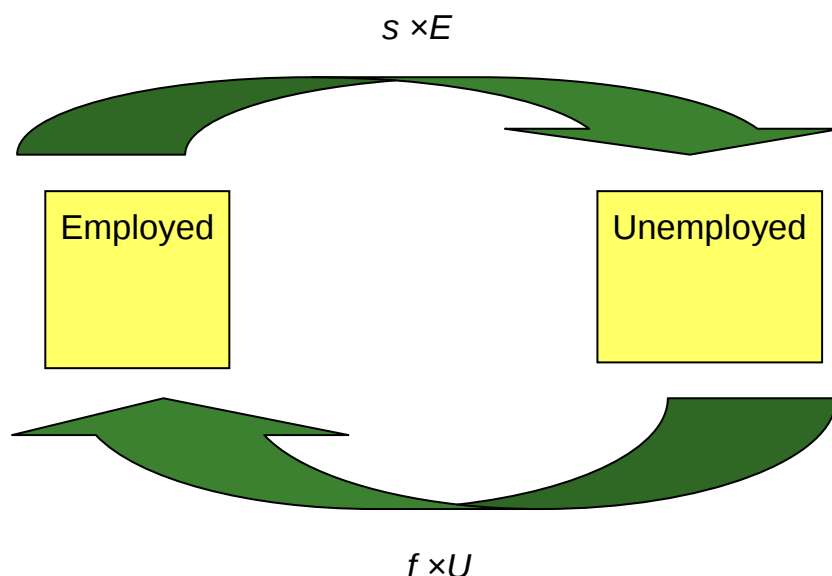




The Natural Rate of Unemployment is the unemployment rate that will arise as the equilibrium in the labour market in the long-run.

Definition: the labour market is at the long run equilibrium (or in steady state), if the unemployment rate is constant.

Since in any period there is a flow out from the employment state and a flow in, in order for the unemployment rate to be constant we must have that the flow out $s \times E$ must be equal to the flow in $f \times U$.

The steady state condition for the labour market is therefore:

$$s \times E = f \times U$$

What is the unemployment rate U / L implied by the steady state condition?

First we need to notice that the labour force is given by $L = E + U$.

From the steady state condition:

$$s \times (L - U) = f \times U$$

$$s \times L - s \times U = f \times U$$

$$s \times L = (f + s) \times U$$

Divide by L both sides and solve for U / L :

¹ The expression “steady state” is a synonym for the long-run equilibrium. Therefore we can use interchangeably the expressions “steady state” and long-run equilibrium.

unemployment because they reduce the opportunity cost of being unemployed and so the urgency of finding a job. We saw that unemployment benefits reduce the marginal cost of searching, meaning that they provide an incentive for workers to continue to search and so to remain more in the unemployment state. Using the notation we used in the natural rate of unemployment an increase in unemployment benefits would decrease the job finding rate f (workers will search more and so will reject more offers). A decrease in the job finding rate will increase the natural rate of unemployment.

Wage Rigidity and Efficiency Wages

If the labour market is competitive, at the equilibrium competitive wage the only unemployed workers are those that do not want to work at that wage and therefore the unemployment is totally voluntary. In order to have unemployment that is not voluntary we must have a labour market in which the market wage is above the competitive wage. In this case we will have an excess of labour supply at the current wage and therefore we have workers that would like to work at the market wage but there are not enough jobs available and so unemployment is also involuntary.

If the market wage is above the competitive wage why it does not decrease?

We need to explain why the market wage is above the competitive wage and why it may be rigid (it does not decrease towards the competitive wage).

If the wage is rigid and above the competitive wage we have **Structural Unemployment** (that is slightly different from Frictional Unemployment).

Structural unemployment arises because wages are set artificially high above the market clearing wage.

The main possible explanations for that:

- a) **Minimum Wage Legislation:** if a minimum wage is introduced (in UK for example it is around £5.93 per hour) and the minimum wage is above the competitive wage especially for unskilled workers we have involuntary unemployment and wage is rigid because there is a lower limit and the wage cannot go below that limit. However the minimum wage cannot explain the majority of the natural rate of unemployment, as most workers' wages is well above the minimum wage.
- b) **Labour Unions:** if the market wage is the result of the bargaining between firms and unions and unions are powerful, they may obtain higher wages, above the competitive wage, and it may be difficult to decrease that wage