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MACROECONOMICS

INTRODUCTION

LECTURE 1

THE SCIENCE OF MACROECONOMICS

Literature

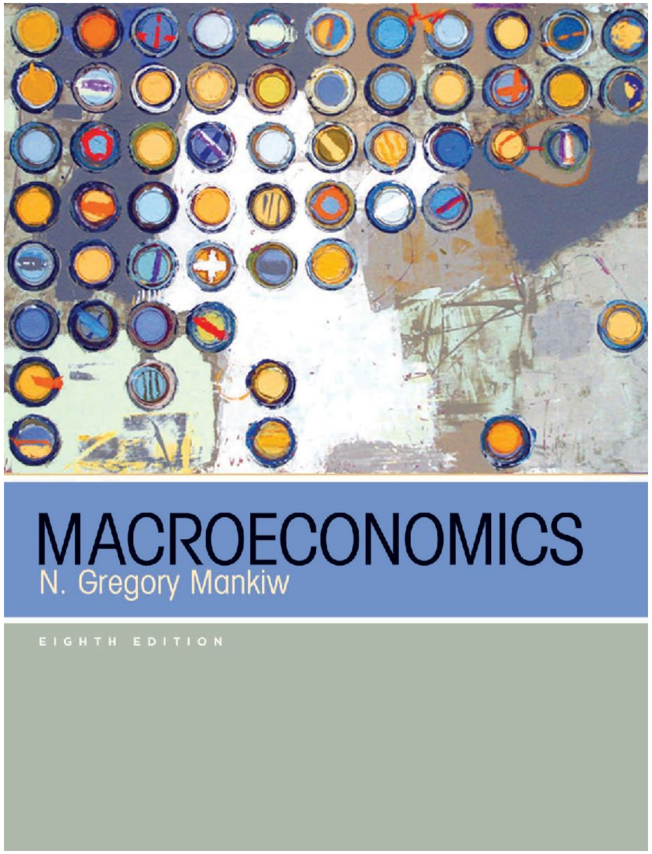
- **N.Gragory Mankiw MACROECONOMICS. 8^{TH} EDITION, 2014.** **http://www.slideshare.net/RMA03/mankiw-macroeconomics-8th-edition**

Additional reading:

•Abel Bernanke. Introduction to macroeconomics. (2008). 6 edition.

•McConnell Campbell R., Brue Stanley L. (2008) Macroeconomics: Principles, Problems, and Policies. 17th ed. — New York: McGraw-Hill/Irwin, 2008. — 488 p.

•Burda, M. and Wyplosz, C. (2009), Macroeconomics (fifth edition)



3. HOW THIS COURSE PROCEEDS

- **Part I Introduction 1**
  - 1 The Science of Macroeconomics
  - 2 The Data of Macroeconomics

- **Part II Classical Theory: The Economy in the Long Run**
  - 3 National Income
  - 4 The Monetary System
  - 5 Inflation
  - 6 The Open Economy
  - 7 Unemployment

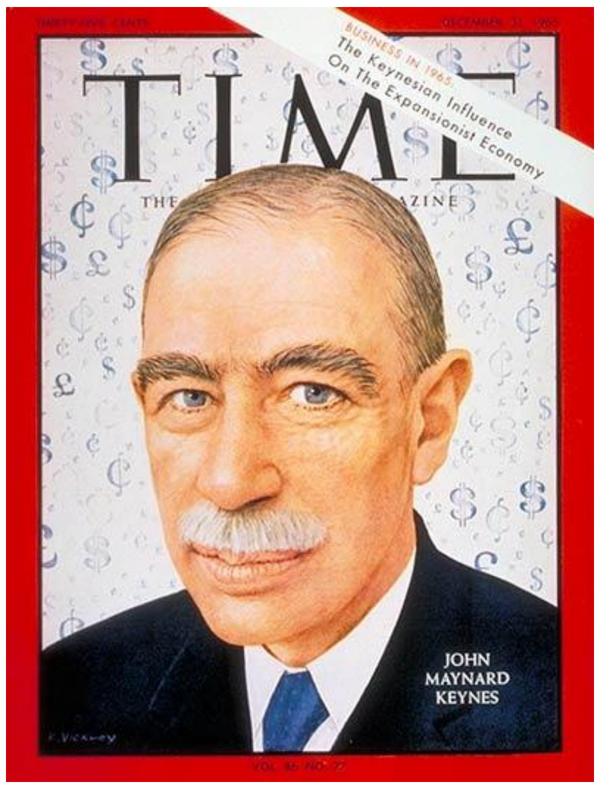
3. HOW THIS COURSE PROCEEDS

- **Part III Growth Theory: The Economy in the Very Long Run**
  - 8 Economic Growth I
  - 9 Economic Growth II

- **Part IV Business Cycle Theory: The Economy in the Short Run**
  - 10 Introduction to Economic Fluctuations
  - 11 **Aggregate Demand I**
  - 12 **Aggregate Demand II**
  - 13 The Open Economy Revisited
  - 14 **Aggregate Supply** and Tradeoff Between Inflation and Unemployment

Outline

1. **WHAT MACROECONOMISTS STUDY**
2. **HOW ECONOMISTS THINK**



1. WHAT MACROECONOMISTS STUDY

1. **Macroeconomics is the part of the field which studies the forces that influence the economy as a whole.**

2. **Macroeconomists**
   - ***collect data,***
   - ***attempt to formulate general theories*** to explain these data,
   - ***use the data to observe*** that economies differ across countries.

Their knowledge is useful both

for explaining economic events and for formulating economic policy.

MOST MACROECONOMISTS ARE INTERESTED IN 6 MAJOR GOALS:

1. Low unemployment
2. Low and stable inflation
3. Minimal **domestic** economic fluctuations
4. Minimal **international** economic fluctuations
5. High rates of economic growth
6. Wise economic policy,

which consists of governmental and non-governmental efforts to influence the other five goals.

1. The Historical Performance of the U.S. Economy

Case Study

Three macroeconomic variables are especially important:

1. **GDP**
   1. **Real GDP** (real gross domestic product)
      - measures the total income of **everyone** in the economy (adjusted for the level of prices),
   2. **real GDP per person**
      - measures the income of the **average person** in the economy.

2. **The inflation rate**
   - measures how fast prices are rising.

4. **The unemployment rate**
   - measures the fraction of the labor force that is out of work.

Macroeconomists study

- how these **variables** are **determined**,
  - why they **change** over time, and
    - how they **interact** with one another.

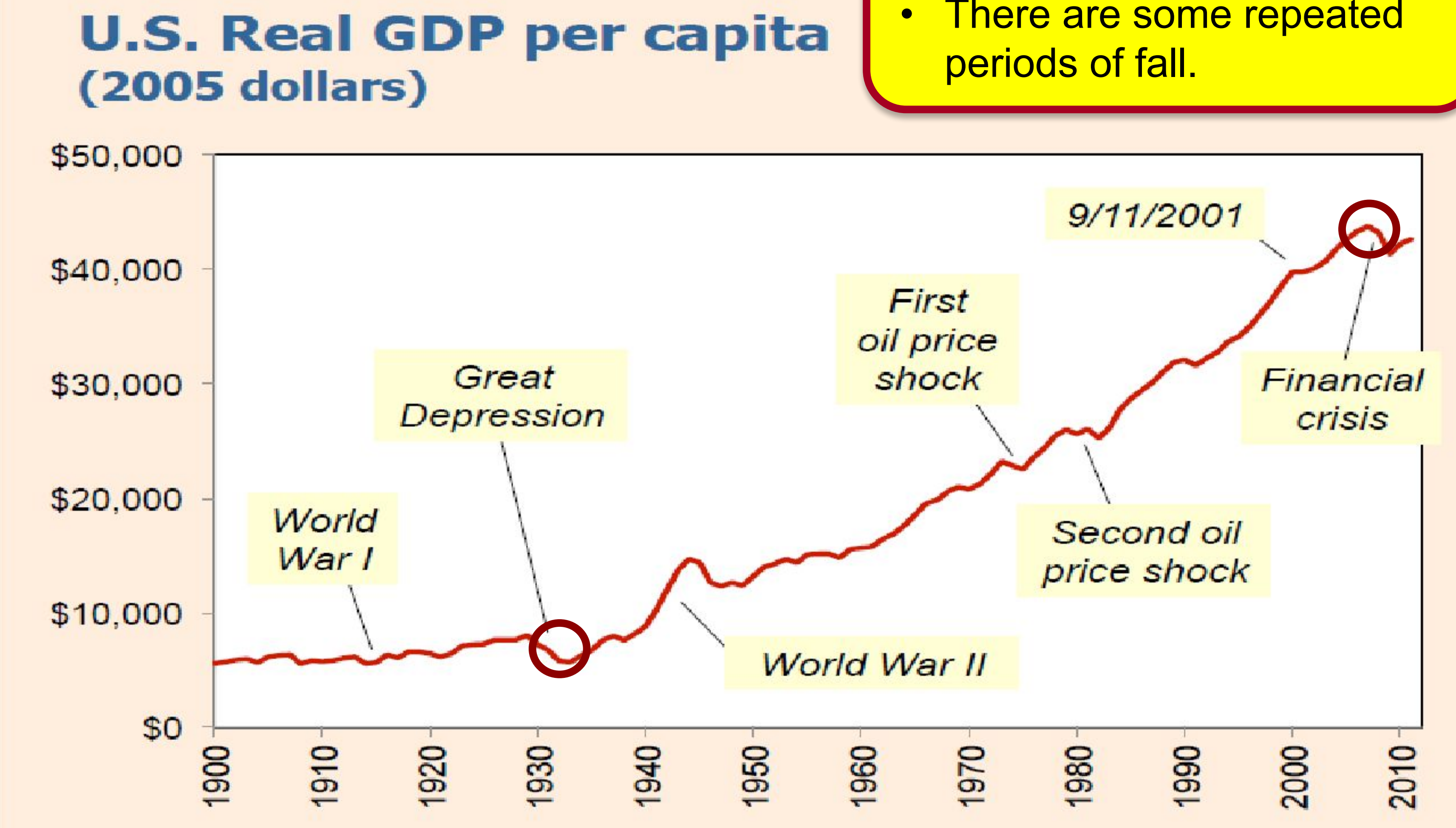
The Historical Performance of the U.S. Economy

Periods during which real GDP falls are called

- **recessions** if they are mild and
- **depressions** if they are more severe.

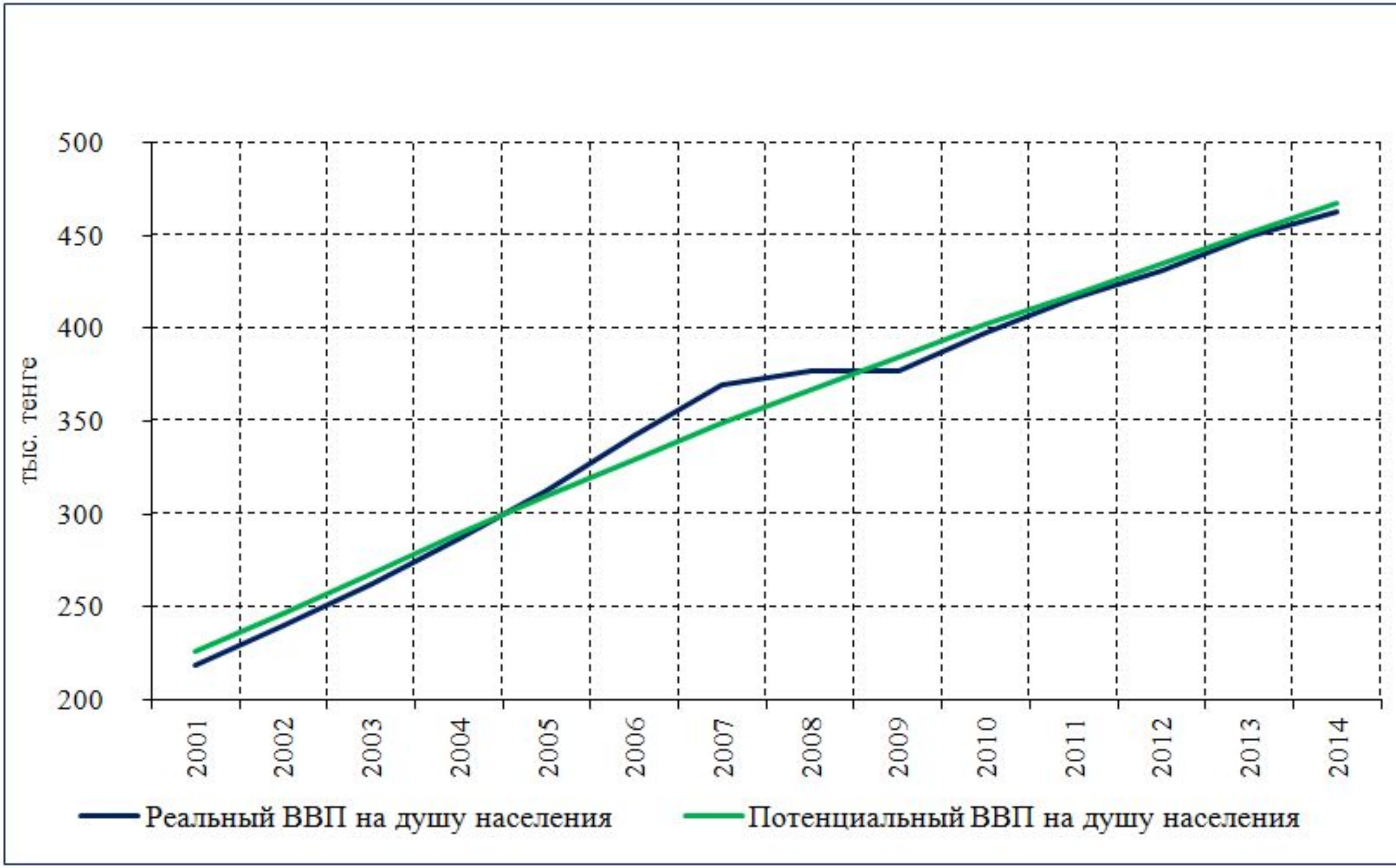
- It grows over time.
- The growth is not steady.
- There are some repeated periods of fall.

Case Study



GDP in Kazakhstan

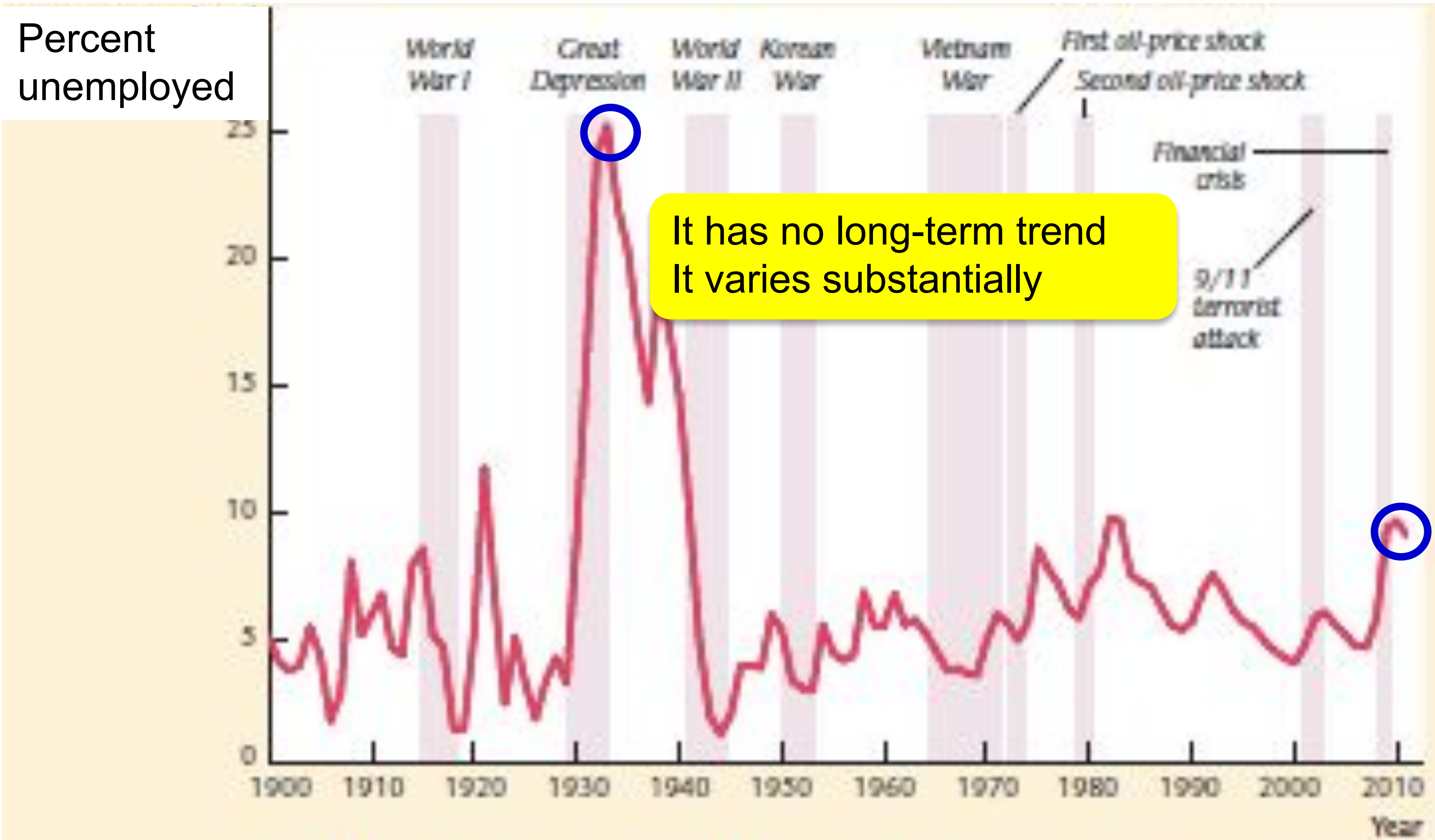
Case Study



The Historical Performance of the U.S. Economy

Recessions and depressions are associated with unusually high unemployment.

Case Study



Unemployment in Kazakhstan

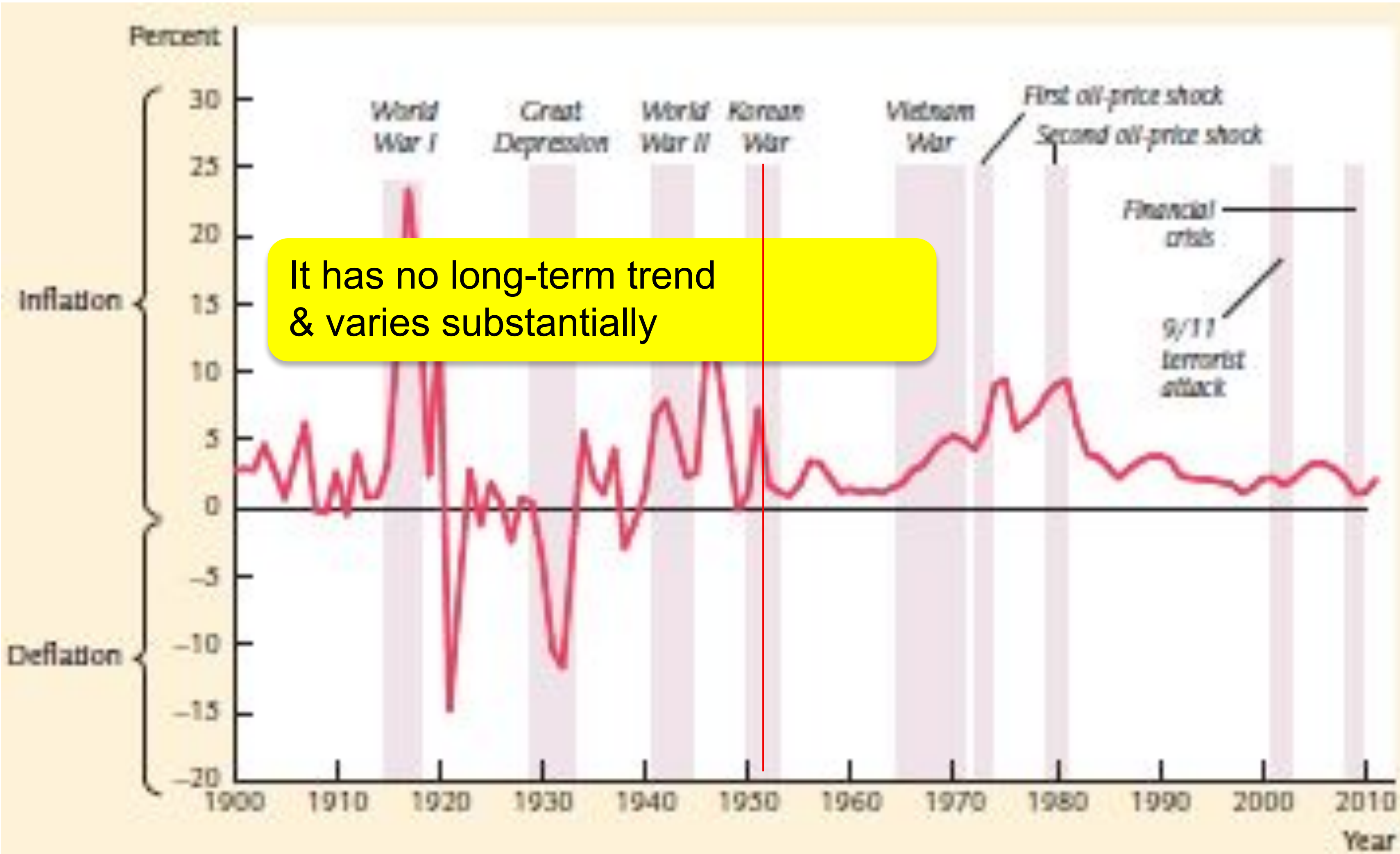
Case Study

The Historical Performance of the U.S. Economy

Case Study

Periods of falling prices, called **deflation**,

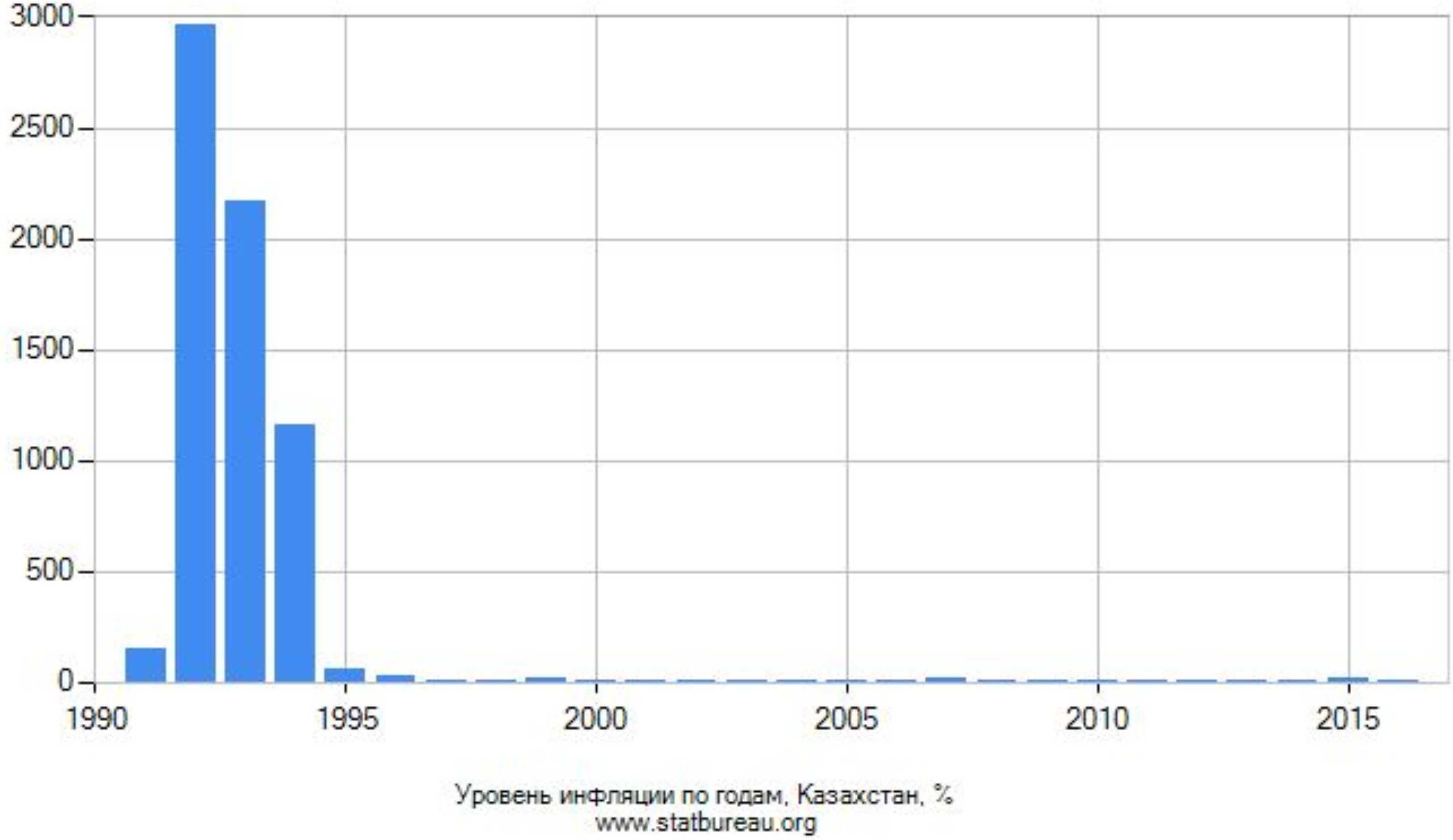
- were almost as common as periods of rising prices.



It has no long-term trend & varies substantially

Inflation in Kazakhstan

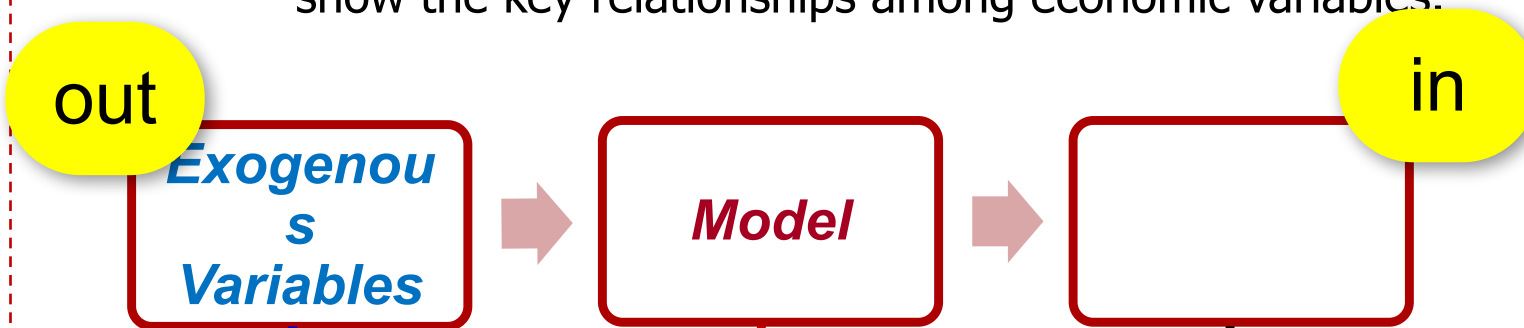
Case Study



2 HOW ECONOMISTS THINK

- **Theory as Model Building**
- **The Use of Multiple Models**
- **Prices: Flexible Versus sticky**
- **Microeconomic Thinking and Macroeconomic Model**

- MACROECONOMICS is a science.
- Macroeconomists use **models**.
  - **Models** are **simplified theories** that show the key relationships among economic variables.



1. **The exogenous variables** are those that come from outside the model.
2. **The endogenous variables** are those that the model explains.
3. **The model** shows how changes in the exogenous variables affect the endogenous variables.

The Model of Supply and Demand

Exogenous

Endogenous

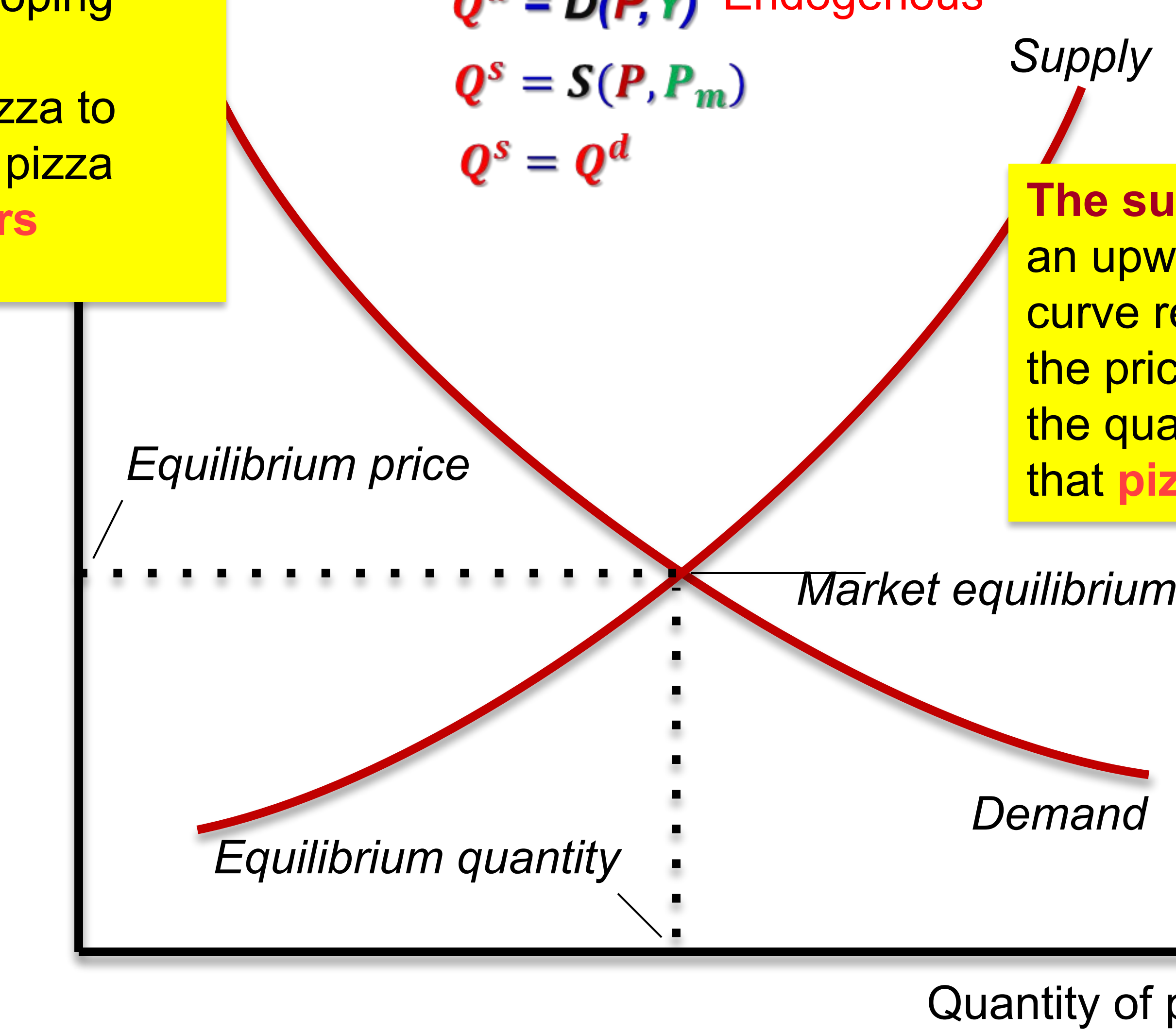
$$Q^d = D(P,Y)$$

$$Q^s = S(P,P_m)$$

$$Q^s = Q^d$$

The demand curve is a downward-sloping curve relating the price of pizza to the quantity of pizza that **consumers** demand.

The supply curve is an upward-sloping curve relating the price of pizza to the quantity of pizza that **pizzerias** supply



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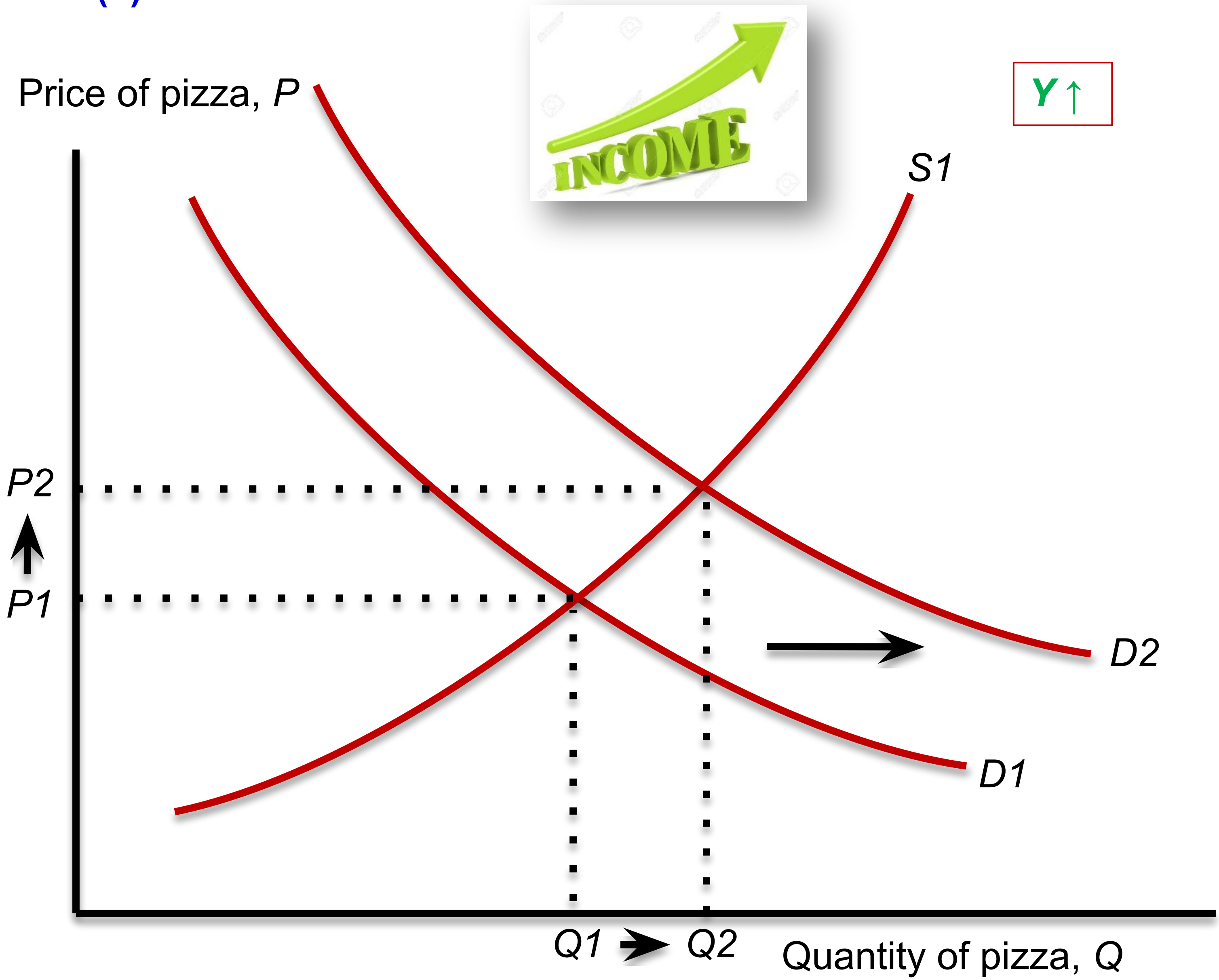
(a) A Shift in Demand



2 HOW ECONOMISTS THINK

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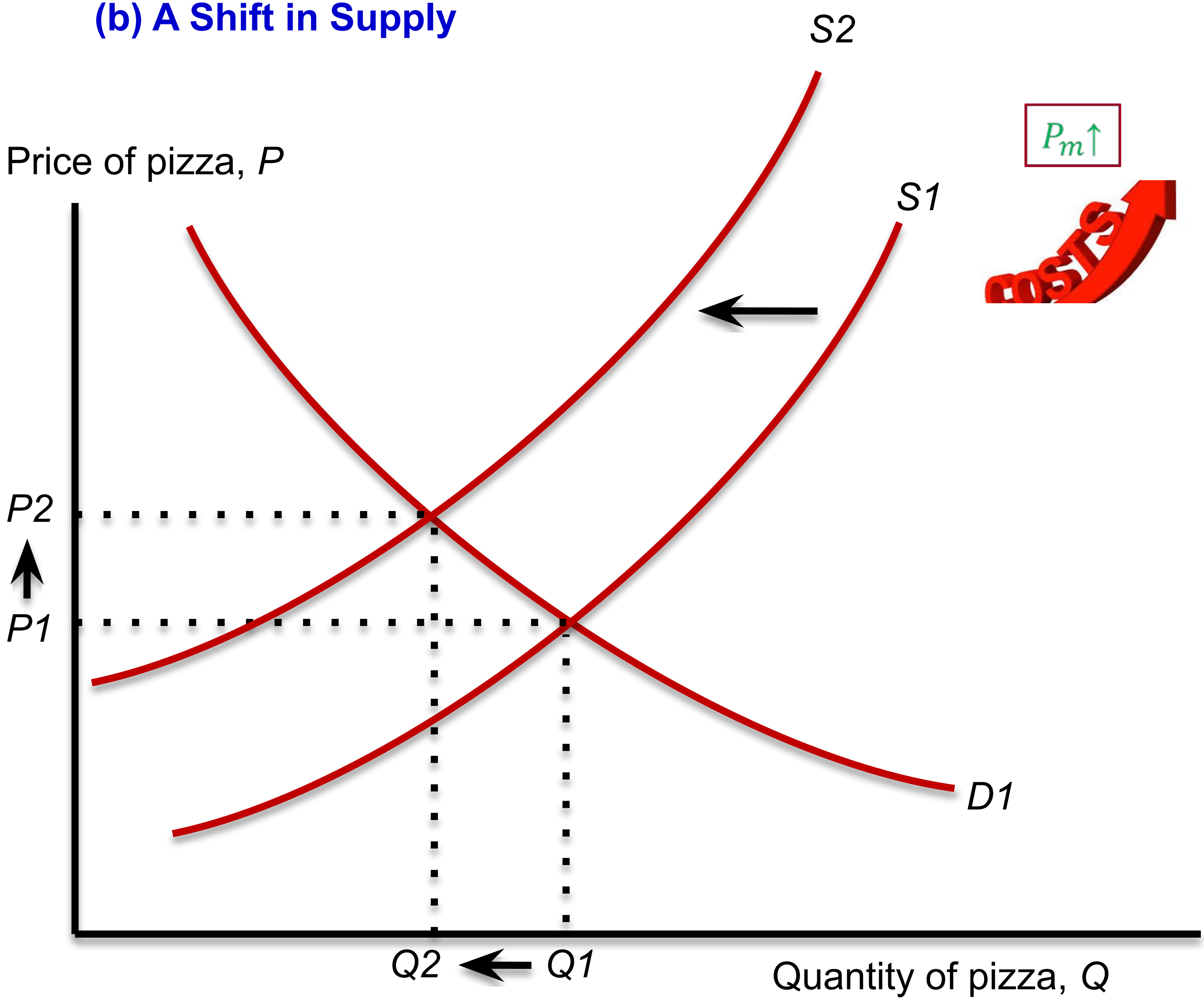
(b) A Shift in Supply



USING FUNCTIONS

A **function** is **a mathematical concept that shows how one variable depends on a set of other variables.**

Example

the Q of pizza demanded ~

- on *P* of pizza and
- on *Y*.

Functional notation expresses **the general idea**:

$$Q^d = D(P, Y).$$

$$Q^d = 60 - 10\boldsymbol{P} + 2\boldsymbol{Y}.$$

$$D(P, Y) = 60 - 10P + 2Y.$$

When we have enough information, it is possible to indicate the **numerical relationship**.

If *P=2, Y=10* =>

Q=60

FYI

2 HOW ECONOMISTS THINK

- Theory as Model Building
- The Use of Multiple Models
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Macroeconomists study **many cases** of the economy.

- Economic growth
- Inflation
- ....

Economists use **different models** to explain different economic phenomena.

Economists must

- **Make assumptions and**
- **Judge whether they are reasonable for studying.**

2 HOW ECONOMISTS THINK

The assumption that

markets are normally in equilibrium

is called Market – CLEARING (M-C) .

- The continuous **M-C** is not entirely realistic.

M-C models assume that all ***W&P*** **are flexible**	**In the real world** some ***W&P*** **are sticky.**

<u>Price flexibility</u>

is assumption for studying long-run issues

- **decade to decade**
- **the growth in real GDP.**

<u>Price stickiness</u>

is assumption for studying short-run issues

- **year-to-year fluctuations**

- Theory as Model Building
- The Use of Multiple Models
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Microeconomics is the study of

1. **how** households and firms **make decisions**
   - **households** choose their purchases
     - ✔ to **maximize their level of satisfaction**,
     - ✔ which economists call **utility**
   - **firms** make production decisions
     - ✔ to **maximize their profits.**
2. **how** these decision makers **interact** in the marketplace.

A central principle is

that households and firms **optimize** —

they do the best they can for themselves

2. HOW ECONOMISTS THINK

- Theory as Model Building
- The Use of Multiple Models
- Prices: Flexible Versus sticky
- Microeconomic Thinking and Macroeconomic Model

- **Macroeconomics and microeconomics are inextricably linked.**

- **Although**
  - microeconomic decisions **underlie** macroeconomic phenomena,
  - macroeconomic models **DO NOT NECESSARILY** focus on the ***optimizing behavior*** of households and firms.

NOBEL MACROECONOMICS

- The winner of the Nobel Prize in economics is announced every October.
- Many winners have been macroeconomists whose work we study.
- Here are a few of them:

Milton Friedman (Nobel 1976)
James Tobin (Nobel 1981)

Robert Solow (Nobel 1987)
Robert Lucas (Nobel 1995)

George Akerlof (Nobel 2001)
Edmund Phelps (Nobel 2006)

FYI

SUMMARY

1. **Macroeconomics is the study of the economy as**
   - a whole.

2. **Economists use models — theories that simplify reality in order to reveal how**
   - exogenous variables influence
   - endogenous variables.

3. **A key feature of a macroeconomic model is whether it assumes that prices are**

THANKS !