HIGHLIGHTS IN THIS ISSUE:

- The unemployment rate in the Slovak Republic was high before the onset of the crisis.
- High long-term unemployment is linked to a long-standing regional development challenge.
- High inflow rates into unemployment and low vacancy and outflow rates point to regional mismatches and ongoing economic restructuring.
- Carefully-planned and effective use of EU structural funds will be key in tackling labour market problems.

Path dependence and the persistence of unemployment in the Slovak Republic

By Pasquale D’Apice* **

Summary

This Country Focus explores the persistence of high unemployment in the Slovak Republic during the last two decades. Given broadly comparable growth models and institutions, particular attention is paid to differences in performance between the Slovak and Czech labour markets. While a companion Country Focus looks in more detail at post-crisis development, adverse macroeconomic shocks experienced during the early and late nineties are reviewed here within a framework used by Jackman, Pissarides and Savouri (1990). Regional macroeconomic statistics and micro data on vacancies and job flows reveal a situation of persistent regional underemployment due to slow and protracted economic restructuring in central and eastern Slovakia. As the latter, to some extent, appears to be still on-going, the unemployment rate is still entrenched in laggard regions while long-term unemployment has remained among the highest in the EU throughout the 2000s, a decade largely characterised by a booming economy.

Introduction

The Slovak Republic has suffered from high unemployment throughout its relatively short history. Despite Gross Domestic Product (GDP) growth being fairly comparable, on average, to that of the Czech Republic, the Slovak unemployment rate was nearly twice as high in the fifteen years that preceded the 2009 crisis (Graphs 1 and 2). Whereas a companion Country Focus (D’Apice, 2014) analyses post-crisis developments in greater detail, this Country Focus sheds light on the legacy of the transition on regional development and structural unemployment. In spite of a heritage of very similar labour market institutions and real wage adjustments, the initial transition shock impacted much more heavily in the Slovak Republic (Graph 3). This divergence was largely due to different degrees of economic dynamism and specialisation between the Czech and the Slovak regions. Laggard regions oriented towards agriculture and industries that proved non-viable in the new market environment (such as coal mining and armaments) were mostly located in Central and Eastern Slovakia. As a result, the unemployment rate rose to 13% in the Slovak Republic while it remained around 4% in the Czech Republic (Graph 4).
The early transition to a market economy had a profound impact on the Slovak labour market...

Regional statistics on unemployment flows and vacancies are consistent with an underemployment equilibrium characterised by uneven economic restructuring. In response to a spike in inflows to unemployment (e.g. due to the early transition shock and economic restructuring), the vacancy rate in the Slovak Republic was too low to gradually absorb the growing number of unemployed (Graph 5). As a result, the outflow rates from unemployment were also low and the length of the unemployment spell was three to four times longer in Slovakia than in the Czech Republic. At the same time, marked regional disparities in the labour market persisted (Graph 6).
A second crisis episode exacerbated the unemployment problem at the turn of the century and...

...while responding to the late 2000s crisis, still poses a mixture of structural and cyclical challenges.

Long-term unemployment rates remain among the highest in the EU...

Following a second severe crisis episode in the end nineties, the unemployment rate peaked at 20% at the turn of the century. The proximity of these two shocks is in turn likely to have affected the labour supply through human capital depreciation and a hysteresis effect, partly explaining the relatively high structural unemployment recorded during the booming pre-crisis years. The situation improved markedly in the mid-2000s. The admission to the EU in 2004 also marked a new era with substantial inflows of foreign direct investment boosting export and employment. With the effect of previously-adopted structural reforms finally feeding through, the labour market improved significantly. Within a few years, the unemployment rate halved to less than 10% along with record increases in labour productivity and real GDP. Yet, regional differentials in the level of economic development improved only marginally and high unemployment rates remained entrenched in Central and Eastern regions (Graphs 7 and 8).

Graph 7: Value added, per capita, by sector and region (euro)

Graph 8: Unemployment rate by region (% of labour force)

Source: Commission services

After this improvement, the situation worsened (in all regions) in the wake of the 2009 crisis, when the unemployment rate rose to early transition levels and remains to date almost 5 percentage points above the pre-crisis level.

**Unemployment and labour market institutions in the Slovak Republic: a snapshot**

The Slovak labour market shares several characteristics with other former EU transition economies. Participation rates are slightly below the EU levels but inactivity among the elderly (above 55 years) and females is particularly pronounced compared to the rest of the EU. More idiosyncratic Slovak characteristics, however, include high rates of unemployment among the less educated, longer duration of unemployment spells, faster population growth (up until now), and large regional differentials in the level and persistence of joblessness (Table 1). Existing estimates also suggest that the presence of marginalised Roma communities in the Slovak territory is particularly pronounced. With regard to labour market institutions, employment protection levels point to a rather flexible labour market, as evidenced by OECD indicators available through 2008. This is especially true for regular and temporary contracts, while collective dismissals are somewhat more regulated. Although activation strategies could be improved, the generosity of both unemployment benefits and social assistance is among the lowest in the EU (European Commission, 2011), with the duration of unemployment benefits being limited to a maximum of six months.

Also, according to the composite indicator of 'flexicurity' developed by Governatori et al. (2010), Slovakia performs well among EU Member States in terms of flexibility of contractual agreements. However, the scores on social security and active labour market policy indicators are at the lower end of the scale. This is consistent with relatively low expenditure on Active Labour Market Policies and with below-EU-
The conventional labour demand and supply framework does not lend itself easily to explaining the persistence of unemployment in a relatively flexible labour market.

...while the Slovak labour market is relatively flexible

In comparison with neighbouring countries, wages have remained competitive relative to productivity at the economy-wide level and especially so in the manufacturing sector (De Broeck, Guscina and Mehrez, 2012). A set of empirical studies has also investigated, through different techniques, the wage curve and the elasticity of wages to unemployment in Slovakia. Gertler (2010) suggests that wages have been rather flexible in Slovakia since the mid-nineties, especially compared to other countries, but also highlights heterogeneity in the wage curve across sectors, skills and regions, with the higher-skilled segment of the labour force being the most responsive to adjustments. Union density is comparable to that in neighbouring countries, having gradually halved to about 17% during the 2000s. The minimum wage level is rather low (around 2 euro per hour), yet around the OECD average as a share of the average wage and close to the constitutionally-guaranteed subsistence level (defined as the level of social assistance for those in material need). Furthermore, it is estimated that only around 3% of all employees receive the minimum wage.9

The impact of economic restructuring in a Jackman, Pissarides, Savouri (1990) framework

As emphasised by Munich and Svajner (2007), the conventional labour demand and supply framework does not lend itself easily to explaining the coexistence of unemployment and vacancies or the increase and persistence of unemployment in the aftermath of protracted economic restructuring. In analysing labour market developments in former transition economies, Munich and Svajner (2007) suggest using a framework originally developed by Jackman, Pissarides and Savouri (1990), where a given level of unemployment may be seen as the intersection between a negatively sloped Beveridge curve (representing the relationship between the unemployment rate and the job vacancy rate at which unemployment stabilizes) and the vacancy supply curve (the locus of unemployment/vacancy rate ratios at which wages are in equilibrium).

This approach has the advantage of providing a simple representation of the impact of economic restructuring on the labour market (Graph 9) and allows for mismatches to be classified in two broad categories. First, when both the unemployment outflow rate and the vacancy rate are high, mismatches may relate to the skill of the unemployed or to labour market institutions raising the reservation wage or leading to decreasing search effort. Second, when the inflow rate to unemployment is high and both the unemployment outflow and the vacancy rate are low, the mismatch is likely to be related to economic restructuring or other macroeconomic conditions. The framework developed by Jackman, Pissarides and Savouri (1990) is hence a useful complement to more traditional approaches and

<table>
<thead>
<tr>
<th>Table 1: Structure of unemployment</th>
<th>1998</th>
<th>2000</th>
<th>2005</th>
<th>2010</th>
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<tbody>
<tr>
<td><strong>EU</strong></td>
<td></td>
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</tr>
<tr>
<td>Unemployment (% of the labour force)</td>
<td>10.3</td>
<td>8.5</td>
<td>9.1</td>
<td>9.7</td>
</tr>
<tr>
<td>Unemployment rate among males (% of the male labour force)</td>
<td>12.2</td>
<td>19.1</td>
<td>16.3</td>
<td>14.4</td>
</tr>
<tr>
<td><strong>CZ</strong></td>
<td></td>
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<tr>
<td>Unemployment rate among females (% of the female labour force)</td>
<td>5.9</td>
<td>8.8</td>
<td>8.0</td>
<td>7.4</td>
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<tr>
<td><strong>SK</strong></td>
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<tr>
<td>Unemployment rate among those with lower secondary education or less</td>
<td>10.8</td>
<td>9.8</td>
<td>9.8</td>
<td>9.6</td>
</tr>
<tr>
<td><strong>EU</strong></td>
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<tr>
<td>Unemployment rate among those with tertiary education</td>
<td>8.2</td>
<td>7.8</td>
<td>8.4</td>
<td>9.7</td>
</tr>
<tr>
<td><strong>CZ</strong></td>
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<tr>
<td>Long-term unemployment rate (% of the labour force)</td>
<td>12.2</td>
<td>18.9</td>
<td>15.5</td>
<td>14.2</td>
</tr>
<tr>
<td><strong>SK</strong></td>
<td></td>
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<tr>
<td>Youth Unemployment (% of the labour force 15-24)</td>
<td>13.1</td>
<td>18.6</td>
<td>17.2</td>
<td>14.6</td>
</tr>
<tr>
<td><strong>EU</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Participation rate (% of population of working age)</td>
<td>28.7</td>
<td>40.5</td>
<td>53.4</td>
<td>44.3</td>
</tr>
</tbody>
</table>

The framework proposed by Jackman, Pissarides and Savouri (1990) is a useful complement to more traditional models for economies undergoing structural change particularly suited to interpreting idiosyncratic labour market developments in economies undergoing structural change.

**Graph 9: Beveridge curve (UV) and vacancy supply curves (VS and VS') within a Jackman, Pissarides and Savouri (1990) framework**

In this model, employment and wage setting behaviour of firms and workers determine the vacancy supply curve (VS). The historical relationship between the unemployment rate and the vacancy rate determines the Beveridge curve (UV). The equilibrium (E) is reached when the labour demand curve (VS) intersects the labour supply curve (UV). Along the labour supply curve, flows into unemployment must equal those out of unemployment. In Graph 9, points above (below) the labour supply curve indicate an excess (shortage) of vacancies at the current level of unemployment. It follows that the unemployment rate must fall (rise) along the curve to reach a new equilibrium. In the case of a negative economic shock, the number of vacancies declines (VS shifts downward to VS'). The new equilibrium will therefore be one of higher unemployment and lower vacancies (E'). The opposite happens with a positive shock moving the VS curve upwards.

To check for the empirical validity of the framework, Beveridge curves are estimated for Slovakia and the Czech Republic. As emphasised by Jackman, Pissarides and Savouri (1990), one cannot be sure that the data points consistently lie on the same Beveridge curve. As shown in Graph 10, however, in a first approximation, the functional form is comparable overall for the two countries and has the expected shape. Yet, despite having a comparable Beveridge curve, the 'equilibrium point' is one of higher unemployment and fewer vacancies for Slovakia throughout the time-span considered (1991-2012), suggesting that the vacancy supply curve is persistently lower in this case.

Given the institutional, geographical and historical similarities between the two countries, the different outcome may be largely driven by idiosyncratic features of the Slovak labour market, which have shifted the vacancy supply curve down and the Beveridge curve to the right. As the Slovak economy also displays low vacancies and the matching function increasing returns to scale, Munich and Svejnar (2007) also conclude that poor matching in the past may be mostly due to on-going economic restructuring and low demand for labour. This hypothesis is supported by a review of the literature on the Slovak and Czech transition to a market economy (Box 1). As we will see in the next section, however, the situation improved significantly around the time of EU accession (2004).
The economic situation improved markedly in the mid-2000s, when the unemployment rate halved to 9.5%...

**Box 1 – Labour market developments during the transition to a market economy**

Many of the current features of the Slovak labour market reflect the legacy of the transition towards a market economy. The initial surge in the unemployment rate to double digit levels dates back to the early 1990s, when the country was still part of Czechoslovakia. Although the early years of the transition were characterised by an initial sharp drop in output in all CEE countries, the very similar adjustments in terms of real wages and subsidies to enterprises in the Czech and Slovak Republics – at that time still united – were matched by decisively different outcomes in the labour market (Basu, Estrin and Svejnar, 2005; Graph 3).

The Slovak territory was hit much harder in terms of employment losses and even more so in terms of the rise of unemployment. In effect, the transition to a market economy occurred more quickly in the Czech Republic. By 1993, 53.5% of all workers were employed in private firms in the Czech Republic, compared to only 32.0% in the Slovak Republic. The growth of the service sector was also much faster in the Czech Republic, which also benefited from inflows of foreign direct investment – largely in the tradable sector – over ten times higher than in Slovakia during the early stages of transition (EBRD, 1996). That said, after the divergence in the unemployment rate registered between 1989 and 1993, subsequent developments were not that different (Graph 4). The events of the early transition clearly had lasting impacts.

Ham, Svejnar and Terrel (1998) found that slightly less than half of the Czech-Slovak differential in the duration of unemployment spells – which on average was three to four times longer in Slovakia – could be explained by differences in demand variables at the district and regional levels and by structural differences at the industry level. In line with this, Sorm and Terrell (2000) found that, compared to the Czech Republic, Slovakia had significantly lower job flows into sectors such as finance, trade, and tourism and lower employment outflows from agriculture and manufacturing.

**Labour market developments during the booming pre-crisis years**

After worsening in the late 1990s, the economic situation improved significantly in the mid-2000s, shifting the vacancy supply curve upwards. Structural reforms aimed at macroeconomic stabilisation and at enhancing greater openness to trade and foreign direct investment (FDI) were introduced in Slovakia towards the end of the nineties, at a time when several European transition economies experienced a period of reform fatigue and sluggish growth. Since structural reforms typically take time to bear fruit, while the costs in terms of unemployment are felt immediately, the Slovak unemployment rate rose rapidly and reached an historical peak at 20% in the early 2000s. With macroeconomic and structural adjustments finally feeding through, the situation in the labour market started to improve rapidly during the mid-2000s, with the move towards EU membership also marking a new phase. An unprecedented flow of investment, especially in the form of FDI in the tradable sector, well exceeding those in the other Visegrad countries, contributed to increasing export market shares and to raising productivity. With the volume of GDP increasing by nearly 50% between 2003 and 2008, the unemployment rate did experience a spectacular drop, but it remained close to 10%, the highest in the EU.

Similarly, despite an unprecedented boost in demand, the Beveridge curve shifted slightly upwards during the 1990s. This surprising dynamic presumably relates to the conversion of the end-nineties spike in unemployment into structural unemployment and to the continuation of regional differentials in relative income levels, labour productivity and labour utilisation during the mid-2000s, which were strongly correlated with regional underperformances in the labour market (Banarjee and Jarmuzek, 2010).
...yet it remained entrenched in laggard regions

Continuing regional development will be key to completing economic restructuring and lowering structural unemployment

Graph 11: Regional unemployment rates in the Slovak and Czech Republics in 2012 (% of the labour force)

Source: Commission services

This translated into persistently higher incidence and duration of unemployment in regions that were most heavily affected during the early transition years, with the resulting surge in long-term unemployment likely to have led to human capital depreciation and hysteresis. Estimates of the job vacancy and job finding and separation rates during the boom years are in line with an overall long-term unemployment rate that is on a declining path while remaining the highest in the EU.

Conclusions

Despite a heritage of very similar labour market institutions and real wage adjustments, the initial transition shock impacted much more heavily in terms of jobs and output losses in Central and Eastern Slovakia than in the western part of the country and the Czech territories. A framework based on Jackman, Pissarides and Savouri (1990) is consistent with a situation of underemployment due to slow and protracted economic restructuring in the Slovak Republic. While the unemployment rate stayed high but stable close to 13% throughout the nineties, a second crisis episode at the turn of the century impacted heavily on the labour market, with the unemployment rate peaking at 20% in 2001.

The situation improved significantly during the years of buoyant growth and EU accession that characterised the mid-2000s, when previously-introduced structural reforms and low capital taxes attracted significant amounts of direct investment. Regional differentials in the level of economic development, however, improved only marginally. With a few notable exceptions, the economy of laggard regions has remained largely dependent on lower value-added industries. Unemployment has in turn remained entrenched in Central and Eastern Slovakia, suggesting that economic restructuring is still unfinished there. To date, the only Slovak region, where the service sector has caught up to EU standards, is Bratislava, where GDP per capita is four times higher than in the eastern part and the unemployment rate is one fourth of that in the latter region.

With almost nine Slovaks out of ten residing outside the Capital region, high unemployment can hardly be addressed without faster economic convergence among Slovak regions and an overhaul of the existing bipolar structure of the economy. Improved labour mobility would also help but would hardly suffice. Considering the generally lower level of investment outside Bratislava, the strategic planning for the allocation of more than a dozen billion in EU funds over the period 2014-2020 (roughly equivalent to 2.5% of GDP per year) should be a natural starting point for developing a medium-term regional development strategy reflecting the relative strengths and potential of each region and fully addressing the structural challenges faced by Slovakia (European Commission, 2013).14

While a companion Country Focus analyses in greater detail the severe impact of the crisis on the labour market, passive and active labour market policies (ALMPs) also have a role to play at the current juncture. They could help preserve the income and employability of those who lost their job during the latest crisis. On the other hand, a longer-term comparison between the Czech and Slovak experiences indicates that failing or being unable to swiftly respond to adverse regional macroeconomic shocks can have long lasting effects on the labour market.
References


European Commission (2013), Assessment of the 2013 national reform programme and stability programme for Slovakia, European Commission staff working paper, Brussels, 30.5.2012,


International Monetary Fund (2003). "Growth and Institutions", World Economic Outlook, Chapter 3, March 2003


Münich D. and Svejnar J. (2007), "Unemployment in East and West Europe," IZA discussion papers, IZA DP No. 2798


Labour Force Survey, quarterly data, seasonally adjusted, % of active population. Data for the Czech and Slovak Republic for the period 1993-1997 are OECD estimates of the harmonised rate of unemployment.

Gross Domestic Product, annual data, year-on-year growth rate, constant prices. Harmonised data are not available for the period 1993-1996 for almost a third of the EU Member States.

The group of the Visegrad countries include Poland, Czech Republic, Slovakia and Hungary.


Note: Unemployment rates are expressed as a percentage of the labour force; inflow rates are average annual rates of the number flowing into unemployment in a month divided by the number employed in the same month; outflow rates are average annual rates of the number flowing out of unemployment in a month divided by the number unemployed in the same month.

A quite costly restructuring and subsequent privatization of the banking sector was carried out. Large scale privatization of public companies also took place during these years. Sizeable tax breaks for investment and overall low taxes on capital played a decisive role in attracting FDI. Membership of the EU and the prospect of euro-area accession enhanced attractiveness in terms of macroeconomic stability, trade opportunities and significant net transfers from the EU budget. Public deficits were rein in. Greater flexibility was introduced in the labour market and the health and pension systems were partially reformed. Identifying which reforms played a major role in spurring growth goes beyond the scope of this Country Focus. Overall, however, it is hardly disputable that, taken together, this comprehensive set of reforms laid the foundations for the subsequent strong investment and TFP-driven economic boom. As illustrated in this paper, however, the likely short term impact on the labour market was not necessarily positive, with the unemployment rate peaking at 20% by the end-nineties and starting to drop only in the mid-2000s.

Unlike the unemployment rate, the participation rate has been roughly comparable to that of other Central European transition economies. Currently, it stands at 69%, broadly aligned with that in the Czech Republic (about 70%) and somewhat below the EU15 average (nearly 73%). Participation rates for the age cohort 25-55, however, are actually higher in Slovakia than in the EU15.

As in other transition economies, structural reforms did not prevent unemployment rates from surging in the short-term. The causes are many and stories vary from country to country; however, a common element is that there is a mismatch between the destruction of old jobs in the previously publicly-owned companies and the creation of new ones in more productive private companies. While lay-offs in the uncompetitive public sector industries are a pressing priority at times of reforms and fiscal rebalancing, domestic and foreign direct investments in new plants normally take a few years before materialising and generating employment. Similarly, privatization of public enterprises and acquisition-led FDIs generally have a negative short-term effect on employment associated to a rapid increase in labour productivity (Lukas, 2001).

Due to the significantly more developed transport infrastructure and their proximity to destination markets, the western part of Slovakia attracted by far the largest share of foreign direct investment. Notably, an automotive cluster swiftly expanded around the sites of three major car producers located in Western Slovakia (Bratislava, Tmava, Žilina) with car production and export increasing substantially during the 2000s. Following the arrival of large foreign investors, the electro technical and consumer electronics sector also developed in Western Slovakia and experienced remarkable growth. Central and Eastern Slovakia, on the other hand, remained oriented towards more traditional sectors such as paper and wood-processing and steel production, although some ICT and chemical firms also started to produce in those regions.

The ongoing preparation of the Partnership Agreements and Operational Programmes for the next programming period, including the Smart Specialisation Strategy, should provide the Slovak authorities with an opportunity to embark on a useful technical discussion with all involved stakeholders on how to best address existing regional disparities. Identifying specific priorities for investment under the European Structural and Investment Funds go well beyond the scope of this Country Focus. A complementary analysis of public (and private) investment as well as detailed sectoral and project related cost-benefit analysis would be needed.