Course: Foundations of Economics
Lecture 6: Unemployment

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Goal
JOB
SEARCH
TOGETHER
QUALIFICATION
RESUME
Strategy
Ideas
Brainstor

Learning goals

- Defining unemployment
- Types of unemployment
- Measuring unemployment rate
- Limitations of unemployment rate
- Unemployment rate and Inflation

The meaning of ‘unemployment’

Definition of unemployed:

*Those of **working age** who are **without work**, but **who are available and willing to work** at current wage rates.*

Types of Unemployment I

Seasonal unemployment

- When industries slow or shut down for a season of the year to make seasonal shifts in production schedules and people lose their jobs
- Examples: When people who sell Halloween costumes or Christmas trees are out of a job because the holiday has passed

Types of Unemployment II

Frictional unemployment

- Due to normal turnover in the labor market
- People who are temporarily between jobs
  - Moving or changing occupations
  - Unemployed for similar reasons
- Critical point is that it is short term unemployment

Types of Unemployment III

Structural unemployment

When workers skills are not match for jobs available in the economy

- Causes:
  - Workers displaced by automation
  - New technologies
  - Shift to foreign markets
  - Lack of education
- Key feature: Prolonged periods of unemployment

Types of Unemployment IV

Cyclical unemployment

- Portion of unemployment that is attributable to a decline in the economy's total production
- Rises during recessions, and falls during expansions

Examples: COVID lockdown caused people to save more and spend less, businesses had to shutdown

Counting the Unemployed

Employed
- Everyone currently at work, including part time workers

Unemployed
- People not currently working
  - Temporarily laid-off, expected to return
  - Actively looking for a job in last 4 weeks

Out of the labor force
- Nor looking for work

Measuring unemployment

Unemployment rate

- Number of unemployed people as a percentage of the labor force

$$\text{Unemployment rate} = \frac{\text{Unemployed}}{\text{Labour Force}}$$

Labor force = Employed + Unemployed

Task

The number of employed people is 10 million, while 2 million people are unemployed.

What is the unemployment rate?

Solution

The number of employed people was 10 million, while 2 million people were unemployed. What was the unemployment rate?

$$\frac{2}{10 + 2} \times 100\% = 16.7\%$$

Why reducing Unemployment is a key macroeconomic goal?

There are economics and human costs of high unemployment rate:

Economic: the economy does not reach its output potential due to idle labor

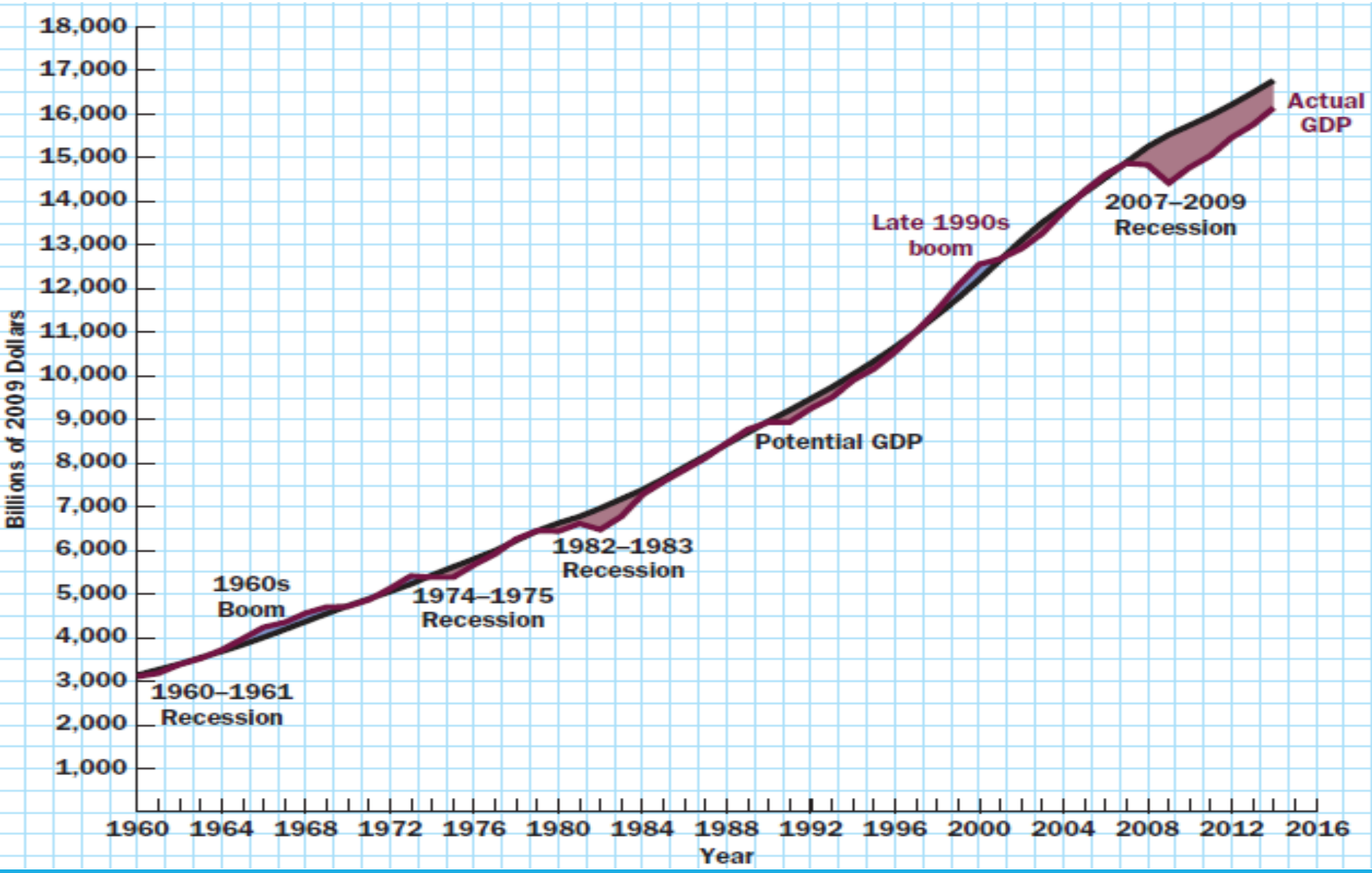
Human: unemployment bears social and psychological costs

The Economic Costs of High Unemployment

Year	Civilian Unemployment Rate	Capacity Utilization Rate	Real GDP Lost Due to Idle Resources
1958	6.8%	75.0%	4.8%
1961	6.7	77.3	4.1
1975	8.5	73.4	5.4
1982	9.7	71.3	8.1
1992	7.5	79.4	2.6
2003	6.0	73.4	2.2
2009	9.3	70.0	7.6
2010	9.6	74.3	6.5

Source: Baumol & Blinder MACROECONOMICS (11th ed), page 111. 2009 Cengage Learning, inc.

Actual and Potential GDP in U.S.



Source: Baumol & Blinder MACROECONOMICS (11th ed), page 112. 2009 Cengage Learning, inc.

Economic cost of Unemployment: GDP gap

Cumulative gap between actual and potential GDP

- From 2008 – 2014 (2009 prices) roughly $5.5 trillion
- About four months worth of production at 2014 levels

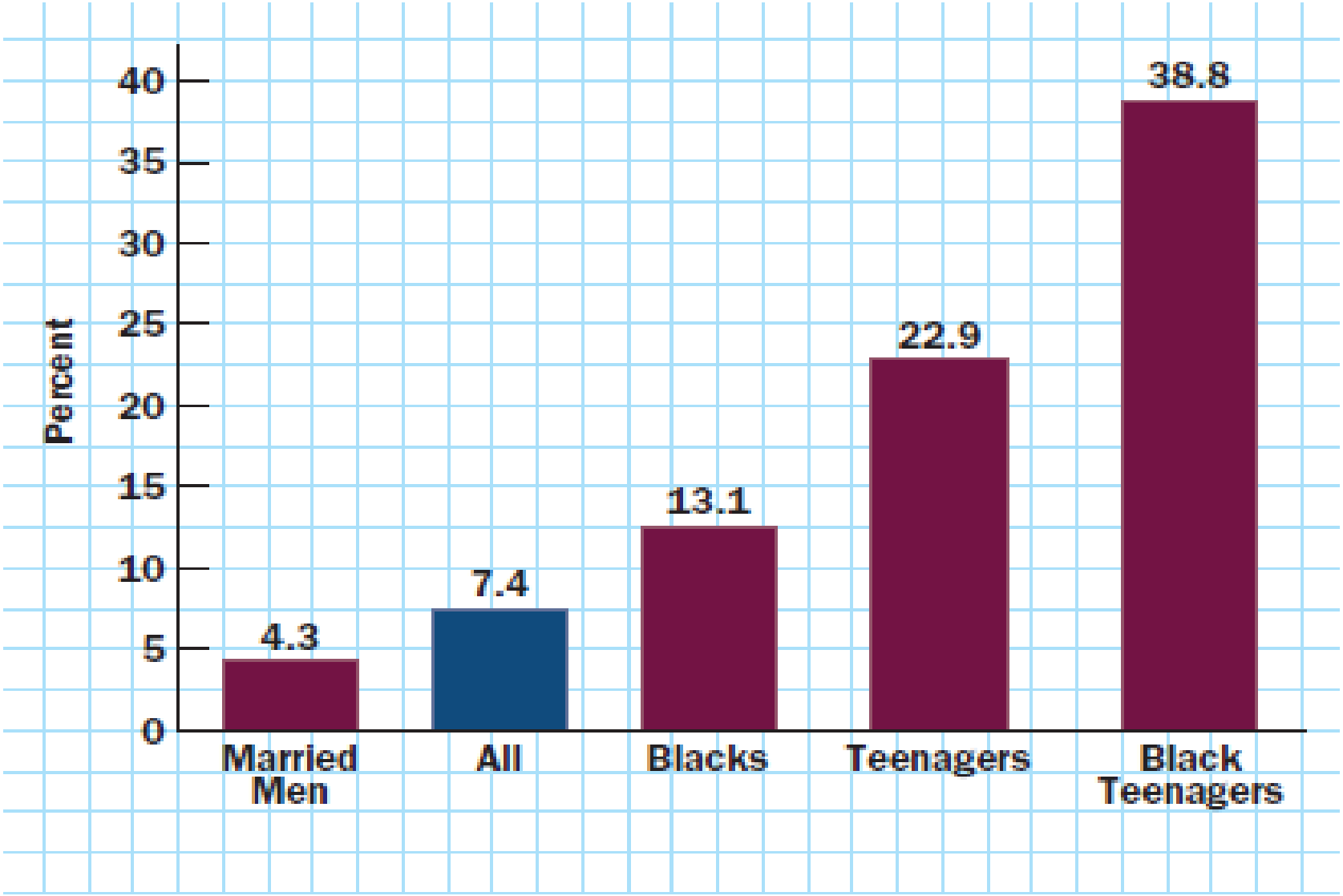
The Human Costs of High Unemployment

Human costs of high unemployment
- Income loss, hunger, cold, ill health psychological cost

Some help for the unemployed
- System of unemployment insurance
- Social welfare programs

Unemployment rates in US: different for different groups
- Lower for married men, whites, well-educated people
- Higher for teenagers, nonwhites, blue-collar workers

Unemployment Rates in US for Selected Groups, 2019



Source: Baumol & Blinder MACROECONOMICS (11th ed), page 112. 2009 Cengage Learning, inc.

The Human Costs of High Unemployment

Unemployment rates:

Country	2005	2012	2019
U.S.	4.6	9.3	3.7
Canada	5.5	7.3	5.6
France	9.5	9.1	9.4
Germany	10.4	7.8	3.5
Italy	6.9	7.9	10.5

Source: Author's compilation

Problems with Counting the Unemployed

Discouraged worker

- Unemployed person who gives up looking for work
- No longer counted as part of labor force

Disguised unemployment

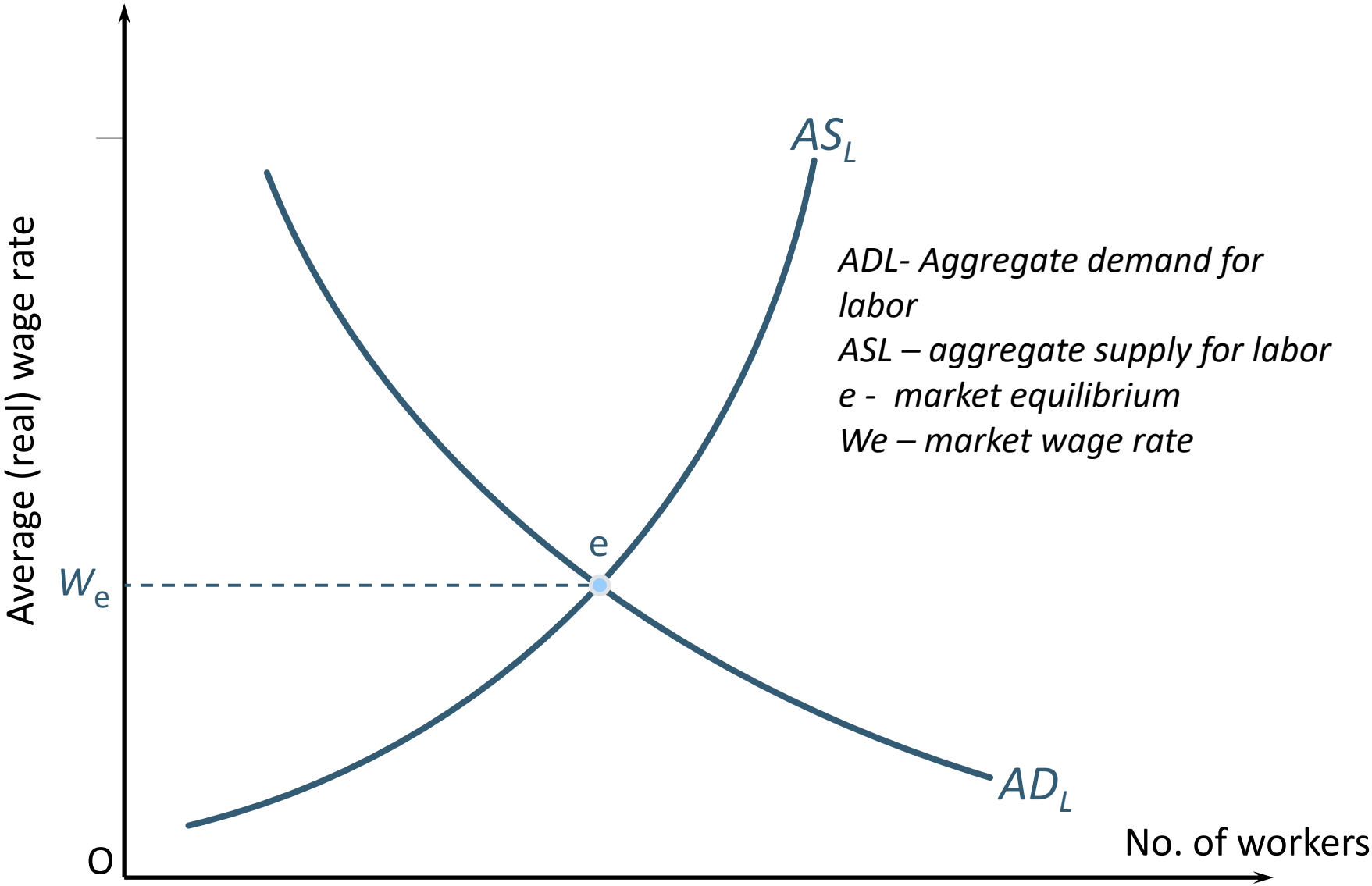
- Involuntary part-time
- Loss of overtime or shortened work hours
- underemployment

How Much Employment is Full Employment ?

Full employment

- Everyone who is willing and able to work can find a job
- Unemployment rate is still positive
- At full employment still frictional and structural
- Estimate of 4% - 6% is normal during full employment

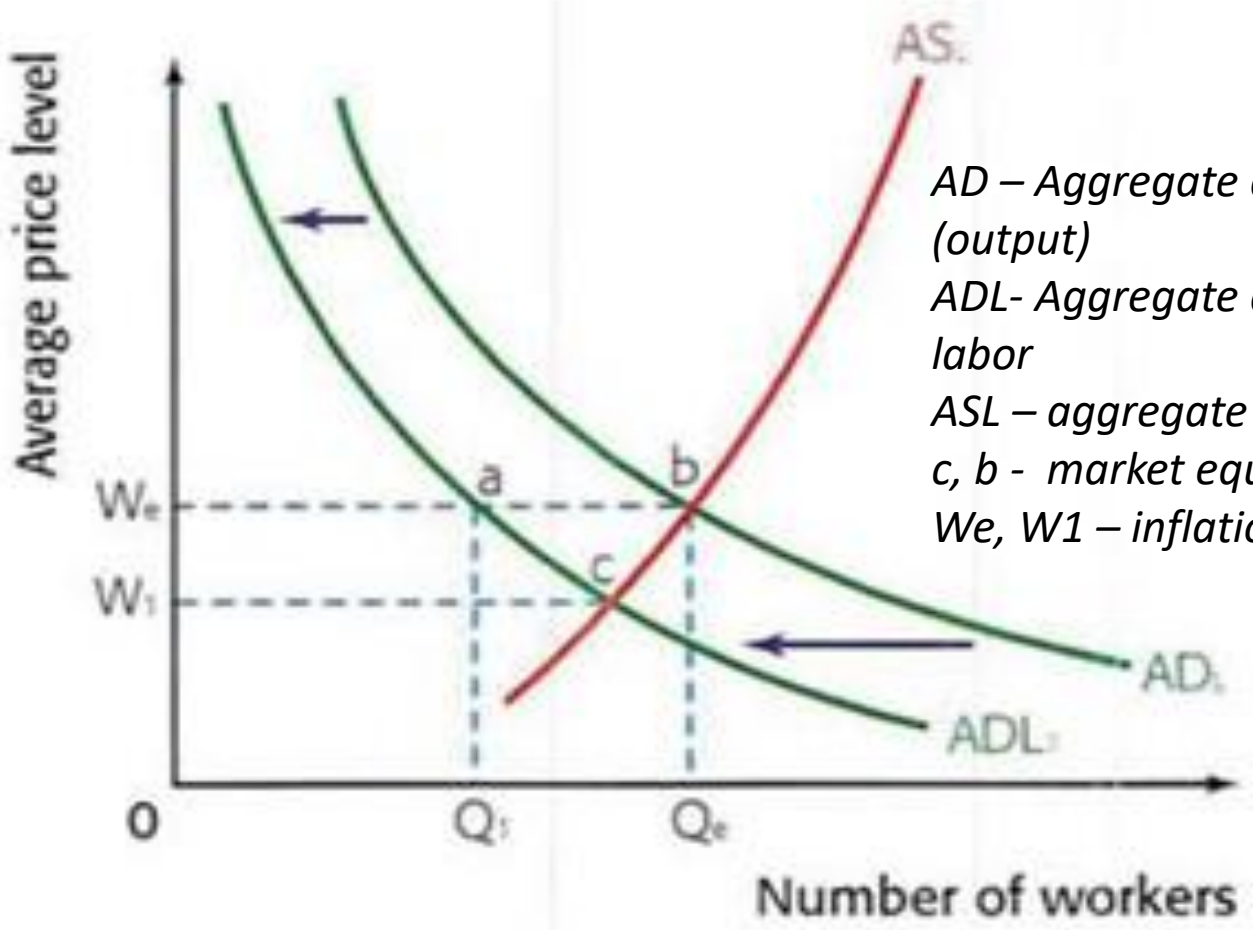
Labor market explained graphically



Source: Sloman (2016), Essentials of Economics, 7th ed, Prentice Hall, page 306.

Demand-deficient or cyclical unemployment

AD↓ => Output↓ => ADL ↓

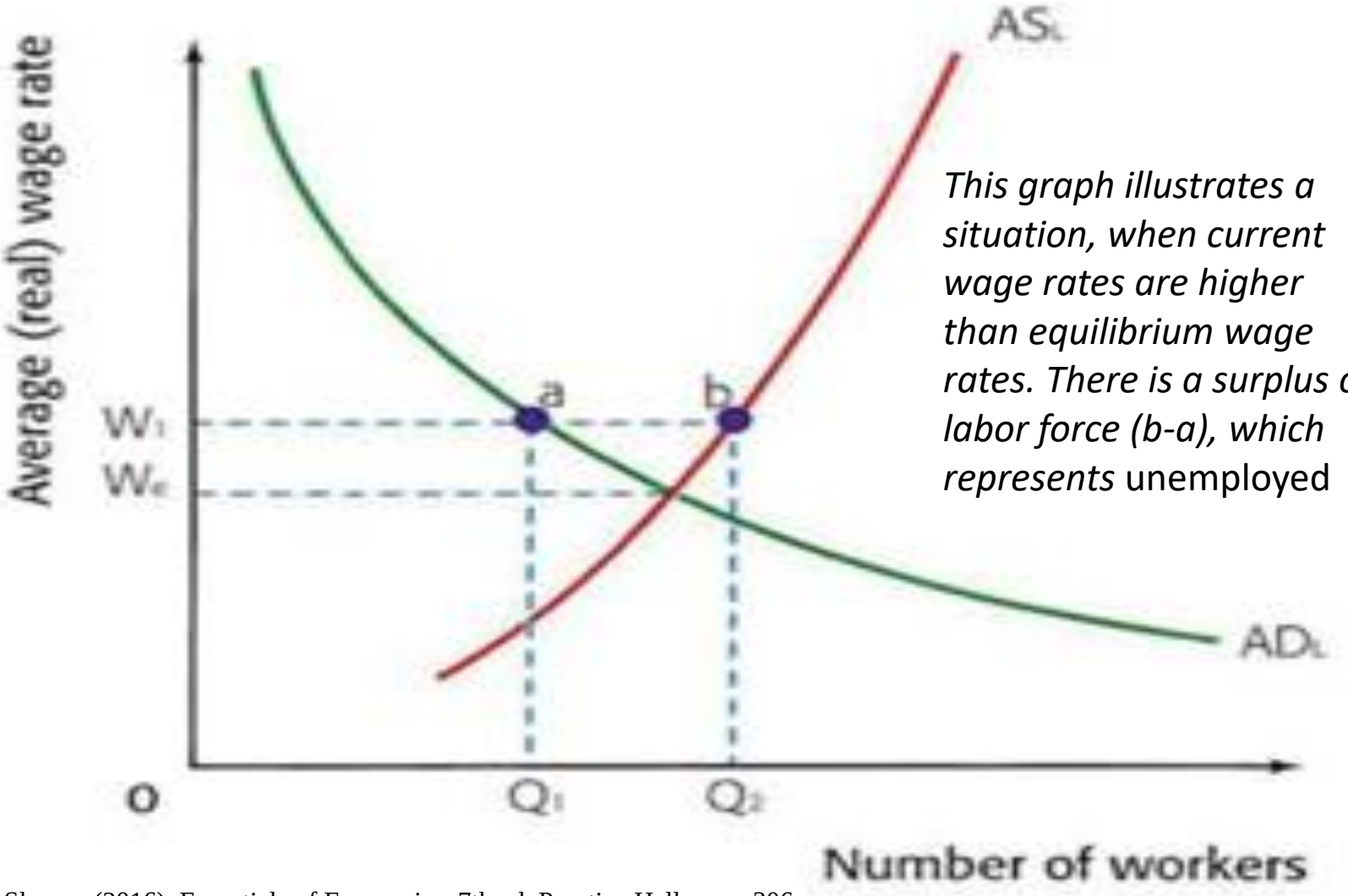


AD – Aggregate demand (output)
ADL- Aggregate demand for labor
ASL – aggregate supply for labor
c, b - market equilibrium
We, W1 – inflation rates

Source: Sloman (2016), Essentials of Economics, 7th ed, Prentice Hall, page 306.

Real-wage unemployment

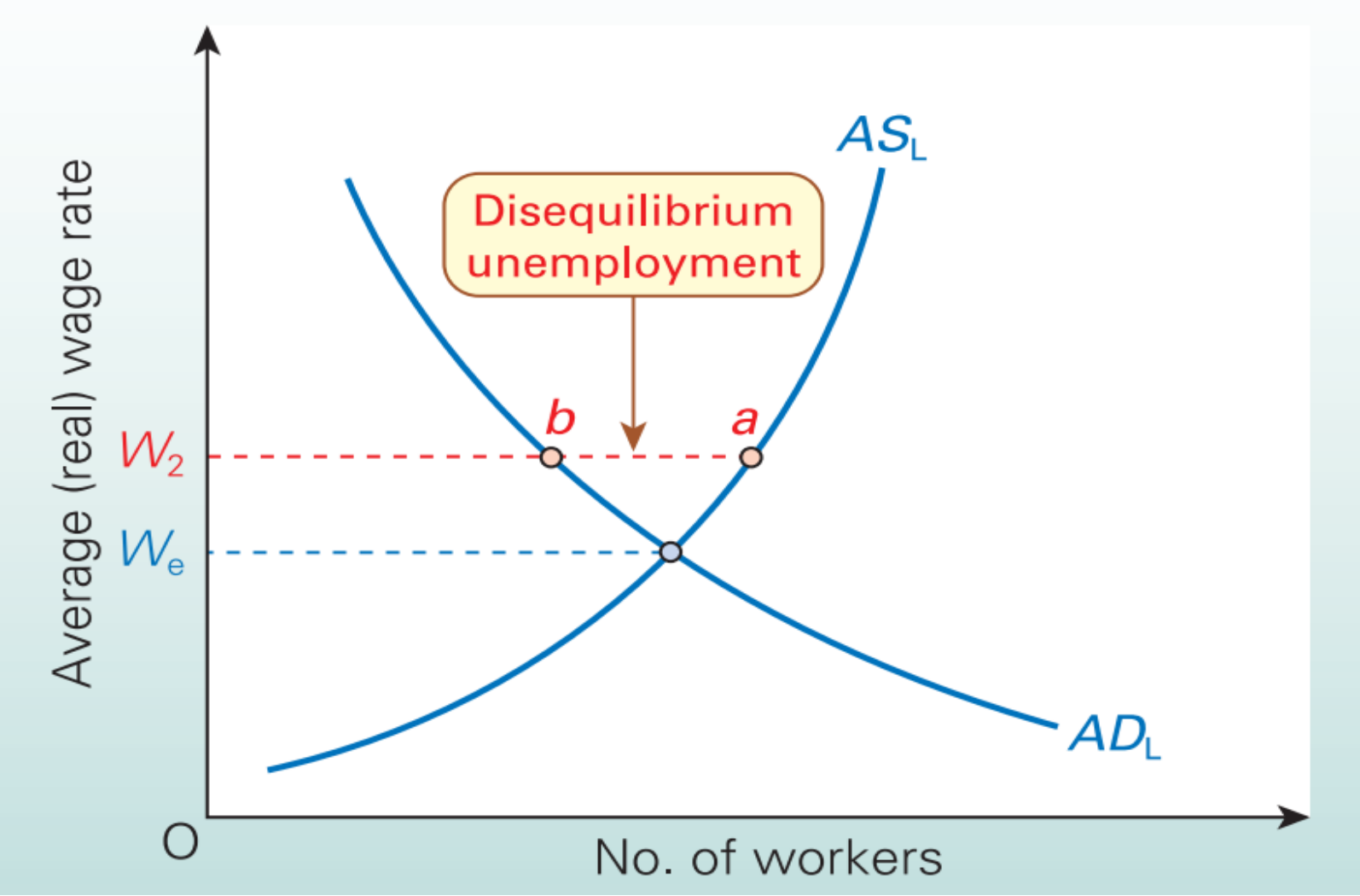
Wr > We



This graph illustrates a situation, when current wage rates are higher than equilibrium wage rates. There is a surplus of labor force (b-a), which represents unemployed

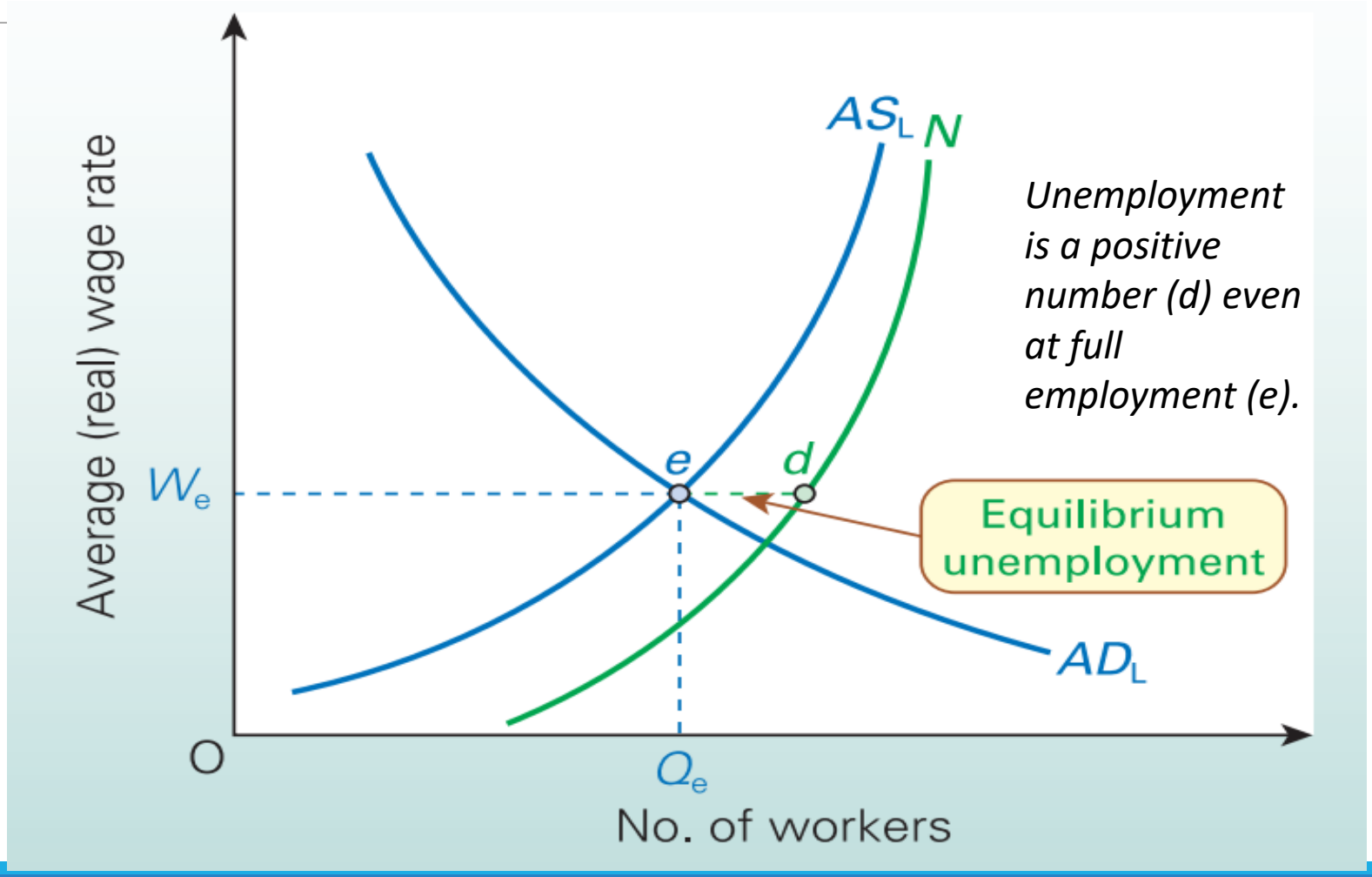
Source: Sloman (2016), Essentials of Economics, 7th ed, Prentice Hall, page 306.

Labor market



Source: Sloman (2016), Essentials of Economics, 7th ed, Prentice Hall, page 307.

Equilibrium unemployment



Source: Sloman (2016), Essentials of Economics, 7th ed, Prentice Hall, page 308.

Unemployment and inflation: is there a link?

British economist A.W. Phillips showed that there was an inverse relationship between rate of change in wages and unemployment in UK

Similarly, American economists Samuelson and Solow found negative correlation between US inflation and unemployment

Increase in unemployment was associated with declining wages and vice versa

Deriving Phillips curve

Phillips curve illustrates inverse relationship between changes in wage inflation and unemployment rates

Source: Sloman (2016), Essentials of Economics, 7th ed, Prentice Hall, page 313.

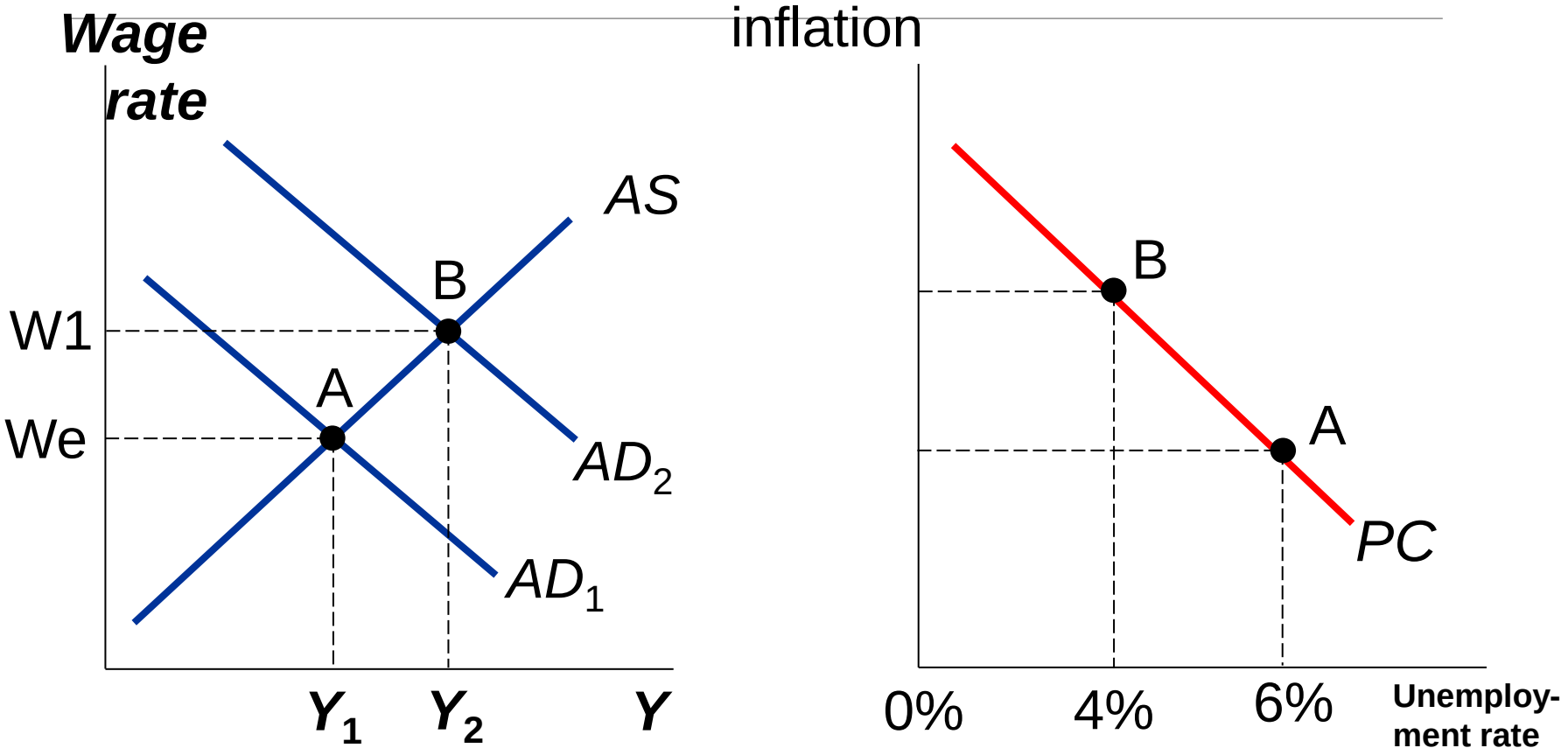
GDP growth and Phillips curve

Increase in Aggregate Demand (AD) causes GDP growth.

Increased AD leads to fall in unemployment

and leads to price increase, i.e. inflation.

GDP growth and Phillips Curve illustrated



Increase in AD=output (Y2) leads to lower inflation and higher unemployment
B=>A in Phillips Curve (PC)

Phillips curve: applications

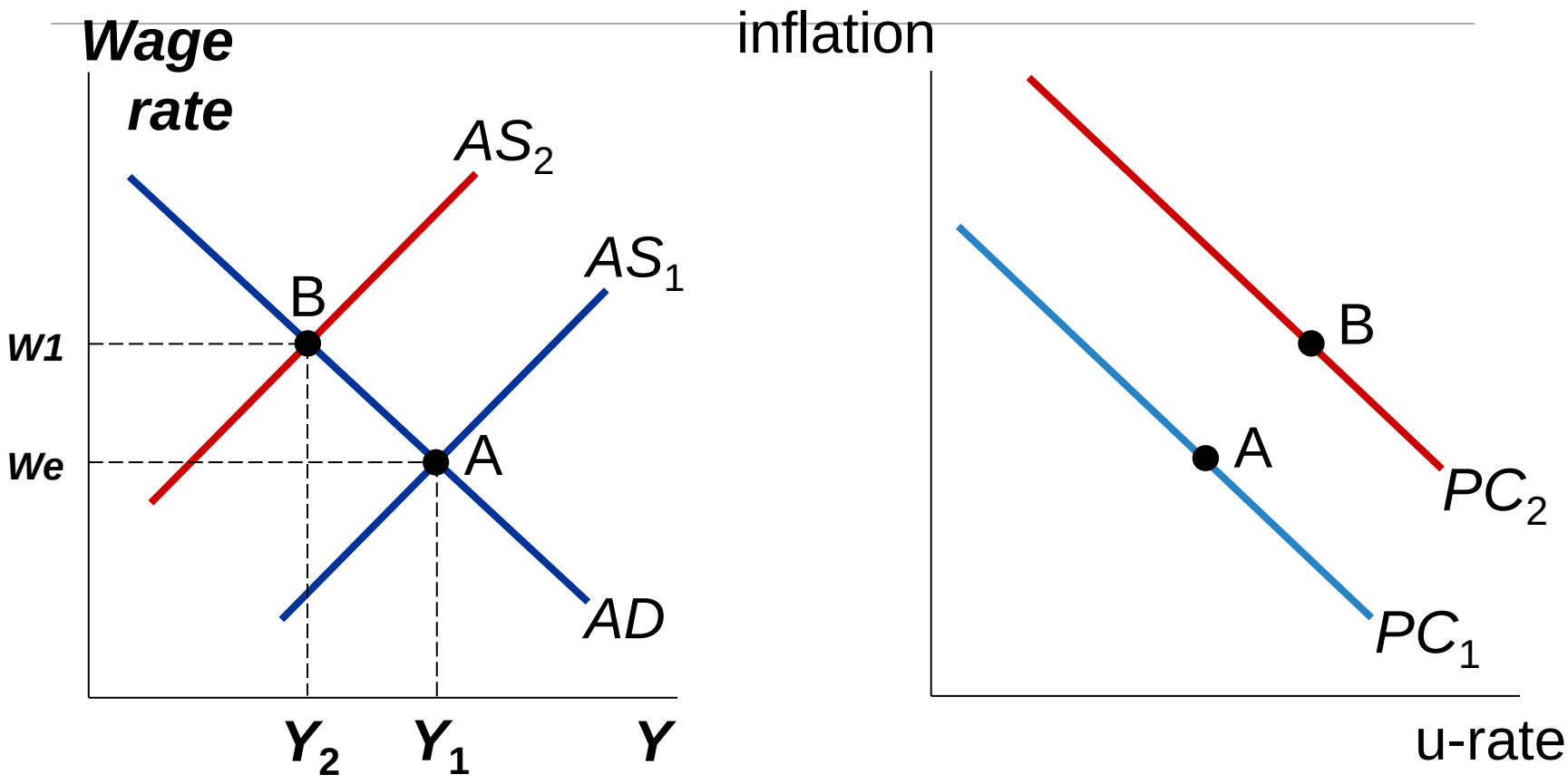
- Phillips curve helps decision makers to prioritize between inflation and unemployment
- Useful in policy interventions to address:
  - Low unemployment with high inflation
  - Low inflation with high unemployment
  - Anything in between

Phillips curve: limitations

The inverse relationship between unemployment and inflation is not stable

- Evidence from 1970es: stagflation (increase both in inflation and unemployment rates)
- Early 2000s, UK: stagflation (increase both in inflation and unemployment rates)
- 2008, UK: Phillips curve shifted back to left

Adverse Supply Shock and Phillips curve



Supply shock results in less output (Y2), higher inflation w1, and higher unemployment

Source: adapted from N.Gregory Mankiw, (2018), Principles of Economics, 8th ed, Cengage learning. Page 775

Recap

Unemployment is one of the main concerns of macroeconomics policy

Economic cost of high unemployment is lost opportunities for growth

There are seasonal, frictional, structural, cyclical types of unemployment

Minimum wage requirements may lead to unemployment

Unemployment rate is always positive in market economy due to existence of frictional and structural types of unemployment

Phillips curve demonstrates inverse interrelationship between unemployment and inflation rates

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