

Introduction to Macroeconomics

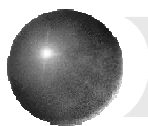
The National Economy

Economic Fluctuation and Growth

The Global Economy

Aggregate Demand and Aggregate Supply

A Short History of U.S. Economy



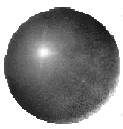
Micro and Macro “economics”

● **Microeconomics**

- **Examines the factors that influence individual economic choices**
- **Examines how markets coordinate the choices of various decision-makers**
- **Ex: 電腦降價5% →...**

● **Macroeconomics**

- **Studies the performance of the economy as a whole**
- **Focuses on the big picture**
- **Ex: 聯準會調高利率一碼**

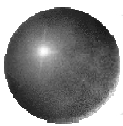


The National Economy

- ⊕ **Macroeconomics concerns the overall performance of the economy**

- ⊕ ***Gross product***
 - ⊕ **Commonly measure of an economy's size**
 - ⊕ **Measures the market value of final goods and services produced**
 - in a particular geographical region
 - during a given period

3



Gross Domestic Product

- ⊕ **GDP = *Gross Domestic Product***

- ⊕ **Ex: GDP of U.S. economy**
 - ⊕ **Measures the market value of all final goods and services**
 - ⊕ **produced in the United States**
 - ⊕ **during a given period (1 year)**

- ⊕ **Helps us keep track of the economy's incredible variety of goods and services**

4

The National Economy

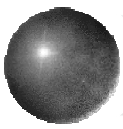
- **Macroeconomic policy typically focuses on**
 - **performance of the national economy,**
 - **how the national economy interacts with other economic bodies**
 - **Economy continually renewing itself**
- **Money is called a medium of exchange**
 - **Circulates throughout the economy**
 - **Facilitating the exchange of resources and products among economic units**

5

分析：中國三角債問題將重現(大紀元時報)

- **三角債：**
 - 是指眾多企業間相互拖欠貸款的債權債務關係，導致連鎖反應，資金流通停滯，如：甲公司欠乙公司一筆錢，乙又欠丙公司一筆錢，丙公司又欠甲的款項，形成三角債務關係。
- **2005年外國投資者的直接投資獲利約減少了5%，而美國政府自美國公司取得的資料則是減少了8~9%。而該下降幅度有加劇的趨勢，因為獲利的減少，外國投資也減少了。依據中國國家統計局之統計，2005年上半年外國直接投資已減少了12%。而外國直接投資的減少，勢必也會連帶造成外國投機性的資本流入減少。中國在1997年至2002年間經濟呈現通貨緊縮的情形。所謂通貨緊縮，係指政府採行相關緊縮性貨幣政策，以防止可能產生的通貨膨脹問題，或因生產過剩及消費減少，而導致物價下跌，長期將會造成生產萎縮。**
- **中國的消費者物價指數（CPI）在2004年年中到達最高點，達到5%，但因經濟持續性的過度擴張，已導致指數下降，2005年11月只達到1.3%，已反應出市場有通貨緊縮的現象。民眾因為預期價格會下跌，所以民眾的購物時機會延後，而可能導致加速通貨緊縮。**
- **價格下跌對消費者及從事出口的貿易商（在中國買到更便宜的貨品再轉賣到其他國家）而言是利多，但對於提供工業產品投資貸款的中國商業銀行而言就不是一件好消息了，因為向銀行貸款的廠商營運將出現問題。**
- **報導說，如果價格下跌的情勢持續發展，不免讓人擔憂。在1990年中期普遍發生的「三角債」問題恐將重演。**

6



Flow and Stock Variables

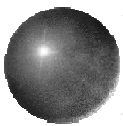
● ***Flow Variable***

- ▣ **Measure the amount of something over a period of time**
- ▣ **Ex:**
 - Average spending per week,
 - hours worked per month.

● ***Stock Variable***

- ▣ **An amount measured at a particular point in time**
- ▣ **Ex:**
 - Amount of cash on hand you have now
 - Number of housing units in existence today

7



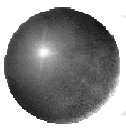
Knowledge and Performance

- **If the economy functions smoothly,**
 - ▣ **policy makers need not understand how it works**

- **If problems occur, like**
 - ▣ **high inflation**
 - ▣ **severe unemployment****Must understand how a healthy economy works before considering how the problem is corrected**

- **Thus, we must understand the essential relationships among key economic variables**

8

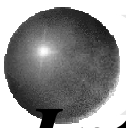


Mercantilism

- ⊕ **Policy makers may implement the wrong economic prescription**
 - ⊕ **due to a flawed economic theory**

- ⊕ **Mercantilism(重商主義)**
 - ⊕ **National's economic goal is to accumulate precious metals in the public treasury**
 - ⊕ **To accumulate gold and silver**
 - **Sell more output to foreigners than it bought from them**
 - **Tariffs and quotas were popular**
 - **Reduce international trade and gain from specialization**

9



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Economic Fluctuations

⊕ *Economic fluctuations*

- ⊞ **The rise and fall of economic activity relative to the long-term economic growth**
- ⊞ ***Also called: Business cycles***
- ⊞ **Vary in length and intensity**

⊕ Components of Business Cycles

- ⊞ **Two phases**
 - **Periods of expansion**
 - **Periods of contraction**

11



Depression and Recession

⊕ *Depression*

- ⊞ **Severe contraction**
- ⊞ **Lasting longer than one year**
- ⊞ **Accompanied by high unemployment**

⊕ *Recession*

- ⊞ **Milder contraction**
- ⊞ **Decline in total output lasting at least two consecutive quarters**

12

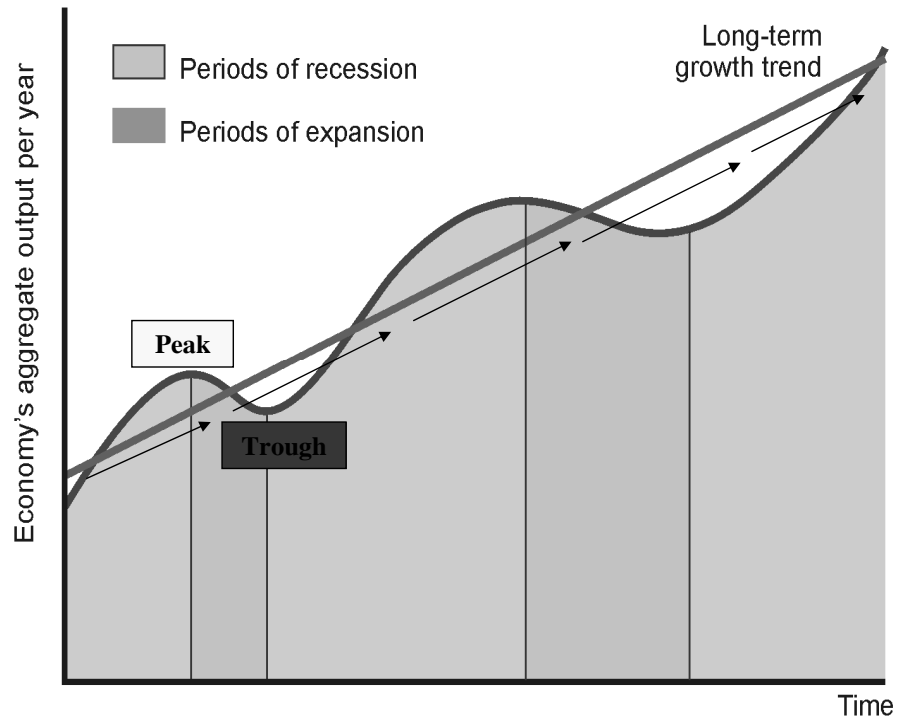
Hypothetical Business Fluctuations

Long-term growth trend:
upward sloping straight line.

Economic fluctuations:
Movements along growth trend.

Recession
begins after the previous expansion has reached its *peak*, ends when the economy reaches a *trough*.

Between a peak and a trough *recession*
Between a trough and next peak: *expansion*.

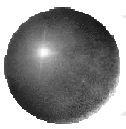


13

The Great Depression

- **1929年至1933年的蕭條**——「世界經濟衰退」比任何一次經濟衰退的影響都要深遠的多。這次經濟蕭條是以農產品價格下跌為起點的：首先發生在木材價格上（**1928年**），這主要是由於蘇聯木材競爭的緣故，但更大的災難是在**1929年**到來的，加拿大小麥過量生產，美國強迫壓低所有農產品產地基本穀物的價格，不管是歐洲，美洲還是澳洲。農業衰退由於金融的大崩潰而進一步惡化，尤其在美國，一股投機熱導致大量資金從歐洲抽回，隨後在**1929年10月**發生了令人恐慌的華爾街股市暴跌。**1931年**法國銀行家收回了給奧地利銀行的貸款，但這並不足以償還債務。這場災難使中歐和東歐許多國家的制度破產了：它導致了德國銀行家為了自保，而延期償還外債，近而也危及到了在德國有很大投資的英國銀行家。資本的短缺在所有的工業化國家中都帶來了出口和國內消費的銳減：沒有市場必然使工廠關閉，貨物越少，貨物運輸也就越少，這必然會危害船運業和造船業。在所有國家中，經濟衰退的後果是大規模失業：美國**1370萬**，德國**560萬**，英國**280萬**（**1932年**的最大數據）。

14



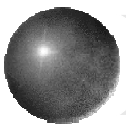
U.S. Growth

- U.S. economy in 2001 was more than eleven times larger than in 1929 as measured by real GDP

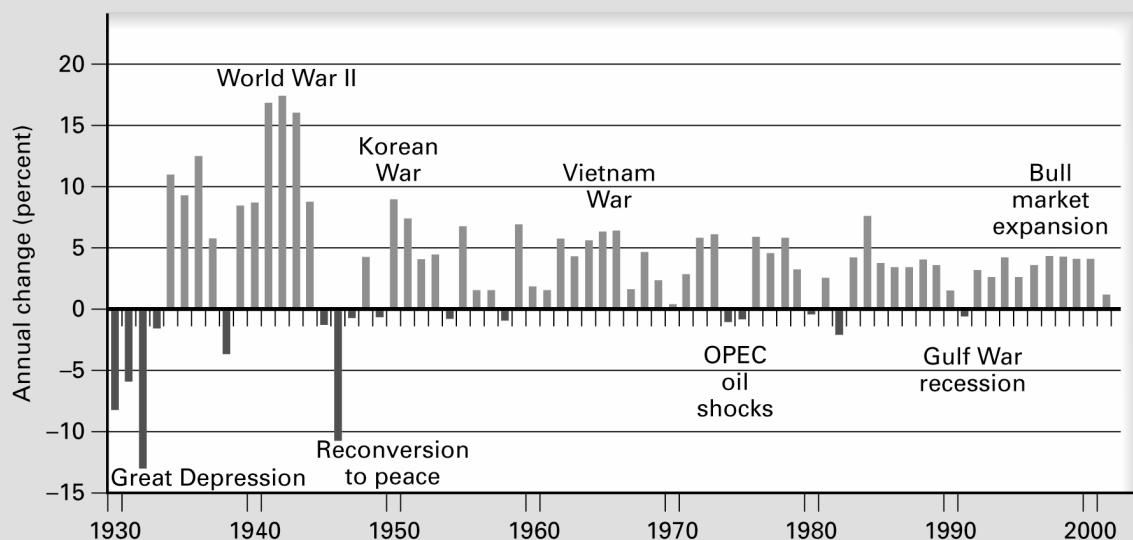
- Real GDP:**

- the effects price level have been stripped away*
- Remaining changes reflect *real* changes in the value of goods and services

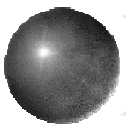
15



Annual Percentage Change in U.S. Real GDP from 1929 -2001



16



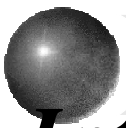
Increases in Production

- ⊕ **Production tends to increase over the long run**
 - ⊞ **Increases in the amount and quality of resources, especially labor and capital**

 - ⊞ **Better technology**

 - ⊞ **Improvements in the rules of the game that facilitate production and exchange**

17



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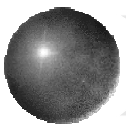
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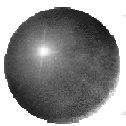
A Short History of U.S. Economy



Business Cycle

- ⊕ **Turning points – peaks and troughs – are defined only after the fact**
 - ⊞ **Recession:**
 - Output declines for at least two consecutive quarters,
 - Not so designated until six months after it begins
 - ⊞ **Expansion:**
 - Officially underway after two consecutive quarters of growth

19



Leading Economic Indicators

- ⊕ **Leading economic indicators:**
 - ⊞ point to the coming recession or expansion
 - ⊞ predict, or lead to, a downturn and upturns point to an economic recovery
 - ⊞ **Ex: in the early stages of a recession**
 - firms reduce overtime and new hiring,
 - machinery orders decline,
 - stock market turns down

20

領先經濟指標指數 (*The Index of Leading Economic Indicators*)

- 由**11**個具領先特質的構成因子組成：平均每週工作時數、首度申請失業救濟人數、消費財新訂單、賣方業績、廠房設備訂單、建築許可、實質M2、股票價格（SP50）、未來交貨訂單的變化（耐久財）、敏感性物料價格、消費者預期指數，領先經濟指標指數是設計用來預測未來的經濟活動。平均來說，該指數在景氣循環高峰出現前便領先**10**個月下降；就循環谷底而言，指數的表現似乎比較不明顯，一般是領先**2**個月。
- 每個月的最後一個營業日，由Bureau of Economic Analysis，US Department of Commerce 公佈

21

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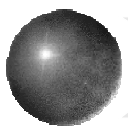
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Economic Fluctuation and Growth

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Aggregate Output

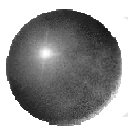
● Aggregate output

- Total goods and services produced in the economy during a given period
- Best measure:
- real gross domestic product (real GDP)

● Aggregate demand is the relationship between

- average price of aggregate output
- quantity of aggregate output demanded

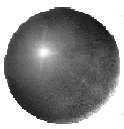
23



Price Level

- Average price of aggregate output
- An *index number* comparing average prices of all goods and services produced in that year to average prices in base year (or reference year)
- The *price level* in the base year has a benchmark value of 100
- Price level or price index used to make
 - Comparisons in prices across time
 - Accurate comparisons of real aggregate output over time

24

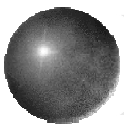


GDP Price Index

- **After adjusting GDP for price changes, we end up with *real GDP***

- **The GDP price index**
 - Shows how the economy's general price level changes over time
 - Can be used to convert production in different years into dollars of constant purchasing power

25



Aggregate Demand Curve (AD)

- ***AD curve* shows the relation between**
 - the price level in the economy
 - the real GDP demanded

- **Sums demands of four economic decision makers:**
 - households,
 - firms,
 - governments,
 - the rest of the world

- **Among the factors held constant along a given AD curve are**
 - The price levels in other countries
 - The exchange rates

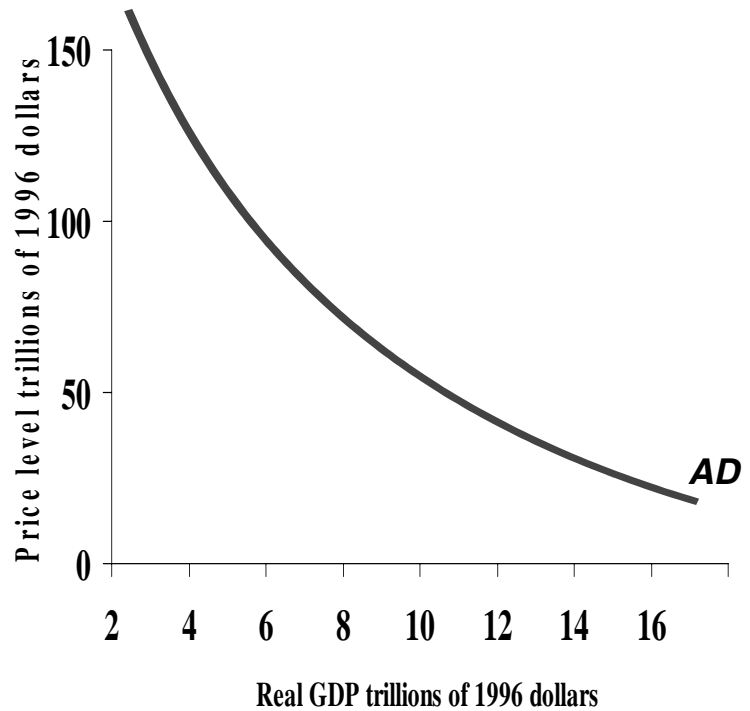
26

Aggregate Demand Curve

Vertical axis:
measures an index of the price level relative to a 1996 base year price level of 100.

The horizontal axis:
real GDP, measured output in dollars of constant purchasing power in 1996 prices

The downward slope reflects that as the price level increases, purchases of the four major decision makers decline



27

Aggregate Supply Curve (AS)

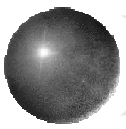
● AS curve:

- how much output U.S. producers are willing and able to supply at each price level

● Assumed constant along an AS curve are

- Resource prices, including wage rates
- The state of technology
- The rules of the game that provide production incentives

28



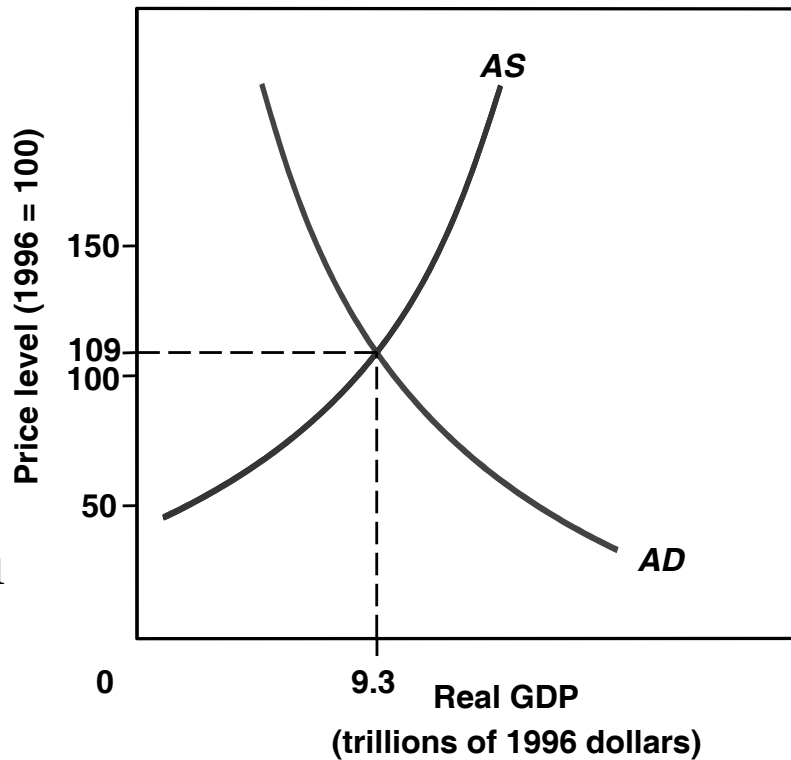
Aggregate Demand & Supply

Resource prices are assumed to be constant along AS curve

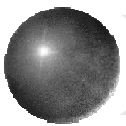
Firms find a higher price level more profitable → Increase real GDP supplied.

Equilibrium occurs where the AD and AS curves intersect.

Equilibrium real GDP in 2001 was about \$9.3 trillion at a price level of 109.



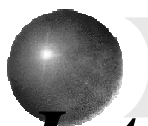
29



Equilibrium

- **Employment is not measured directly along the horizontal axis**
 - Firms usually hire more workers to produce more output
- **Higher levels of real GDP can be beneficial because**
 - More goods and services are available in the economy
 - More people are employed

30



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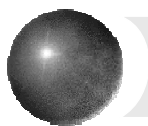
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Short History of U.S. Economy

• **Four economic eras**

• **Before Great Depression (included)**

- Contractions were often accompanied by a falling price level

• **Great Depression ~ early 1970s**

- Strong economic growth
- Moderate increases in the price level

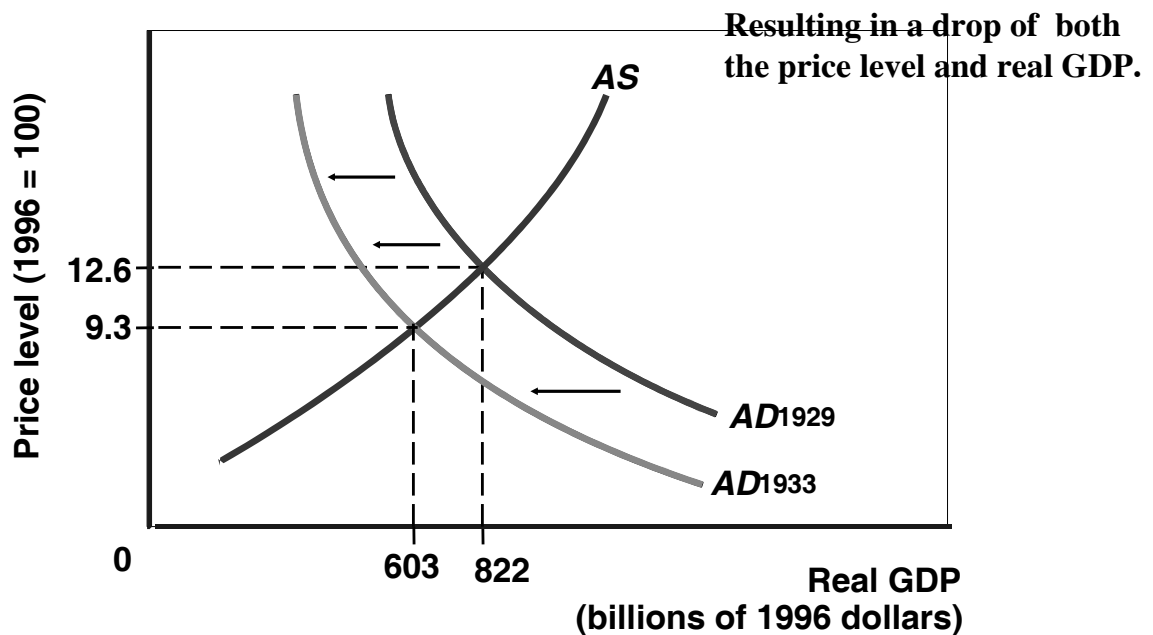
• **early 1970s ~ early 1980s**

- High unemployment
- high inflation

• **After early 1980s**

- Good economic growth
- Moderate increases in the price level

Great Depression – Decrease in Aggregate Demand

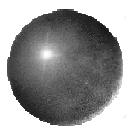


33

Great Depression and Before

- ◆ **Why did aggregate demand decline so much during this period?**
 - ▣ **Stock market crash of 1929**
 - ▣ **Grim(悲觀) business expectations**
 - ▣ **Drop in consumer spending**
 - ▣ **Widespread bank failures**
 - ▣ **Sharp decline in the nation's money supply**
 - ▣ **Severe restrictions on world trade**

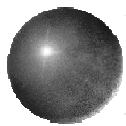
34



Great Depression and Before

- **Before Great Depression, economic policy:**
 - *laissez-faire* policy(自由放任)
- **It is believed that if people were allowed to pursue their self-interest freely:**
 - Resources are by an “invisible hand”
 - Produce the greatest, most efficient level of aggregate output
 - Contractions were essentially self-correcting

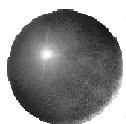
35



Age of Keynes (凱因斯)

- **Aggregate demand was unstable**
- **Instability occurs partially because**
 - Investment decisions are often guided by unpredictable “*animal spirits*” of business expectations
- **Keynes claimed:**
 - no natural forces ensure that the economy would return to a high level of output given a reasonable time to adjust

36



Age of Keynes

⊕ **Keynes proposed :**

⊞ **government can increase AD**

- **Direct stimulus:** by increasing its own spending
- **Indirect stimulus:** by cutting taxes to stimulate private-sector demand,

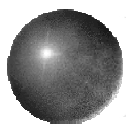
⊕ ***Federal budget deficit***

⊞ **Flow variable**

⊞ **Measures total federal outlays exceed total federal revenues**

⊞ **In a given period**

37



Age of Keynes

⊕ **Federal policies is designed to shift AD back (See here)**

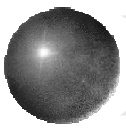
⊞ **Increase real GDP**

⊕ **The Keynesian approach:**

⊞ **Demand-side economics**

⊞ **Focused on how changes in AD could promote full employment**

38



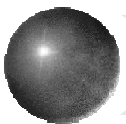
Age of Keynes

- ⊕ **To avoid another depression,**
 - ⊞ **Employment Act of 1946**
 - ⊞ **The federal government fosters**
 - **Maximum employment**
 - **Maximum production**
 - **Maximum purchasing power**

 - ⊞ **Created the Council of Economic Advisers**

 - ⊞ **Required the president to report annually on the state of the economy**

39



The Great Stagflation: 1973 - 1980

- ⊕ **Federal spending on both**
 - ⊞ **the war in Vietnam**
 - ⊞ **social programs**

in the late 1960s significantly increased both

 - ⊞ **aggregate demand**
 - ⊞ **inflation rate**

- ⊕ **The AS reduces because**
 - ⊞ **High inflation rates→**
 - **Nixon introduce ceilings on prices and wages**
 - ⊞ **OPEC reduced the supply of oil (石油危機)**

Resulted in stagflation!

40

The Great Stagflation

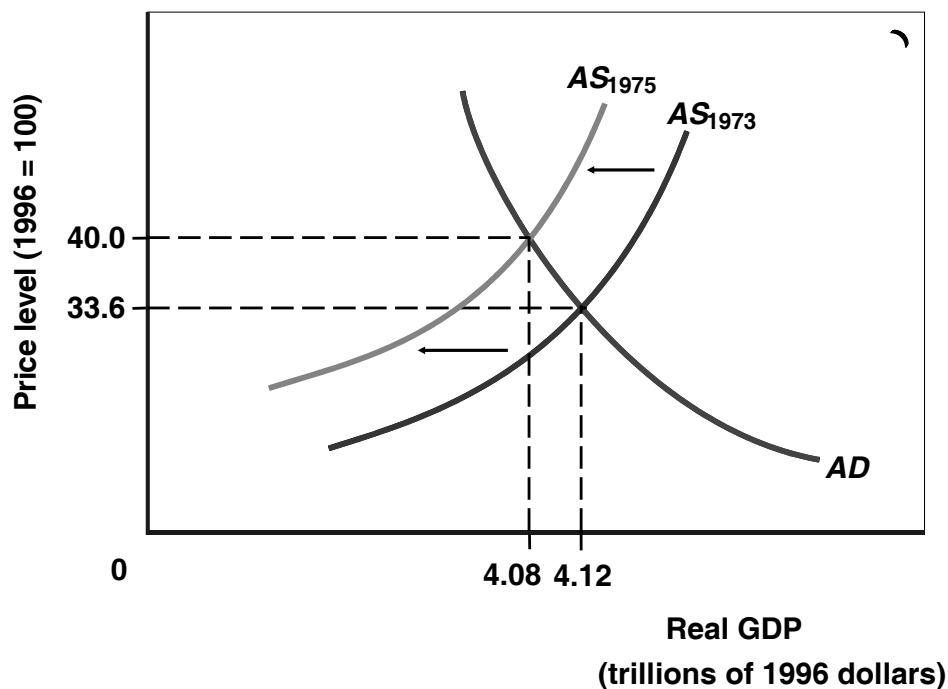
Stagflation

- **Stagnation:** contraction in the economy's aggregate output
- **Inflation:** a rise in the economy's price level
- **Primarily a supply side problem!**
- **Demand-management policies of Keynes were relatively ineffective**

41

Stagflation Between 1973-1975

The stagflation of the mid-1970s denotes a reduction in aggregate supply.



42



Experience Since 1980

- ⊕ **The stagflation shifted policy maker's attention from AD to AS**

- ⊕ ***Supply-side economics***
 - ⊞ Lowering tax rates→
 - ⊞ increase the supply of resources→
 - ⊞ increase after-tax earnings

- ⊕ **Increase in AS**
 - ⊞ expanding real GDP
 - ⊞ reducing the price level

43



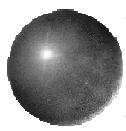
Experience Since 1980

- ⊕ **In 1981 President Reagan cut *personal income tax rates* by an average of 23%**

- ⊕ **In 1982, before the tax cut was fully taken, the unemployment rate shot up to 10%**

- ⊕ **After the recession, the economy began the longest peacetime expansion on record**

44



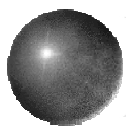
Experience Since 1980

- **However,**
 - growth in federal spending < growth in tax revenues**
 - Federal budget deficits (赤字) increases**

- **Huge deficits accumulated as a huge federal debt**

- **Government debt**
 - **Stock variable**
 - **Measures the net accumulation of prior deficits**
 - **Doubled in the period of 1980 to 1992 relative to GDP**

45

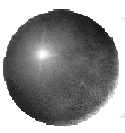


Experience Since 1980

- **George H.W. Bush and William Clinton cut deficits**
 - **By increase taxes**
 - **reductions in federal spending, deficit turned to surpluses**

- **U.S. economic expansion has recently began to slow down**

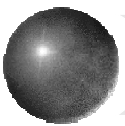
46



課堂報告

- 請解釋何謂**Mercantilism**
- 請解釋何謂**stock variable**和**flow variable**
- 請解釋何謂**Aggregate demand**和**Aggregate supply curves**
- 請解釋何謂**demand-side economics**和**supply-side economics**

47



Homework

- 15: Determine the shift of AD (or AS)
- 16: Analyze the Reagan's policy in cutting taxes.

48