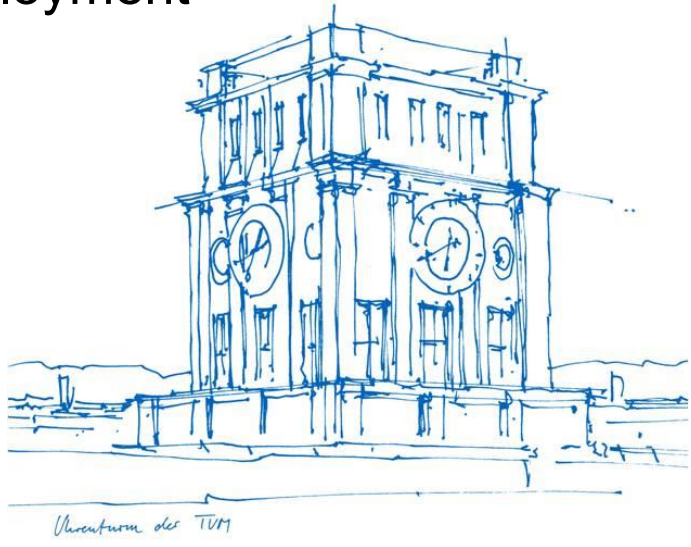
# Economics II – Macroeconomics

## VI. Aggregate demand and unemployment

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# Outline

I. Introduction to macroeconomics (chapter 1)
II. Technological change and economic growth (chapter 2)
III. The aggregate economy (chapter 13)
IV. Aggregate demand and fiscal policy (chapter 14)
V. The labour market (chapters 6 and 9)
**VI. Aggregate demand and unemployment (chapter 14)**
VII. Credit, banks and money (chapter 10)
VIII. Inflation and monetary policy (chapter 15)
IX. Technological progress, unemployment and living standards in the long run (chapter 16)
X. Economic and financial crises (chapter 17)

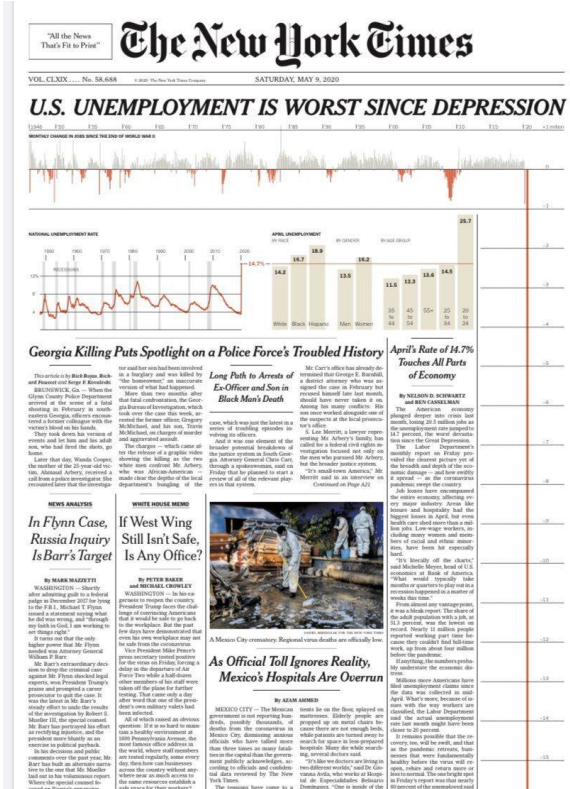
# VI. Aggregate demand and unemployment

The Economy Ch. 14

# The context

- **How can we model the link between output and unemployment?**

- We have introduced two models that help us to understand the links between aggregate demand, total output, and employment in the economy


"All the News That's Fit to Print"

The New York Times

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U.S. UNEMPLOYMENT IS WORST SINCE DEPRESSION

MONTHLY CHANGE IN JOBS SINCE THE END OF WORLD WAR II

NATIONAL UNEMPLOYMENT RATE

APRIL UNEMPLOYMENT BY RACE BY GENDER BY AGE GROUP

14.7% 16.7 14.2 18.9 13.5 16.2 11.5 12.3 13.6 14.5 25.7

White Black Hispanic Men Women 16 to 19 20 to 24 25 to 34 35 to 44 45 to 54 55+

Georgia Killing Puts Spotlight on a Police Force's Troubled History

Long Path to Arrests of Ex-Officer and Son in Black Man's Death

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NEWS ANALYSIS

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A Mexico City crematory. Regional virus deaths are officially low.

As Official Toll Ignores Reality, Mexico's Hospitals Are Overrun

By AZAM AHMED

# The context

1. *The **supply side:*** One model is of the supply side of the economy and focuses on how labour is employed to produce goods and services. This is called the *labour market model*.

2. *The **demand side:*** The other is of the demand side of the economy and explains how spending decisions generate demand for goods and services and, as a result, employment and output. This is the *multiplier model*.

- **Together they explain how the economy fluctuates around the long-run labour market equilibrium over the business cycle.**

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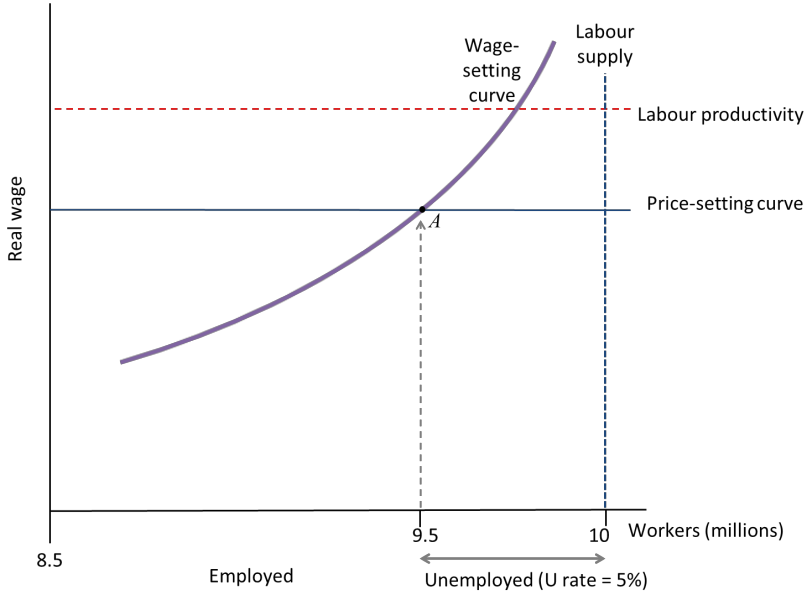
# Supply side model

At ***A****:* the real wage that delivers the markup consistent with the extent of competition in the economy is just high enough to provide workers with the incentive to work, and to make hiring them worthwhile for firms

The production function connects employment and output: **Y = λN**
assuming λ = 1:
***Y = N***



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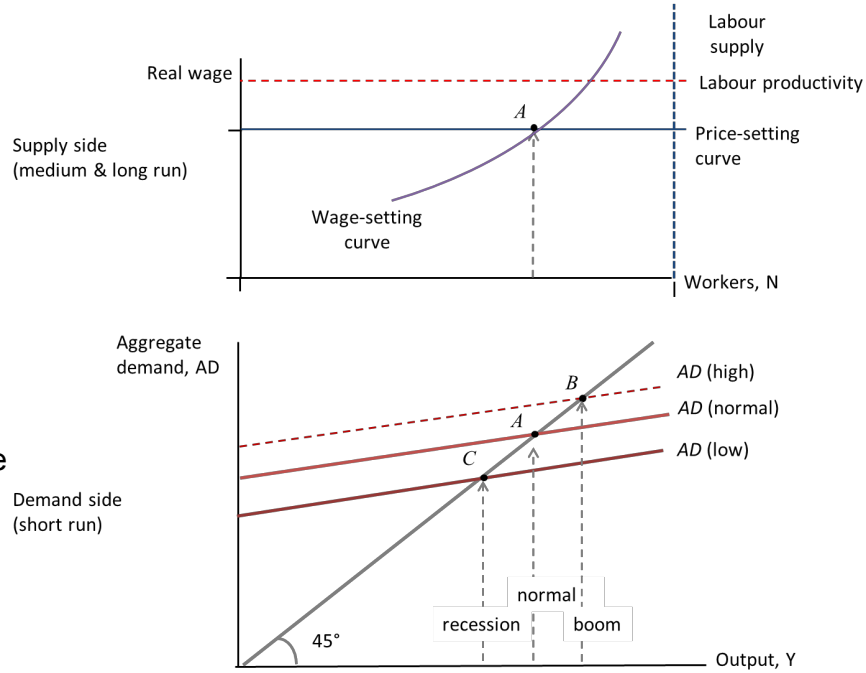
# Aggregate Demand and Unemployment

- The economy is initially at labour market equilibrium at point A with unemployment of 5%.
- The level of output here is called the “normal” level of output. Any other level of aggregate demand would produce a different level of employment.
- If the aggregate demand curve shifts down, then through the multiplier process, output and employment fall to C. Unemployment rises above 5%.
- **Short-term fluctuations in employment are caused by changes in aggregate demand**



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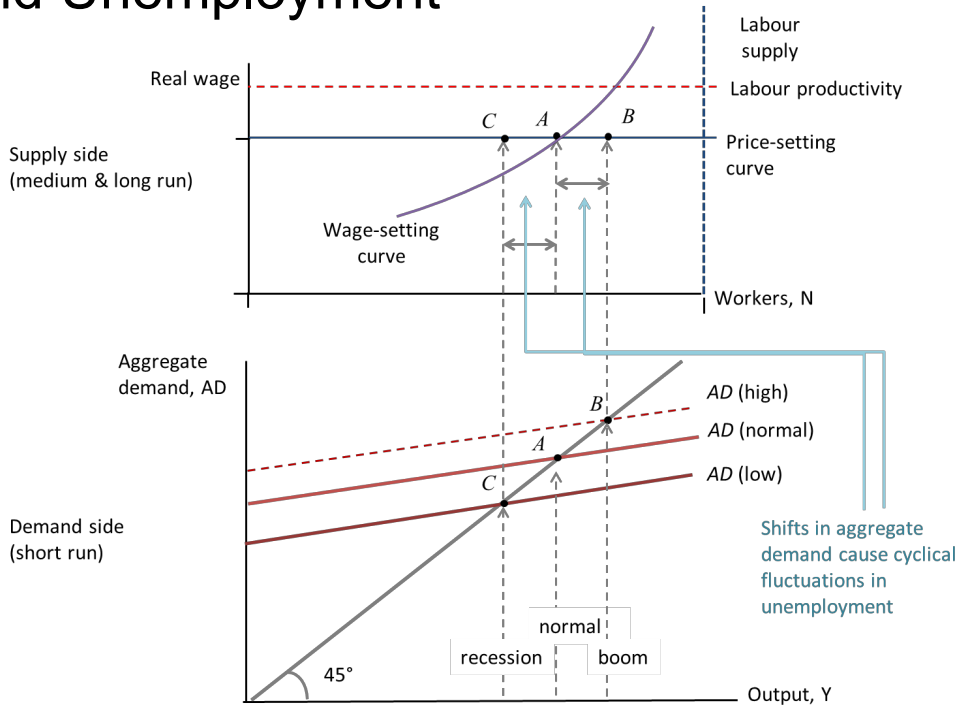
# Aggregate Demand and Unemployment

- When employment is *below* the labour market equilibrium because of deficient aggregate demand, the additional unemployment is called *cyclical unemployment.*

- If there is excess demand, above labour market equilibrium, then unemployment is below its equilibrium level.



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# Aggregate Demand and Unemployment

- In our study of business cycle fluctuations using the *multiplier model*, we have made a number of *ceteris paribus* assumptions:
  - prices, wages, the capital stock, technology, and institutions are constant → **short run model**

    [This name does not refer to a certain period of time, but instead to what is *exogenously* given]

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# Aggregate Demand and Unemployment

- *The labour market model* is a **medium-run model**

– capital stock, technology, and institutions are *exogenous*. Output, employment, prices, and wages are *endogenous*.

The models still served their purpose: to predict what happens to output and employment in the short- and medium-term when

1) there is a demand shock (a shock to investment, consumption or exports)
2) policymakers use fiscal policy or monetary policy to shift the aggregate demand curve

- We will get to the ***long-run*** **in unit IX**

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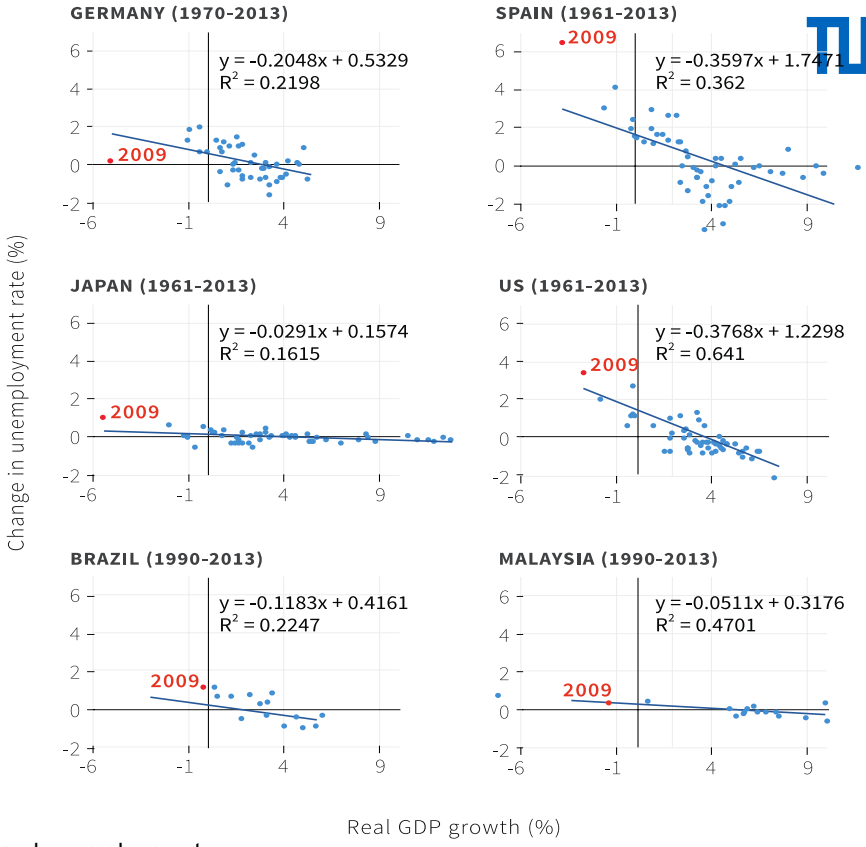
# Okun's Law

Arthur Okun
(advisor to US President Kennedy):

changes in the *rate of GDP growth* are negatively correlated
with the *unemployment rate*

**Okun's coefficient =**
Degree of correlation



# Summary

We combined two models for thinking about total output and the unemployment rate (or employment) in the economy:

1. The supply side model (labour market model)
2. The demand side (multiplier model)

Key insights:

- (Un)employment reacts to changes in aggregate demand (AD)
- Policy measures that stabilize AD can dampen negative effects on the labour market

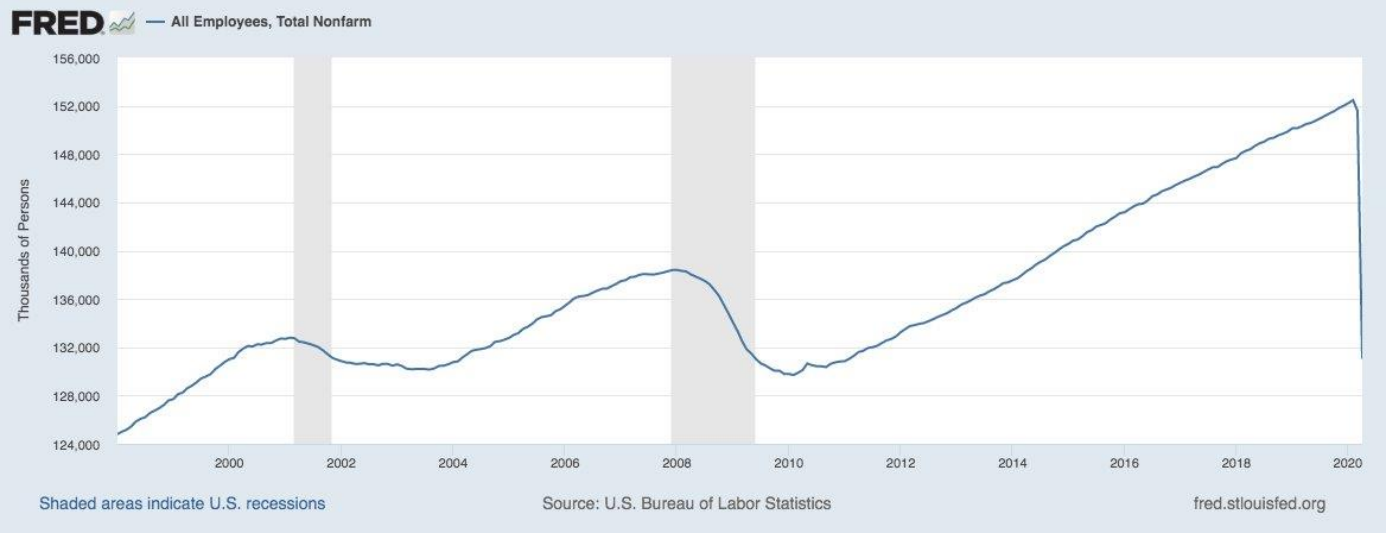
[Policy measures can also dampen positive effects, for instance through regulations that makes hiring costly]

# Conclusions

- Economies often experience shocks to aggregate demand, such as a decline in business investment or an increase in desired savings by households.
- Shocks tend to be *amplified* by the multiplier process: first-round effects plus second-round or indirect effects due to further declines in spending.
- In the second half of the twentieth century, the advanced economies enjoyed a great *decline in economic instability,* which was due in part to larger governments and the existence of automatic stabilizers that moderated swings in aggregate demand.
- While active fiscal policy played its part, it had a mixed record. France discovered in the early 1980s that a poorly planned fiscal expansion can lead to a *fiscal deficit* with little benefit to the domestic economy.

# Conclusions

- We experienced that even the “rich” countries can suffer from economic crises which underlined the importance of fiscal policy in recessions



# Conclusions

- Problem: Often hardest-hit countries are unable to implement the necessary fiscal stimulus because of fears of sovereign debt crises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