

Макроэкономика: Занятие 7

Сергей Владимирович Алексеев

sergeyvalexeev.com

+7 (921) 963-55-38

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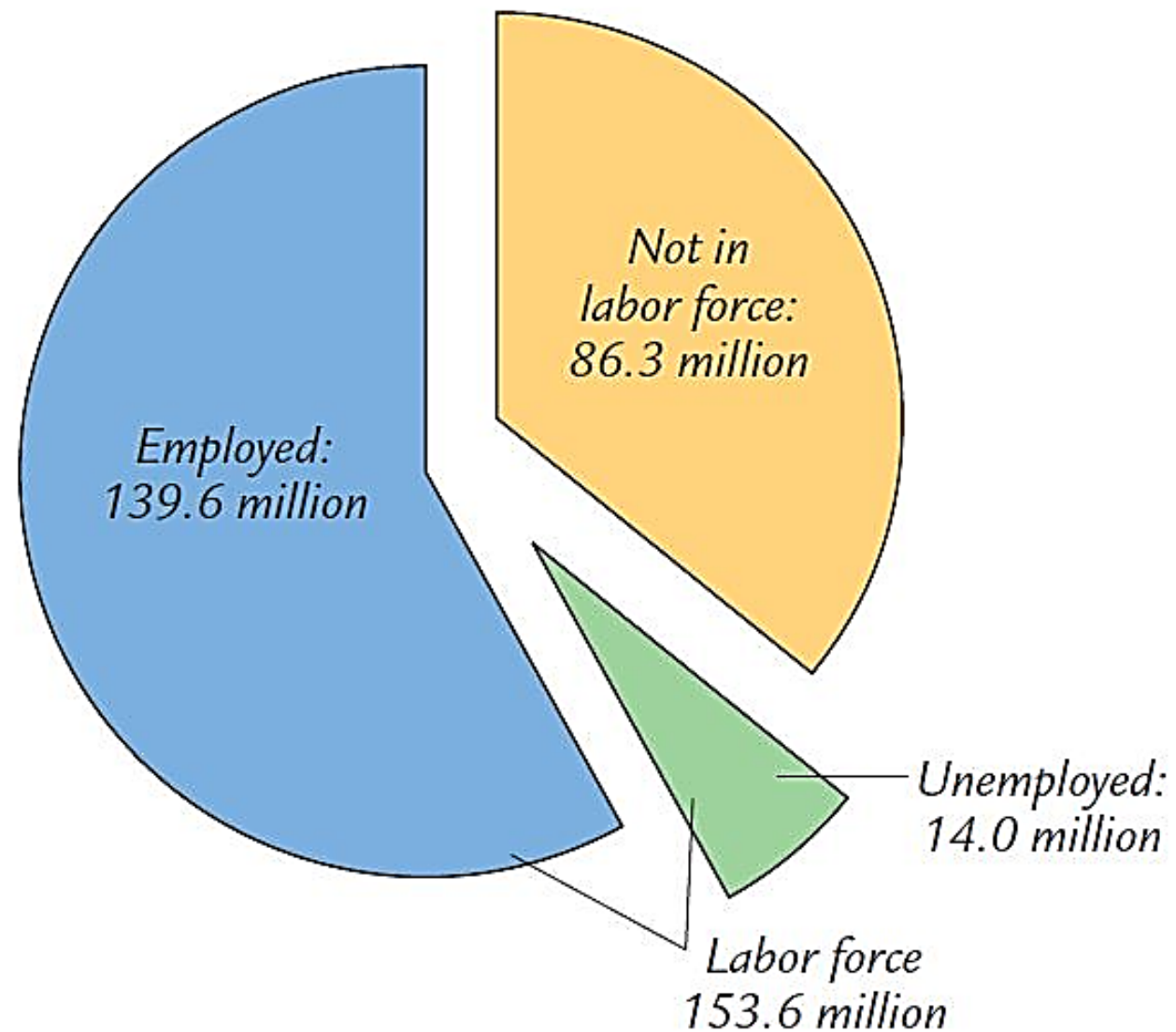
Почему это важно

- Безработица прямое последствие макроэкономических проблем
 - Уровень жизни, уровень удовлетворения и т.д.
- Важно с точки зрения политиков
 - Страховые схема
 - Пенсия
 - Минимальные зарплаты
- Безработицу и инфляцию часто называют «twin evil» макроэкономики
 - Кривая Филлипса
 - Кривая Филлипса с поправкой на ожидаемую инфляцию
 - Критика Лукоса

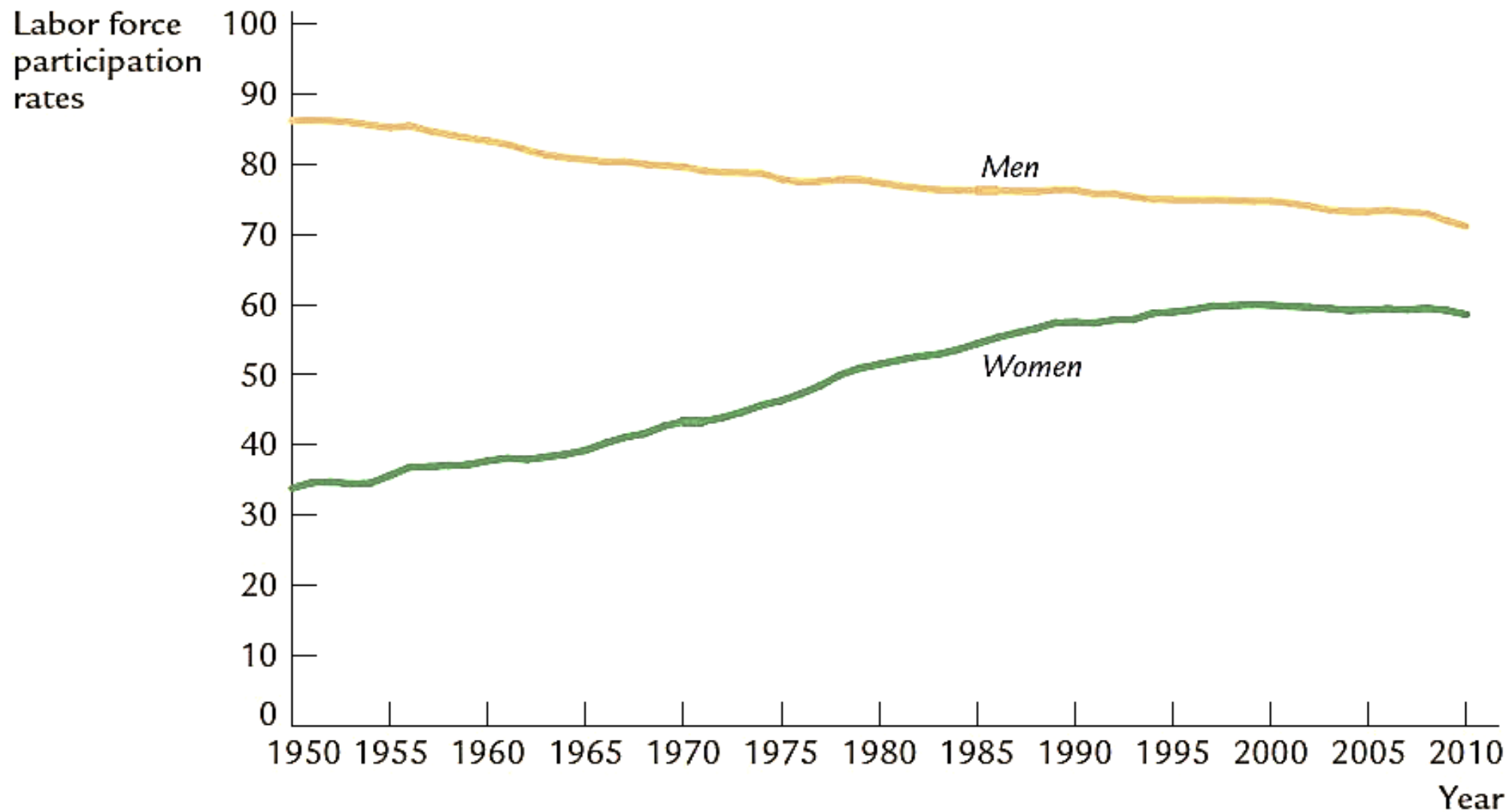
Измерение безработицы

- Важно следить как экономика использует все ресурсы
- Опросы:
 - Занят
 - Работали хотя бы час
 - Безработный
 - Кто ищет дольше 4х недель
 - Не в рабочей силе
 - Домохозяйки, студенты, пенсионеры
 - Discouraged workers
- $L = E + U; u = \frac{U}{L}$
- $Labor\ Force\ Participation = \frac{L}{adult\ population}$

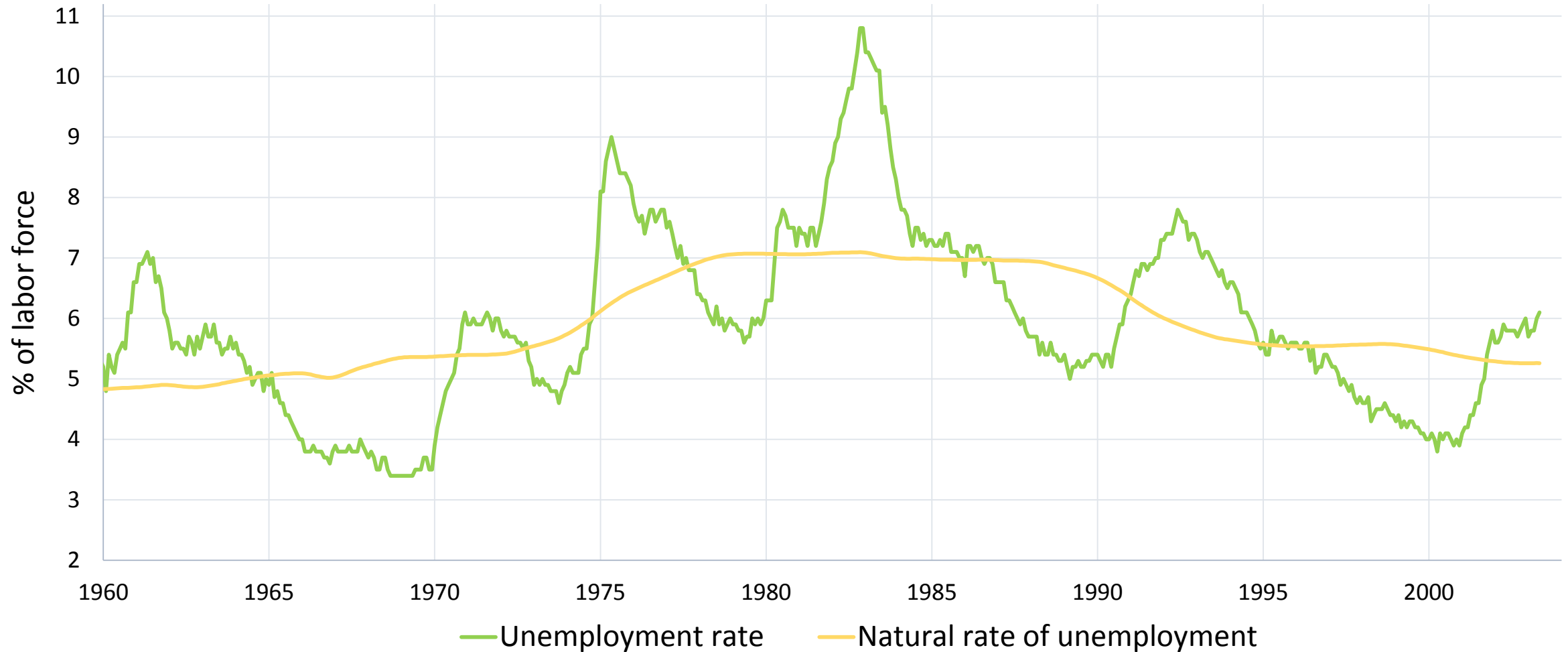
Population: 239.9 million
(16 years and older)



Структура экономически активного населения

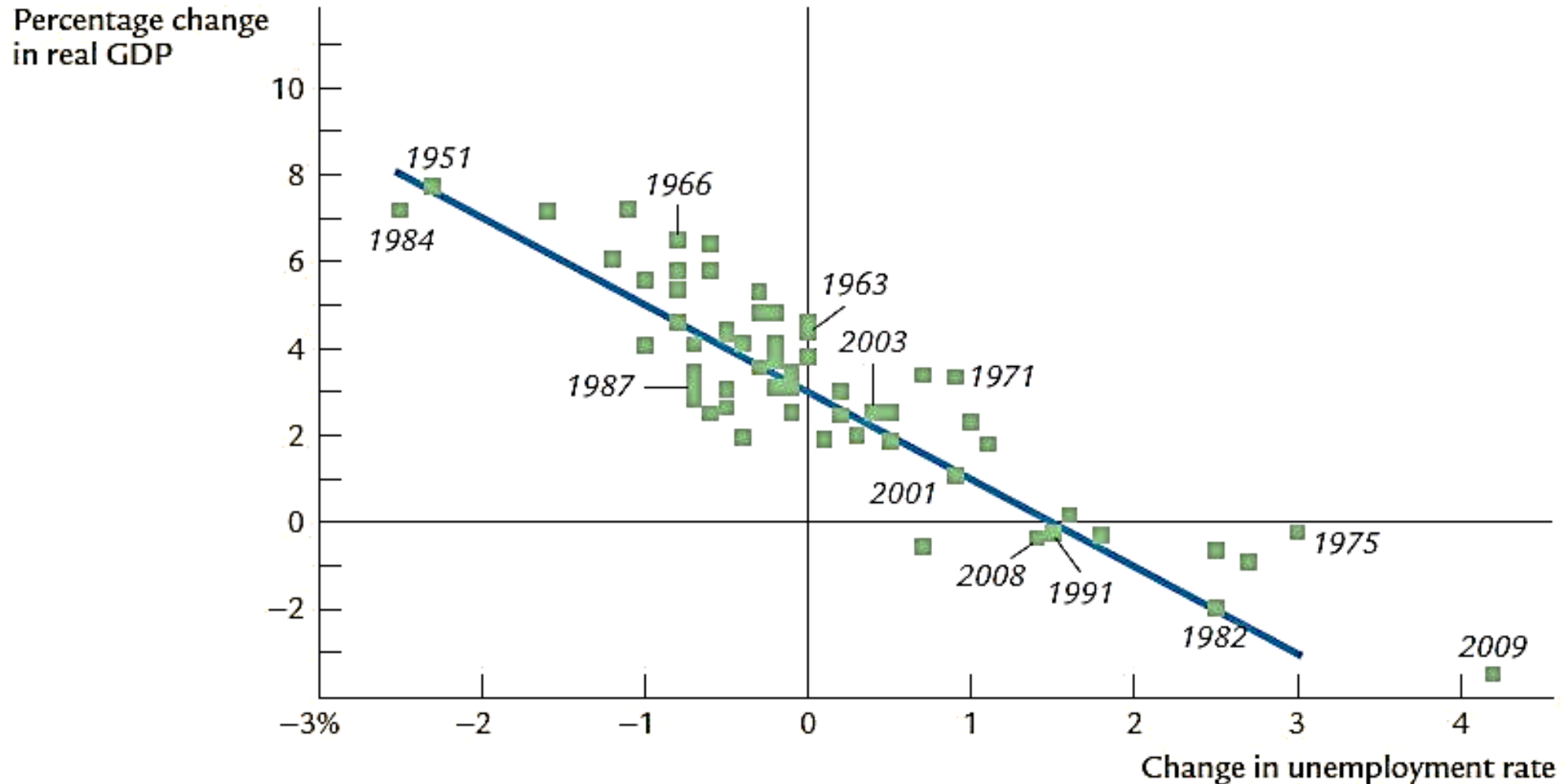


Естественный уровень безработицы



Естественный уровень безработицы и бизнес цикл

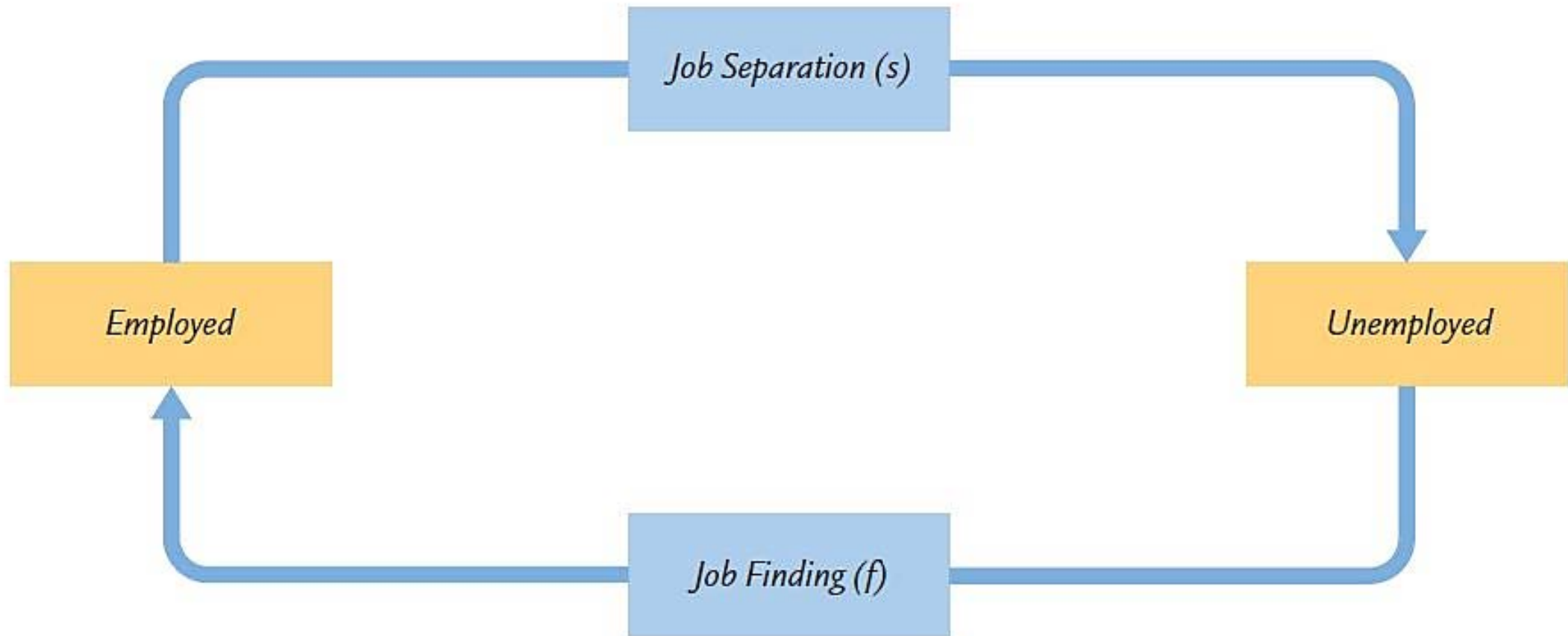
Okun's Law



$$\%Change\ GNP = 3 - 2 * (Change\ Unemployment\ Rate)$$

Формализация естественного уровня безработиц

Таблица перехода



Формализация естественного уровня безработицы

Условие равновесия

- $L = E + U$
- Безработные: $\frac{U}{L}$
- *Условие равновесия: $fU = sE$*
 - # of unemployed people who find jobs = # of employed people who lose or leave their jobs
 - the labor market is in steady state, or long-run equilibrium, if the unemployment rate is constant
- $fU = s(L - U)$
- $f \frac{U}{L} = s(1 - \frac{U}{L})$
- $\frac{U}{L} = \frac{s}{s+f} = \frac{1}{1+\frac{f}{s}}$
- $\frac{U}{L} = \frac{0.01}{0.01+0.20}$
 - Если 1% потерял работу
 - И 20% получили работу

Why is there unemployment?

- *Policy implication*

- A policy will reduce the natural rate of unemployment only if it lowers s or increases f
- If job finding were instantaneous ($f = 1$), then all spells of unemployment would be brief, and the natural rate would be near zero
 - There are two reasons why $f < 1$:
 1. job search (фрикционная безработица)
 2. wage rigidity (структурная безработица)

Фрикционная безработица

- Причина - несовершенство рынков (frictions)
 - caused by the time it takes workers to search for a job
- Может быть даже если работа есть и зарплаты способны подстраиваются
- Occurs when:
 - Workers have different abilities, preferences
 - Jobs have different skill requirements
 - Geographic mobility of workers not instantaneous
 - Flow of information about vacancies and job candidates is imperfect

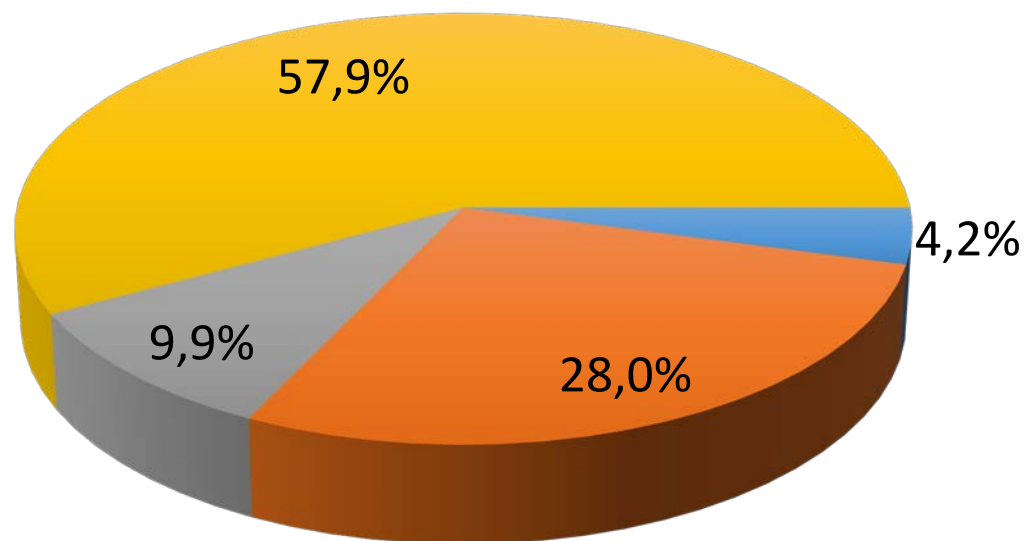
Структурные изменения

- def: changes in the composition of demand among industries or regions
- *example: Technological change*
increases demand for computer repair persons, decreases demand for typewriter repair persons
- *example: A new international trade agreement* causes greater demand for workers in the export sectors and less demand for workers in import-competing sectors
 - Textile and discouraged workers
- It takes time for workers to change sectors, so sectoral shifts cause frictional unemployment.

Структурные изменения

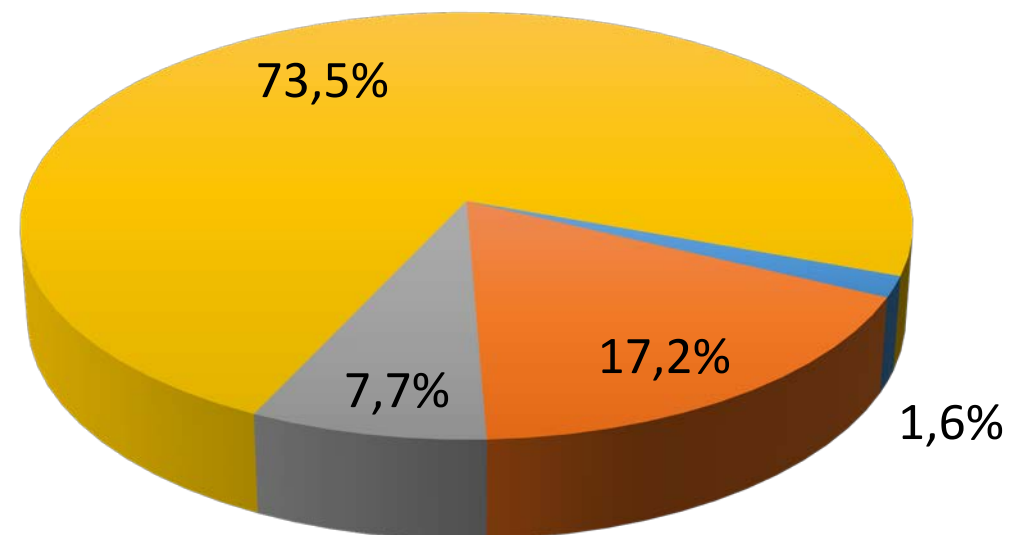
Sectoral shifts

1960



■ Agriculture ■ Manufacturing
■ Other industry ■ Services

2000



■ Agriculture ■ Manufacturing
■ Other industry ■ Services

Source: World Development Indicators, World Bank

More examples of sectoral shifts

- Late 1800s: decline of agriculture, increase in manufacturing
- Late 1900s: relative decline of manufacturing, increase in service sector
- 1970s: energy crisis caused a shift in demand away from gas guzzlers toward smaller cars.

*In our dynamic economy,
smaller sectoral shifts occur frequently,
contributing to frictional unemployment*

What makes make up a classical argument

Public Policy and Job Search

Govt programs affecting unemployment

- *Govt employment agencies:*
disseminate info about job openings to better match workers & jobs
- *Public job training programs:*
help workers displaced from declining industries get skills needed for jobs in growing industries

Unemployment insurance (UI)

- UI pays part of a worker's former wages for a limited time after losing his/her job.
- В ЕС значительно выше, чем в США
- UI increases search unemployment, because it:
 - reduces the opportunity cost of being unemployed
 - reduces the urgency of finding work
 - hence, reduces f
- Studies: The longer a worker is eligible for UI, the longer the duration of the average spell of unemployment.

Benefits of UI

- By allowing workers more time to search, UI may lead to better matches between jobs and workers, which would lead to greater productivity and higher incomes

Меньше давления на поиск работы и выше вероятность, что «плохое» предложение работы будет отвергнуто

- Скорее всего приводит к better matching

Попытки реформировать UI

- Не partially experience rates, а 100% percent experience rates
- Не будет стимула «скидывать» рабочую силу при временном спросе
- Поможет побороться с «плохой» безработицей

Why is there unemployment?

$$\frac{U}{L} = \frac{s}{s + f} = \frac{1}{1 + \frac{f}{s}}$$

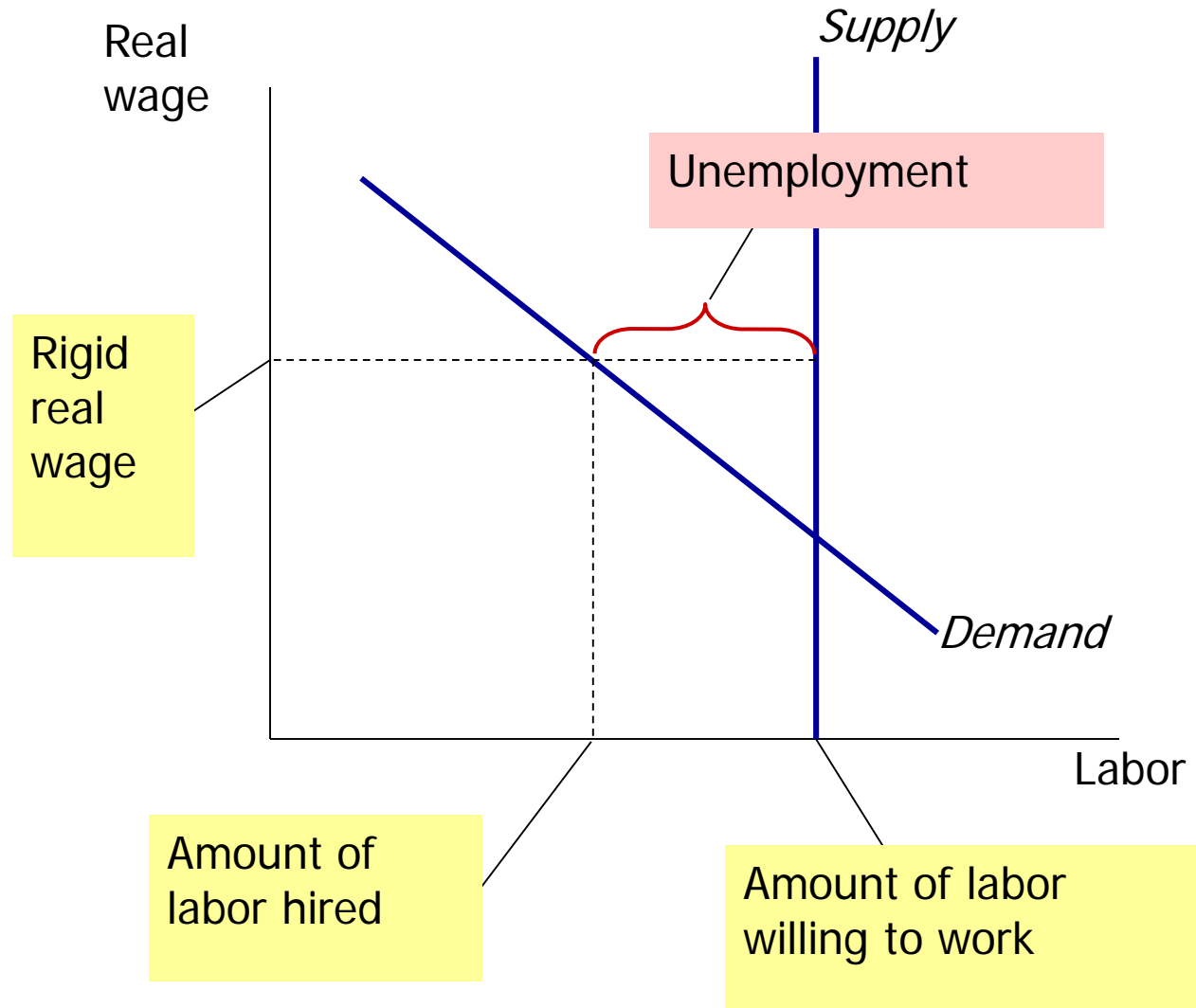
- There are two reasons why $f < 1$:

DONE ✓ 1. job search

Next ➔ 2. wage rigidity

Unemployment from real wage rigidity

If the real wage is stuck above the eq'm level, then there aren't enough jobs to go around.



Unemployment from real wage rigidity

If the real wage is stuck above the eq'm level, then there aren't enough jobs to go around.

Then, firms must ration the scarce jobs among workers.

Structural unemployment:
the unemployment resulting from real wage rigidity and job rationing.

Reasons for wage rigidity

1. Minimum wage laws
2. Labor unions
3. Efficiency wages

1. The minimum wage

- The minimum wage is well below the eq'm wage for most workers, so it cannot explain the majority of natural rate unemployment.
- However, the minimum wage may exceed the eq'm wage of unskilled workers, especially teenagers.
- If so, then we would expect that increases in the minimum wage would increase unemployment among these groups
- В США 30-50% средней з/п в промышленности
- Некоторые считают, что tax credit лучше, чем минимальная з/п
 - Earned tax credit будет выше, чем заработок и государство будет доплачивать
 - Затраты на труд для бизнесы таким образом не взвинчиваются
- Кто эти неквалифицированные кого мы пытаемся спасти

The minimum wage in the real world:

- In Sept 1996, the minimum wage was raised from \$4.25 to \$4.75. Here's what happened:

Unemployment rates, before & after		
	3 rd Q 1996	1 st Q 1997
Teenagers	16.6%	17.0%
Single mothers	8.5%	9.1%
All workers	5.3%	5.3%

- Other studies: A 10% increase in the minimum wage increases teenage unemployment by 1-3%.

2. Labor unions

- Unions exercise monopoly power to secure higher wages for their members.
- When the union wage exceeds the eq'm wage, unemployment results.
- Employed union workers are **insiders** whose interest is to keep wages high.
- Unemployed non-union workers are **outsiders** and would prefer wages to be lower (so that labor demand would be high enough for them to get jobs)
- Пример Швейцарии
 - Централизованное правительство

Union membership and wage ratios by industry, 2001

industry	# employed (1000s)	U % of total	RBU % of total	wage ratio
mining	531	12.3%	12.9%	103.4
construction	6,881	18.4	19.0	151.0
manufacturing	18,149	14.6	15.5	105.9
transportation	4,441	24.1	25.4	127.8
comm. and pub util	2,981	22.6	23.7	104.2
wholesale trade	4,540	5.5	5.9	105.8
retail trade	20,505	4.5	5.0	117.8
fin, insu, and real est	7,648	2.1	2.8	90.1
services	34,261	5.9	6.8	103.3
government	19,155	37.4	41.8	121.1
all	119,092	13.6%	15.0%	118.0

RBU = nonunion workers represented by a union

wage ratio = $100 \times (\text{union} + \text{RBU wage}) / (\text{nonunion wage})$

3. Efficiency Wage Theory

- З/п выше равновесной даже если есть безработные и даже если компания явно можно сэкономить на выплатах:
 - attract higher quality job applicants
 - Adverse selection
 - increase worker effort and reduce “shirking”
 - Moral harard
 - reduce turnover, which is costly
 - improve health of workers
(in developing countries)
- The increased productivity justifies the cost of paying above-equilibrium wages.
- The result: unemployment
- История с Генри Фордом
 - Платил 5\$, а не 3\$ за 8ми часовую смену
 - High wages means lower costs

Все теории одинаковы в том, что фирмы, которые платят выше равновесной работают эффективнее

Why is there unemployment?

$$\frac{U}{L} = \frac{s}{s + f} = \frac{1}{1 + \frac{f}{s}}$$

- There are two reasons why $f < 1$:

DONE ✓ 1. job search

DONE ✓ 2. wage rigidity

Дюрация безработицы

- Короткие периоды безработицы имеют фрикционную природу
- Длинные – структурную
- С 1990 по 2006 – 38% безработных были таковыми менее 4 недель
- 31% более 15 недель
 - Другими словами 71% времени без работы были по причине тех кто не работал более 15 недель
- Важное различие для policymakers

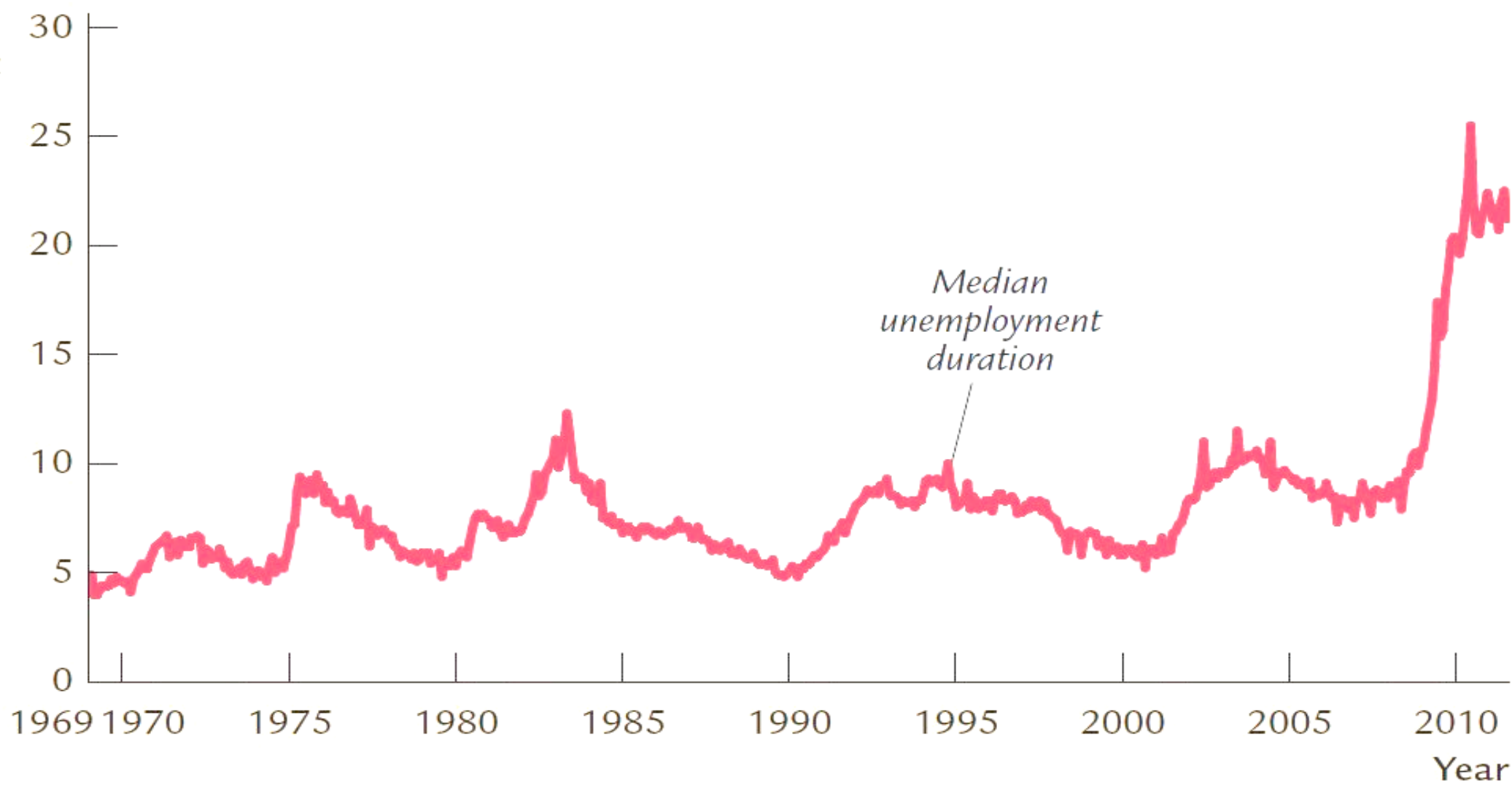
The duration of U.S. unemployment, *average over 1993-2002*

# of weeks unemployed	# of unemployed persons as % of total # of unemployed	amount of time these workers spent unemployed as % of total time all workers spent unemployed
1-4	39%	6.5%
5-14	31%	20.5%
15 or more	30%	73.0%

The duration of unemployment

- The data:
 - More spells of unemployment are short-term than medium-term or long-term.
 - Yet, most of the total time spent unemployed is attributable to the long-term unemployed.
- This long-term unemployment is probably structural and/or due to sectoral shifts among vastly different industries.
- Knowing this is important because it can help us craft policies that are more likely to succeed.

Duration of
unemployment
(weeks)



Всплеск дюрации в период Великой Рецессии

- [Robert Barro](#)

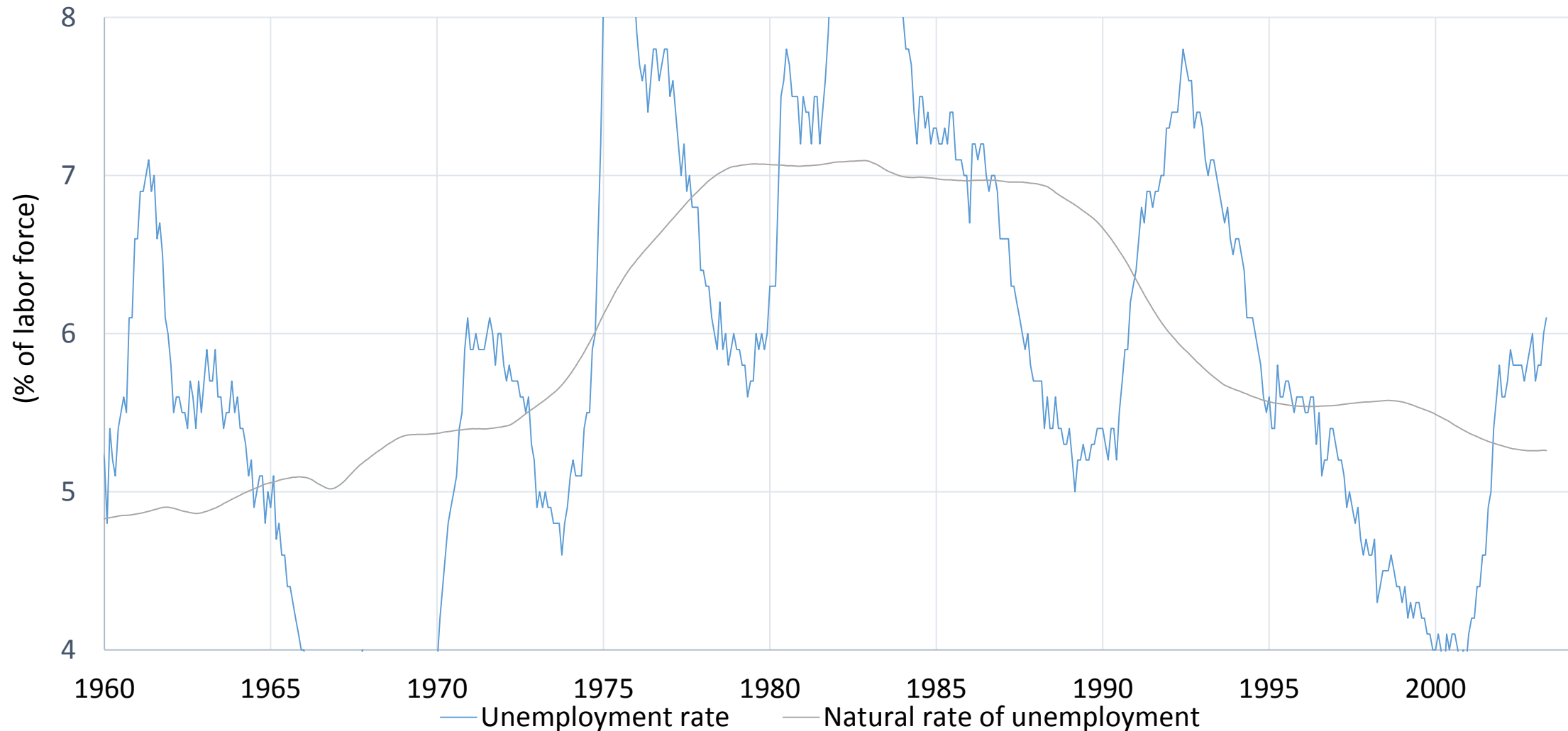
Generous unemployment insurance programs have been found to raise unemployment in many Western European countries in which unemployment rates have been far higher than the current U.S. rate. In Europe, the influence has worked particularly through increases in long-term unemployment

- [Paul Krugman](#)

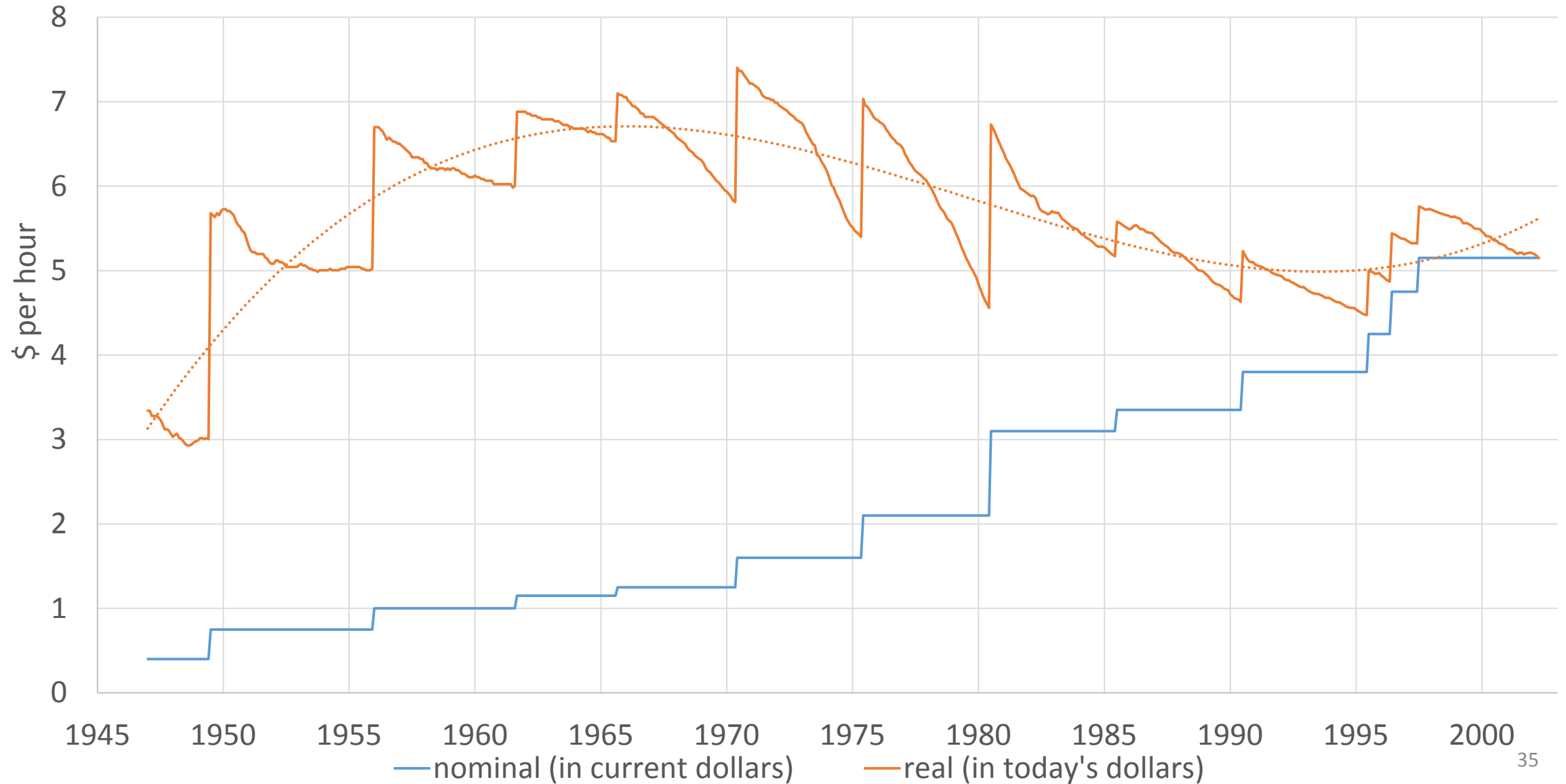
Do unemployment benefits reduce the incentive to seek work? Yes: workers receiving unemployment benefits aren't quite as desperate as workers without benefits, and are likely to be slightly more choosy about accepting new jobs. The operative word here is "slightly": recent economic research suggests that the effect of unemployment benefits on worker behavior is much weaker than was previously believed. Still, it's a real effect when the economy is doing well. But it's an effect that is completely irrelevant to our current situation. When the economy is booming, and lack of sufficient willing workers is limiting growth, generous unemployment benefits may keep employment lower than it would have been otherwise. But as you may have noticed, right now the economy isn't booming—there are five unemployed workers for every job opening. Cutting off benefits to the unemployed will make them even more desperate for work—but they can't take jobs that aren't there. Wait: there's more. One main reason there aren't enough jobs right now is weak consumer demand. Helping the unemployed, by putting money in the pockets of people who badly need it, helps support consumer spending.

TREND: The natural rate rises from 1960s to early '80s, then falls from mid-80s to 2000

попробуем объяснить этот тренд с помощью теории которую прошли



EXPLAINING THE TREND: The minimum wage



EXPLAINING THE TREND:

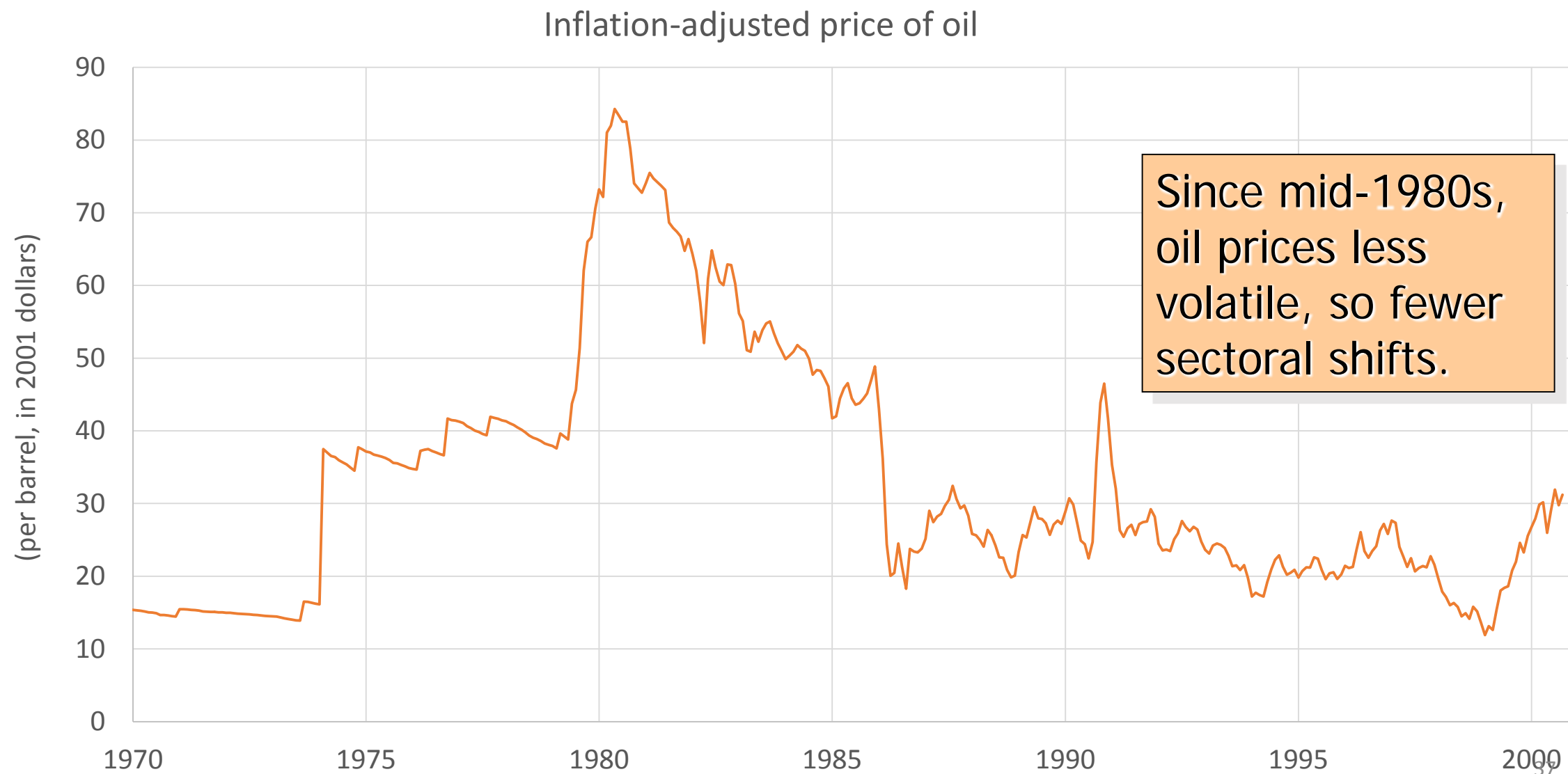
Union membership

Union membership selected years	
year	percent of labor force
1930	12%
1945	35%
1954	35%
1970	27%
1983	20.1%
2002	13.2%

Since the early 1980s, the natural rate of unemployment and union membership have both fallen.

But, from 1950s to about 1980, the natural rate rose while union membership fell.

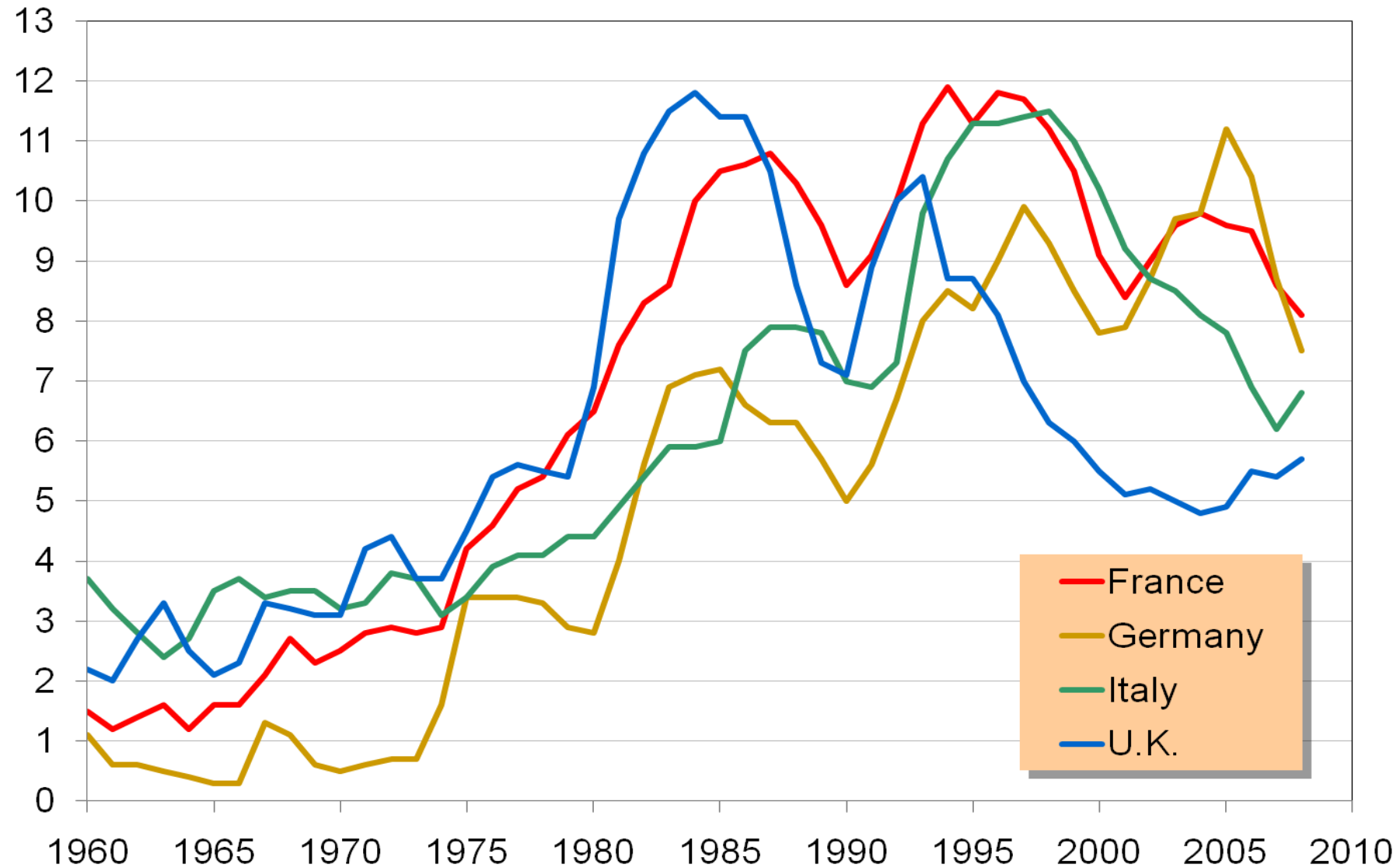
EXPLAINING THE TREND: Sectoral shifts



EXPLAINING THE TREND: Demographics

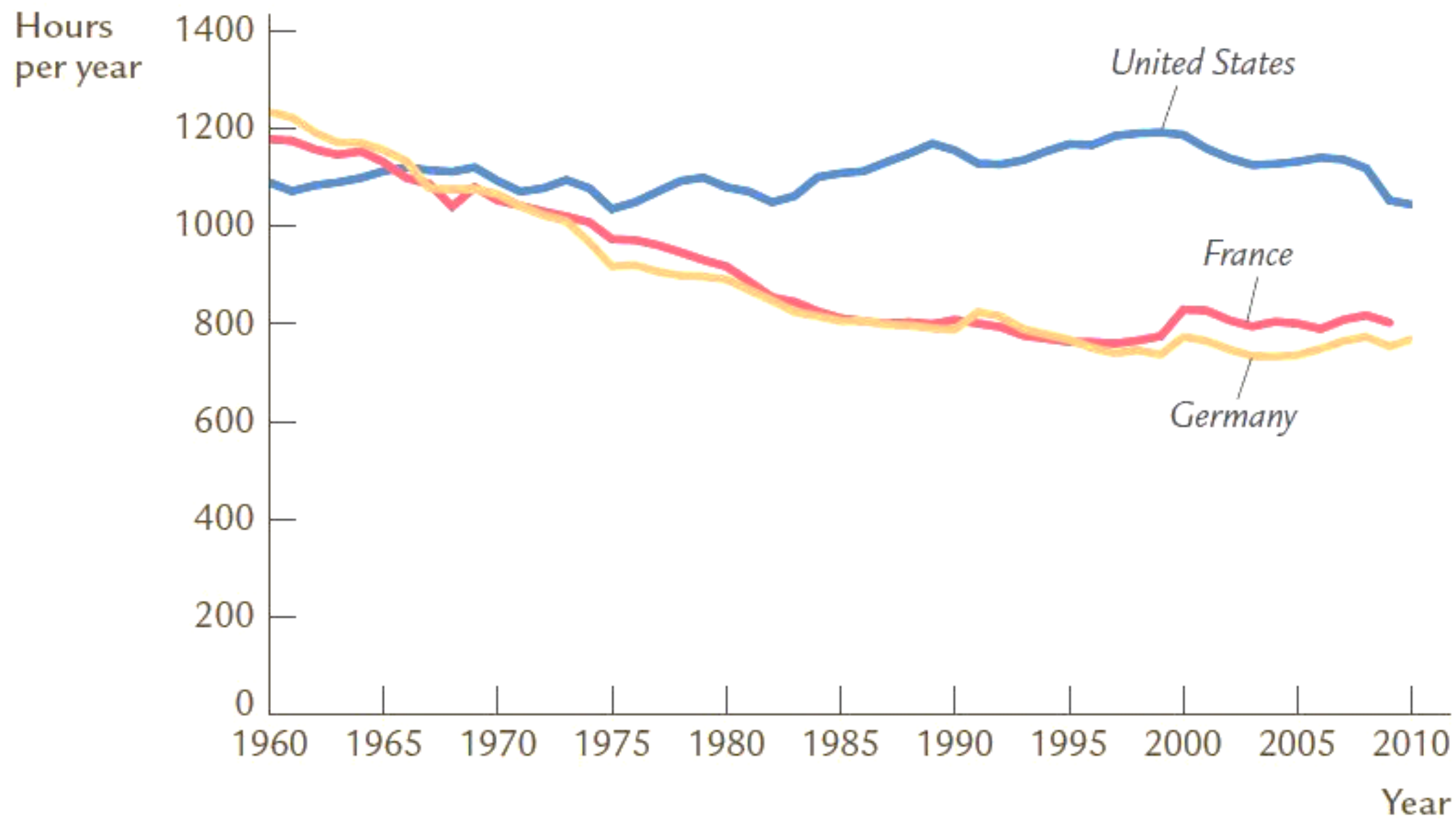
- 1970s:
The Baby Boomers were young.
Young workers change jobs more frequently (high value of s).
- Late 1980s through today:
Baby Boomers aged. Middle-aged workers change jobs less often (low s).

Всплеск безработицы в Европе



Возможные объяснения

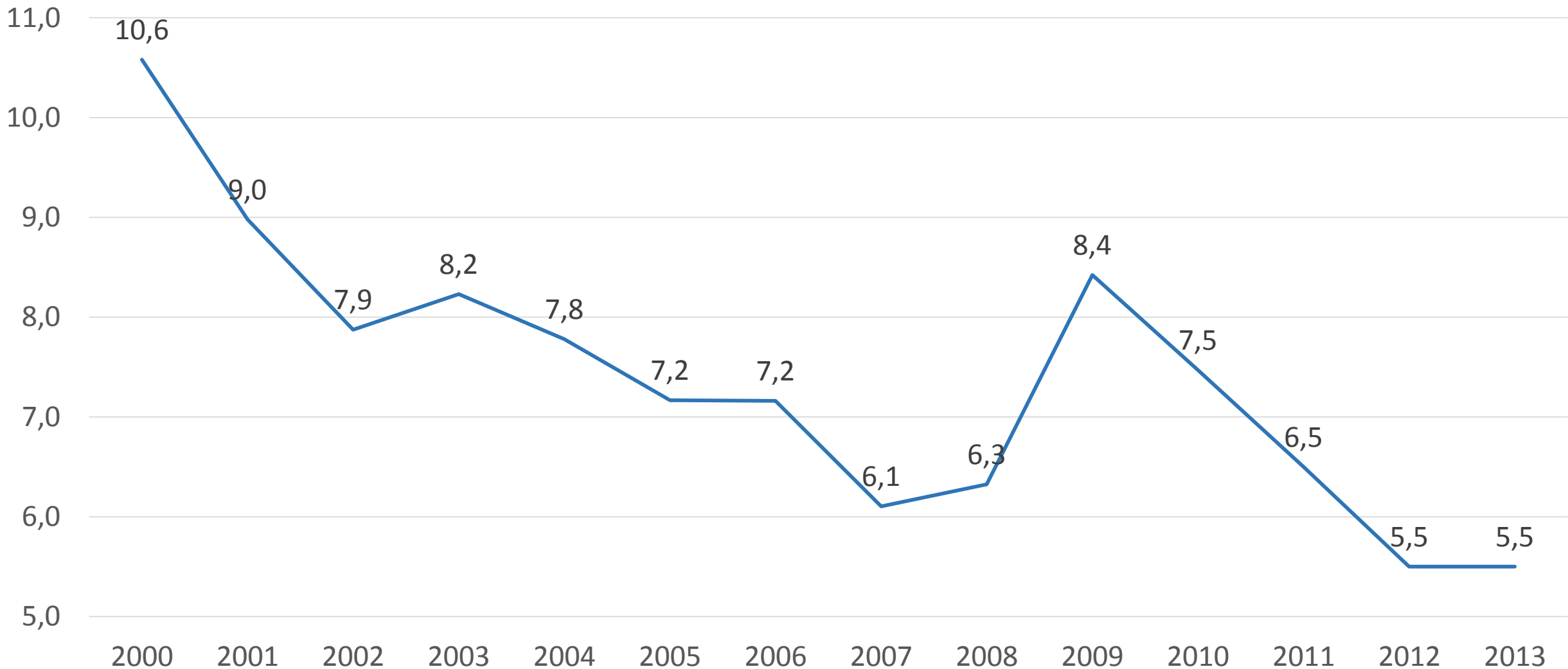
- Большинство стран дают длительные пособия по безработицы
 - В каком-то смысле получатели вообще не часть экономически активного населения
- Технологические изменения
 - Снижения спроса на неквалифицированный труд
 - В США же это привело к большей разницы в доходах, потому что зарплаты менее жесткие
- Если убрать пособия, то многие выйдут на работу, но разница в доходах вырастет

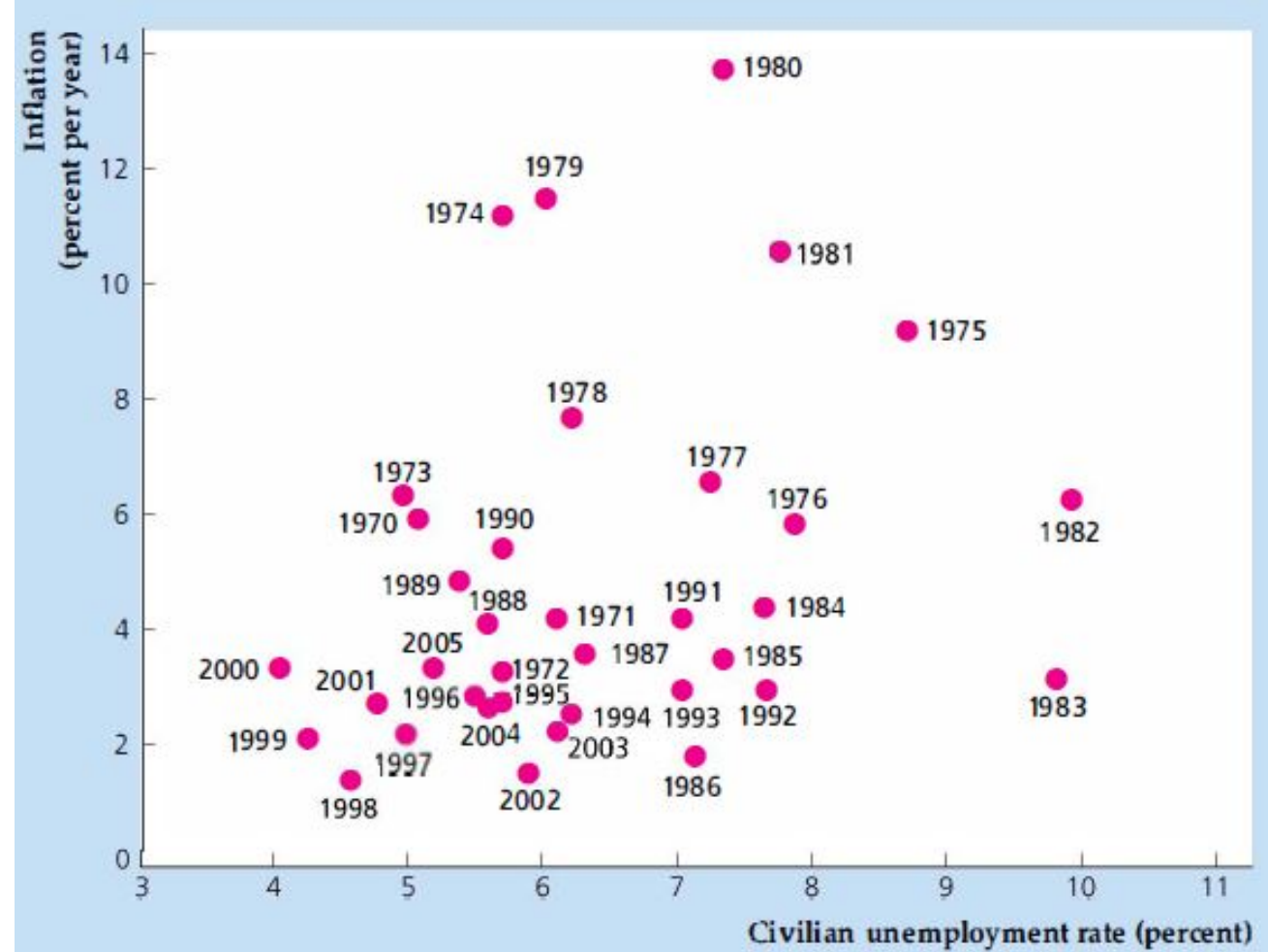
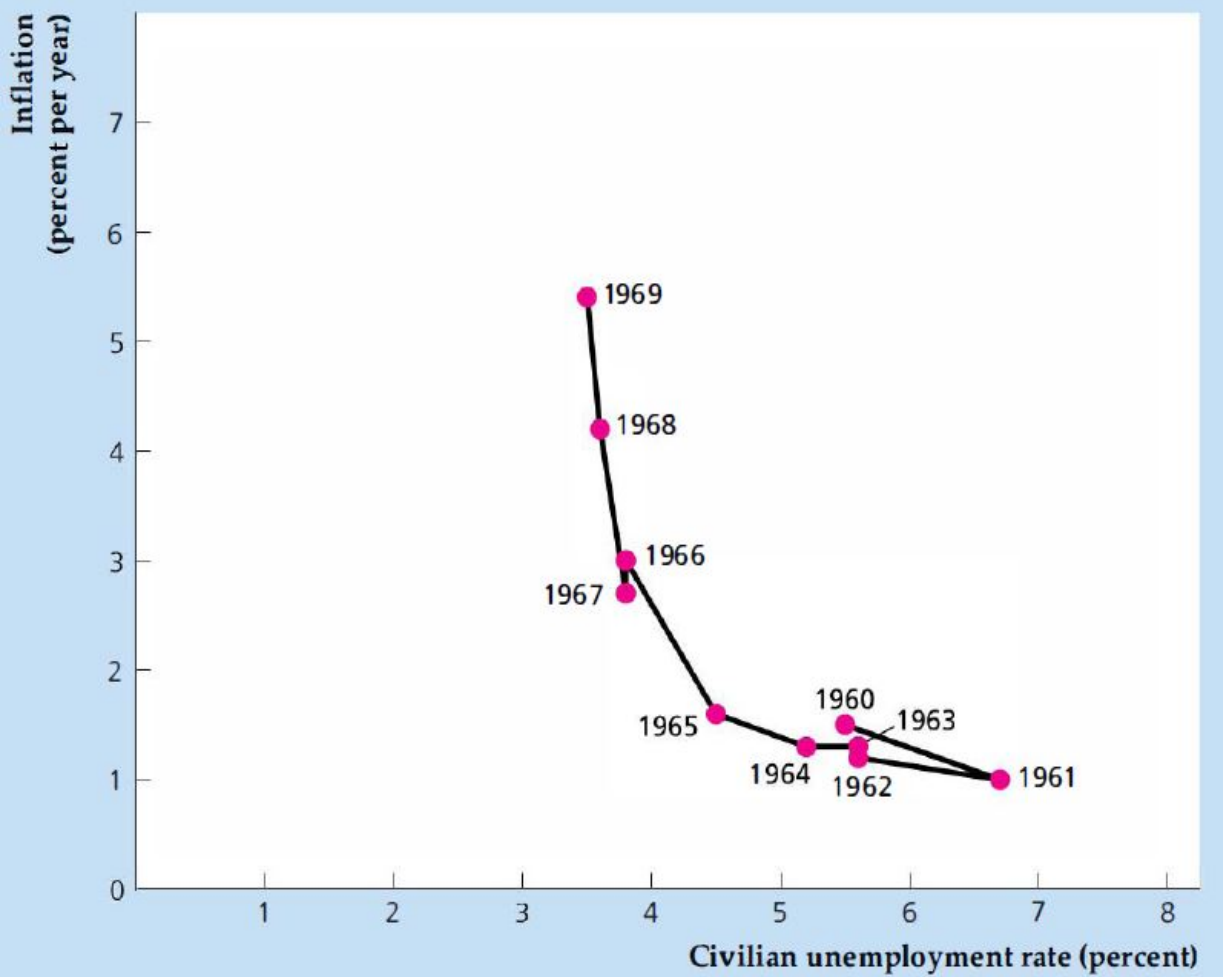


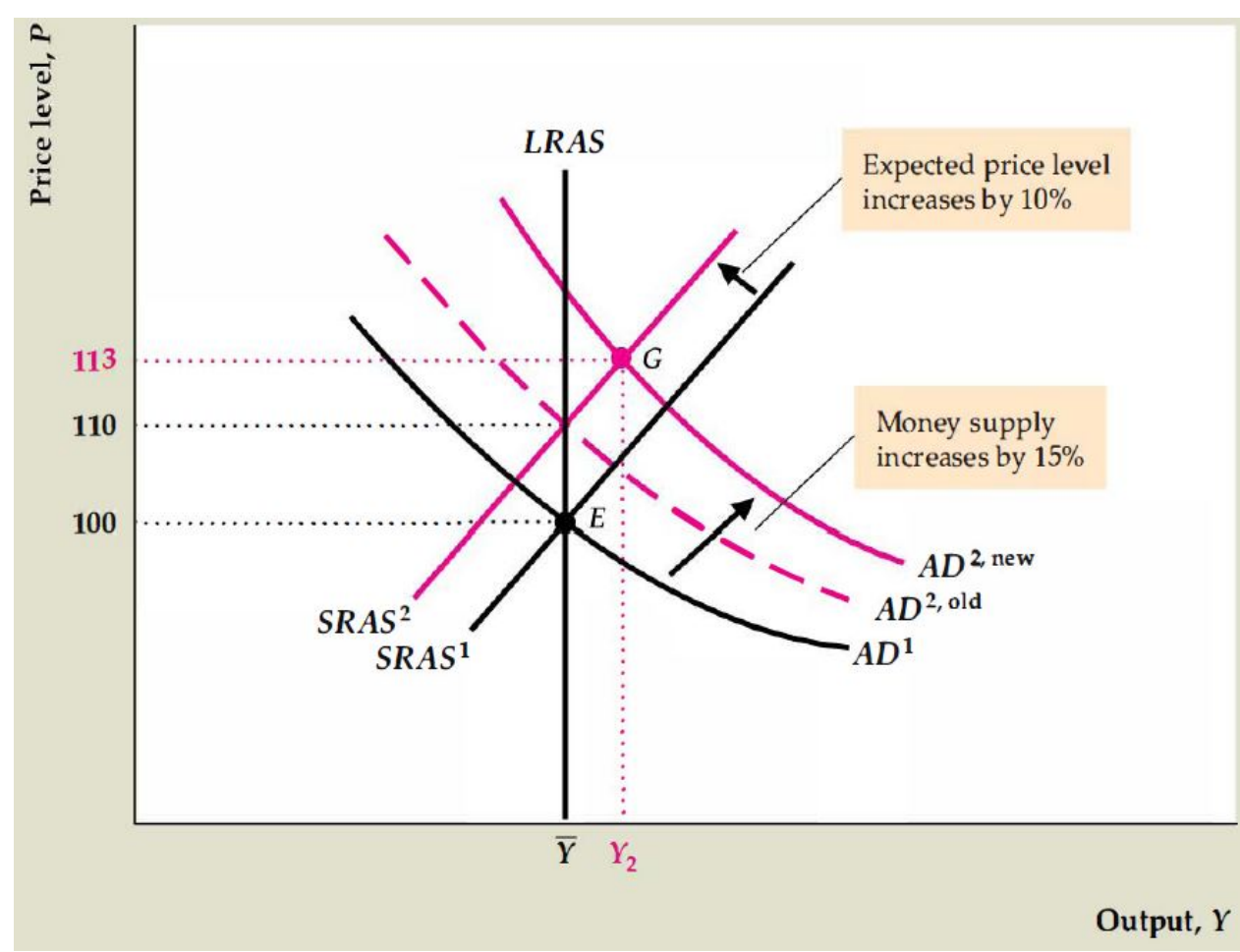
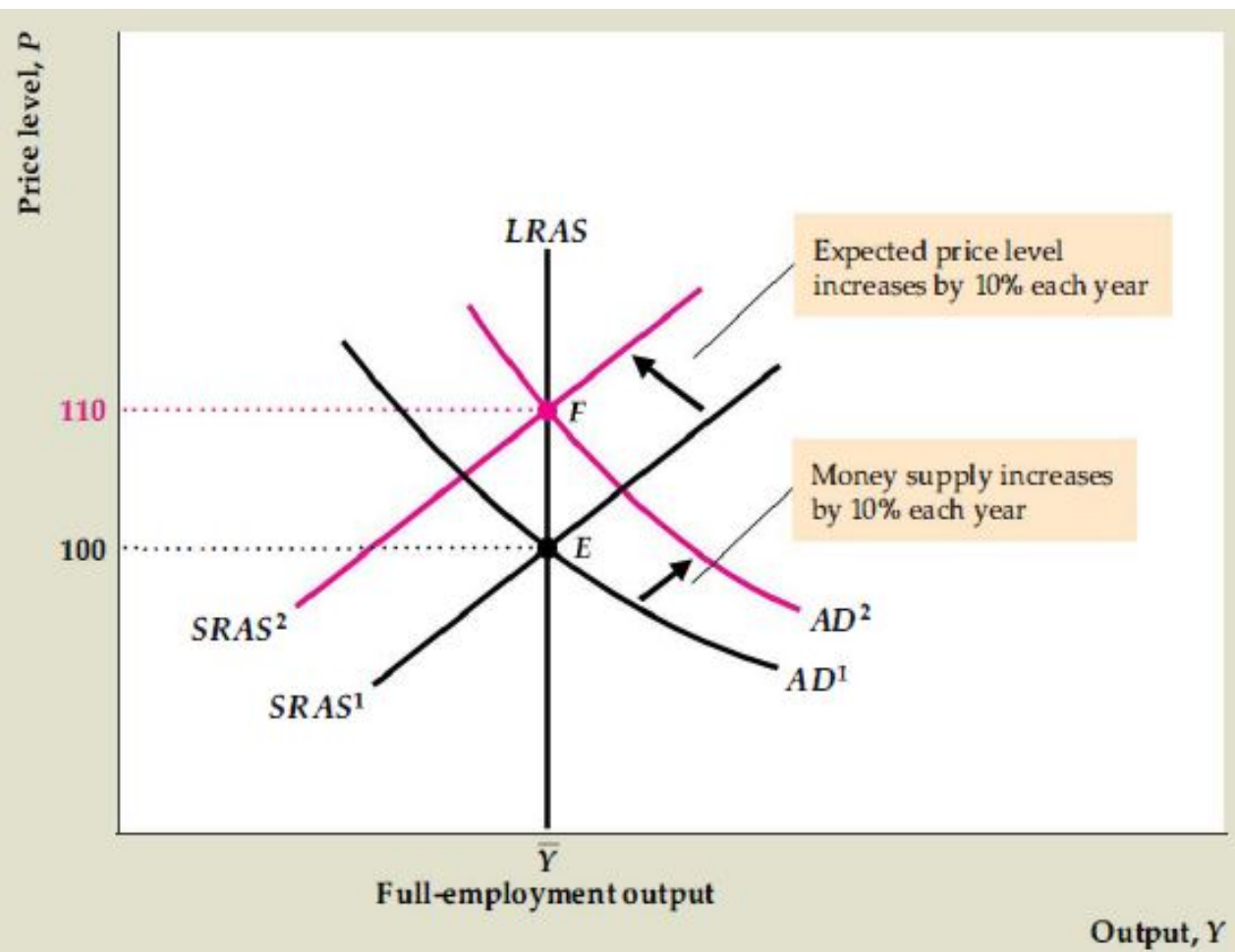
The Rise of European Leisure

- Статистика:
 - Средний американец работает больше часов
 - В Европе рабочие дни и недели короче
 - В США выше коэффициент участия в рабочей силе
- Гипотезы:
 - Prescott – tax
 - Underground economy – again taxes
 - Alesina, Glaeser – collective bargaining
 - Lobbying of holiday as well
 - Blanchard – preferences
 - Unemployment represents wasted resources

Безработица в России

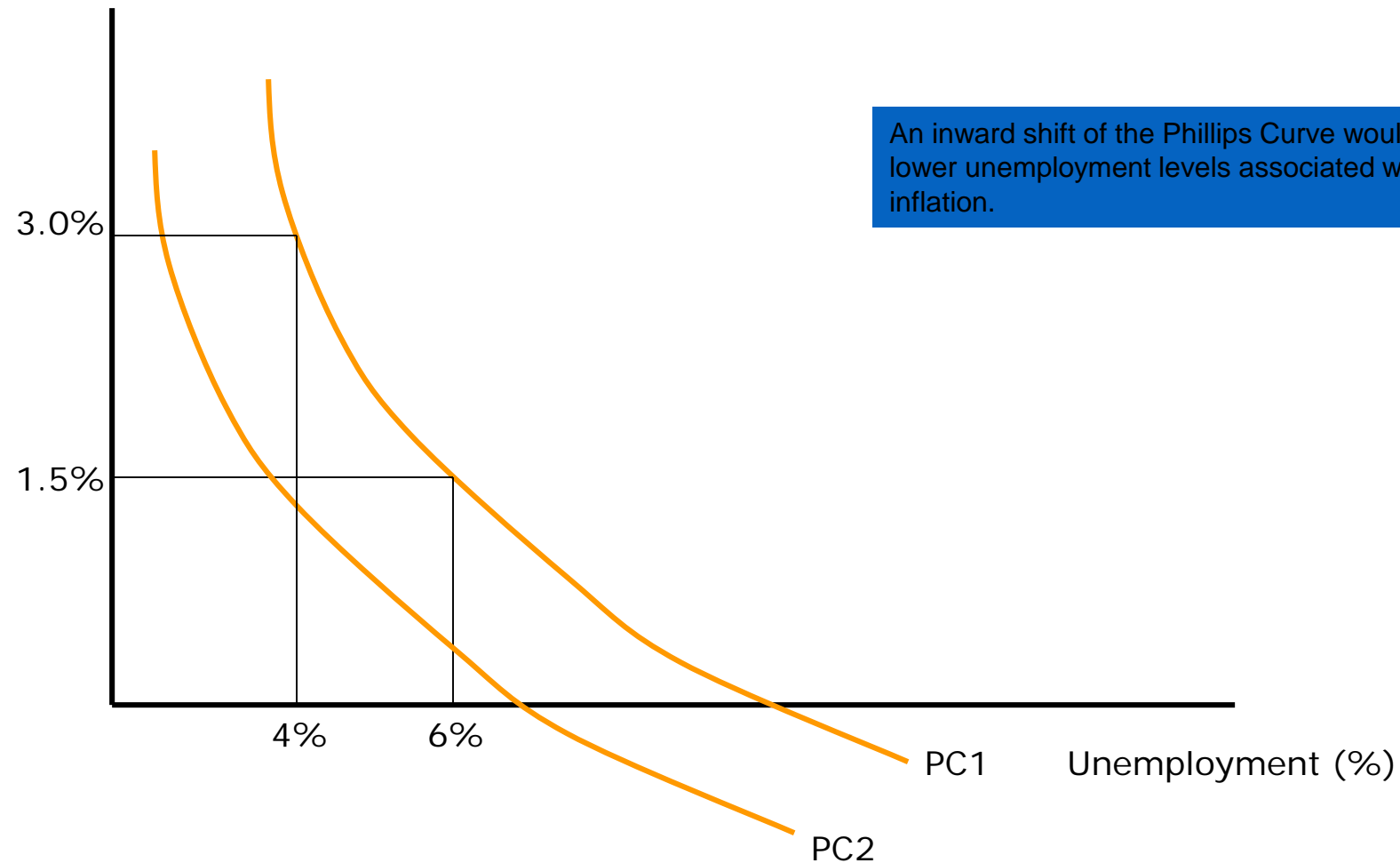






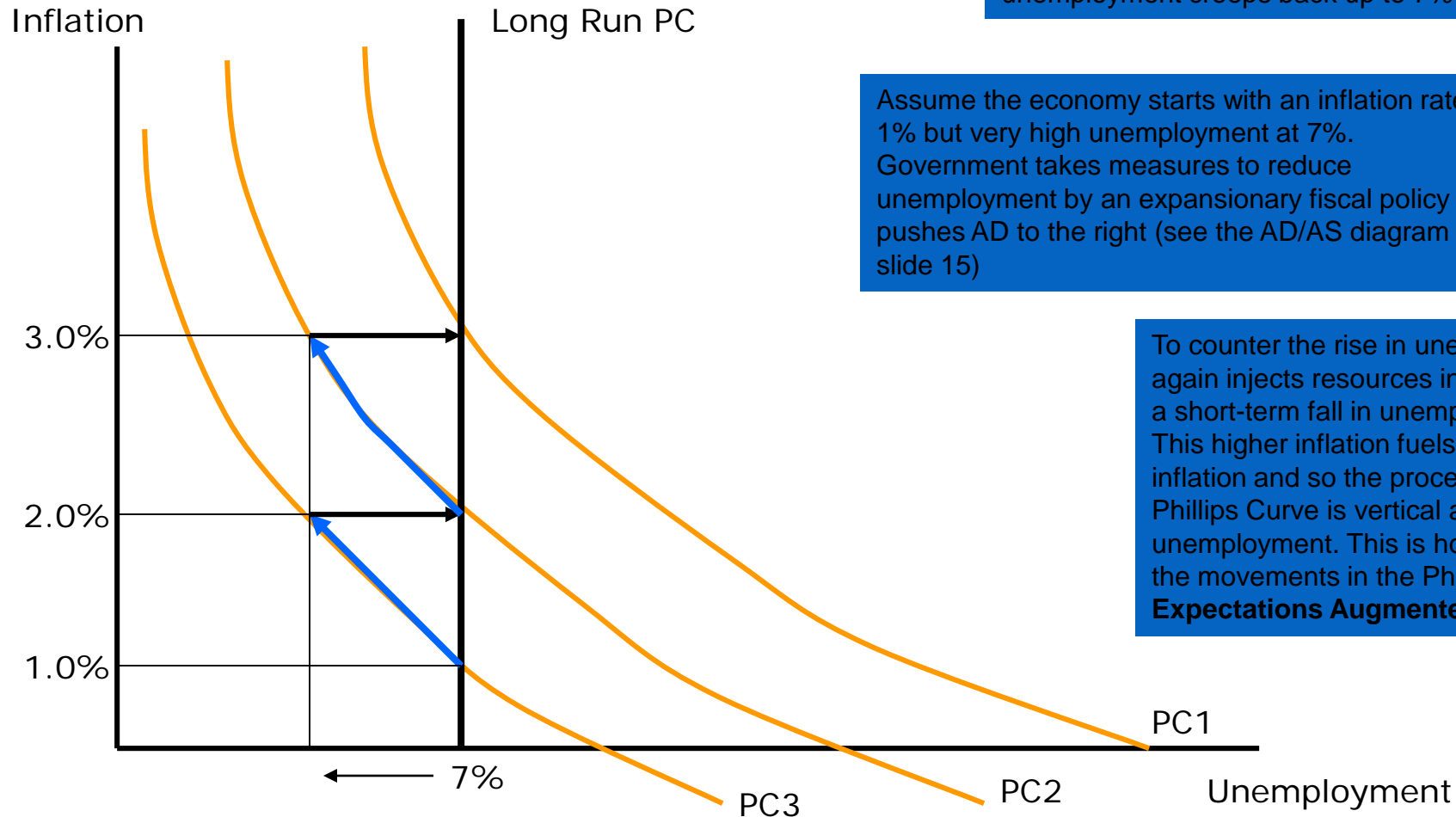
The Phillips Curve

Wage growth %
(Inflation)



An inward shift of the Phillips Curve would result in lower unemployment levels associated with higher inflation.

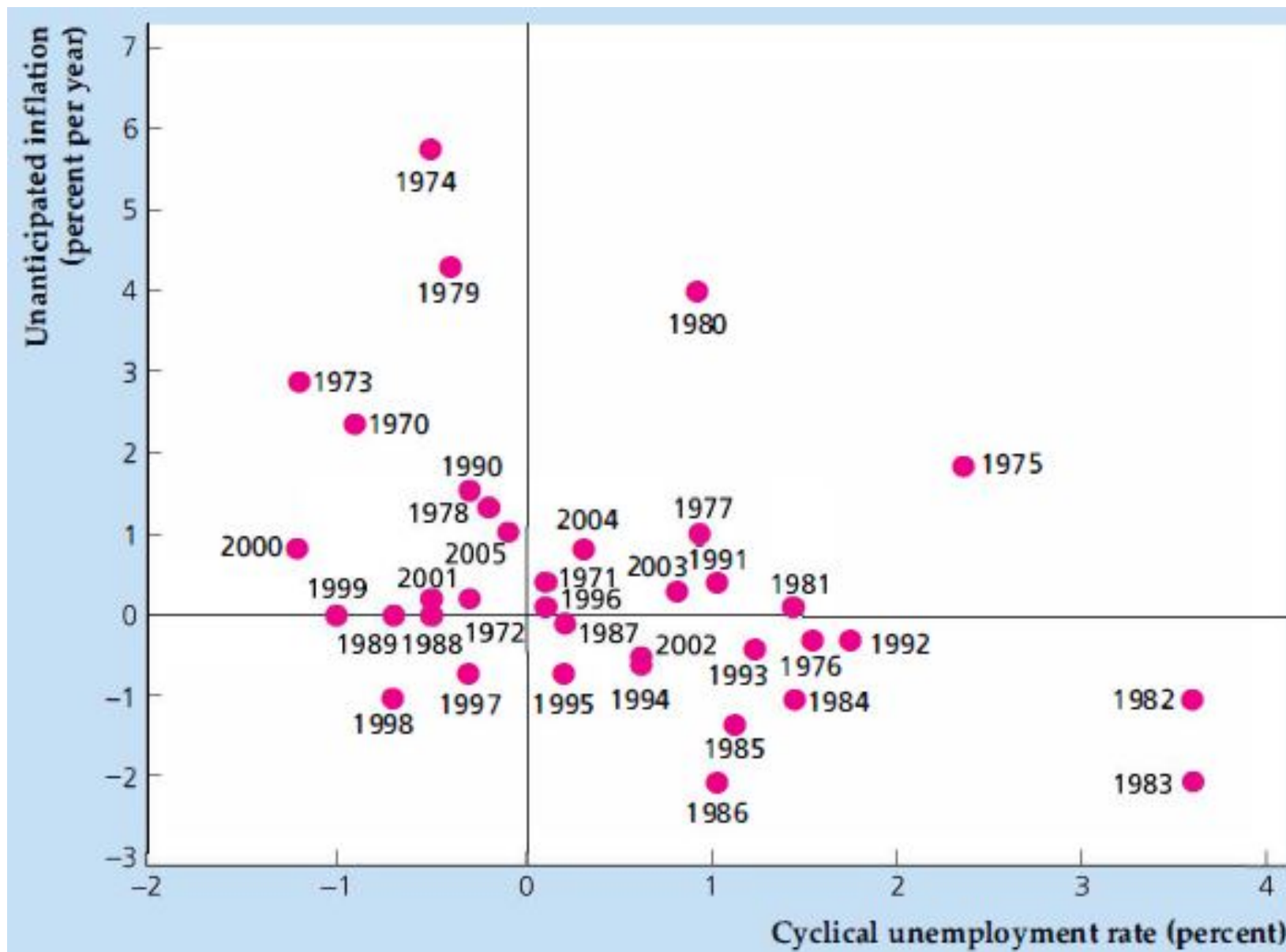
The Phillips Curve



There is a short term fall in unemployment but at a cost of higher inflation. Individuals now base their wage negotiations on expectations of higher inflation in the next period. If higher wages are granted then firms costs rise – they start to shed labour and unemployment creeps back up to 7% again.

Assume the economy starts with an inflation rate of 1% but very high unemployment at 7%. Government takes measures to reduce unemployment by an expansionary fiscal policy that pushes AD to the right (see the AD/AS diagram on slide 15)

To counter the rise in unemployment, government once again injects resources into the economy – the result is a short-term fall in unemployment but higher inflation. This higher inflation fuels further expectation of higher inflation and so the process continues. The long run Phillips Curve is vertical at the natural rate of unemployment. This is how economists have explained the movements in the Phillips Curve and it is termed the **Expectations Augmented Phillips Curve**.



Дополнительные материалы

- [Civilian Unemployment Rate](#)
 - Federal Reserve Economic Data (FRED). US. Bureau of Labor Statistics
- [Живые и мертвые](#)
 - Изменения, происходящие на рынке труда, свидетельствуют о завершении эпохи «легких денег»