Unemployment has fallen considerably during the recent period of record growth in the Czech economy. This has ended a long period of relatively jobless growth during which GDP was driven by advances in productivity and capital deepening rather than rises in employment. This country focus analyses the cyclical and structural factors underlying Czech labour market performance to assess whether unemployment is set to continue falling or whether structural challenges still remain that are likely to hinder long-term employment growth. The Beveridge curve is used as a construct to examine the performance of the labour market.

Transformation of the Czech labour market

During the transition to a market economy, the Czech Republic managed to avoid the temporary rise in unemployment experienced by some new member states. This was partly a reflection of the strength of the Czech economy, in particular the industrial sector, relatively slow progress in restructuring, and favourable lending conditions extended to enterprises by the partially state-owned banking sector. Structural change in the labour market was somewhat postponed until the recession of the late nineties when a collapse in external demand forced a shake-out of Czech enterprises.

Figure 1: Unemployment in Czech Republic, Poland and Hungary

Summary

Unemployment has fallen considerably during the recent period of record growth in the Czech economy. This has ended a long period of relatively jobless growth during which GDP was driven by advances in productivity and capital deepening rather than rises in employment. This country focus analyses the cyclical and structural factors underlying Czech labour market performance to assess whether unemployment is set to continue falling or whether structural challenges still remain that are likely to hinder long-term employment growth. The Beveridge curve is used as a construct to examine the performance of the labour market.
Unemployment declined after the recession but remained stubbornly high at around eight per cent until 2005, while rising productivity and capital deepening accounted for nearly all output growth. Since 2005, unemployment has fallen sharply following an upswing in demand and is now at the lowest level since the recession.

Some of the improvement in the labour market may have been structural. Nominal unit labour costs have declined significantly during the last three years to below the EU-10 average, partly explaining a dip in the NAIRU, while cyclical factors also appear to have played a major role.

Figure 2: Nominal unit labour costs (relative to EU-27)

The recent period of record high growth has run parallel with a positive output gap indicating that the Czech economy is at a high point in the economic cycle. Furthermore, unemployment has fallen below the NAIRU indicating a significant tightening in the labour market.

Figure 3: Unemployment, NAIRU and output gap; Beveridge curve for the Czech Republic

The Beveridge curve represents the relationship between the vacancy rate and the unemployment rate. Typically the curve slopes downwards from left-to-right as higher rates of unemployment tend to be associated with lower vacancy rates. For the Czech economy, the Beveridge curve has the typical negative slope and anticlockwise movement observed in many other economies. The recession of 1997-99, which followed the period of strong growth in the middle of the nineties, saw a sharp rise in the unemployment rate. The subsequent growth momentum, interrupted by a further slowdown in activity between 2001 and 2002, was accompanied by a falling unemployment rate and a rising vacancy rate. The current combination of a high vacancy rate and low unemployment is representative of a fast growing economy in which there are difficulties in satisfying high labour demand.

In addition to providing an indication of cyclical conditions, the Beveridge curve can also provide a framework for examining the efficiency of operation of the labour market. The literature on the Beveridge curve views a rightward shift of the curve as a decline in efficiency of the job-matching process and an increase in labour force participation. With respect to the Czech economy, the Beveridge curve appears to have shifted rightwards. The remainder of
this country focus examines each of the factors which influence the Beveridge curve (labour market churn; job matching; labour force participation) in order to assess whether structural challenges still remain despite the low level of unemployment.

Labour market churn

New jobs have been spread across the secondary and tertiary sectors. Many new jobs have been created in industrial manufacturing while there has also been strong growth in property services and financial intermediation, thus expanding the Czech Republic’s relatively small but growing service sector. This is similar to the pattern in other new member states, where more labour intensive service sector jobs have contributed to an increase in the employment elasticity of growth.\(^1\)

Figure 4: Employment elasticity of growth

![Employment Elasticity of Growth](image)

Source: Eurostat

A significant majority of new jobs have been permanent and full-time. This is consistent with the past trend and reinforces the reliance of the Czech labour market on this type of employment. During the recent phase of employment growth, the level of part-time employment has remained stationary and the level of temporary employment has declined. In the Czech Republic, both types of employment are below EU-10 and EU-27 averages.

The reliance on permanent employment is partly a legacy of the pre-transition era while its persistence may be partly due to the structure of the Czech economy. The percentage of employment in industry, where permanent full-time contracts are the norm, is the highest in the EU, while the size of the tertiary sector, associated with a higher degree of part-time and temporary work, is significantly below the EU average.

The Czech labour market continues to be dominated by permanent full-time employment.

Table 1: Selected labour market indicators

<table>
<thead>
<tr>
<th>Indicator</th>
<th>2005</th>
<th>2006</th>
<th>2007</th>
<th>EU-10</th>
<th>EU-27</th>
</tr>
</thead>
<tbody>
<tr>
<td>Unemployment</td>
<td>7.9</td>
<td>7.2</td>
<td>5.3</td>
<td>6.4</td>
<td>7.1</td>
</tr>
<tr>
<td>Youth unemployment rate</td>
<td>19.2</td>
<td>17.5</td>
<td>10.7</td>
<td>13.3</td>
<td>15.4</td>
</tr>
<tr>
<td>% Long-term unemployment</td>
<td>53.0</td>
<td>54.2</td>
<td>52.2</td>
<td>41.4</td>
<td>42.8</td>
</tr>
<tr>
<td>NAIRU</td>
<td>7.0</td>
<td>6.7</td>
<td>6.1</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Employment rate (15 to 64)</td>
<td>64.8</td>
<td>65.3</td>
<td>66.1</td>
<td>63.8</td>
<td>65.4</td>
</tr>
<tr>
<td>Employment rate (15 to 24)</td>
<td>27.5</td>
<td>27.7</td>
<td>28.5</td>
<td>32.2</td>
<td>37.2</td>
</tr>
<tr>
<td>Employment rate (25 to 54)</td>
<td>82.0</td>
<td>82.5</td>
<td>83.5</td>
<td>79.5</td>
<td>79.1</td>
</tr>
<tr>
<td>Employment rate (55 to 64)</td>
<td>44.5</td>
<td>45.2</td>
<td>46.0</td>
<td>43.3</td>
<td>44.7</td>
</tr>
<tr>
<td>Activity rate (15 to 64)</td>
<td>70.4</td>
<td>70.3</td>
<td>69.9</td>
<td>68.2</td>
<td>70.5</td>
</tr>
<tr>
<td>Activity rate (15 to 24)</td>
<td>34.0</td>
<td>33.5</td>
<td>31.9</td>
<td>37.0</td>
<td>44.0</td>
</tr>
<tr>
<td>Activity rate (25 to 54)</td>
<td>88.3</td>
<td>88.2</td>
<td>87.8</td>
<td>84.3</td>
<td>84.4</td>
</tr>
<tr>
<td>Activity rate (55 to 64)</td>
<td>46.9</td>
<td>47.7</td>
<td>48.2</td>
<td>45.3</td>
<td>47.3</td>
</tr>
<tr>
<td>% Part-time workers</td>
<td>4.9</td>
<td>5.0</td>
<td>5.0</td>
<td>7.18</td>
<td>18.2</td>
</tr>
<tr>
<td>% Temporary contracts</td>
<td>8.6</td>
<td>8.7</td>
<td>8.6</td>
<td>9.59</td>
<td>14.5</td>
</tr>
<tr>
<td>% Employment Services</td>
<td>57.9</td>
<td>58.2</td>
<td>58.4</td>
<td>62.0</td>
<td>68.9</td>
</tr>
<tr>
<td>% Employment Industry</td>
<td>38.3</td>
<td>38.1</td>
<td>38</td>
<td>31.6</td>
<td>24.8</td>
</tr>
<tr>
<td>% Employment Agriculture</td>
<td>3.8</td>
<td>3.7</td>
<td>3.5</td>
<td>6.3</td>
<td>6.2</td>
</tr>
</tbody>
</table>

Source: Eurostat

Given the expansion of the service sector, demand for temporary and part-time employment is likely to increase in line with the EU as a whole, where over half of all
employment creation during 2000-2005 was in non-standard employment (EU, 2006). It is therefore important that the Czech labour market is able to support this growing demand as well as to maintain the current high levels of full-time permanent employment over the long-term.

In summary, the rate of new job creation has been high recently in the Czech economy which can partly explain the upward shift in the Beveridge curve. There has been a gradual shift away from industrial sector employment to service sector employment which is likely to entail a higher demand for non-standard employment.

**Job matching**

This section analyses some of the most important factors that influence how a labour market reconciles supply with demand: the level of labour taxation, employment protection legislation, skills matching and labour mobility.

**Labour taxation**

The level of labour taxation, including social contributions paid by employers and employees, can influence the dynamism of a labour market by conditioning both supply and demand. Lowering average effective tax rates tends to encourage workers into the labour market, while lowering marginal tax rates tends to encourage longer working. Although, it also has to be acknowledged that some of the best performing labour markets, for example in Scandinavia, have relatively high labour taxation.

Prior to the introduction of a flat-tax on personal income, the implicit tax rate on labour in the Czech Republic was higher than the EU-15 average and above rates in neighbouring new member states. This is mainly due to a high level of social contributions rather than direct labour taxation. The rate has stayed relatively constant over the last ten years while rates in neighbouring new member states have declined. The Czech government introduced a flat tax rate of 15 per cent on personal income, effective from January 2008. This replaced a system of several marginal rates and follows the introduction of similar ‘flat taxes’ in a number of new member states. Under the new scheme, the tax is levied on an expanded base of gross earnings plus social security contributions implying an average effective rate of 23%. However, this will also give rise to several marginal rates, due to the effect of tax credits, social security contributions and means-tested social benefits. In terms of influencing labour supply, the reform will reduce effective tax rates at the top and bottom of the earnings scale (IMF, 2008). In addition, a cap on the social security contribution, the rate of which is one of the highest in the EU, will significantly reduce the tax rate on high earners. It is estimated that the introduction of the flat-tax has pushed the average effective tax wedge beneath the EU-15 average (IMF, 2008) and lower than in Poland and Hungary. While permanent employment has continued to grow during the recent period, the lack of growth in part-time and temporary employment may be partly related to labour taxation. In particular, there is a minimum healthcare contribution equal to the contribution on a full-time minimum wage job which may discourage some part-time work (OECD, 2008).

In conjunction with labour taxation, the level of out-of-work benefits and minimum wage can also potentially affect flexibility. In the Czech Republic net replacement rates are higher than in Hungary and Slovakia but comparable with the OECD average (IMF, 2008). The minimum wage in the Czech Republic is similar to that of Poland and Hungary and, given that it only affects two per cent of the workforce, does not appear to be a significant hindrance to labour supply. The level of out-of-work benefits was also reduced in 2008 in combination with more stringent eligibility criteria for unemployment benefits.

In summary, while the tax wedge on labour is higher than in other new member states, it is comparable with the EU-15 average, and combined with moderate out-of-work benefits does not appear to be a significant hindrance to growth in full-time employment. On the other hand, the minimum level of social contributions on part-time work may have partly contributed to a lack of growth in this type of employment.

**Employment protection legislation**

Employment protection legislation has an important influence on the flexibility of a labour market by setting parameters around hiring and retention. Stringent
Employment protection legislation can reduce activity in a labour market and, in particular, restrict the opportunities of particular groups at the margins. In this respect, there is a perceived correlation between the stringency of employment law and long-term unemployment (EU, 2006). Similar to other new member states, the Czech Republic has inherited stringent employment protection legislation on permanent employment from the pre-transition era (EU 2006). In particular, there are strict conditions for the dismissal of employees on permanent contracts (Munich, 2006) and the costs of dismissal are not graduated according to the duration of employment (OECD, 2008). Despite the recent increase in employment, which has to be seen in the context of a pattern across many new member states, heavy employment protection on permanent employment may still be a hindrance to future employment growth. In particular, the rate of long-term unemployment has hardly declined during the recent boom. Temporary employment has remained lightly regulated, possibly reflecting its relative lack of importance.

![Figure 5: Employment protection legislation](image)

**Source:** OECD 2004

**Skills matching**

As a whole, unemployment is strongly correlated with educational attainment in that over seventy per cent of unemployed have only primary education or secondary education without qualifications while, on average, less than five per cent of university graduates are unemployed (CSO, 2008). This underlines the increasing demand for higher skills. The education system in the Czech Republic is focused on the completion of secondary education, similar to neighbouring new member states. The Czech Republic has the highest participation in secondary education in the EU while participation in tertiary education is comparatively low, with a smaller percentage of students attending university level institutions than the EU-average and below that in Poland and Hungary. There is also a similar pattern for educational investment. In order to manage the growing demand for tertiary education, the introduction of tuition fees has been proposed (OECD, 2008) which would also bring new investment to the sector. Consideration should be given to increasing the supply of tertiary education and raising the number of graduates. This would bring the Czech Republic closer to the EU-average and increase the skills base in the Czech economy.

![Figure 6: Participation rates in secondary and tertiary education](image)

**Source:** Eurostat
With respect to skills matching, the Czech Republic also performs somewhat poorly on re-training workers, while this seems to be an area of the utmost importance given economic restructuring. This message is underlined by an examination of long-term unemployment. Over fifty percent of long-term unemployed are focused in three regions: Moravskoslezsky, Ustecky and Jihomoravsky, all of which have undergone industrial restructuring. Similar to the picture for overall unemployment, long-term unemployment is linked to educational attainment, while a greater proportion of long-term unemployed lack basic education (CSO 2008). However, the Czech Republic scores poorly in active labour market policies (ALMP) where spending is low by comparison with other new member states (EU, 2006). Participation in life-long learning is also relatively low compared to the EU average, particularly amongst low-skilled and low-educated unemployed workers (Munich, 2006).

Mobility

Finally, a lack of regional mobility may also contribute to poor job matching. In common with other new member states, regional mobility is much lower than in older member states. This has been linked to the persistence of a large proportion of state-controlled rents, which reduces the stock of rentable property in high growth regions (OECD, 2008) and pushes rents higher. At the same time, areas of high unemployment tend to have devalued housing stock which may further constrain mobility.

In summary, while the levels of taxation and benefits do not appear restrictive, employment protection legislation on permanent employment is relatively high and may constrain long-term employment growth. It may also have contributed to more friction in job matching, due to a reluctance of employers to hire under stringent employment regulations. The education system may also have contributed to an increase in skills mismatching in that the Czech economy has an increasing demand for higher skills while the tertiary education system is still in the process of expansion and development. Finally, limited regional mobility may also be a constraining factor.

The following section assesses the final influence on the Beveridge curve, labour force participation.

Labour force participation

Employment rates have grown strongly over the recent period; both overall employment rates and male employment rates have risen above the EU-27 average and are substantially higher than in Hungary and Poland. However, while overall employment grew by more than one and a half percent in 2006 and 2007, this may be partly due to a decline in the participation rate (activity rate) of younger and middle-aged workers which caused a fall in the overall level of participation. Compared to the OECD average, participation is low for older workers (aged 50-55); women (aged 20–40) and young people (aged 19-30) (OECD, 2008).

Low participation amongst a section of older workers may be partly a legacy of transition. When the Czech economy was restructured in earnest at the end of the nineties, many workers faced the challenge of acquiring new skills and finding employment against a stepwise reduction in demand. However, the participation rate of a broader range of older workers from 55-64 is above the EU-27 average and considerably higher than in Poland and Hungary. In this respect, the Czech pension system provides relatively few economic incentives for early retirement compared to Poland, Hungary and Slovakia (WB, 2007). Furthermore, the participation rate has been increasing consistently since 2002. Low participation amongst women of fertility age may in part be related to maternity provisions. The Czech Republic provides for a relatively long period of up to four years of paid parental leave. Low participation amongst women is also likely to be a factor behind the low rate of part-time employment. A low level of participation of young people may be linked to high secondary education completion rates. The recent decline in the participation rate can also be attributed to an increase in the tertiary education population.

Overall, labour force participation can probably be discounted as a factor in the rightward shift of the Beveridge curve, noted in the initial section of this article, given that the overall participation rate has declined since 2005. Indeed, the decline in the participation rate tends to reinforce the message that a decline in job matching, in particular skills mismatching, is likely to be a major cause of increased friction.
Conclusion

Based on an analysis of the Czech Republic using the Beveridge curve, it appears that an important factor which may have led to a decline in the efficiency of the Czech labour market, as indicated by a rightward shift in the curve, is a decline in the efficiency of job matching. This appears to be primarily due to an increase in skills mismatching, as well as constraints on regional mobility. Skills mismatches are linked to the Czech education system and relatively low investment in active labour market policies. In addition, job matching may be constrained by relatively heavy employment protection on permanent employment. In this respect, this country focus has highlighted a number of structural challenges which need to be addressed if a low level of unemployment is to be achieved in the long term at the same time reducing friction in the labour market.

References

Czech Republic Staff Report for the 2007 Article IV Consultation (2007), IMF.

1 Rate of change in employment divided by rate of change in gross domestic product.
2 It has also been suggested that subsidies could be used to stimulate growth in part-time employment, for example, by extending part of the new tax credit for working retirees to individuals working part time (IMF 2008).