**Course „Micro Economics"**
**Prof. Dr. Marius Dannenberg**

# Chapter 2

# Key Principles of Economics

Syllabus: "Economics and Business Management"

## What Is a Principle?

- **A principle is a simple truth that most people understand and accept.**
- **The following 10 principles provide the underlying logic behind economic analysis**



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## Principle 1: People face tradeoffs

**To get one thing, we usually have to give up another thing:**

- **Guns v. butter**
- **Food v. clothing**
- **Leisure time v. work**
- **Efficiency v. equity**

**=> Making decisions requires trading off one goal against another**

## Principle 2. The cost of something is what you give up to get it

**Decisions require comparing costs and benefits of alternatives**

- **Whether to go to college or to work?**
- **Whether to study or go out on a date?**
- **Whether to go to class or sleep in?**

**=>The <u>opportunity cost</u> of an item is what you give up to obtain that item**



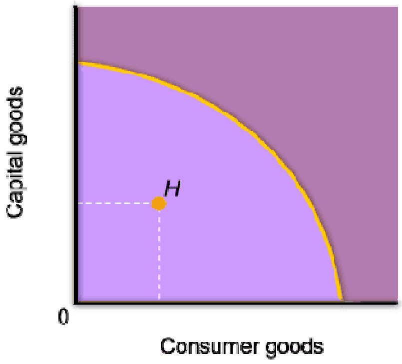


## PRINCIPLE *of Opportunity Cost*

- **Opportunity cost:** What you sacrifice to get something.

**PRINCIPLE** *of Opportunity Cost*
The opportunity cost of something is what you sacrifice to get it.

## Opportunity Cost and Production Possibilities

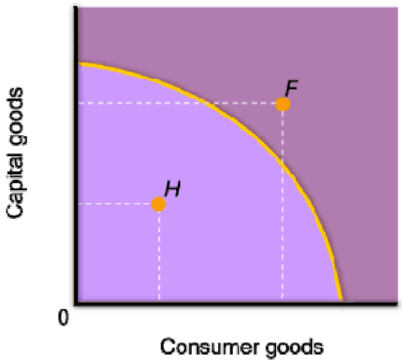



- **The** *production possibility frontier (ppf)* **is a graph that shows all of the combinations of goods and services that can be produced if all of society's resources are used efficiently.**
- **The production possibility frontier curve has a negative slope that indicates the trade-off that a society faces between two goods.**
- **The slope of the ppf is also called the** marginal rate of transformation (MRT).
- **Points inside of the curve are inefficient.**
- At point *H*, resources are either unemployed, or are used inefficiently.



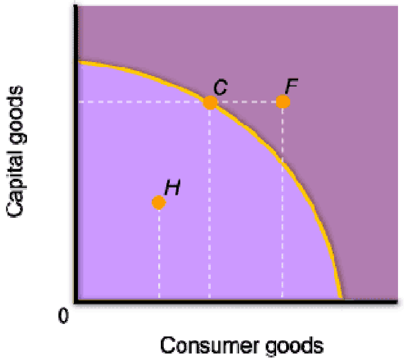


## Opportunity Cost and Production Possibilities




- **Point "*F*" is desirable because it yields more of both goods, but it is not attainable given the amount of resources available in the economy.**

## Opportunity Cost and Production Possibilities

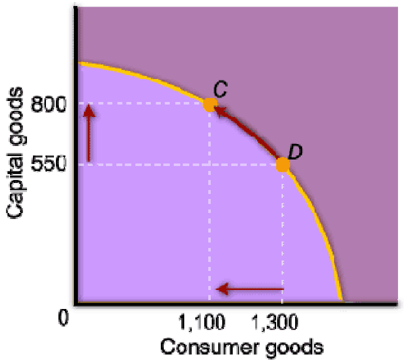



- Point "*C*" is one of the possible combinations of goods produced when resources are fully and efficiently employed.





## Opportunity Cost and Production Possibilities




- A move along the curve illustrates the concept of opportunity cost.
- In order to increase the production of capital goods, the amount of consumer goods will have to decrease.

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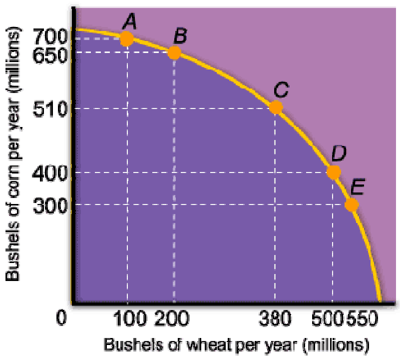
## The Law of Increasing Opportunity Cost




- **The *concave* shape of the production possibility frontier curve reflects the** *law of increasing opportunity cost.*
- As we increase the production of one good, we sacrifice progressively more of the other.



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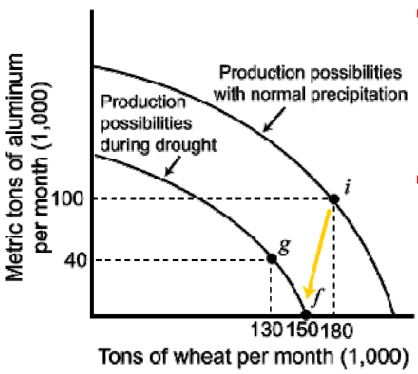
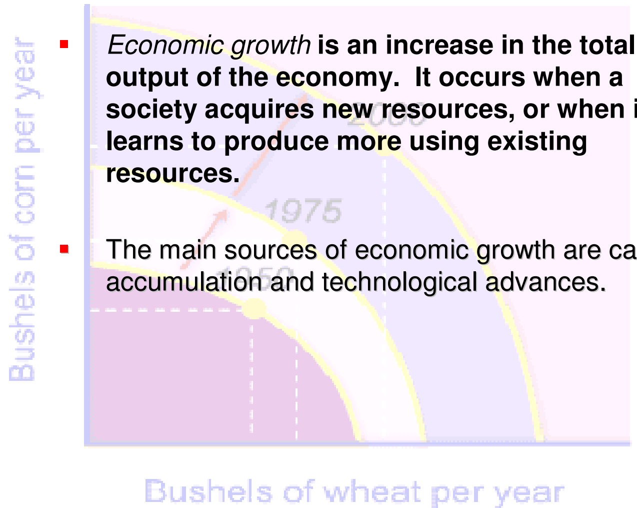
## Opportunity Cost and Production Possibilities




- **A drought decreases the amount of electric power available for aluminum smelting and irrigation, shifting the production possibilities curve inward.**
- **The region's economy moved from point "*i*" to point "*f*", with aluminum production dropping to zero.**

## Economic Growth

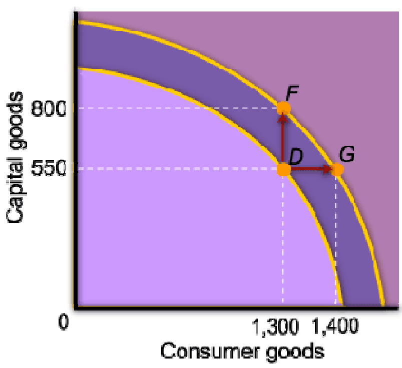



- *Economic growth* **is an increase in the total output of the economy. It occurs when a society acquires new resources, or when it learns to produce more using existing resources.**
- The main sources of economic growth are capital accumulation and technological advances.



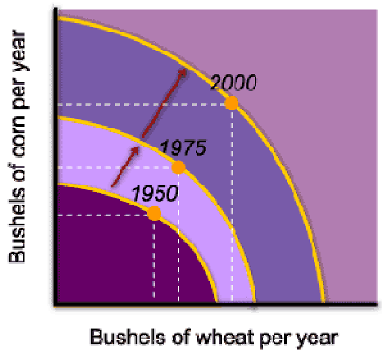


## Economic Growth




- **Outward shifts of the curve represent *economic growth.***
- **To increase the production of one good without decreasing the production of the other, the PPF curve must shift outward.**
- **From point "D", the economy can choose any combination of output between 2F" and 2G".**

## Economic Growth




- Not every sector of the economy grows at the same rate.
- In this historic example, productivity increases were more dramatic for corn than for wheat over the 50-year period.





## Using the Principle: The Opportunity Cost of a College Degree

| | |
|---|---|
| Tuition and books<br>(4 years at $10,000 per year) | $40,000 |
| Opportunity cost of college time<br>(4 years at $20,000 per year | $80,000 |
| Total opportunity cost | $120,000 |

## 3. Rational people think at the margin

**<u>Marginal changes</u> are small, incremental adjustments to an existing plan of action**

**=> People make decisions by comparing costs and benefits *at the margin***





## *Marginal* PRINCIPLE

*Marginal* **PRINCIPLE**

Increase the level of an activity if its marginal benefit exceeds its marginal cost; reduce the level of an activity if its marginal cost exceeds its marginal benefit. If possible, pick the level at which the activity's marginal benefit equals its marginal cost.

- **Marginal benefit: The extra benefit resulting from a small increase in some activity.**
- **Marginal cost: The additional cost resulting from a small increase in some activity.**

## PRINCIPLE *of Diminishing Returns*

**PRINCIPLE** *of Diminishing Returns*

Suppose output is produced with two or more inputs and we increase one input while holding the other input or inputs fixed. Beyond some point—called the point of diminishing returns—output will increase at a decreasing rate.

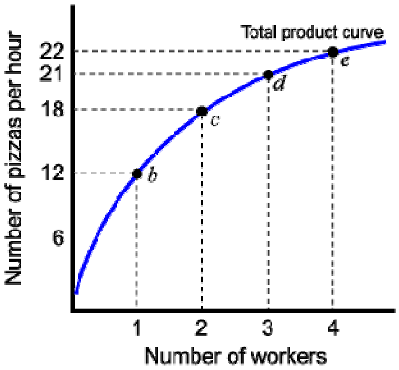




## Total Product Curve and Diminishing Returns

- **Total Product Curve: A curve showing the relationship between the quantity of labor and the quantity of output.**

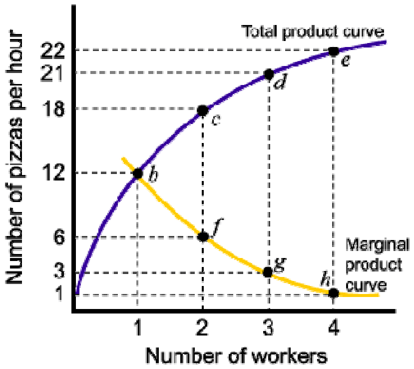
| Diminishing Returns for Pizza | |
|---|---|
| *Number of Workers* | *Total Pizza Produced* |
| 1 | 12 |
| 2 | 18 |
| 3 | 21 |
| 4 | 22 |



## Marginal Product of Labor and Diminishing Returns

- **Marginal Product of Labor: The change in output from one additional worker.**

| Diminishing Returns for Pizza | | |
|---|---|---|
| *Number of Workers* | *Total Pizza Produced* | *Marginal Product* |
| 1 | 12 | 12 |
| 2 | 18 | 6 |
| 3 | 21 | 3 |
| 4 | 22 | 1 |








## Diminishing Returns in the Short Run and the Long Run

- **Short Run: A period of time over which one or more factors of production is fixed; in most cases, a period of time over which a firm cannot modify an existing facility or build a new one.**
- **Long Run: A period of time long enough that a firm can change all the factors of production, meaning that a firm can modify its existing production facility or build a new one.**

## Principle 4: People respond to incentives

- Marginal changes in costs or benefits motivate people to respond
- The decision to choose one alternative over another occurs when that alternative's marginal benefits *exceed* its marginal costs!

- LA Laker basketball star Kobe Bryant chose to skip college and go straight to the NBA from high school when offered a $10 million contract.





## Principle 5: Trade can make everyone better off

- People gain from their ability to trade with one another
- Competition results in gains from trading
- Trade allows people to specialize in what they do best

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

- In a market economy, households decide what to buy and who to work for
- Firms decide who to hire and what to produce
- Adam Smith made the observation that households and firms interacting in markets act as if guided by an "invisible hand."

=> Because households and firms look at prices when deciding what to buy and sell, they unknowingly take into account the social costs of their actions.

=> As a result, prices guide decision makers to reach outcomes that tend to maximize the welfare of society as a whole.





## *Spillover* PRINCIPLE

- Spillover: A cost or benefit experienced by people who are external to the decision about how much of a good to produce or consume.

***Spillover* PRINCIPLE**
For some goods the costs or benefits associated with producing or consuming those goods are not confined to the person or organization producing or consuming them.

## Principle 7: Governments can sometimes improve market outcomes

- **When the market fails (breaks down) government can intervene to promote efficiency and equity**
- **Market failure occurs when the market fails to allocate resources efficiently**
- **Market failure may be caused by an externality, which is the impact of one person or firm's actions on the well-being of a bystander**
- **Market failure may also be caused by market power, which is the ability of a single person or firm to unduly influence market prices**





## Principle 8: The standard of living depends on a country's production

- **Standard of living may be measured in different ways:**
  - **By comparing personal incomes.**
  - **By comparing the total market value of a nation's production.**
- **Almost all variations in living standards are explained by differences in countries' productivities**
- **Productivity is the amount of goods and services produced from each hour of a worker's time**

***Higher productivity => Higher standard of living***

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

- **Inflation is an increase in the overall level of prices in the economy**
  - **One cause of inflation is the growth in the quantity of money.**
  - **When the government creates large quantities of money, the value of the money falls.**



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## Principle 10: Society faces a short-run tradeoff between inflation and unemployment

**The Phillips Curve illustrates the tradeoff between inflation and unemployment:**

**⇩Inflation ⇨ ⇧Unemployment**

**It’s a short-run tradeoff!**

## Summary

- When individuals make decisions, they face tradeoffs.
- Rational people make decisions by comparing marginal costs and marginal benefits.
- People can benefit by trading with each other.
- Markets are usually a good way of coordinating trades.
- Government can potentially improve market outcomes
- A country's productivity determines its living standards.
- Society faces a short-run tradeoff between inflation and unemployment