Introdução à Economia/Introductory Economics

3. Inflation, unemployment and inequality

(adapted from CORE, The Economy.

Based on Units 13, 15, 9, 19)

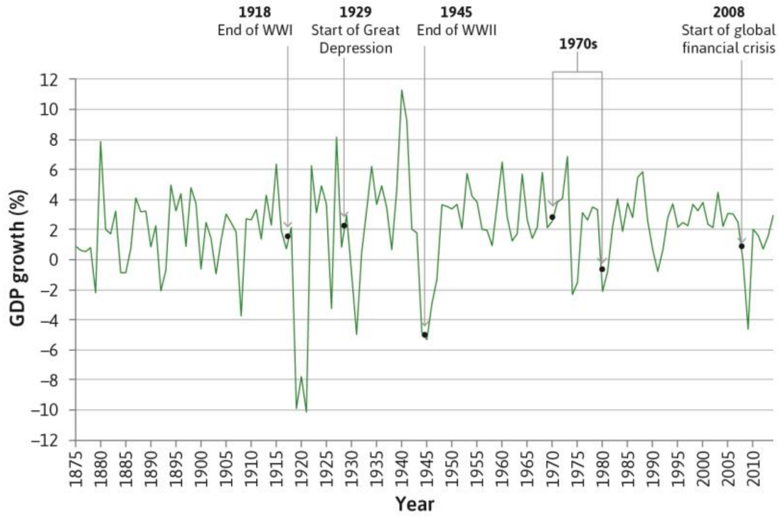
2021/2022

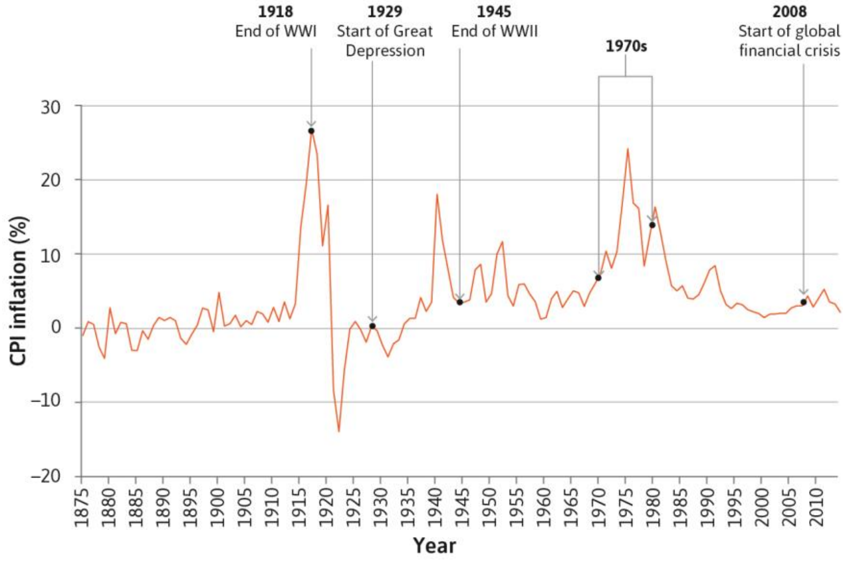
2nd Quarter (P2)

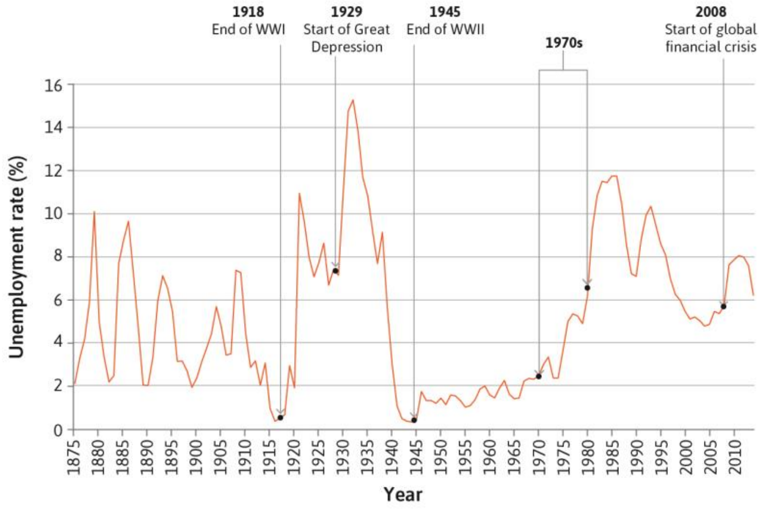
Inflation, GDP, and Unemployment

Inflation = an increase in the general price level in the economy

Inflation tends to be lower during recessions (high unemployment)







Inflation tends to be higher in poor than in rich countries

Measuring inflation

The **Consumer Price Index** (**CPI**) measures the general level of prices that consumers pay for goods and services, including consumption taxes

- Based on a representative bundle of consumer goods – "cost of living"
- Common measure of inflation = change in CPI

GDP deflator = A measure of the level of prices for domestically produced output (ratio of **nominal** to **real GDP**)

nominal GDP=production evaluated at current prices

real GDP=production evaluated at the prices of a base year

Inflation: Key Concepts

Inflation = an increase in the general price level
Zero inflation = A constant price level from year to year (month to month, quarter to quarter, …)
Deflation = A decrease in the general price level
Disinflation = A decrease in the <u>rate</u> of inflation

Real interest rate = **Nominal interest rate – Inflation rate**
[The Fisher equation]

Inflation: Key Concepts

Core Inflation: inflation measure that excludes transitory or temporary price volatility, such as for some food items, energy products, etc.

- Reflects the inflation trend in an economy.
- Is calculated to gauge the actual inflation apart from temporary shocks and volatility.

Economia

Taxa de inflação sobe para 2,6% em novembro

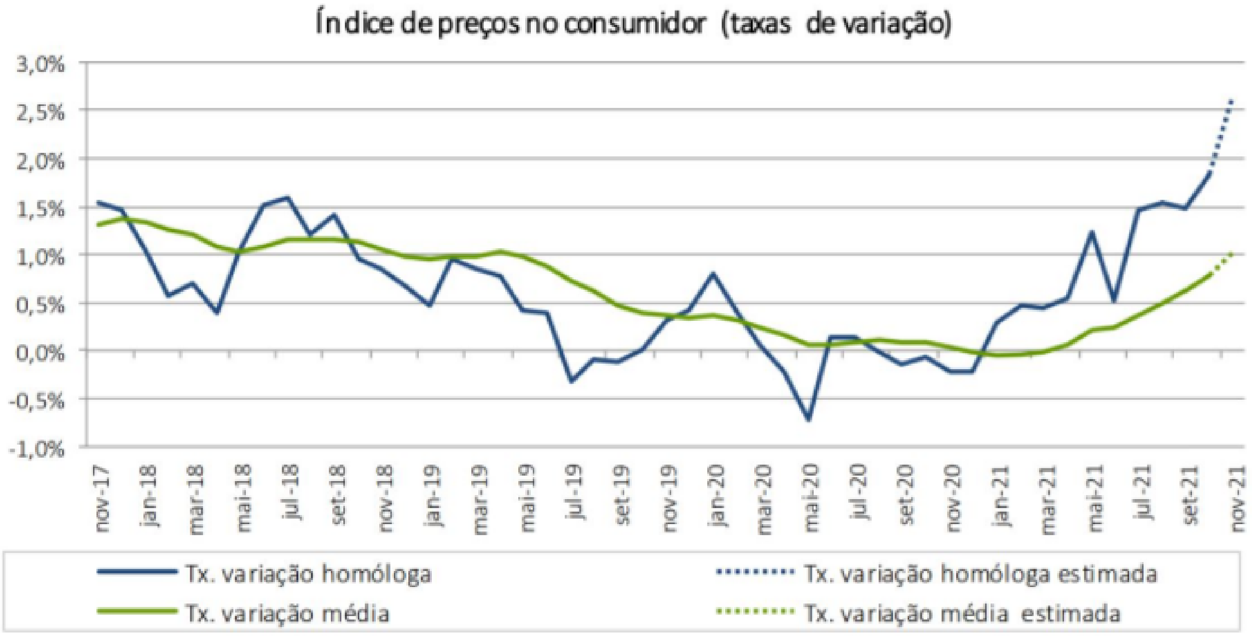
Rita Neto
30 Novembro 2021

Índice de Preços do Consumidor (IPC) subiu 0,5% face a outubro, mas caiu 0,3% face a novembro do ano passado.

Follow

A inflação voltou a aumentar. Depois de uma subida em outubro, o Índice de Preços do Consumidor (IPC) cresceu para 2,6% em território nacional em novembro. Esta taxa representa um **aumento de 0,5% face a outubro e uma descida de 0,3% face a novembro do ano passado**, de acordo com a estimativa publicadas esta terça-feira pelo Instituto Nacional de Estatística (INE).

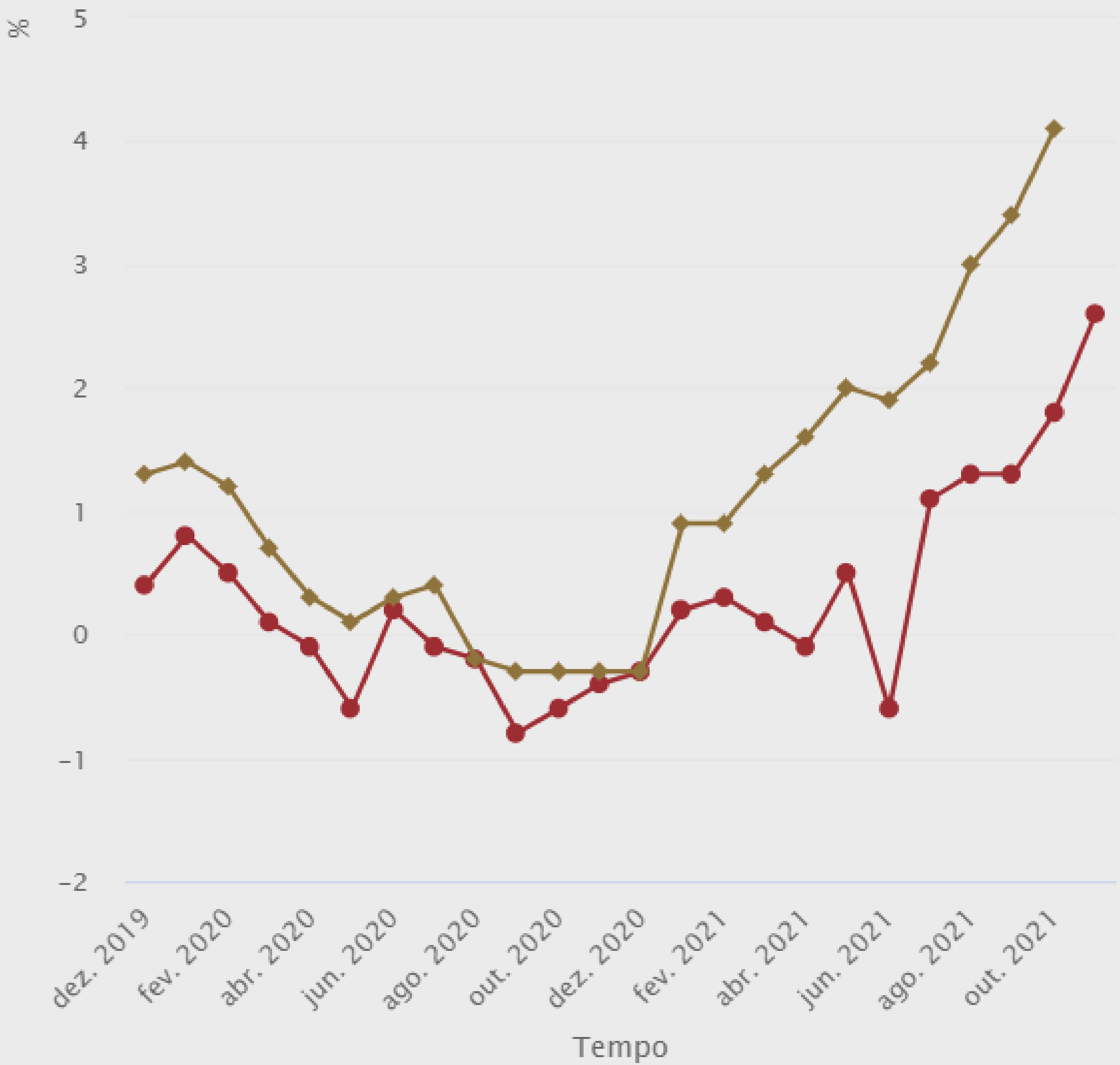
Se em agosto e setembro estabilizou nos 1,5%, outubro foi o pontapé de partida para um caminho de subidas da inflação. Passou para 1,8% no décimo mês do ano e, em novembro, deverá ter-se fixado em 2,6%. É uma subida de 0,5% no espaço de um mês, mas uma quebra de 0,3% num ano. O INE estima uma **variação média da inflação de 1% nos últimos 12 meses.**



O **indicador de inflação subjacente** (índice total excluindo produtos alimentares não transformados e energéticos) terá registado uma variação de 1,8% (1,1% em outubro), estimando-se que a taxa de variação homóloga do índice relativo aos produtos energéticos se situe em 14,2% (13,4% no mês precedente), enquanto o índice referente aos produtos alimentares não transformados terá apresentado uma variação de 0,8% (-0,7% em outubro).

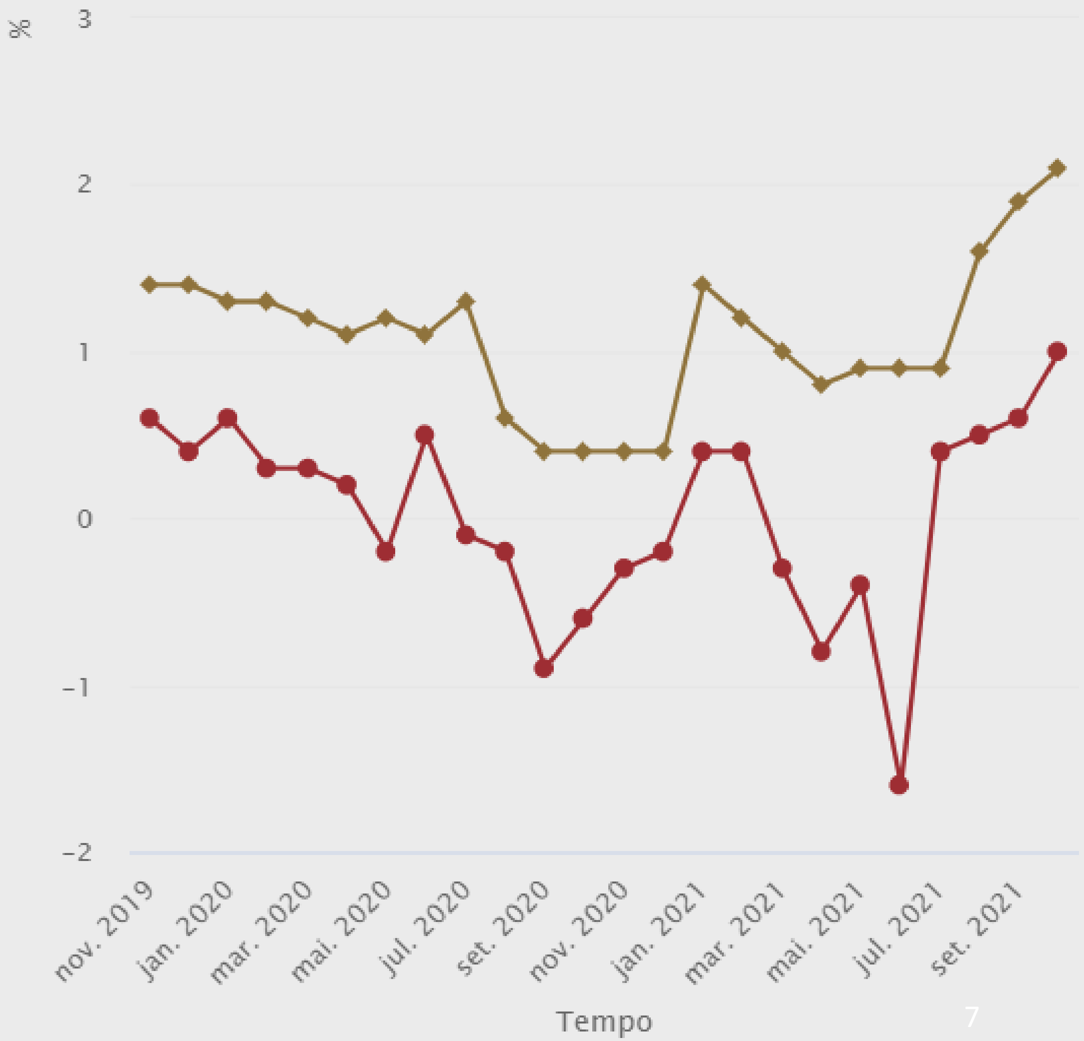
O INE destaca ainda que o **Índice Harmonizado de Preços no Consumidor (IHPC) português** terá registado uma **variação homóloga de 2,7%** em novembro (1,8% em outubro).

Índice harmonizado de preços no consumidor - Total | Portugal e área do euro



IHPC excluido alimentares não processados e energéticos|Portugal e área do euro

https://bpstat.bportugal.pt/dominios/41



Inflation: from temporary to permanent

Inflation starts temporary

(first, raw materials; then, intermediate goods)

but is increasingly embedded: then wages, and finally expectations

Inflation changes from temporary to permanent when
the economic agents begin to incorporate in their expectations
inflation trends, as it happens with wage bargains.

What’s wrong with inflation?

For people on fixed nominal income (e.g., pensioners), higher inflation means lower real value of income (that is, lower purchasing power).

Inflation also reduces the real value of debt, which is good for borrowers and bad for creditors.

High rate of inflation makes the economy work less well:

- high inflation is often volatile → uncertainty
- it is harder for producers to distinguish between changes in **relative prices** and inflation
- **menu costs** as firms have to update their prices more frequently

What’s wrong with deflation?

Deflation could have even more dramatic consequences than high inflation.

When prices are falling, households will <u>postpone consumption</u> (particularly of durables) because they expect goods will be cheaper in the future. This is similar to a negative shock to aggregate demand.

Causes of inflation

Prices and wages are determined by interactions between firms, consumers, and workers (note that wages are the price of labour).

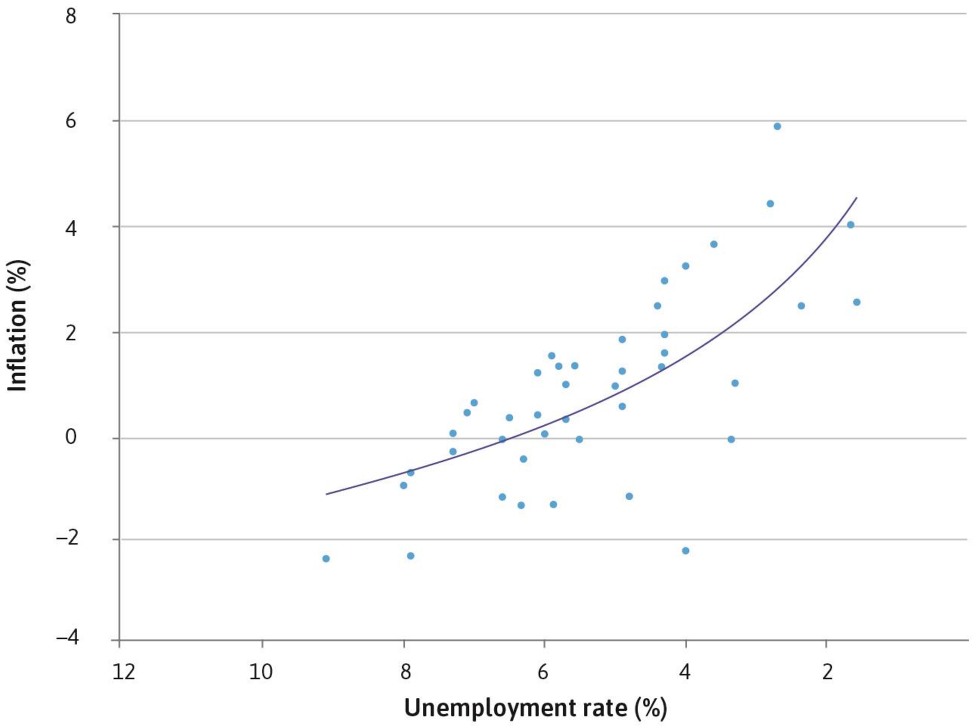
Inflation may be due to:

- increases in bargaining power of firms over their consumers (e.g., because of reduced competition)
- increases in the bargaining power of workers over firms, due to higher bargaining power or (close to) full employment

Inflation and employment

Higher employment may result in inflation.

It increases workers' bargaining position → higher wages → higher cost of production → higher prices



Inflation and aggregate demand

An upswing in business cycle is often associated with rising inflation.

- higher aggregate demand → higher employment → higher wages → higher cost of production → higher prices

- the economy experiences price and wage inflation, but the real wage (W/P) may not increase (note that the real wage is the measure of acquisition power)

Stable price level

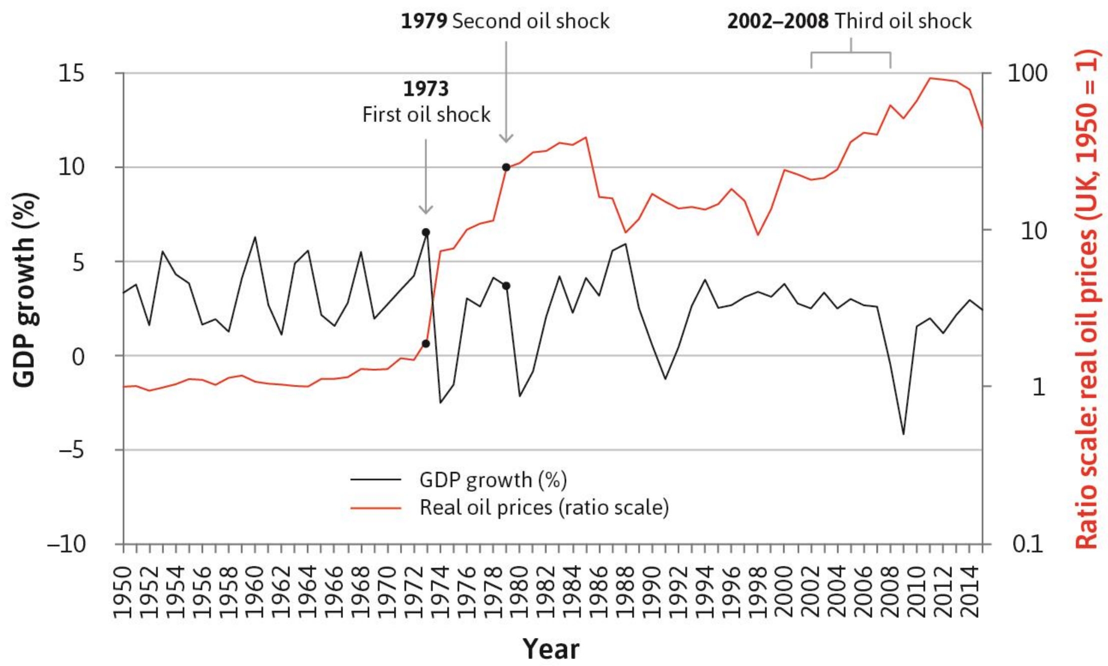
Prices are stable (inflation is 0) when the labour market is in equilibrium.

Unemployment below equilibrium:
→ **upward pressure on wages and prices**
The opposite happens when unemployment is above equilibrium.

This trade-off between inflation and unemployment, called **Phillips curve**, is not stable: it shifts over time. Keeping unemployment "too low" leads to higher prices but also rising inflation.

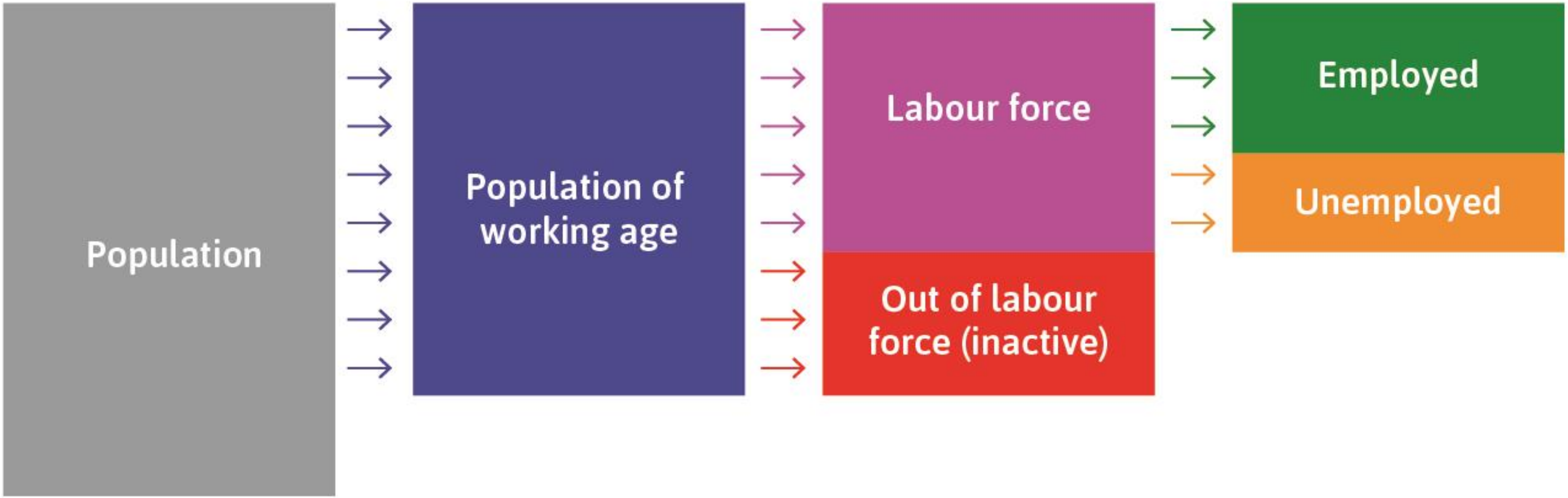
Supply shocks

Another cause of high and rising inflation is a **supply shock** = unexpected change on the supply-side of the economy (e.g., oil price shock).



Unexpected increases in oil prices in 1970s caused simultaneous increase in unemployment and prices.

The labour market



Labour market statistics

<u>The structure of the labour market</u> differs widely across countries.

$$\text{participation rate} = \frac{\text{labour force}}{\text{population of working age}}$$

$$\text{unemployment rate} = \frac{\text{unemployed}}{\text{labour force}}$$

$$\text{employment rate} = \frac{\text{employed}}{\text{population of working age}}$$

Unemployment

Unemployment = excess supply in the labour market

There will always be unemployment in labour market equilibrium

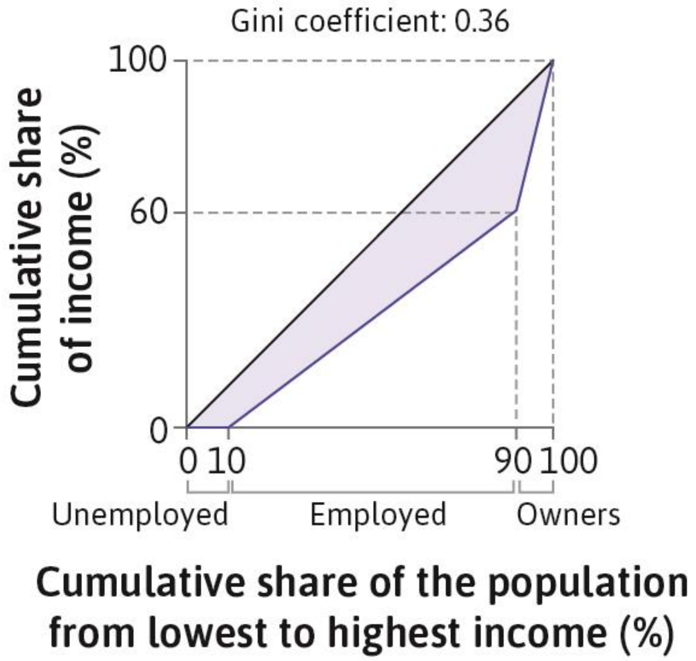
- No unemployment → zero cost of job loss → no effort
- Therefore, some unemployment is necessary to motivate workers

Division of output

The labour market determines the division of the economy's output between <u>employed workers, the unemployed, and firm-owners.</u>

The **Gini coefficient** (measure of inequality) will rise with:

- unemployment rate ↑
- real wage ↓
- markup ↑
- productivity ↑ (at least in the short run)



Labour market policies

- Education & training: labour productivity ↑

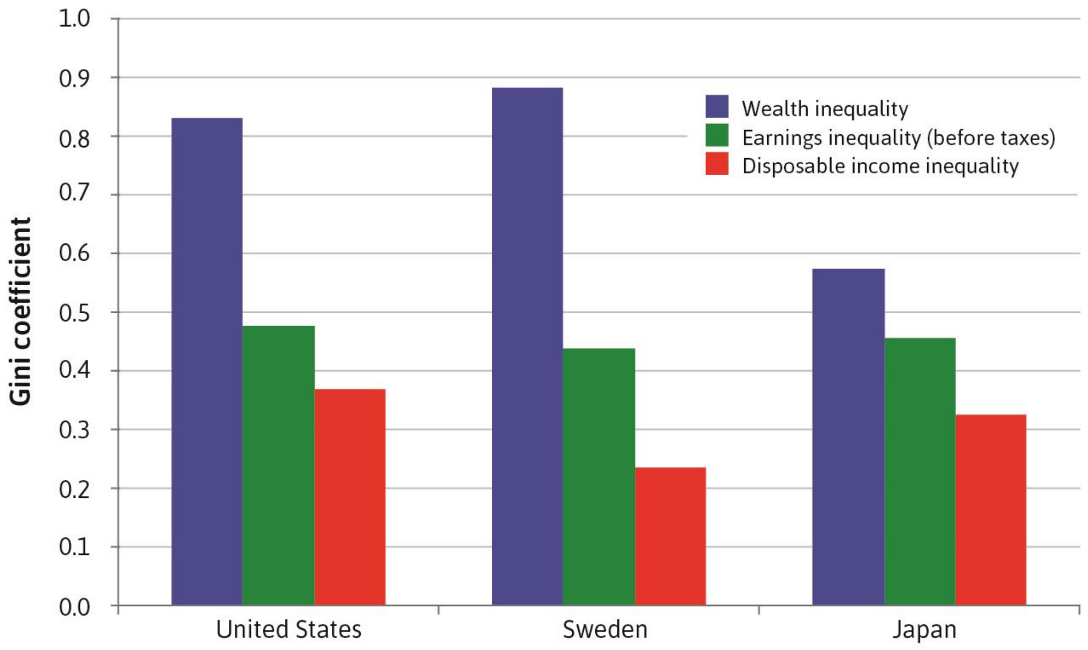
- Lower unemployment benefit: reservation wage ↓

(note: reservation wage = minimum wage that the worker requires to participate in the labor market)

- Immigration policies: labour supply ↑
- Childcare provision: female labour participation ↑

Income inequality within countries

- Wealth is much more unequally distributed than earnings before taxes, which is more unequally distributed than disposable income.
- More equality in disposable income can be due to the tax and transfer system.



How much inequality is ‘too much’?

Inequality becomes a problem if there is ‘too much’ of it.

When is inequality unfair?

- Opinions about whether inequality is ‘unfair’ depend largely on individual beliefs about how distributions came about.
- Many people think categorical inequality (based on ‘accidents of birth’ such as country of citizenship, gender or ethnic group) is ‘unfair’, but not inequality based on hard work or taking risks.

Example #1: Worker productivity rises

Productivity can rise (and inequality fall) if the entire workforce is better educated (e.g., through an increase in the compulsory schooling age).

With higher productivity firms make higher profits => New firms are created, reducing unemployment => Workers have better reservation option, so can have higher wages => Inequality falls.

Example #2: Automation

Automation: Technologies that allow machines to do the work that people used to do.

New technology increases demand for some skills and reduces demand for others. <u>In the short run</u>:

- Machines replace routine labour, increasing unemployment and inequality.
- Workers whose skills are complementary earn higher wages, increasing inequality.

(Recall chapter 2)

Example #2: Automation

<u>In the long run</u>, there are two opposing effects on wages and employment:

1. Higher unemployment reduces workers' reservation option, lowering the wage that firms must set, so higher inequality.

2. But an increase in productivity increases profits, which motivates and finances capital expansion, which in turn creates new jobs and reduces unemployment, increasing the wage, so lower inequality.

Overall effect is ambiguous.

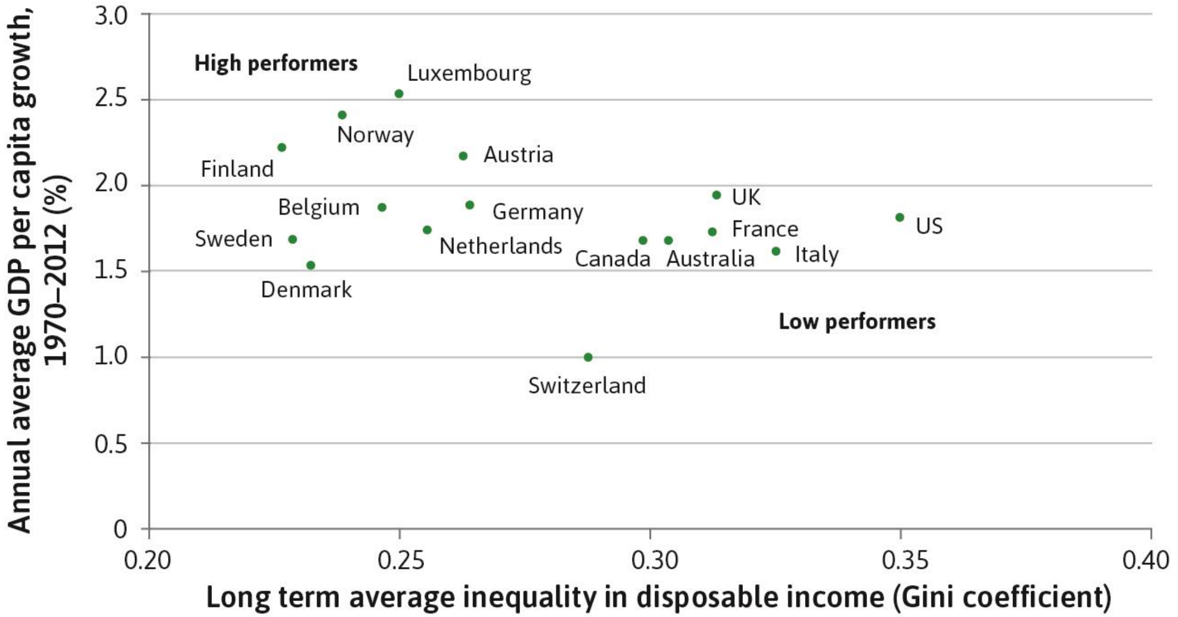
Addressing unfair inequality

Government policies can influence economic inequality through:

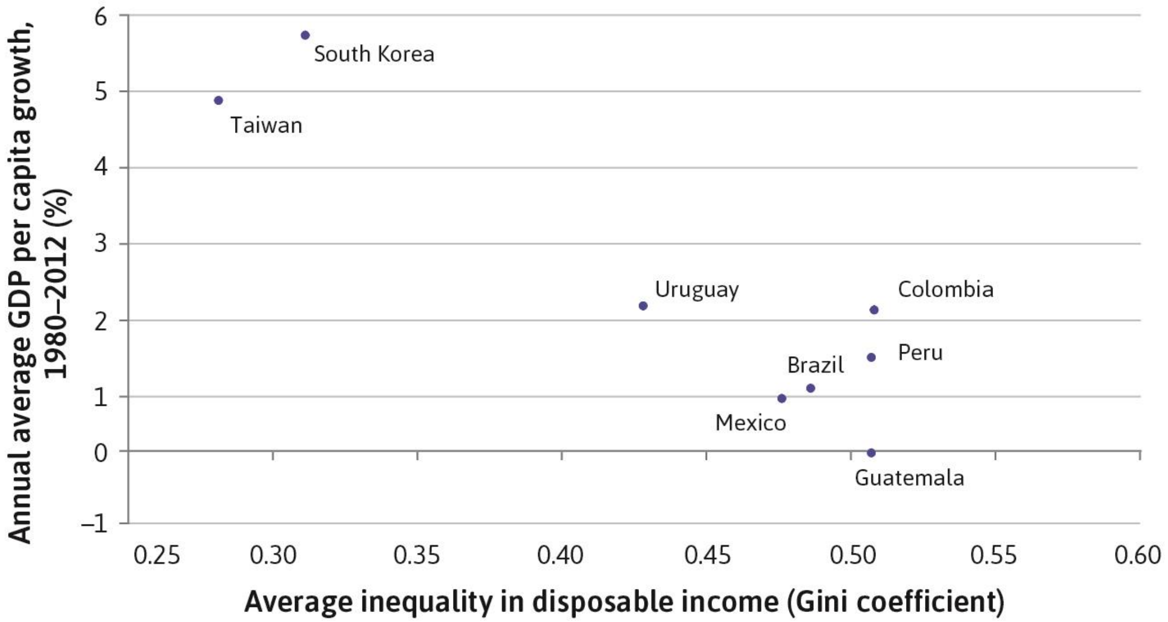
- **Redistribution** – Taxes and transfers to reduce differences in disposable income, and expenditure on public services.
    - **Progressive** policies directly reduce inequality; **regressive** policies directly increase inequality.
- **Predistribution** - Greater equality of endowments (for example, raising the value of endowments of the poor via legislation - e.g., **statutory minimum wage** for specific types of workers)

Inequality and Economic Growth

Rich countries



Catch-up countries



There seem to exist economic benefits of lower inequality.