

For the period ahead, the DG ECFIN survey provides positive signs regarding the pick-up in payrolls. Specifically, employment opportunities are seen growing in industry, trade and services, while in construction expectations have worsened against

the early months of this year. For 2015 Q3, the Manpower Employment Outlook Survey also reports companies' intentions to hire additional workers, albeit at a slower pace than in the previous four quarters.

A perspective on structural unemployment in Romania

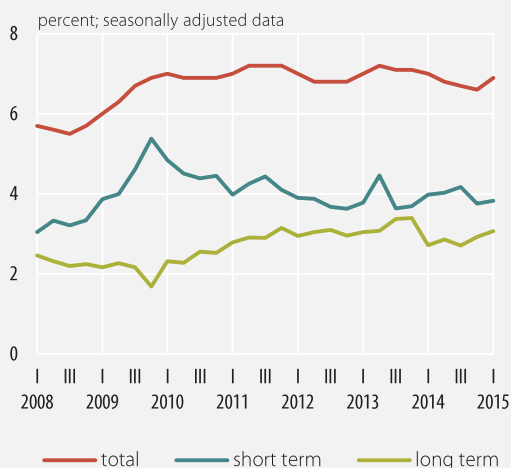
1. Definition

Structural unemployment is a form of unemployment which does not result from business cycle fluctuations, being brought about by the mismatch between employers' requirements and the characteristics of available workers (for instance, their training or geographical location). Such inconsistency arises from fundamental changes in the economy's structure (at demographic or technological level, for example), which explains why structural unemployment is deemed permanent, with an improvement thereof being possible only in the long run.

2. Analytical assessment

The outburst of the global financial and economic crisis led, in Romania as well, to a strong contraction in the economic activity (by approximately 8 percent in 2009-2010), which triggered a substantial decline in the number of employees, initially reflected by higher short-term unemployment (less than

Chart A. Unemployment Rate



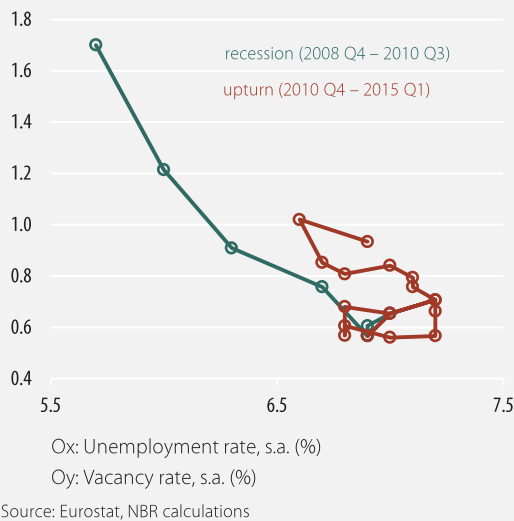
Source: Eurostat, NBR calculations

one year). However, part of the unemployed failed to get hired again, even after the economy resumed positive growth rates, with the share of long-term unemployment becoming twice as high in 2010-2015 Q1 (Chart A). The phenomenon, referred to as "the hysteresis effect" in the literature, is the first indication of an increase in structural unemployment, driven by the fact that the longer the period when a person seeks a job, the lower the chances to succeed, as a result of both the skill depreciation and the change in companies' requirements concerning the training of candidates.

Signs of rising structural unemployment in Romania are also provided by the developments in the Beveridge curve (Chart B), which shows the relationship between labour demand, approximated by the job vacancy rate, and the excess supply of labour, shown by the unemployment rate.

The movements along the curve reflect, in general, the influence of the business cycle, when the unemployment rate and the vacancy rate post opposite developments, while the shifts in the curve suggest the presence of structural factors. Thus, increased efficiency of the search of a job and a

Chart B. The Beveridge Curve



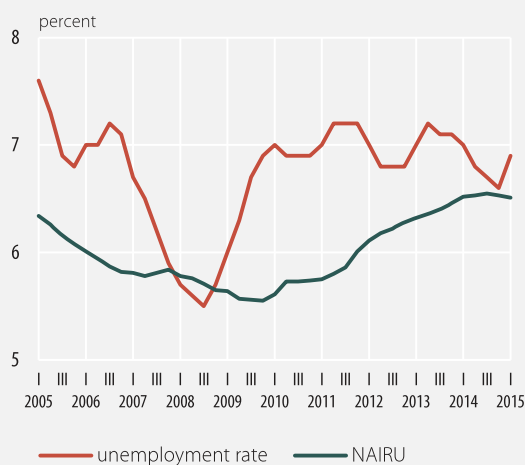
suitable candidate respectively (search & matching) determines an inward shift of the Beveridge curve, while lower efficiency, as revealed by a simultaneous rise in the two indicators, generates an outward shift.

During the recession, the pronounced fall in labour demand led to a rise in the unemployment rate, the Beveridge curve following a downward path. Starting in 2011, however, the curve has seen multiple outward shifts, which indicates more pronounced inefficiency of the search & matching process and, consequently, an increase in structural unemployment.

3. Econometrical estimation

Different methods to quantify structural unemployment are available in the literature. A measure frequently employed to this end is NAIRU, defined as the unemployment rate that does not generate inflationary pressures. Since NAIRU is an unobservable variable, economists have employed over time various estimation methods, the one based on various forms of the Phillips curve (with backward- or forward-looking inflation expectations) being often used at present.

Chart C. Structural Unemployment



For Romania, the estimation was based on the form of the Phillips curve proposed by Gordon, which shows that the evolution of inflation depends on the demand deficit (approximated by the unemployment deviation from NAIRU), backward-looking inflation expectations and explicit supply shocks¹. The results obtained on the basis of this methodology suggest that the structural unemployment rate hovered around 5.8 percent over 2005-2010, before entering an upward trend and standing at about 6.5 percent in early 2015 (Chart C).

A similar tendency was identified across the euro area, with the estimations by the OECD, the IMF and the EC emphasising the expansion of structural

unemployment over 2008-2013. Based on the ECB analyses, the evolution can be at least partly accounted for by the sheer magnitude of job destruction in some Member States, which has led to reduced job-finding rates and the two-fold increase in the share of long-term unemployment compared to the pre-crisis period.

¹ For details, see the paper titled "Relația inversă dintre inflație și șomaj în România. Cât de puternică este în perioada postcriză?" (The Inverse Relationship between Inflation and Unemployment in Romania. How Strong Is It in the Post-Crisis Period?) delivered at the 7th edition of the Monetary Policy Colloquia.

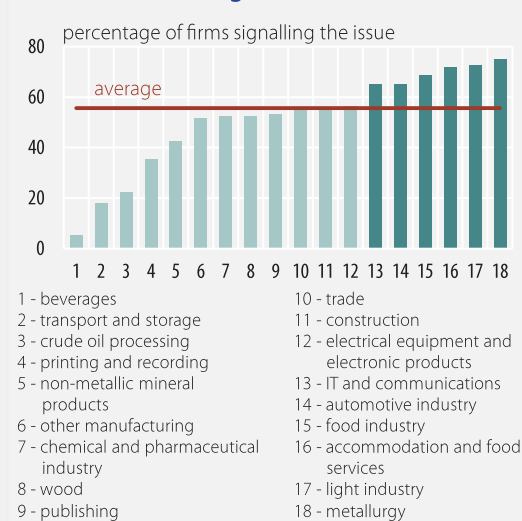
4. Determinants of structural unemployment

The rise in structural unemployment in Romania over 2011-2015, as revealed by the increase in long-term unemployment, the outward shifts of the Beveridge curve, as well as the rise in NAIRU, reflects essentially a widening skill mismatch between labour demand and supply. Besides, the capacity of the Romanian economy to create jobs has diminished since the start of the crisis, which hints, on the one hand, at the economy repositioning on a more competitive structure, oriented towards more technology-intensive sectors, while, on the other hand, reflecting the dampening influence of some labour market institutions (collective pay agreements, labour taxation, minimum wage policy). An upward impact on structural unemployment is exerted by the country's demographic characteristics, with migration and the ageing of population reducing the chances of companies to identify suitable candidates.

Skill mismatch

Over 2009-2011, the recession caused the destruction of around 700 thousand jobs across the economy, with the loss being concentrated especially in industry (about a half) and construction; the two sectors have the largest shares of unskilled workers on their payrolls. The resizing of some excessively developed sectors in the pre-crisis period (construction) and the change in production structure in

Chart D. Shortage of Skilled Workers



Source: NBR survey on the firms' behaviour on the labour market

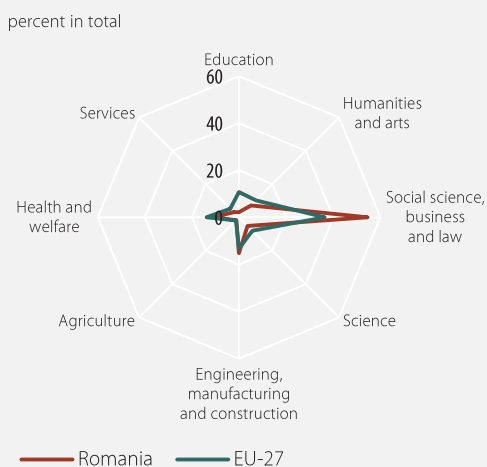
favour of more competitive sectors such as the automotive industry and IT&C services enhanced the mismatch between job requirements and worker attributes, rendering the recovery of lost jobs more difficult (only half of them were regained until April 2015).

The mismatch between labour demand and supply is mirrored by the higher share of low-skilled unemployed in the total number of job-seekers compared to the share of employees with the same education in the total number of employees, the gap widening over the last years. The opposite situation is true for medium- and high-skilled persons, with the supply shortage being more pronounced for highly-trained workers.

The same picture is provided by microeconomic data², as more than half of private companies state that one of the most significant obstacles to hiring is the shortage of skilled workers (Chart D).

Turning to the capacity of the educational system to generate appropriately-skilled staff, several indicators hint at major deficiencies. First, the general education level remains very low as, based on the PISA (Programme for International Student Assessment) test results, the Romanian students fall significantly

² The microeconomic analysis is based on the paper titled "Tendințe comportamentale pe piața muncii. O perspectivă microeconomică" (Behavioural Trends on the Labour Market. A Microeconomic Perspective) delivered at the 8th edition of the Monetary Policy Colloquia.

Chart E. Higher Education Graduates

Source: Unesco

below the OECD average³. Ranking first among the determinants are the shortage of teachers in socio-economically disadvantaged environments (with only 2 percent of university graduates embracing a career in education compared with 10 percent across the EU) and the elevated drop-out rate.

Second, with more than half of the Romanian students studying primarily social science, business and law (18 percentage points above the EU-27 average), the deficit of exact sciences graduates (Chart E) and the vocational education severely contracting (to utter absence in certain fields), an active policy is needed for guiding the youth towards areas of interest to the economy.

Against this background, the unemployment rate among the youth is very high (over 23 percent), regardless of their education level.

Labour market institutions

The speed at which the economy creates new jobs depends essentially on a number of institutional factors such as labour taxation, the minimum wage policy or the spread of collective pay agreements across the economy. According to a survey conducted by the NBR among non-financial corporations at end-2014, in Romania, 75 percent of companies view the high labour taxation as the most significant obstacle to hiring. Furthermore, almost half of companies claim that the minimum wage increase negatively impacts future hiring, with the dampening effect of this factor becoming all the more relevant in the context of the fast-paced hike in the minimum wage during 2014–2016.

In the same direction acts the real wage rigidity induced by the extensive use of collective pay agreements, which provide the existing employees with higher bargaining power. Based on the above-mentioned survey, about 60 percent of companies use such contracts – the main reason behind wage indexation with past inflation; according to internal estimates, such a wage practice enhances the likelihood for a firm to contain future hires by about 3 percentage points.

Demographic factors

Looking beyond the qualitative aspects of labour supply, the mismatch on the labour market is intensified by quantitative factors arising from demographic changes (migration, the ageing of population). Thus, over the last years, Romania has faced an ongoing deterioration of the share of persons aged under 40 in total population (from more than half prior to 2008 to around 45 percent in 2014), concurrently with a lower birth rate.

³ Among the EU countries, only Bulgaria and Cyprus scored similar levels, some of the new Member States even exceeding significantly the OECD average, i.e. Estonia, Poland, Slovenia.