each bar.



(b) Marginal cost

Marginal Benefit Curve

- This curve shows the relationship between the marginal benefit from consuming a good and the quantity consumed.
- Decreasing marginal benefit: the more we have of any good or service, the smaller is its marginal benefit and the less we are willing to pay for an additional unit.
 - This is due to preference changes as one consumes more of one good.
- The curve slopes downward to reflect the principle of decreasing marginal benefit.



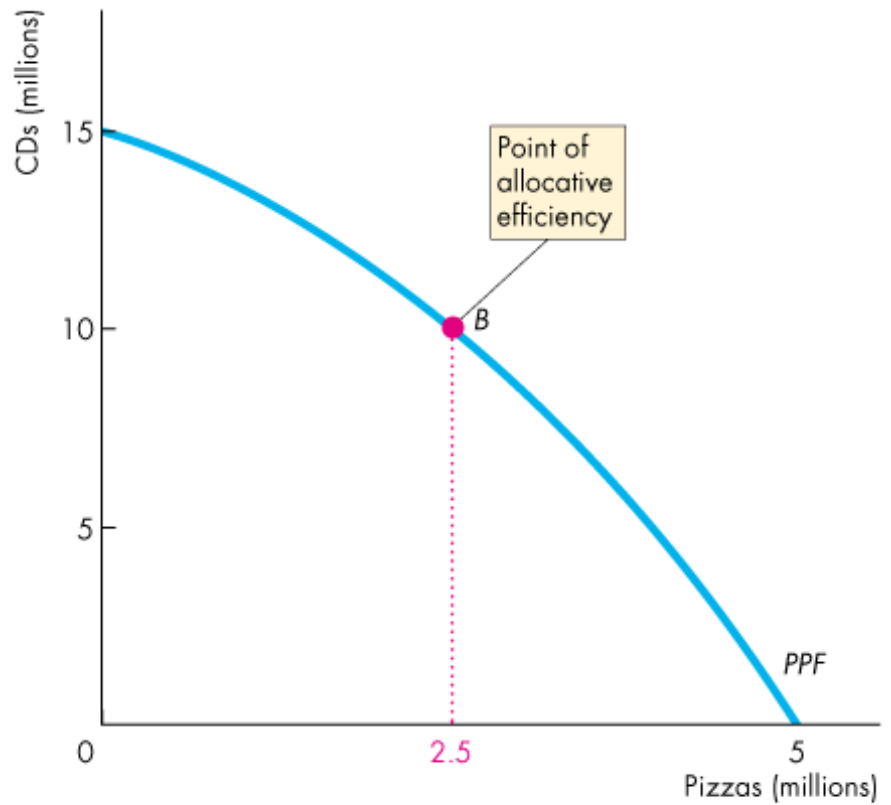
Using Resources Efficiently

- Production Efficiency is when we cannot produce more of any one good without giving up some other good.
 - We are producing at a point *on* the *PPF*.
- When we cannot produce more of any one good without giving up some other good that we value more highly, we have achieved

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- We are producing at *the* point on the *PPF* that we prefer above all other points.
 - This occurs when $MC=MB$ (i.e. when they intersect) and this intersection shows the optimal level of production of pizzas and cds (graph).
 - To the left of the equilibrium: _____ (produce more pizzas)
 - To the right of the equilibrium: _____ (produces fewer pizzas)

Allocative Efficiency

- The point of allocative efficiency is the point on the *PPF* at which marginal benefit equals marginal cost.



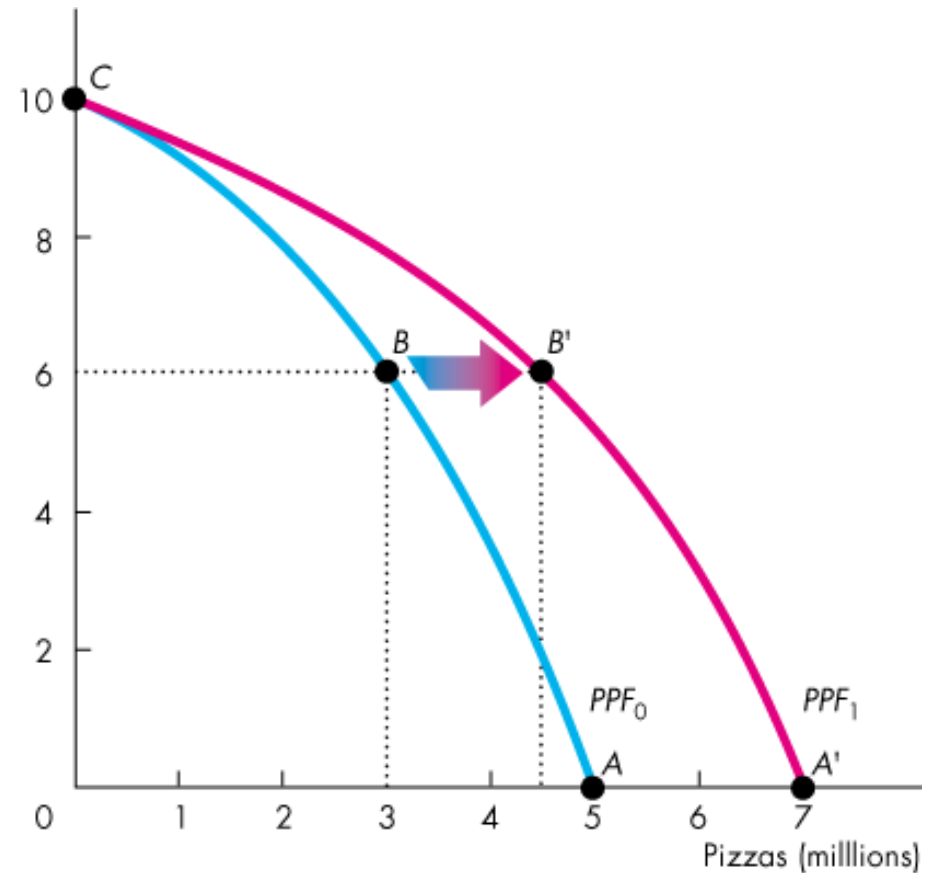
(a) On the *PPF*

How do we get outside of the PPF?

- Economic growth-video. The expansion of the PPF—and increases the standard of living
- Two key factors influence economic growth:
 - _____ is the development of new goods and of better ways of producing goods and services.
 - _____ is the growth of capital resources, which includes *human capital*.

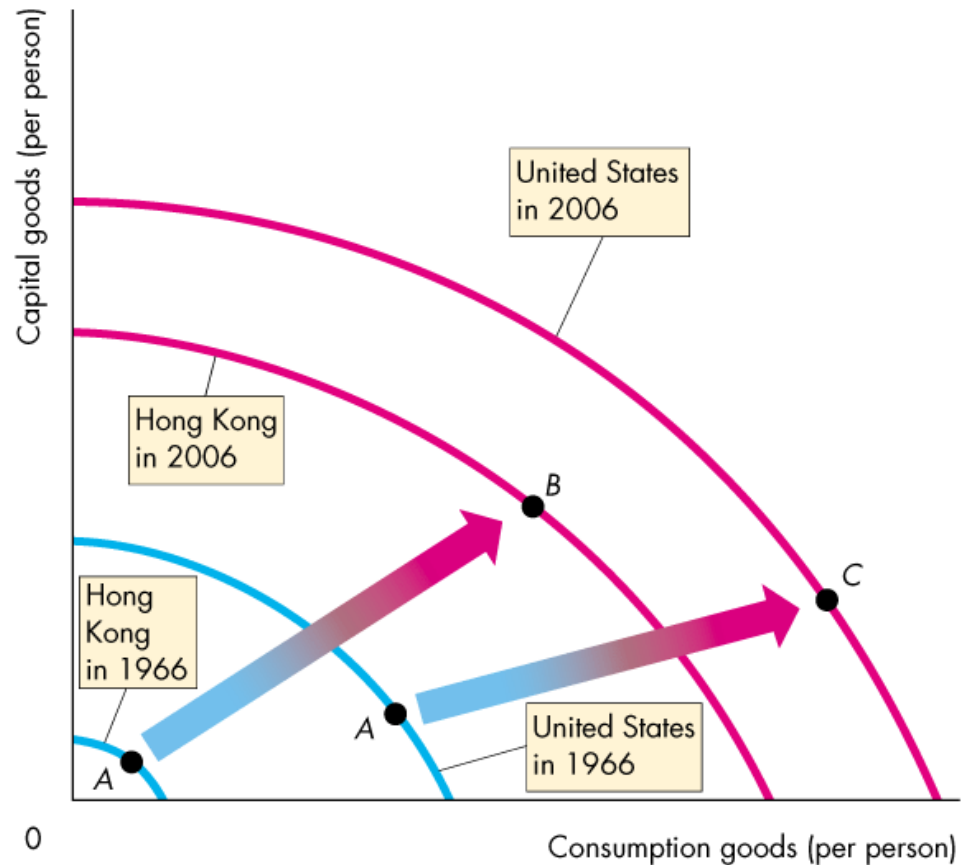
Technological Change

- Figure 2.5 illustrates the tradeoff we face.
- We can produce pizzas or CDs along PPF_0 .
- Assume that a new technology (pizza oven) increases pizza production.
- By using some resources today, to produce this innovation today, the PPF shifts outward in the future.



Capital Accumulation

- By 2006, Hong Kong's production possibilities (per person) were 80 percent of those in the United States.
- Hong Kong's *PPF* shifted out more quickly than did the U.S. *PPF* because Hong Kong devoted more of its resources to capital accumulation.



Principle 4: People respond to incentives

- Incentive- something that _____.
 - Prices are an incentive or disincentive to purchase a good or service based on your value the good or service.
- There are costs associated with many policy choices such as a gas tax. You have fewer people driving, but people need to drive. Therefore, would people's consumption of gasoline respond much to the change in the tax?

Principle 5: Trade can make everyone better off

- Trade allows division of labor and therefore specialization (video), which allows for less opportunity costs with people's lives
- China tends to do more manufacturing and labor-based work because of the size of their population. Is this bad for U.S.?
 - 1.4 billion in China vs 300 million in U.S.
 - More supply of workers means cheaper wages.
 - As these goods are made in China, we purchase them at lower prices and U.S. consumers can save money here to increase their purchases, produce more jobs, etc.
 - (auto market- jobs outsourced but jobs are coming here as well from Japan- Toyota)
- Sectors tend to be _____ - we used to be an agricultural economy and have evolved to be an post-industrial country

Absolute Advantage

- Absolute advantage (Adam Smith): the ability to produce a good
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- based on the number of hours used to produce a good or the total number produced
 - Example: Both producers produce same shoes
 - Producer A produces 20 shoes in 1 hour
 - Producer B produces 10 shoes in 1 hour,
 - Producer A will have an absolute advantage over Producer B because A can produce more shoes per hour given the same resources.

Comparative Advantage

- Comparative advantage (David Ricardo) - the ability to produce a good at a
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- Compare the opportunity cost of producing a particular good by different producers.
 - Whoever has the lower opportunity cost will have the comparative advantage.
 - An individual can only have a comparative advantage in one good because of the inverse opportunity cost of producing two goods.
- So, trade can benefit everyone in society.
 - Trade allows people to specialize in activities that they have a comparative advantage in.
 - In other words, individuals trade in the form of labor hours not in goods, so people are able to be more efficient by producing what they are more productive at producing.

Example: Trade Advantage

Liz's Smoothie Bar

In an hour, Liz can produce 40 smoothies or 40 salads.

Liz's opportunity cost of producing 1 smoothie is 1 salad.

Liz's opportunity cost of producing 1 salad is 1 smoothie.

TABLE 2.1 Liz's Production Possibilities

Item	Minutes to produce 1	Quantity per hour
Smoothies	1.5	40
Salads	1.5	40

Example: Trade Advantage Cont.

Joe's Smoothie Bar

In an hour, Joe can produce 6 smoothies or 30 salads.

Joe's opportunity cost of producing 1 smoothie is 5 salads.

Joe's opportunity cost of producing 1 salad is $\frac{1}{5}$ smoothie.

TABLE 2.2 Joe's Production Possibilities

Item	Minutes to produce 1	Quantity per hour
Smoothies	10	6
Salads	2	30

Example: Trade Advantage Cont.

- **Liz's Comparative Advantage**

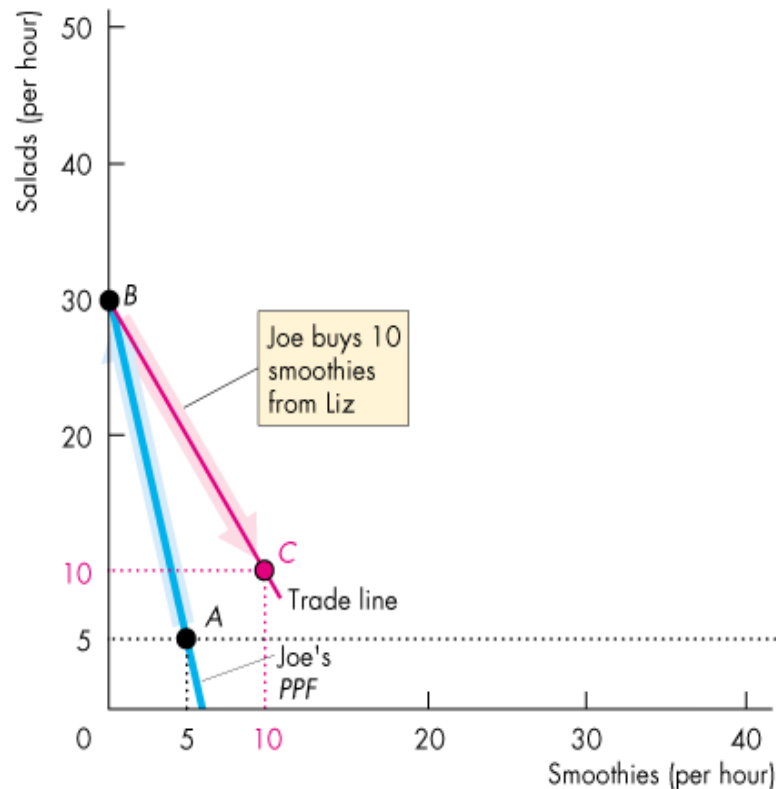
- Liz's opportunity cost of a smoothie is 1 salad.
- Joe's opportunity cost of a smoothie is 5 salads.
- Liz's opportunity cost of a smoothie is less than Joe's.
- So Liz has a comparative advantage in producing smoothies.

- **Joe's Comparative Advantage**

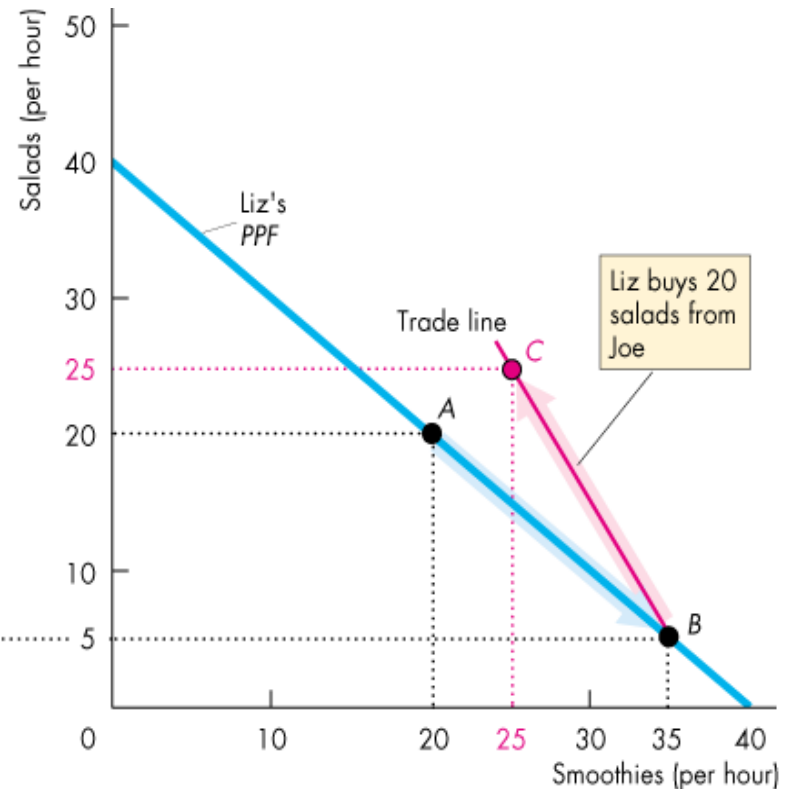
- Joe's opportunity cost of a salad is $1/5$ smoothie.
- Liz's opportunity cost of a salad is 1 smoothie.
- Joe's opportunity cost of a salad is less than Liz's.
- So Joe has a comparative advantage in producing salads.

Gains From Trade

- The PPF stays the same for Joe and Liz, but their consumption of each good is able to increase along the Trade Line after trade.



(a) Joe



(b) Liz

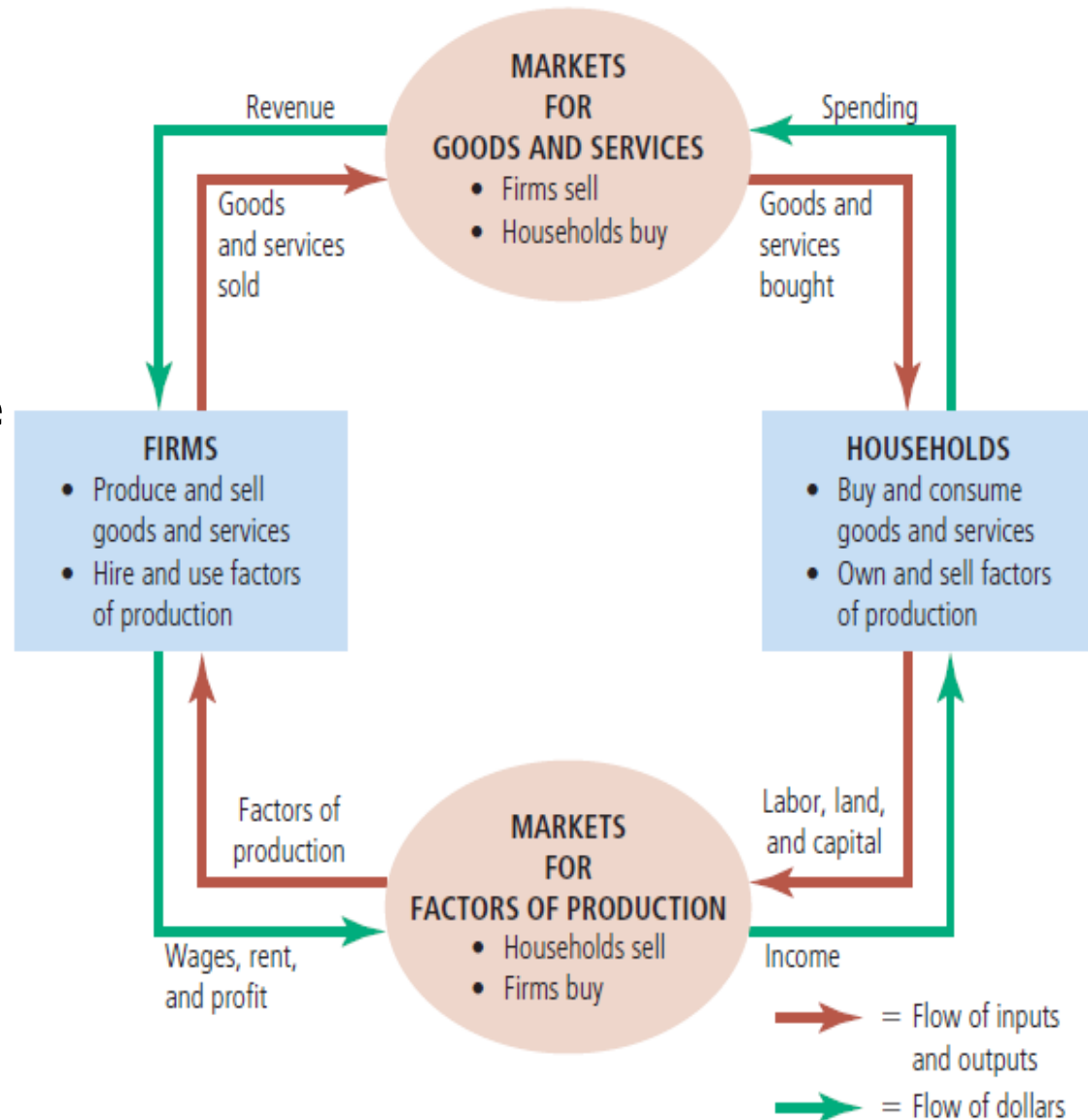
Principle 6: Markets are usually a good way to organize economic activity

- A **market** is any arrangement that enables buyers and sellers to get information and do business with each other.
- Market economy- an economy that allocates resources through the _____ and household as they interact in markets for G and S.
- Wealth of Nations (video): by Adam Smith noted the “Invisible Hand” in this book.
 - He concluded that there are actions in an economy by desires of demand and supply—as if driven by an invisible hand—that work together to determine prices.

Economic Coordination

• Circular Flows Through Markets

- Figure 2.8 illustrates how households and firms interact in the market economy.
- Factors of production and goods and services flow in one direction.
- And money flows in the opposite direction.



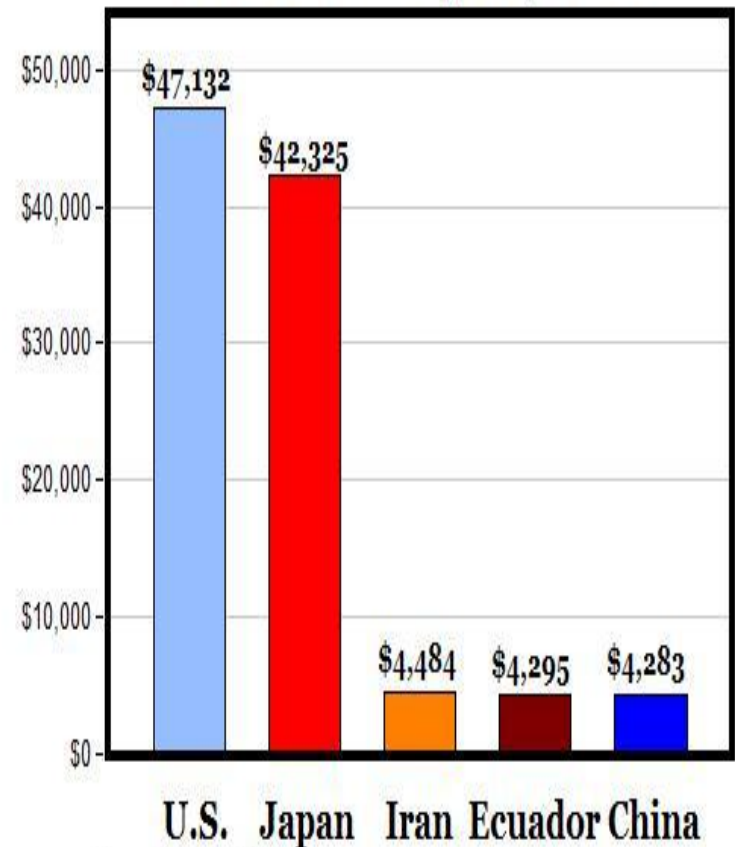
Principle 7: Governments can sometimes improve market outcomes

- What roles of the government are necessary?
 - Property rights- the social arrangements that govern ownership, use, and disposal of resources, goods or services.
 - Market failure- a situation in which a market left on its own fails to allocate resources efficiently
 - One reason is from an externality: the impact of one person's actions on the well-being of a bystander (_____) so regulation may be needed—Externalities (video)
 - Another reason is market power which is the ability of a single economic actor to have a substantial influence on market prices (_____).
 - Lack of competition reduces people's well-being and increases prices.

Principle 8: A country's standard of living depends on its ability to produce Goods and Services

- Various levels of economic well-being depend on a country's productivity (GDP per person) levels.
- Productivity- the quantity of goods and services produced from each hour of a worker's time. y/l or output per worker.
 - Has doubled in the past _____
- While China's GDP is growing around 10% per year, their GDP per person is around _____
- In the US, GDP per capita is about _____.
- This is a sizable difference and shows how much more that China would have to grow in order to have the same standard of living as the US.
- While these changes allow for economic growth there are costs, which is why there is no such thing as a free lunch.

GDP Per Capita, 2010



Source: IMF, via Wikipedia

mjperry.blogspot.com

Principle 9: Prices rise when the government prints too much money

- Inflation- (video):

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- Inflation is increased by excessive printing of money

Principle 10: Society may face a short run trade-off between inflation and the unemployment rate

- Short run effects of monetary injections may include
 - the economy stimulates the overall level of spending and thus the demand for goods and services
 - Higher demand over time may cause firms to raise their prices, but in the short run it may cause them to increase production and higher more workers.
 - More hiring means lower unemployment
- This gives business cycles- fluctuations in economic activity, such as employment and production