

ECONOMIC STATISTICS

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Module 5	Productivity and the Labour Market
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Lecture 1	31 March 2026
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Topic	Labour Market Statistics
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Labour Market Statistics

What aspects should we consider when measuring the labour market?

How do we define employment, unemployment, economic inactivity and labour force participation?

How many hours do people work and how does that relate to underemployment?

What wages do people earn, and how does this affect issues like the gender pay gap?

How do we capture different forms of work such as the self-employed and those working in the 'gig' economy?

How do labour market outcomes affect household incomes, inequality and poverty?

What aspects are important?

The labour market is fundamental for understanding of a modern economy:

- It allocates a key factor of production (labour) to firms.
- It distributes earnings to workers.
- It shapes economic policy.
- It affects long-term growth prospects of the economy.

How do we measure the labour market?

The statistical framework of the labour market needs to:

- Address both short- and long-run issues
- Ensure that it captures a rapidly changing picture of work

The labour market is more complex than many other goods markets. We need to answer questions that concern the preferences and behaviours of individuals.

There are two main ways in which data on the labour market are collected:

- surveys of people and employers,
- administrative data.

Labour market stocks: Levels

The stock measures are the numbers of people in and out of work.

These can be expressed in level terms (millions of people in work) or as a rate (the share of the population who are in work).

At any one point, individuals can be categorised into three groups: employed, unemployed and economically inactive.

EMPLOYED CATEGORY: people are in work, either as employees or self-employed, and they receive earnings in return for their work. It includes also small groups, such as “unpaid family workers”. People may be working full-time or part-time. Part-time is defined in relation of working hours (in general “less than normal”, International Labour Organisation - ILO).

UNEMPLOYED CATEGORY: people are not working, but are looking for a job and available to take up work should they find it.

If we add together the employed and unemployed, we obtain the economically active population, also known as the labour force.

In addition, there is a complementary category: the economically inactive population. It includes people who are not working and who are either not looking for work or unable to take a job.

This depends on several reasons, for example, because people are studying, caring for others or are too unwell to work. Often it includes people who are retired although they are no longer of working age.

How are those categories defined?

Their definition is based on several conventions.

The main labour market aggregates

Category	Levels (thousand of people)
Population aged 15 and over	
Population of working age (15 to 64 years)	37.119
Employed people	24.121
of which employed people of working age	23.199
Unemployed	1.436
of which unemployed people of working age	1.411
Economically inactive of working age	12.509

The main labour market aggregates, Italy, IV quarterly 2025, Istat, Labour Force Survey.

Labour market stocks: rates

- Employment rate: looks only at the working age population, where the employment rate is the number of employed people of working age divided by the population of working age.
- Unemployment rate: The total population of unemployed people, divided the number of employed people of working age plus the number of unemployed people of working age (economically active people).
- Activity rate (participation rate): The sum of the employed people of working age and the unemployed people of working age, divided by the total population of working age.
- Economic inactivity rate: The number of economically inactive people of working age divided by the population of working age. These two rates must sum 100%.

Populations vary between countries and over time, and so much of our economic analysis focuses on rates.

The main labour market rate

Rate	Value (%)
Employment rate of working age	62,5
Unemployment rate	5,6
Activity or participation rate	66,3
Economic Inactivity rate	33,7

Italy, IV quarterly 2025, Istat, Labour Force Survey.

Labour market stocks: Times series

Using rates, we can also look at data through time.

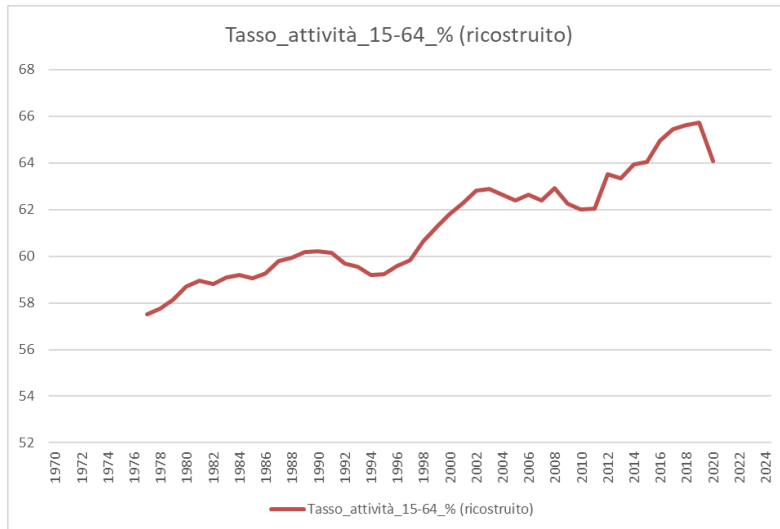


Figure 1 – Participation Rate (15-64)

There has been a steady, small structural rise in activity (participation) over this period (participation of women in the labour market).

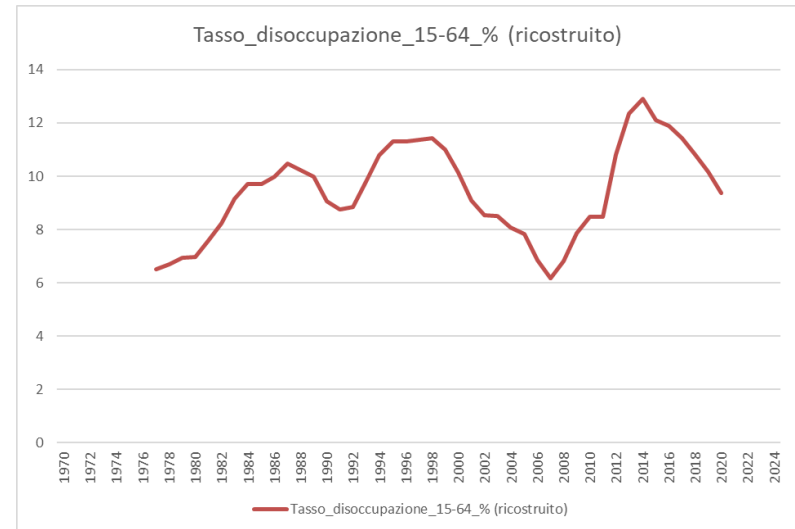


Figure 2 – Unemployment Rate (15-64)

Unemployment rates are more varied, reflecting the fact that unemployment responds strongly to the economic cycle.

Labour market flows

The concepts of employment and unemployment reflect an individual's labour market status at a distinct point in time, and often we observe little change in these measures between quarters. It is important to understand the flows of people between the different categories considered (employed, unemployed, inactive), because it is the cumulative effect of these flows that determines the aggregate values.

Another way of representing these flows is through 'hazard ratios'.

In general, it is thought that people are less likely to move jobs in a downturn as there are fewer opportunities and greater risk aversion among employees.

As we will see, higher rates of job moves are associated with greater pay increases. This makes intuitive sense: those who change jobs often do so to get a pay rise or promotion.

Labour supply and demand

According to economic theory, the number of employed people and the wage level in the labor market are determined by the interaction between labor supply and demand.

The labor supply is represented by the number of people willing to work for a given wage. Economically inactive people—those unable to work and/or not seeking work—are not part of the labor supply and, consequently, the labor market. This means they do not influence employment and wage setting.

From an economic perspective, it is therefore consistent and comprehensive to classify people as employed, unemployed, and inactive. The logic is rigorous, but labour market analysis remains complex. Each group is heterogeneous, consisting of sub-groups with their own preferences and attitudes toward the labour market.

Specification of sub-groups

Among employed people, we distinguish mainly:

- a) By professional position
- b) By contract type
- c) By job characteristics (Full-time vs Part-time, Occasional work, zero-hours contracts, gig economy)

The unemployed are not a homogeneous group. We distinguish mainly:

- a) By duration of unemployment
- b) By motivation and behavior (Newly unemployed (recently out of work)

Young NEETs (neither in education nor employment), People re-entering the labor market after a period of inactivity, Discouraged but still formally active unemployed (looking for work but with low intensity, loss of skills)

Inactive people include people who are not participating in the labor market. Main subgroups:

- a) By reason for inactivity (Students, Retired people, Housewives, People with disabilities or illnesses, People who are not seeking work for family reasons)
- b) Discouraged workers (people who stopped job seeking)
- c) Inactive people "close" to the labor market (People potentially available for work (but not actively looking), People seeking work but not immediately available).

People move between categories

Active labour market policies may help economically inactive people to start looking for work, thereby increasing labour market participation and the supply of labour. It would be wrong to think that the level of economic activity or inactivity is fixed.

Counting filled jobs and vacancies

The number of jobs in the economy can be seen as an indicator of labour demand: how many jobs are firms willing to make available at a given wage rate. In turn, this can be thought of as having two components: the number of filled roles, and the number of job vacancies.

it is also important to remember that the number of people currently in employment is not the same as the number of jobs that employers may be offering, for two reasons:

- 1) Some employed people are self-employed. They are not captured in measures of employee jobs. This can be compensated for by adding estimates of self-employment from the Labour Force Survey to estimates of jobs obtained by surveying employers.
- 2) Some people may have more than one job.

Counting job vacancies

The number of job vacancies is often seen as a leading indicator of the labour market. Increases in job vacancies might lead to rising employment and falling unemployment in the future, and vice versa.

The extent to which aggregate vacancies is a good leading indicator depends on the relative distribution of those vacancies.

During structural shifts in labour demand (some sectors contracting, others expanding), high vacancies may reflect labour mismatch rather than strong aggregate demand. Mismatch arises when the skills (or location) of the unemployed do not align with the requirements of job vacancies.

Another common metric is the unemployment-to-vacancy ratio, sometimes called the u/v ratio. This is simply the number of unemployed people divided by the number of vacancies. The ratio provides an indicator of the level of slack in the labour market: when the u/v ratio is high, there are many people for every vacancy, indicating lots of scope for employment to grow. A low ratio arises when there are few unemployed people for each unfilled job.