



Lecture 1

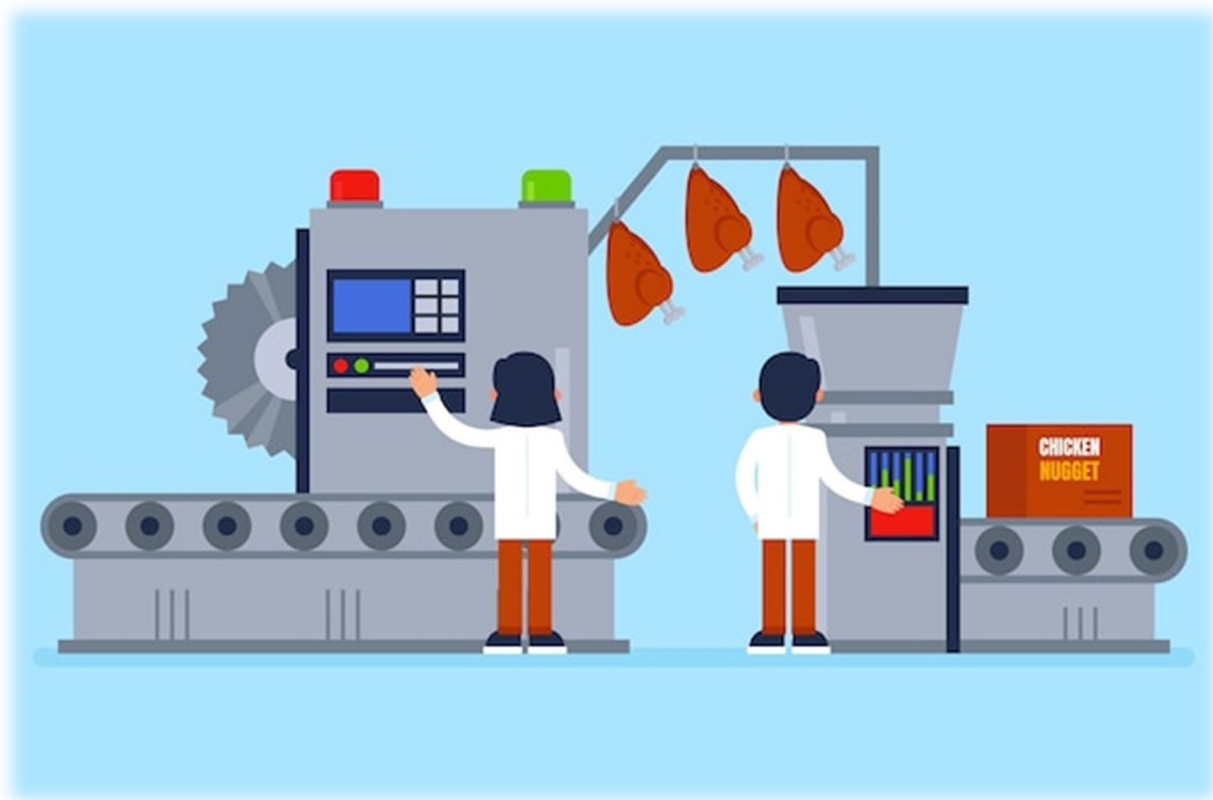
Introduction to Macroeconomics

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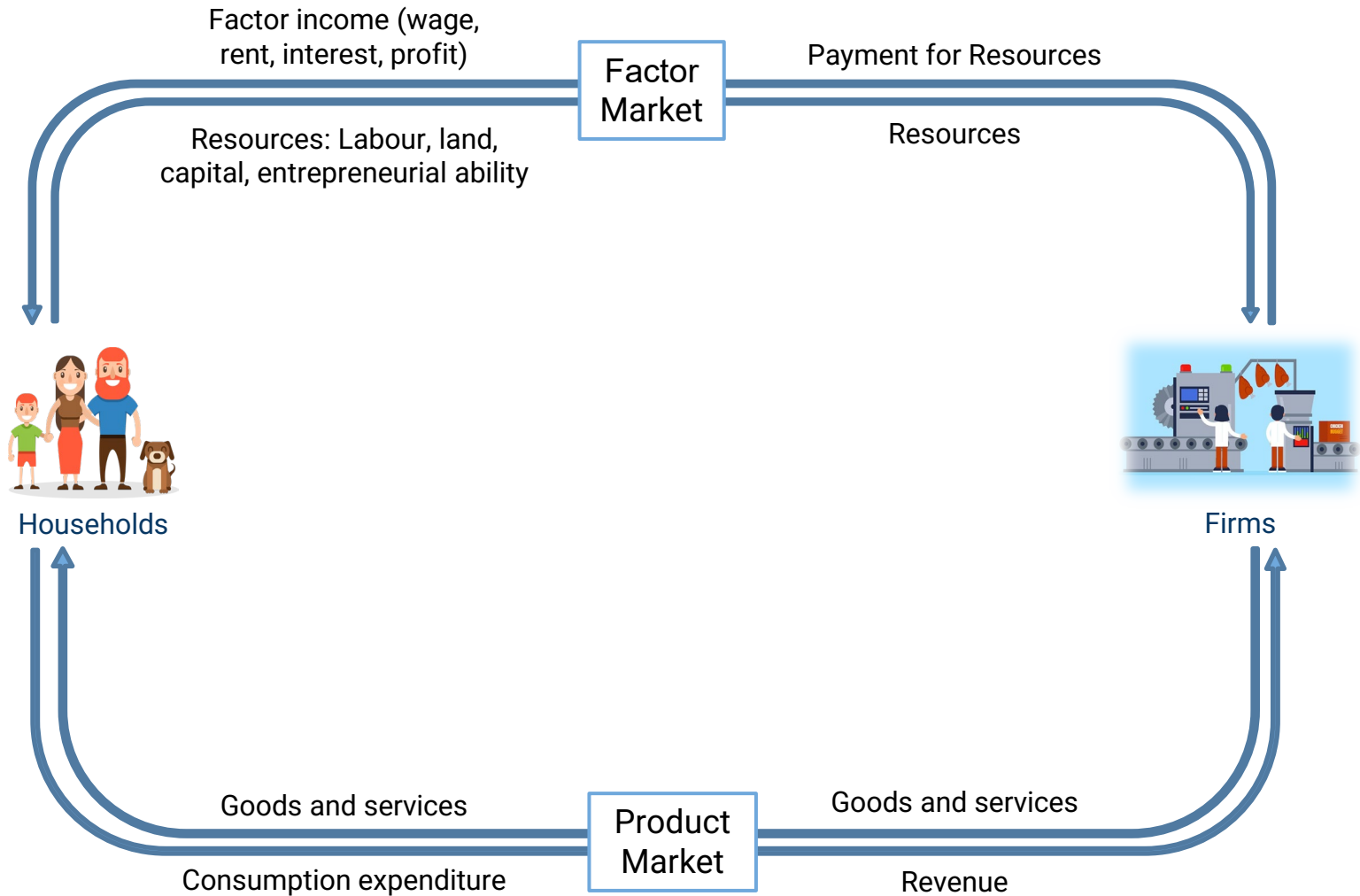
National Economy in a Nutshell

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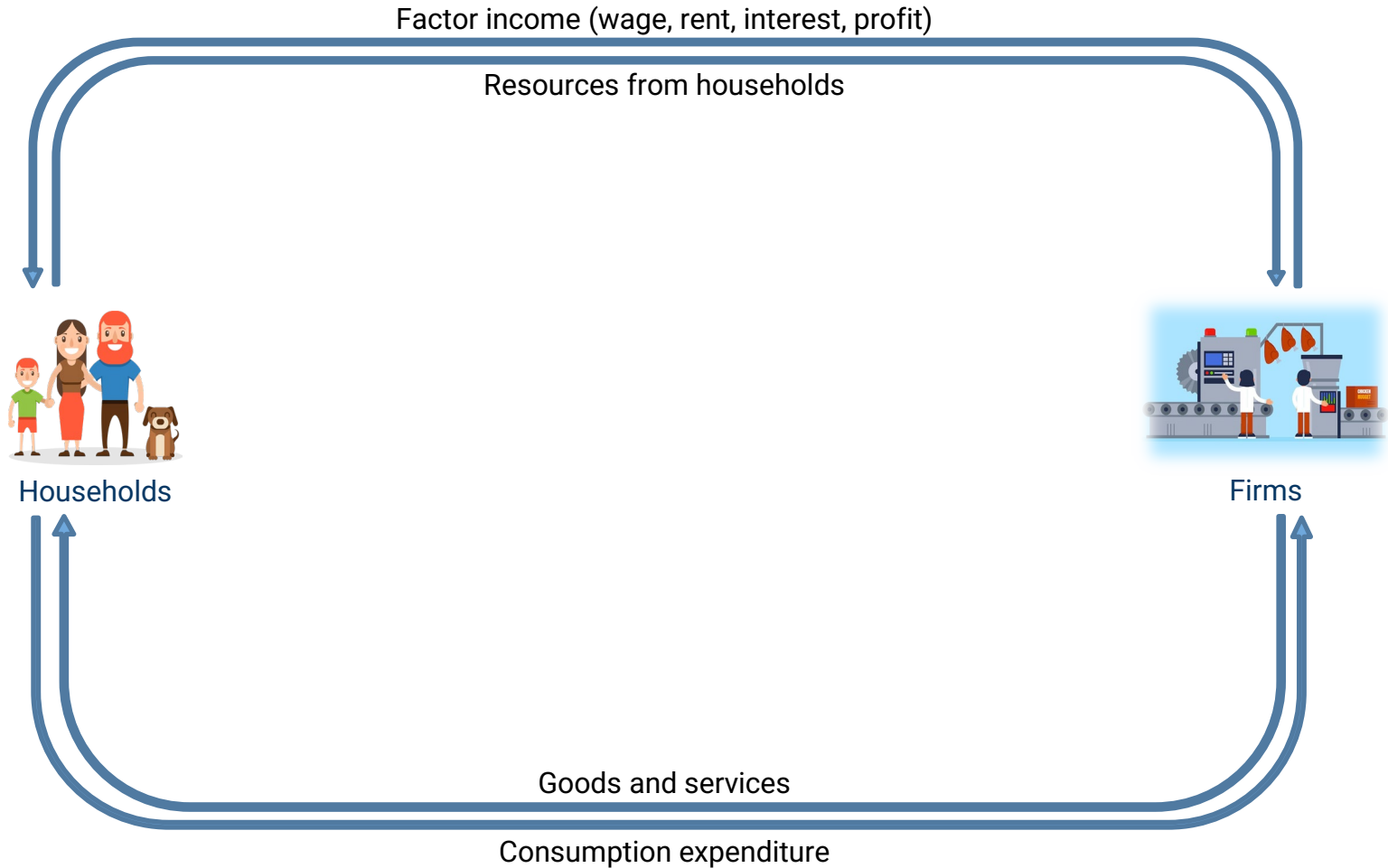




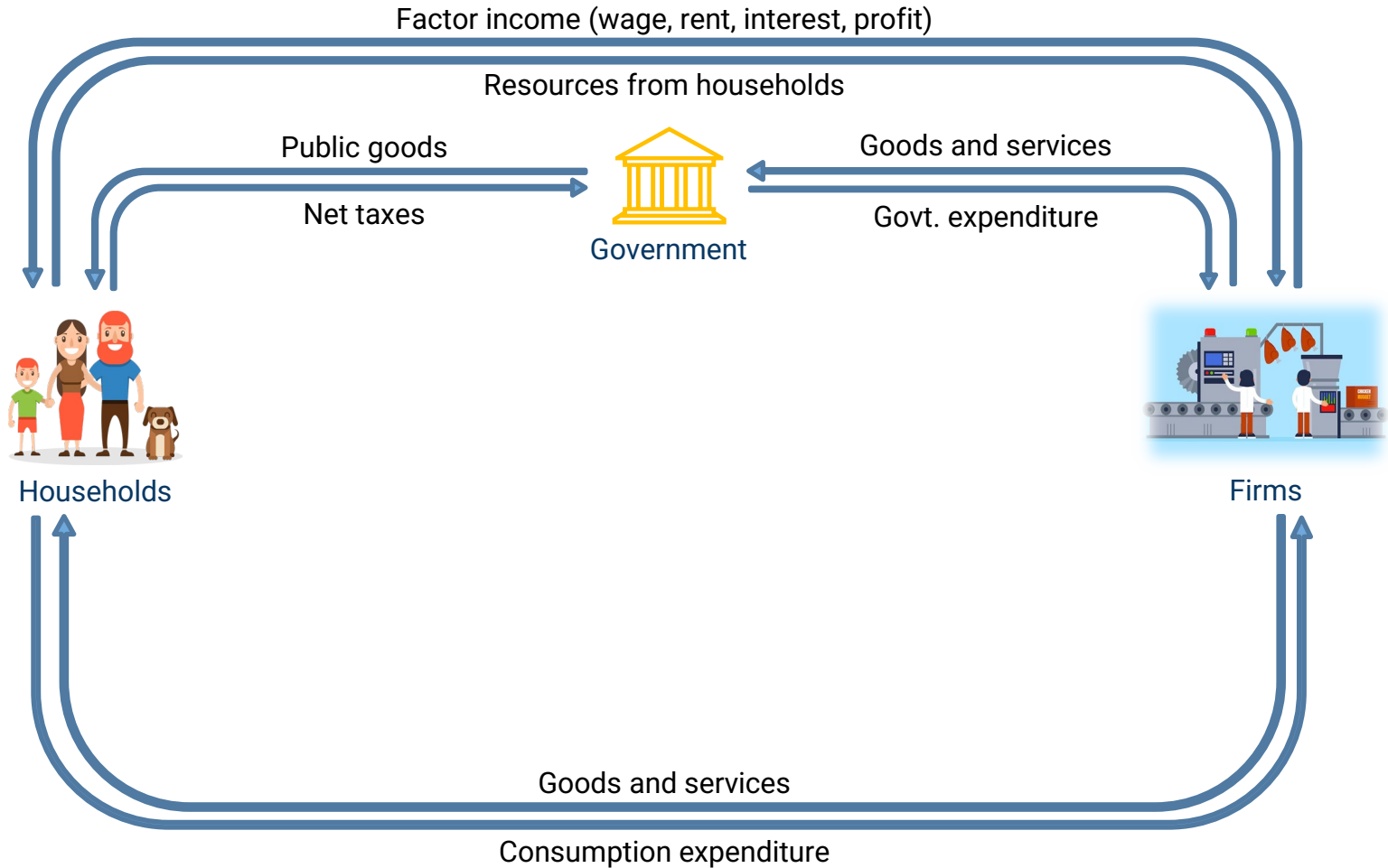
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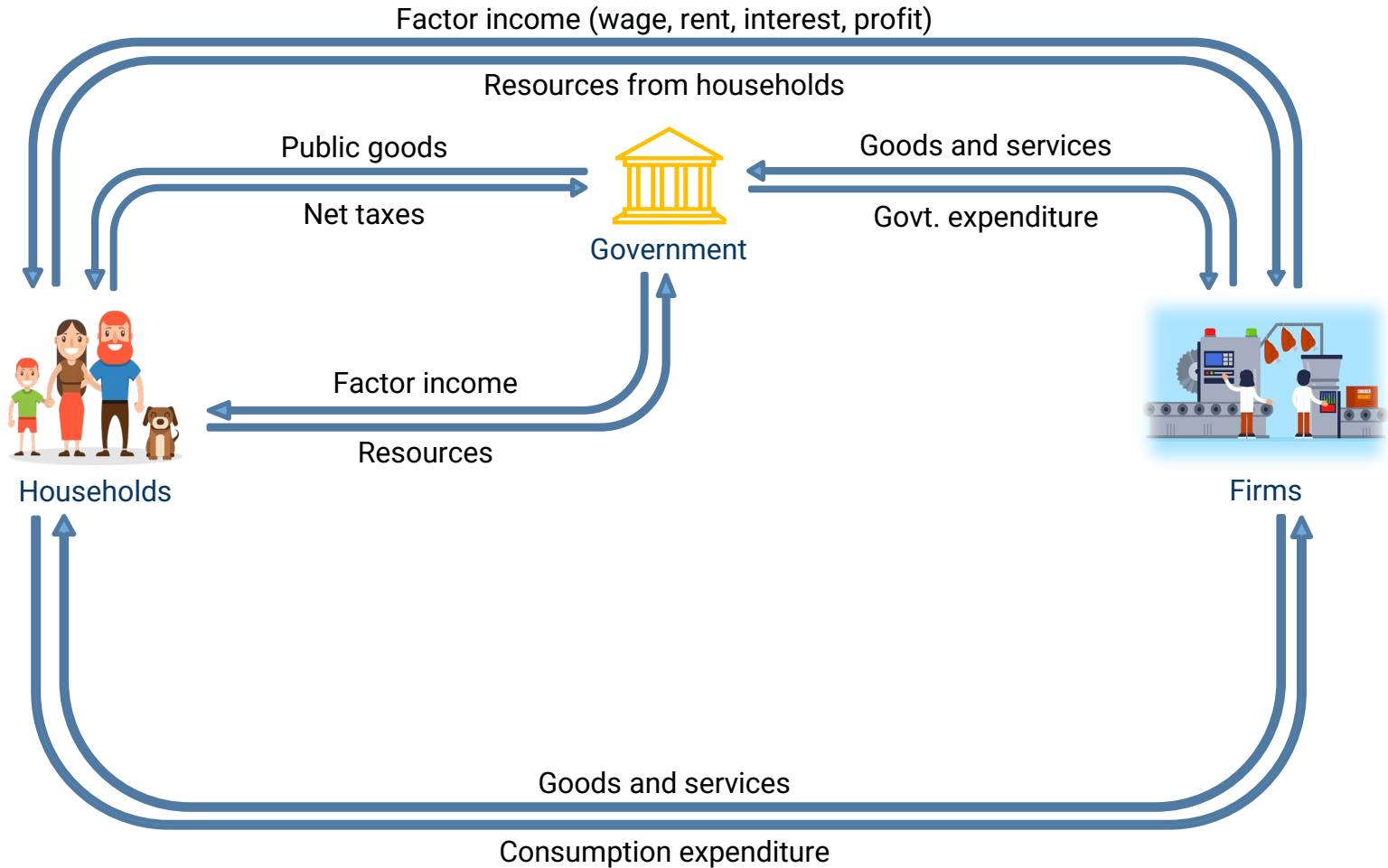
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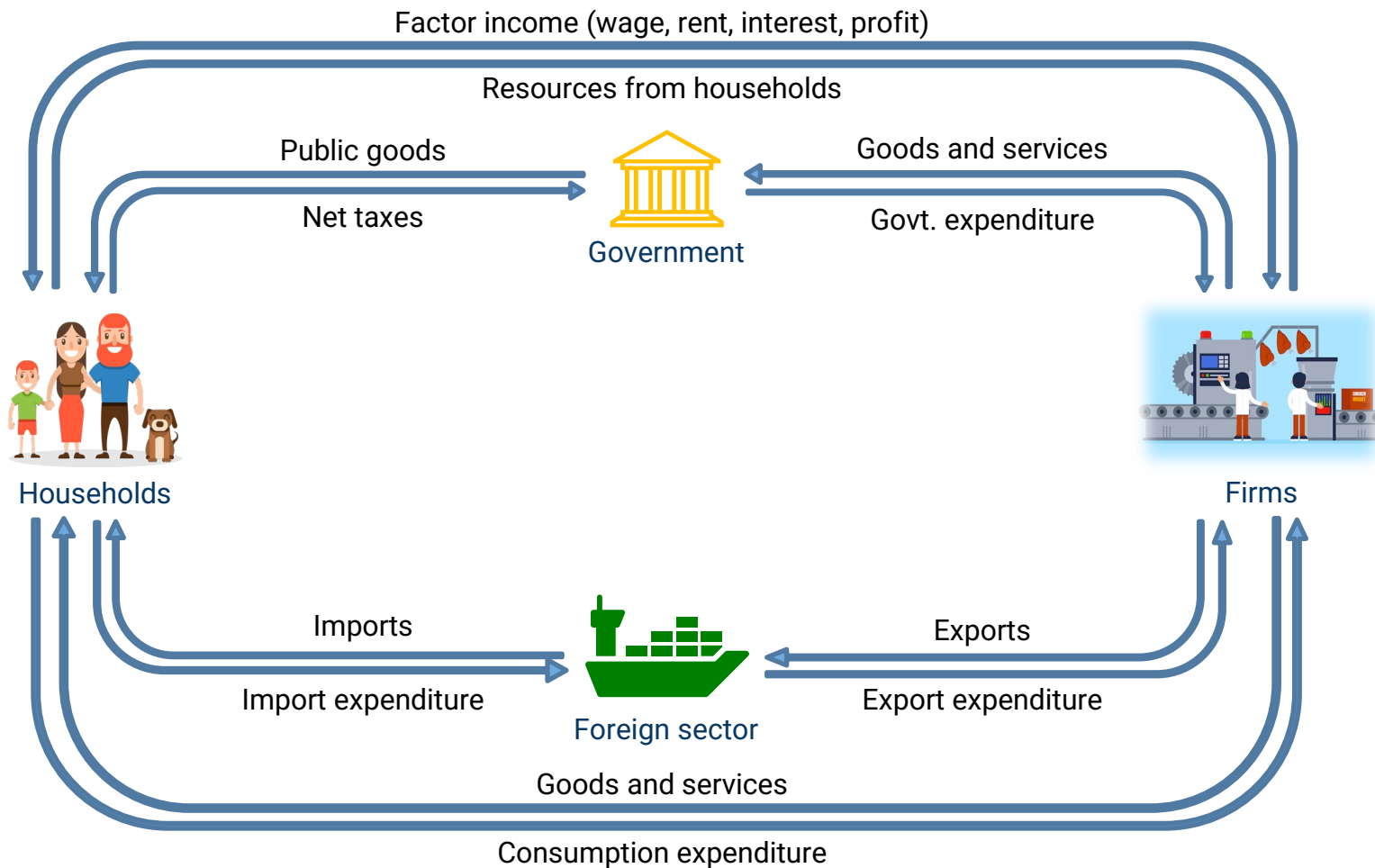
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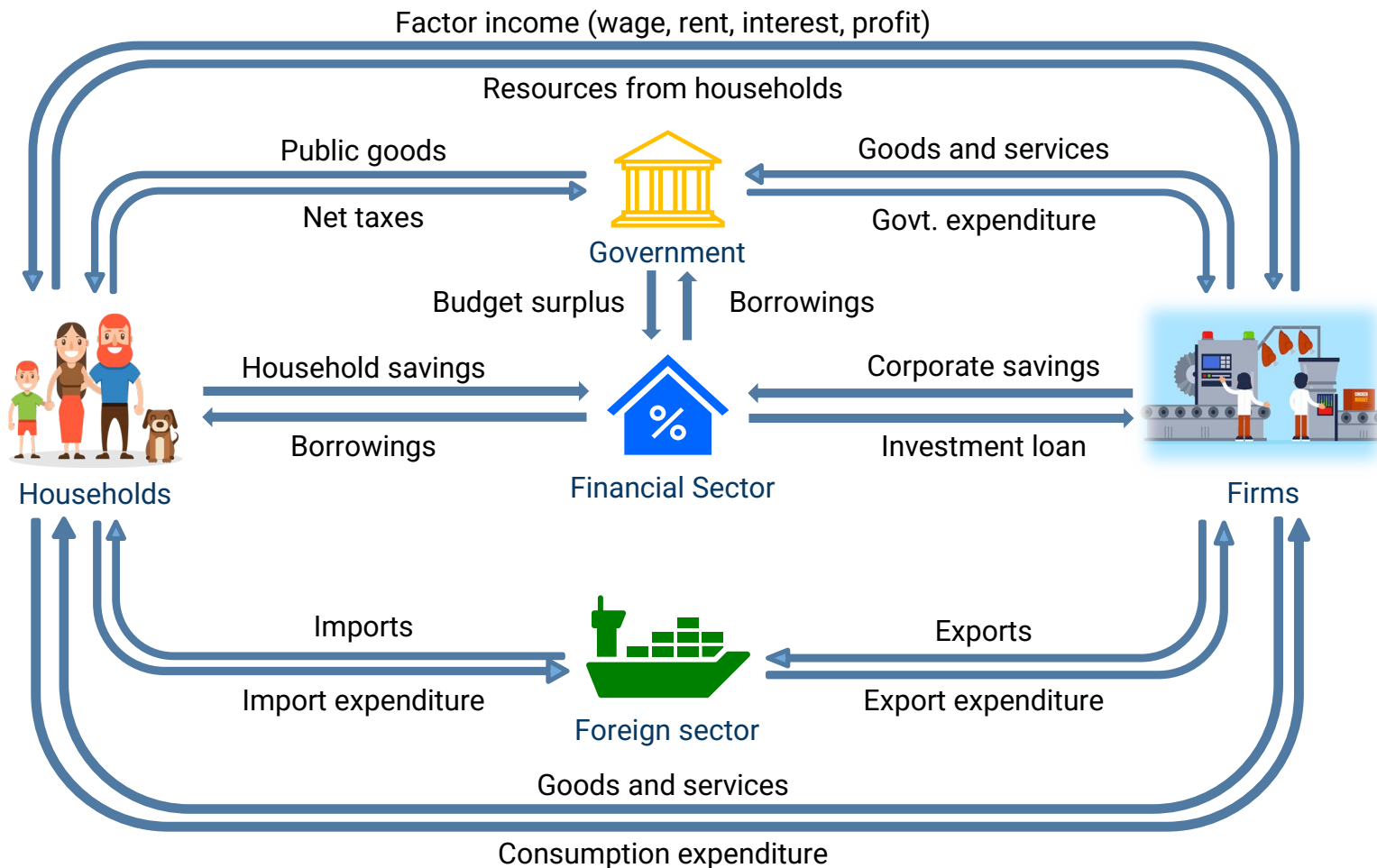


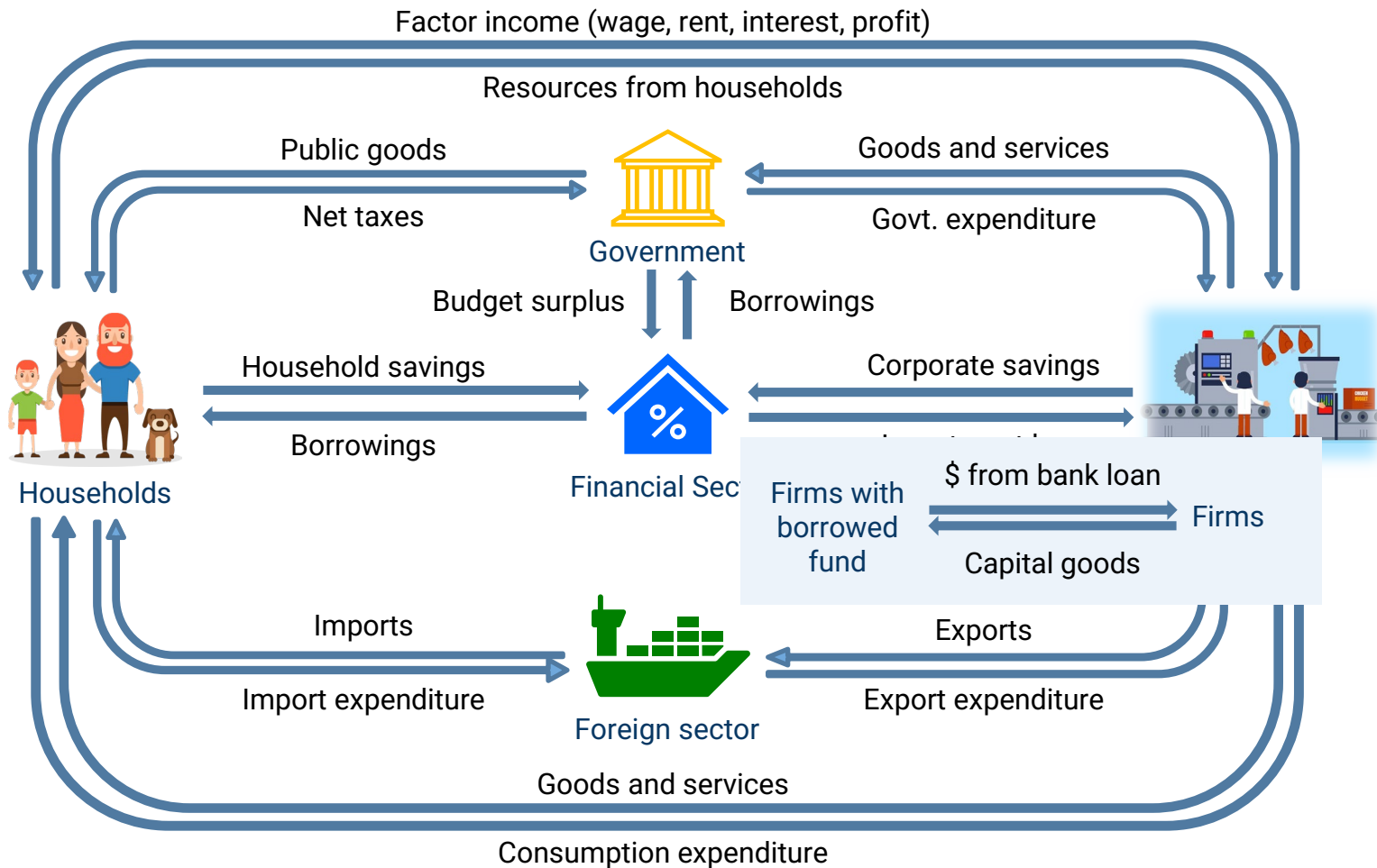
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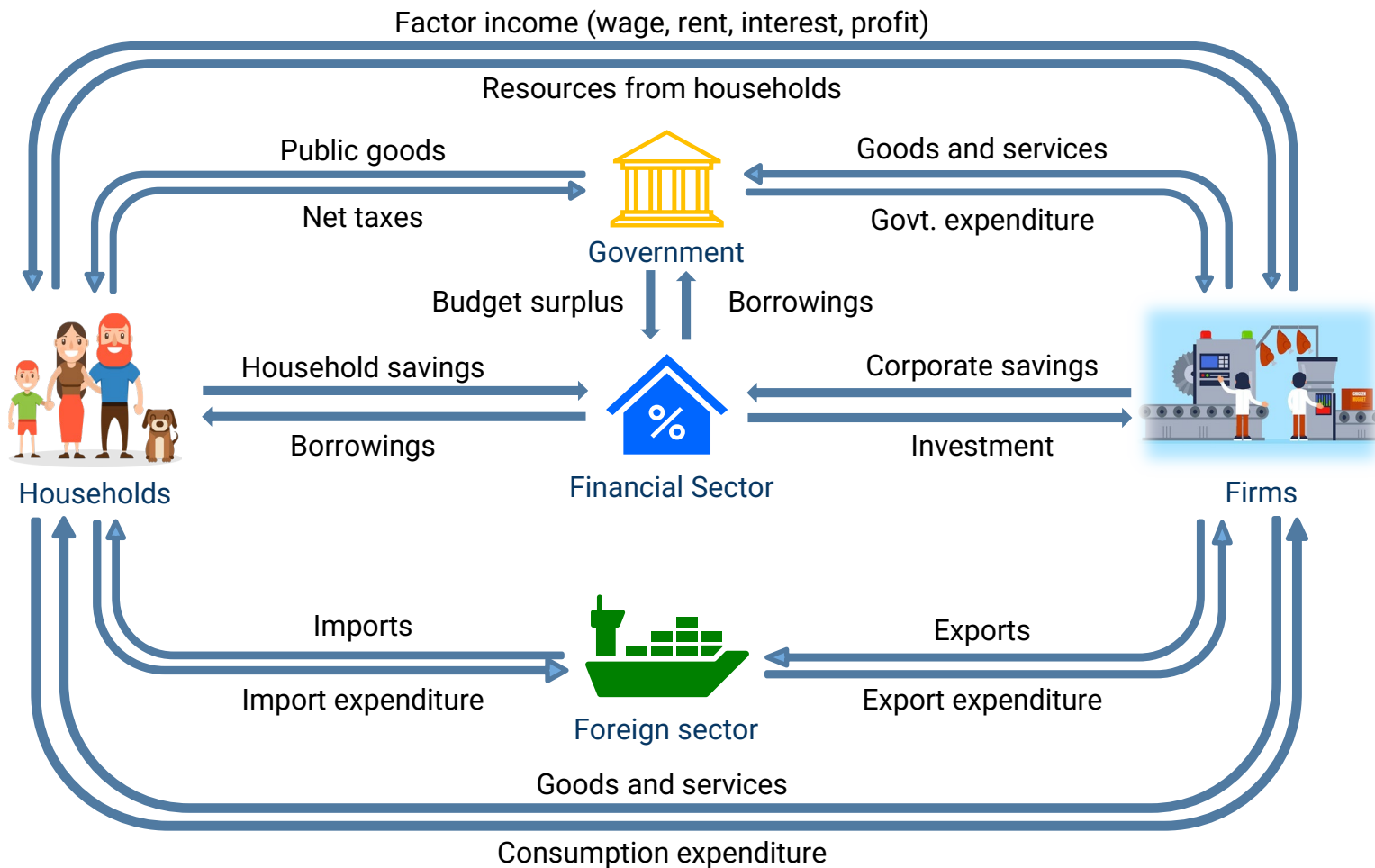


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***Macroeconomics is the study of the
performance of national economy
as well as the
policies used to improve that
performance***

Lecture Outline

- ▶ Major macroeconomic issues
- ▶ Long run economic growth versus short run economic fluctuation
- ▶ Promoting long run economic growth
- ▶ Managing short run economic fluctuation



Major Macroeconomic Issues

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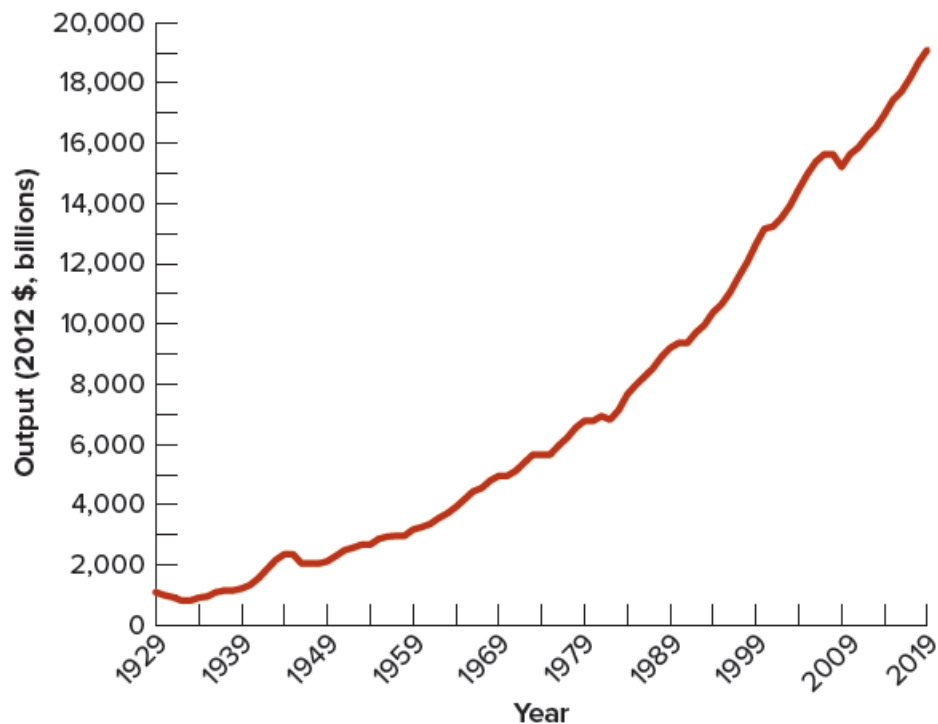


Say you were the
Chief Economist
of Singapore,
what would be
your top priorities
and concerns?

#1 Issue: Economic Growth and Living Standards

- ▶ Economic growth
 - ▶ aka “growth of the economy”
 - ▶ More specifically: “growth of the **output** of the economy”
 - ▶ Even more specifically: “growth of the quantity and quality of the **goods and services** the economy produces”
 - ▶ **More** output ▶ ▶ people have access to **more** goods and services that make their lives easier, healthier, safer, and more enjoyable
 - ▶ Higher **standard of living**

Output of the U.S. Economy, 1929-2019

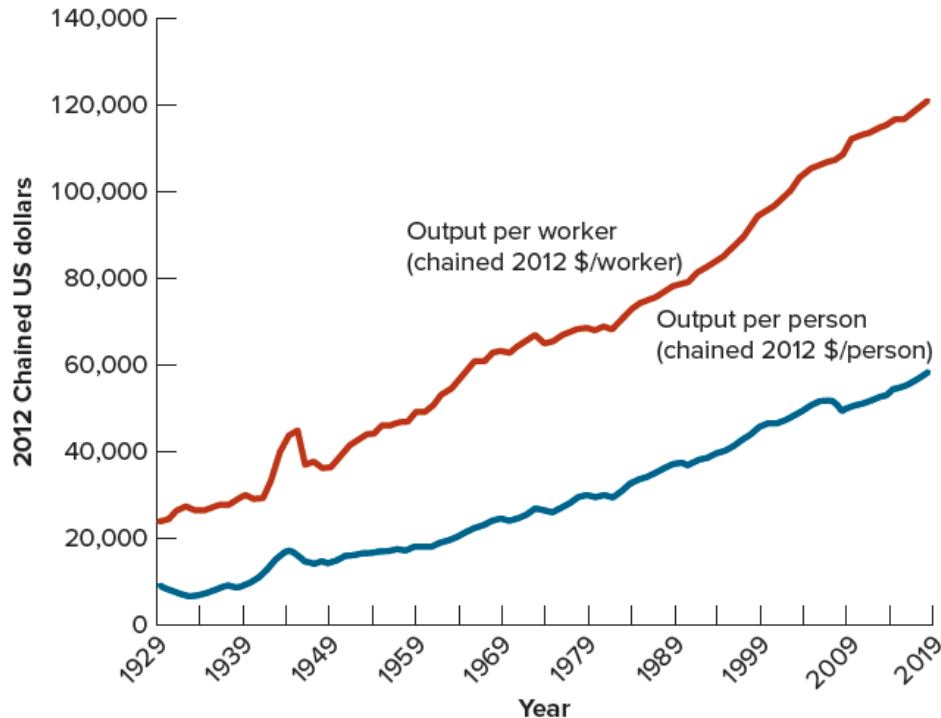


In 2019 output of the U.S. economy was:

- 16 times the 1929 level
- 4 times the 1965 level

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Output per Person and per Worker in the U.S. Economy, 1929-2019



In 2019:

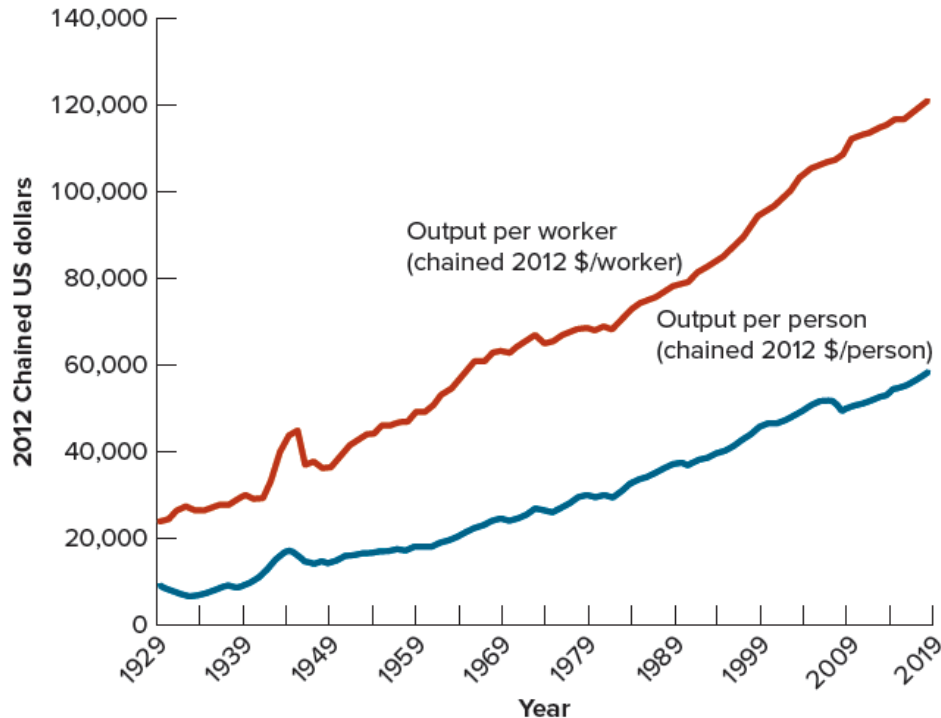
Output per person was more than 6 times the 1929 level

#2 Issue: Productivity

- ▶ Average labour productivity
= output per worker
$$= \frac{\textit{Total output}}{\textit{Number of people employed}}$$

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Output per Person and per Worker in the U.S. Economy, 1929-2019



In 2019:

Output per worker was more than 5 times the 1929 level

#2 Issue: Productivity

- ▶ Why is productivity important?
 - ▶ Let Y = output, POP = population, N = number of people employed
 - ▶
$$\frac{Y}{POP} = \frac{Y}{N} \times \frac{N}{POP}$$
 - ▶ Output per person = Avg labour productivity x Share of population employed
 - ▶ Consumption per person depends on
 - How much each worker produces and
 - The share of people working

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#3 Issue: Recessions and Expansions

- ▶ Economies experience periods of slower growth (**recessions**) and more rapid growth (**expansions**)
- ▶ Causes of these short-term economic fluctuations?
- ▶ What government policies can be used to moderate these fluctuations?

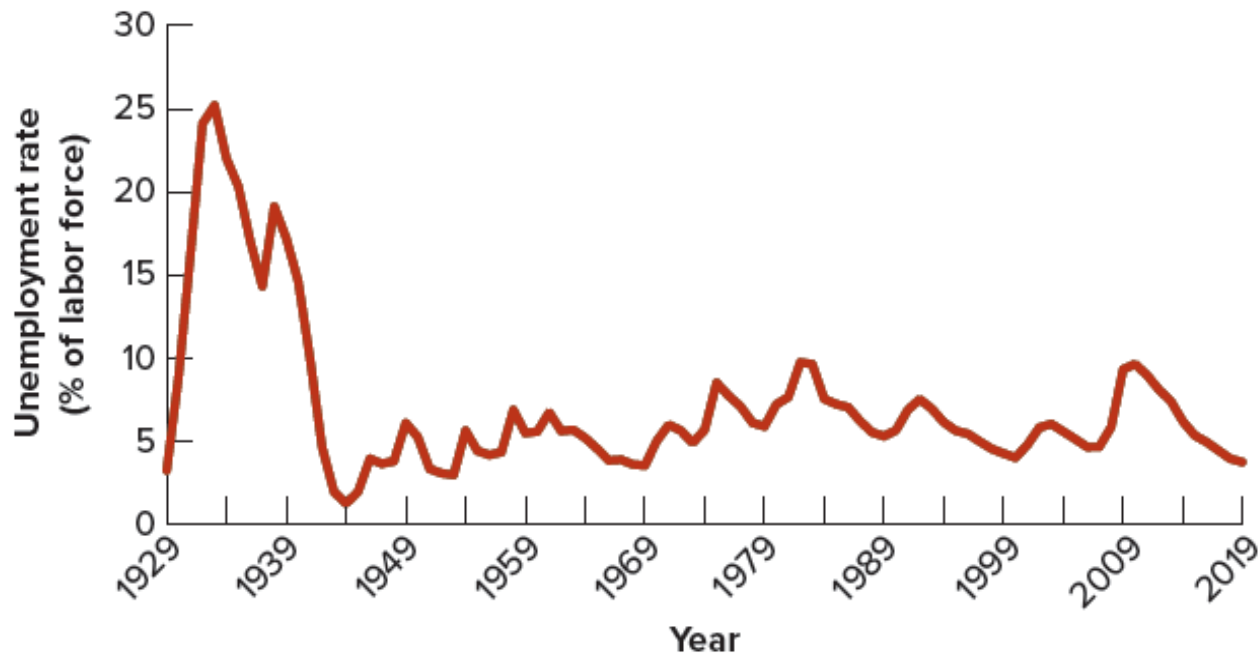
#4 Issue: Unemployment



- ▶ Unemployment
 - ▶ Would like to work but can't find work
- ▶ Unemployment rate
 - ▶ Always greater than 0
 - ▶ Rises during economic downturns
 - ▶ Causes of unemployment?
 - ▶ Why do unemployment rates differ across countries?

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The U.S. Unemploy- ment Rate, 1929- 2019



Unemployment rate: % of the labor force that is out of work

#5 Issue: Inflation

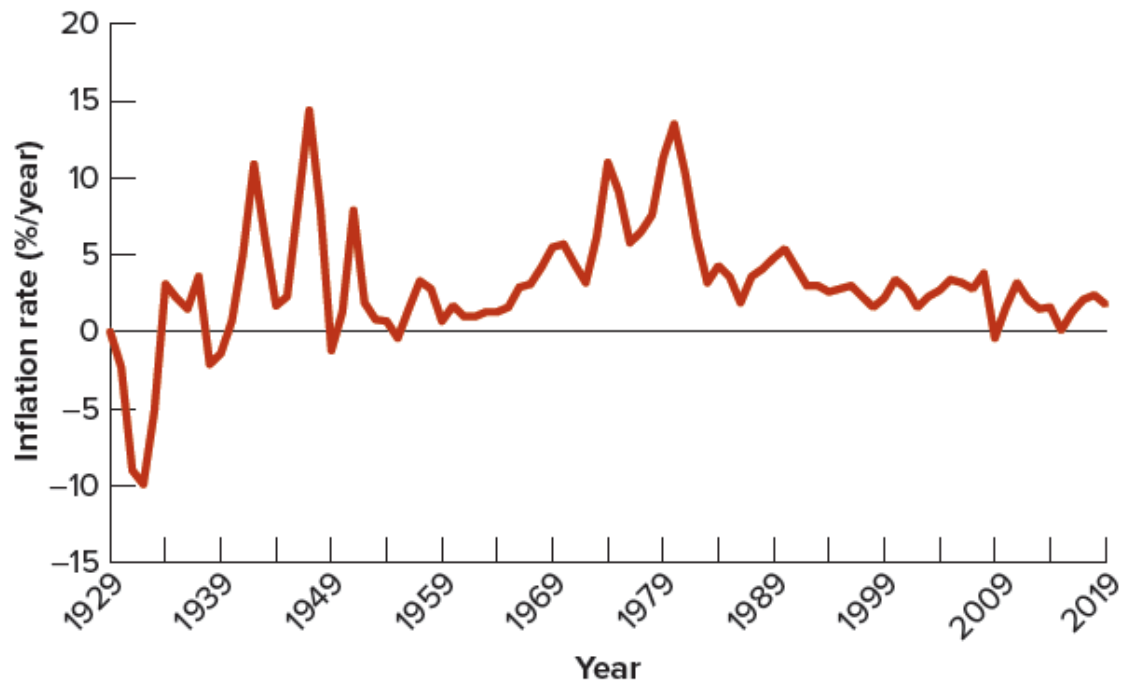


► Inflation

- Rate of increase of prices in general
- High inflation erodes purchasing power
- Causes for inflation?

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The U.S. Inflation Rate, 1929-2019



Inflation: prices in general are increasing over time

Varies over time -- high in the '70s and low in the '90's and today

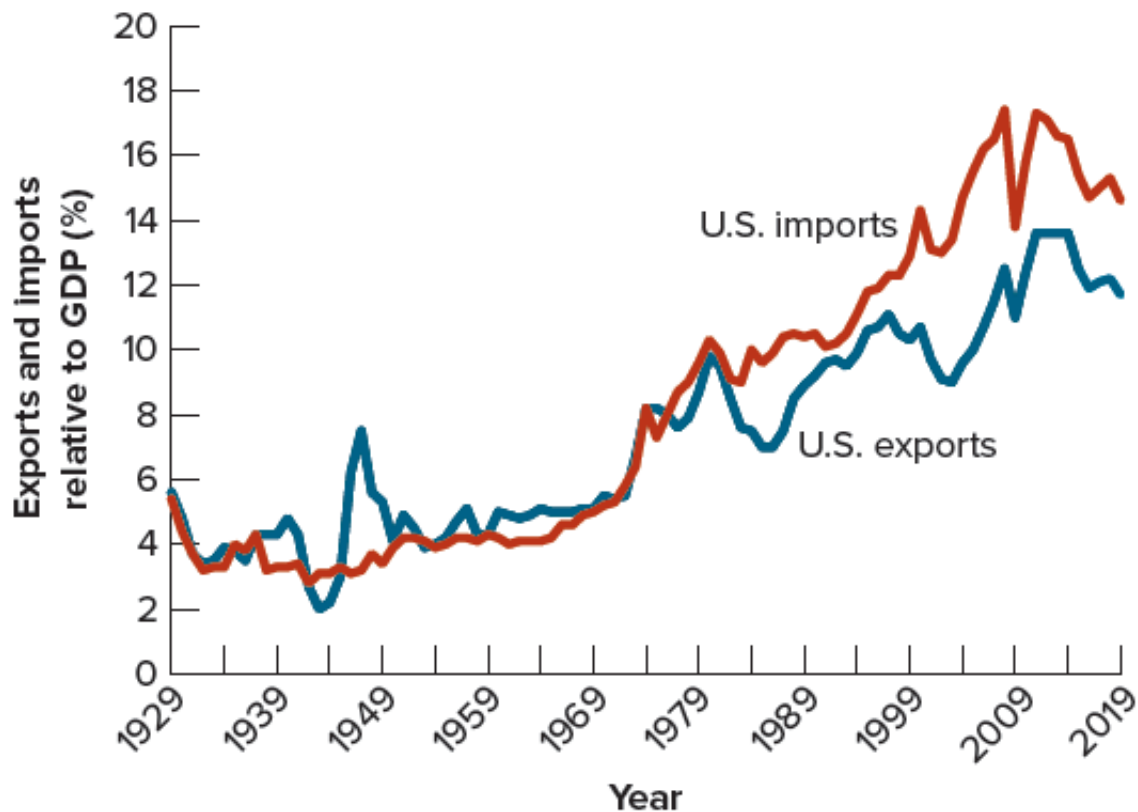
Varies between countries -- in 1990s 3% in U.S. & 400% in Ukraine

#6 Issue: Economic inter- dependence among nations

- ▶ International trade and finance
 - ▶ International trade create political and economic issues:
 - Impact of trade on jobs
 - Trade imbalances
 - When exports and imports differ significantly
 - Trade deficit: $\text{exports} < \text{imports}$
 - Trade surplus: $\text{exports} > \text{imports}$
 - Export bans at times of domestic shortages

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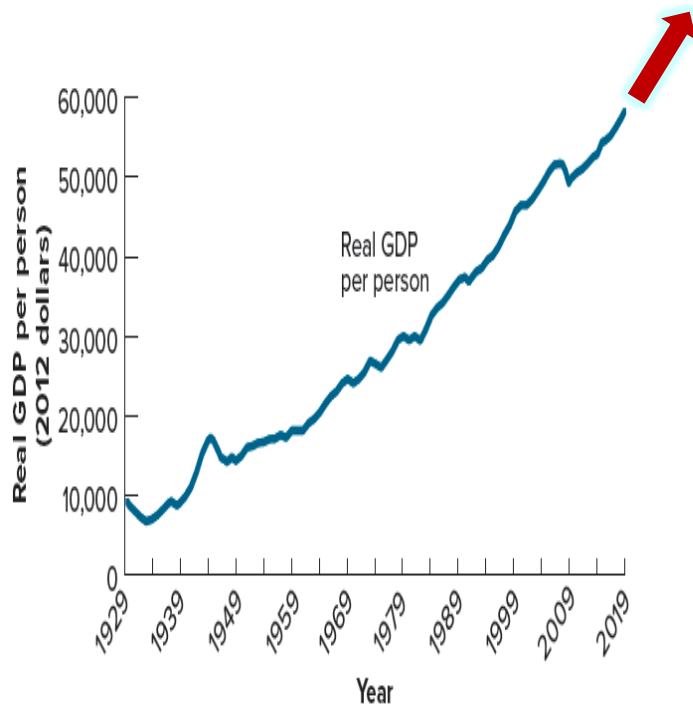
Exports and Imports as a Share of U.S. Output, 1929-2019



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Long Run Economic Growth versus Short Run Economic Fluctuation

Long Run Economic Growth

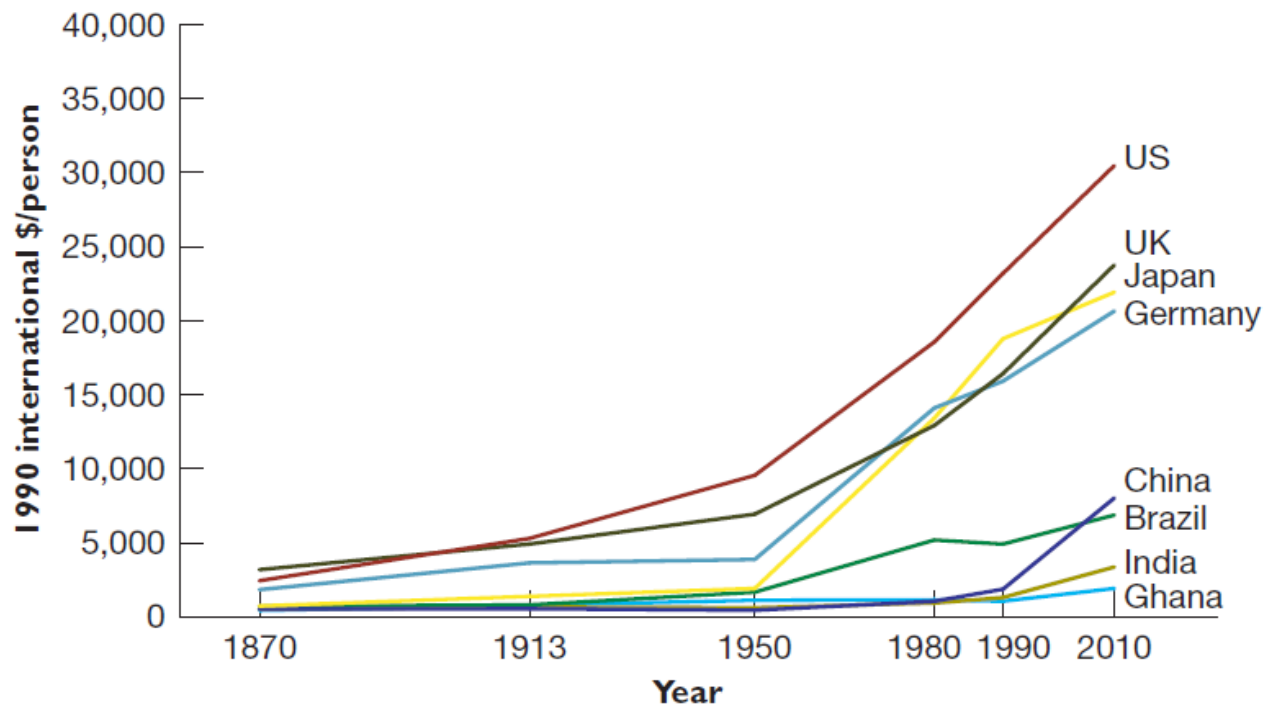


Real GDP per person in the U.S., 1929-2019

- ▶ How can we continue to grow?
- ▶ How can we grow faster?
- ▶ Are we able to overtake the more developed countries in terms of GDP per person?

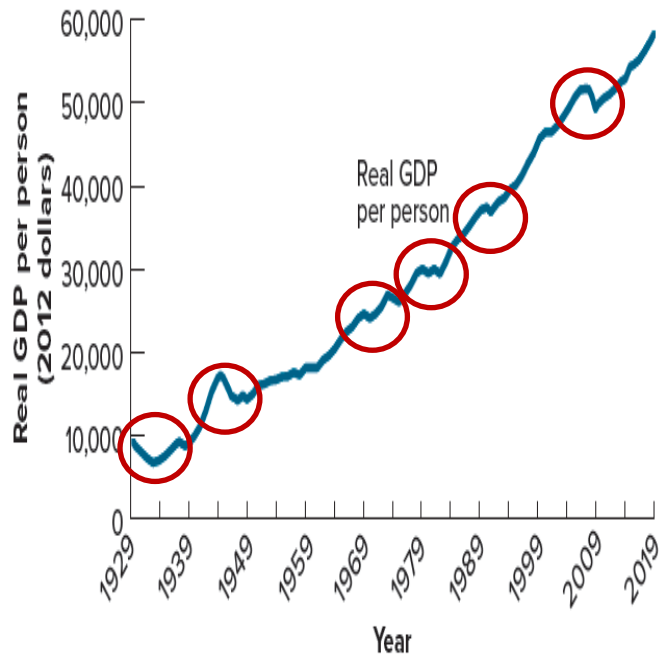
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Real GDP per Person, 1870-2010 (in U.S. Dollars)



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Short Run Economic Fluctuation

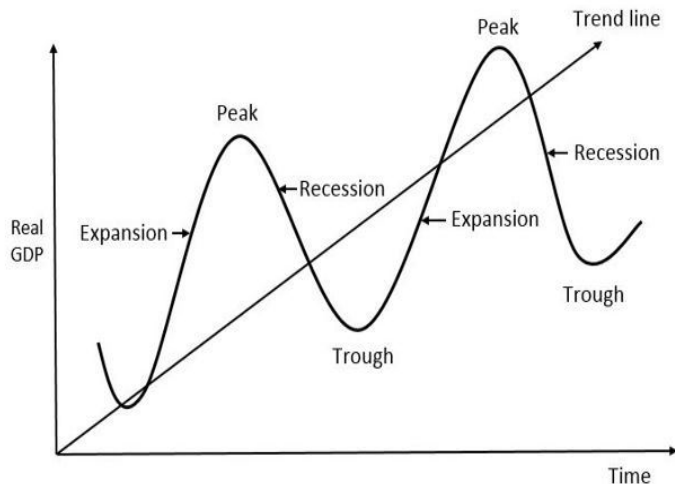


Real GDP per person in the
U.S., 1929-2019

- ▶ Economy does not grow in a straight line
- ▶ Cyclical ups and downs
 - ▶ Recessions and expansions
- ▶ Recessions and expansions are irregular in their length and severity

4 Phases for Business Cycle

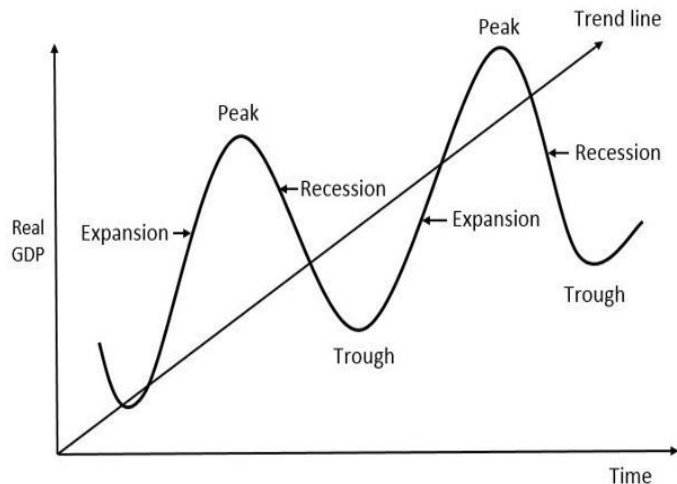
Graph 1



- ▶ A **peak** is the beginning of a recession
 - ▶ High point of the business cycle
- ▶ A **trough** is the end of a recession
 - ▶ Low point of the business cycle
- ▶ An **expansion** is a period in which the economy is growing at a rate significantly above normal
- ▶ A **boom** is a strong and long-lasting expansion

4 Phases for Business Cycle

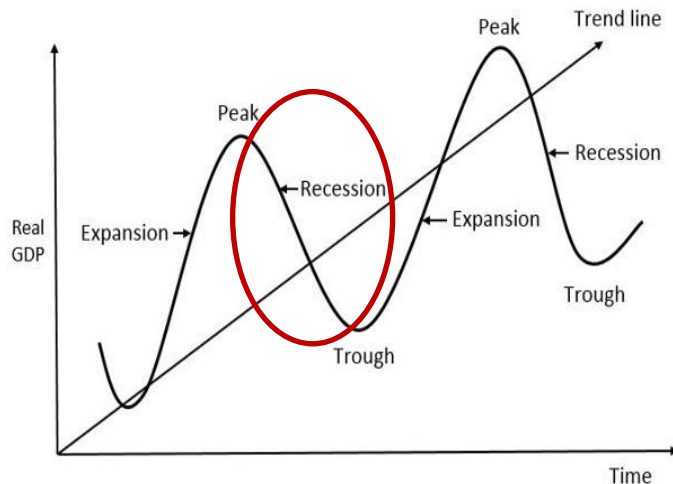
Graph 1



- ▶ A **recession** (or contraction) is a period in which the economy is growing at a rate significantly below normal
 - ▶ A period during which real GDP falls for two or more consecutive quarters
 - ▶ A period during which real GDP growth is well below normal, even if not negative
- ▶ A **depression** is a particularly severe recession

During a Recession

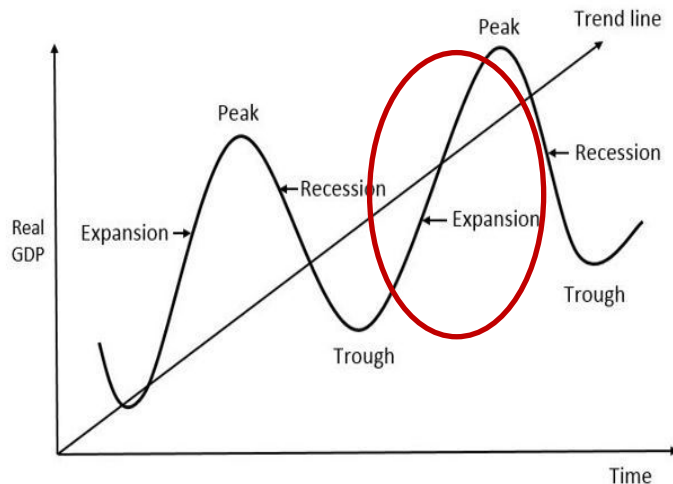
Graph 1



- ▶ Decrease in economic activities; reduced output
- ▶ Increase in cyclical **unemployment**
- ▶ Fall in asset prices; inflation generally decreases
- ▶ Macroeconomic policies to shorten and reduce the severity of recession

During an Expansion

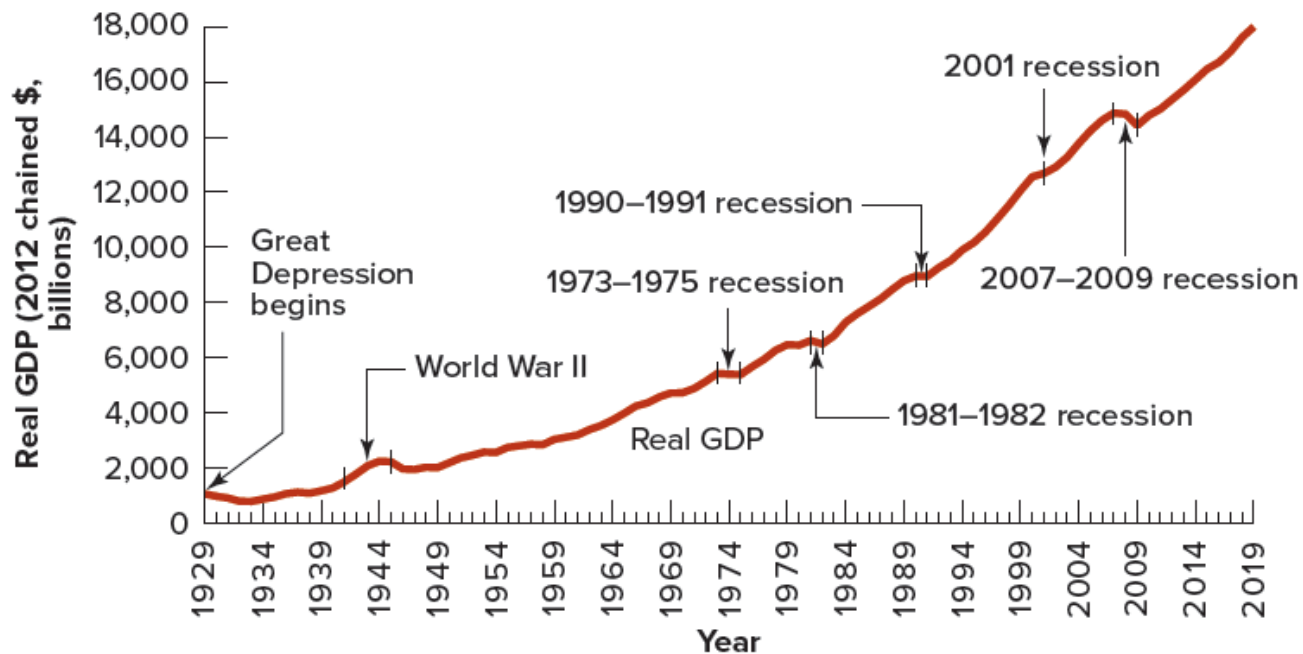
Graph 1



- ▶ Increase in economic activities; increase in demand for final output and resources
- ▶ Increase in **inflation**
- ▶ Macroeconomic policies to prevent overheating of economy to avoid increase in inflation

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Fluctuations in US Real GDP, 1929- 2019





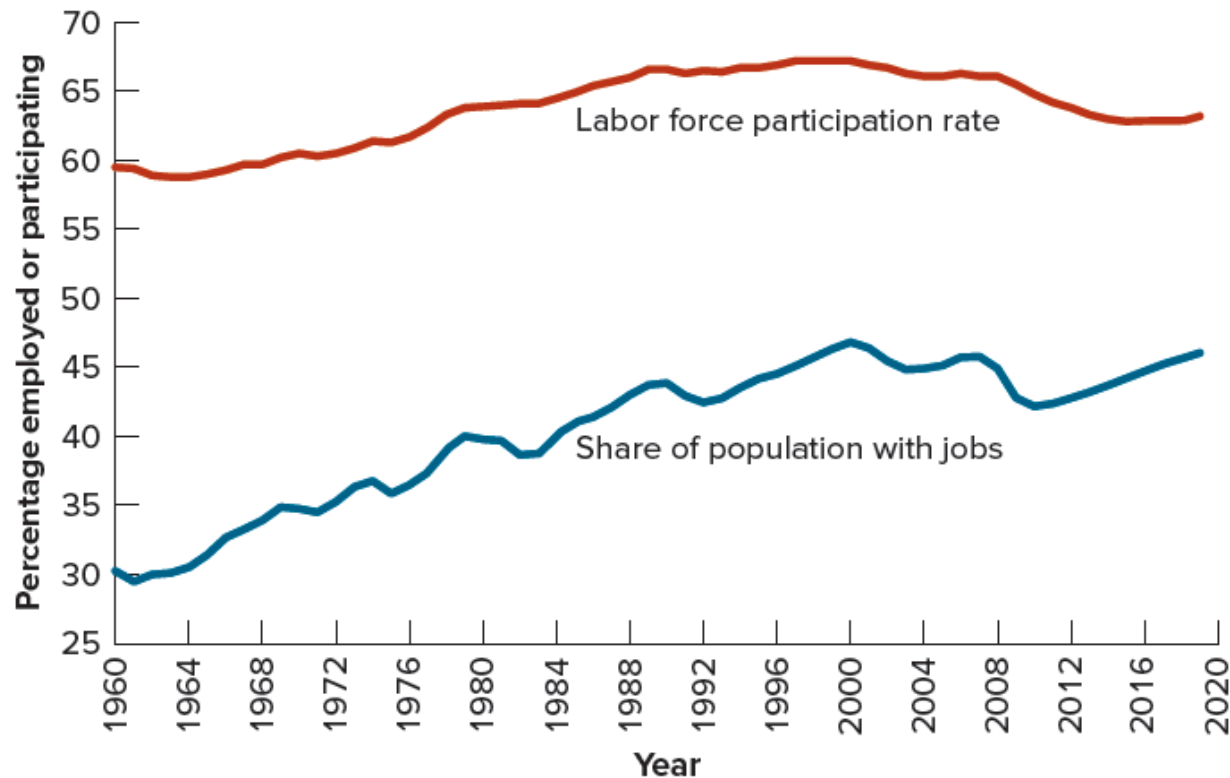
Promoting Long Run Economic Growth

Factors Contributing to Long Run Economic Growth

- ▶ $\frac{Y}{POP} = \frac{Y}{N} \times \frac{N}{POP}$
 - ▶ $\frac{Y}{POP}$ = Output per person
 - ▶ $\frac{Y}{N}$ = Average labour productivity
 - ▶ $\frac{N}{POP}$ = Share of population employed
- ▶ Growth rate of output per person ($\frac{Y}{POP}$) is equal to growth rate of labour productivity ($\frac{Y}{N}$) *plus* growth rate of share of population employed ($\frac{N}{POP}$)

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U.S. Population Employed and Labor Force Participation Rate, 1960- 2019



*In the long run,
increases in output per person
and hence living standards
arise primarily from increases
in average labour productivity*

Determinants of Average Labour Productivity

Human capital

comprises talents, education, training, and skills of workers

Physical capital

includes equipment, tools, machines, factories, vehicles

Land & other natural resources

Land for farming, petroleum, natural gas, metals, timber

Technology

improves productivity of workers and efficiency of physical capital, e.g. information and communications technologies

Entrepreneurship and management

Entrepreneurs create new economic enterprises that are essential to a dynamic, healthy, growing economy

Political and legal environment

Political stability and well-defined property rights encourage people to be economically productive and promote free and open exchange of ideas

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Promoting Economic Growth

Human capital

- ▶ Subsidise education
- ▶ Subsidise training programs

Physical capital

- ▶ Tax incentives for investment
- ▶ Direct investment in infrastructure development

Land & other natural resources

- ▶ Legal framework to ensure efficient and sustainable utilization of natural resources

Technology

- ▶ Tax incentives and/or direct investment

Entrepreneurship and management

- ▶ Tax incentives
- ▶ Mentorship programme for startups

Political and legal environment

- ▶ Maintain political and legal framework to support growth

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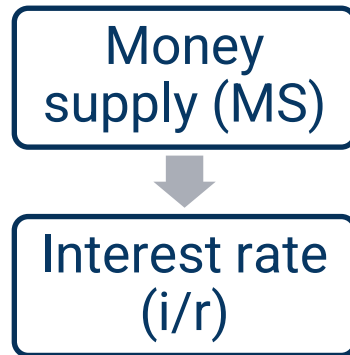
Managing Short Run Economic Fluctuation

Fiscal Policy

- ▶ Ministry of Finance
- ▶ Government expenditures (G)
- ▶ Government revenue (T)

Monetary Policy

- ▶ Central Bank

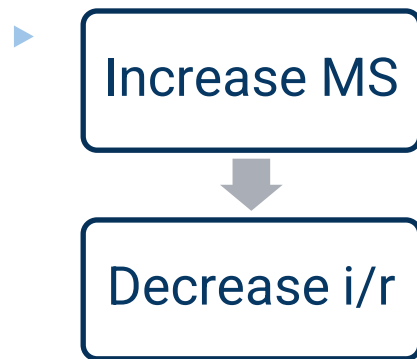


Recession ▶ ▶ Expansionary Policies

Fiscal Policy

- ▶ Increase G
- ▶ Decrease T

Monetary Policy

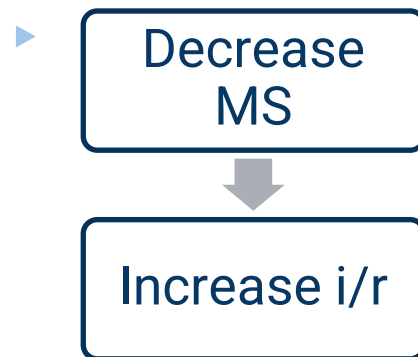


Inflation >> Contractionary Policies

Fiscal Policy

- ▶ Decrease G
- ▶ Increase T

Monetary Policy



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HE1002: Course Design



A close-up photograph of a hand holding a blue pen, poised to write on a piece of paper. The hand is wearing a grey, textured sweater. The background is blurred, showing more of the paper and the hand.

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THANKS!

Any questions?

You can find me at

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