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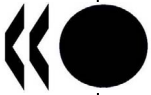
Raising the Flexibility
of the Slovak Economy
during the Catch-Up Phase

Isabell Koske

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RAISING THE FLEXIBILITY OF THE SLOVAK ECONOMY DURING THE CATCH-UP PHASE

ECONOMICS DEPARTEMENT WORKING PAPERS No. 680

by Isabell Koske

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SUMMARY/RÉSUMÉ

Raising the flexibility of the Slovak economy during the catch-up phase

As in other catch-up countries inflation is likely to stay high going forward due to nominal convergence. To better cope with the risk of a too rapid pick up of wages during the convergence process on the one hand and to raise the adjustment potential of the economy to macroeconomic shocks on the other, labour and product market flexibility is essential. Three main areas for improvement are discussed in this chapter. First, wage flexibility should be safeguarded by avoiding significant increases in minimum wages and by abolishing legal extension of collective wage settlements. Second, competition needs to be strengthened, especially in the liberal professions where entry and conduct regulation should be eased. In addition, the points of single contact that already exist for small enterprises should be extended to entrepreneurs of the liberal professions. Third, a wider use of information and communication technology (ICT) could lead to important productivity gains. Removing obstacles to the spread of e-business and a swift implementation of e-government are imperative. This Working Paper relates to the 2009 *OECD Economic Survey of the Slovak Republic* (www.oecd.org/eco/surveys/slovakia)

Keywords: Slovak Republic; nominal convergence; labour market flexibility; product market flexibility

JEL classification: O47; J31; J52; D4

Accroître la flexibilité de l'économie Slovaque durant la phase de rattrapage

Comme dans les autres pays en phase de rattrapage, l'inflation devrait rester élevée à l'avenir sous l'effet du phénomène de convergence nominale. Pour mieux parer aux risques d'augmentation trop rapide des salaires au cours du processus de convergence, d'une part, et pour accroître les possibilités d'ajustement de l'économie aux chocs macroéconomiques, d'autre part, il est indispensable que le marché du travail et les marchés de produits soient flexibles. On examinera dans ce chapitre les trois principaux domaines où des améliorations devraient être réalisées. Premièrement, il faudrait préserver la flexibilité des salaires en évitant de fortes hausses du salaire minimum et en mettant fin à l'extension des conventions collectives salariales. Deuxièmement, la concurrence doit être renforcée, surtout dans les professions libérales, où il faudrait assouplir l'entrée et les conditions d'exercice. De plus, il serait souhaitable d'étendre aux professions libérales les guichets uniques qui existent déjà pour les petites entreprises. Troisièmement, la productivité pourrait sensiblement progresser si on utilisait plus largement les technologies de l'information et de la communication (TIC). Il est impératif de supprimer les obstacles à la diffusion du commerce électronique et de mettre en place rapidement l'administration électronique. Ce Document de travail se rapporte à l'*Étude économique de l'OCDE de la République slovaque 2009* (www.oecd.org/eco/etudes/slovaquie).

Mots clés : République slovaque ; convergence nominale ; flexibilité du marché du travail ; flexibilité du marché des biens

Classification JEL : O47; J31; J52; D4

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RAISING THE FLEXIBILITY IN SLOVAKIA DURING THE CATCH-UP PHASE

By Isabell Koske¹

The Slovak economy has made considerable progress during the past decade in closing the GDP *per capita* gap with the more advanced OECD economies. The catch up in living standards has proceeded particularly rapidly since EU entry in 2004, with the economy growing at an average rate of 7½ per cent per year between 2004 and 2007. The high growth was supported by wide-ranging structural reforms and associated strong inflows of foreign direct investment. Nonetheless, living standards still remain well below the euro area average. As the GDP *per capita* level is catching up with the levels seen in the more advanced economies, the price level is catching up as well, resulting in inflation that will remain relatively high over the foreseeable future. As outlined in Chapter 1, the resulting positive inflation differential *vis-à-vis* the euro area average is one factor that risks triggering a boom-bust cycle.

Raising the overall flexibility of the economy is essential to counteract the emergence of such a boom-bust cycle. Firstly, flexible labour and product markets are needed to deal with cyclical shocks. This is all the more important given the loss of an independent monetary policy that could serve as a shock absorber. Secondly, by boosting productivity growth greater product market flexibility should help coping with the risk of a too rapid pick up of wages during the convergence process. Although notable progress has been made over the past years in making labour and product markets more flexible, there still remains considerable room for improvement, especially since some of the earlier achievements have been eroded by recent legislative changes.

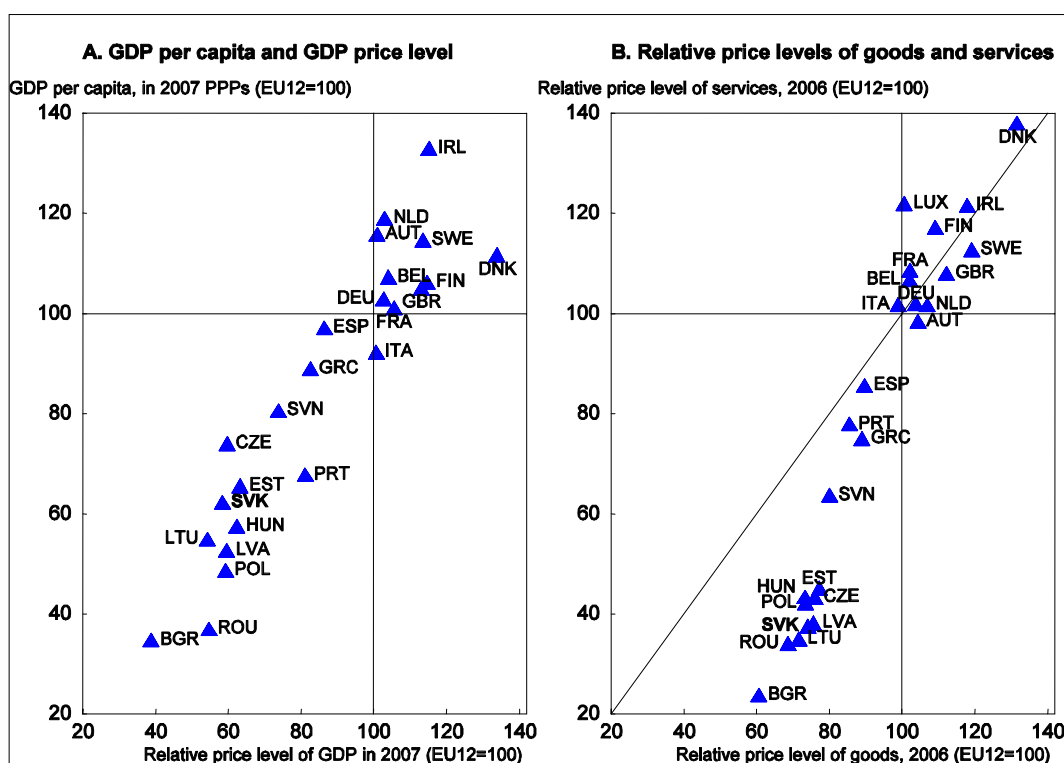
Nominal convergence before and after euro area entry***Prices and wages are well below the euro area average...***

Countries with lower GDP *per capita* levels tend to be characterized by lower absolute price levels. The EU member countries of central and eastern Europe, which have a GDP *per capita* level well below the euro area average, also have a lower price level than the average euro area country (Figure 1, panel A). In the case of the Slovak Republic, both the GDP *per capita* level and the price level stood at around 60% of the euro area average in 2007. At the time that Greece, Portugal, Slovenia and Spain adopted the euro, their GDP *per capita* and price levels were closer to the euro area average; hence the Slovak Republic is the country with the largest catch-up potential for income growth and nominal convergence requirement for the price level that has ever joined the euro area.

1. Economist in the Economics Department. This paper was originally prepared as Chapter 2 for the OECD's 2009 Economic Survey of the Slovak Republic under the responsibility of the Economic and Development Review Committee. The author is grateful for the valuable comments received on earlier drafts of this text from Felix Hüfner and Andreas Wörgötter in the Economics Department of the OECD, as well as for discussions with officials from the Slovak government. Special thanks go to Béatrice Guérard of the OECD Economics Department for statistical assistance.

Whilst the level of both goods and services prices are lower in catching-up economies, the price differential tends to be more pronounced for services (Figure 1, panel B) as they tend to be more sheltered from competition and depend more on local income. A more detailed product break-down shows that the comparative price level of the Slovak Republic is particularly low for public services such as education, health and the supply of housing, water, electricity and gas, which often cost less than half of the average euro area price (Figure 2). The prices of goods on the other hand, are generally closer to the euro area average; for clothing and footwear, Slovak households pay only slightly less than their euro area counterparts and in the communications sector, the price level even exceeds the average price level in the euro area. A comparison of relative price levels between 2000 and 2007 reveals rapid nominal convergence in the run-up to the euro entry phase.

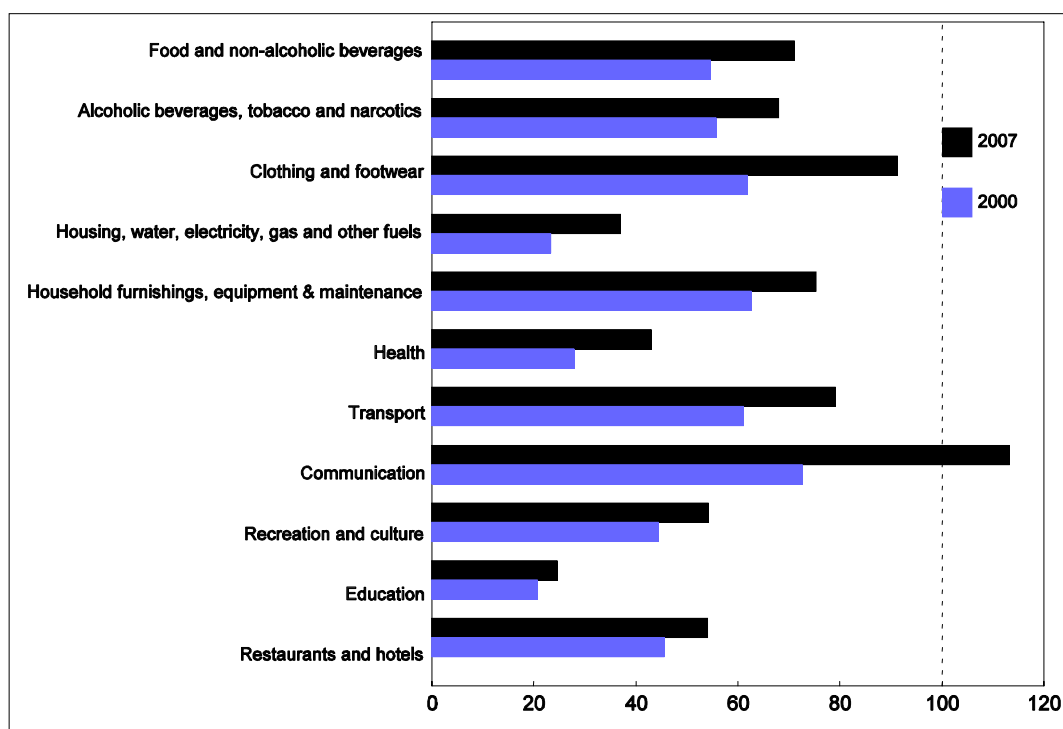
Figure 1. Real and nominal convergence



Source: Eurostat.

The lower price level in the Slovak Republic is matched by a lower wage level (Figure 3). When measured at current exchange rates, the wage level in the Slovak Republic is one of the lowest in the OECD. At one-fifths of the euro area average, wages are particularly low in the public sector relative to the public sector in the euro area.¹

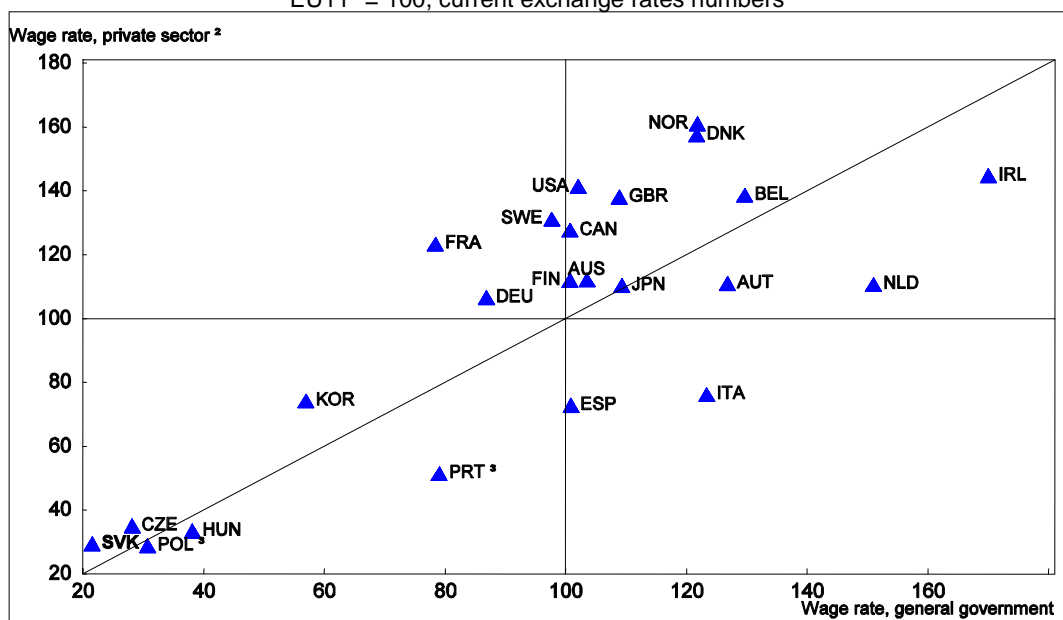
Figure 2. Comparative price level - product breakdown
EU12 = 100



Source: Eurostat.

Figure 3. Relative wage rates, 2006

EU11¹ = 100, current exchange rates numbers

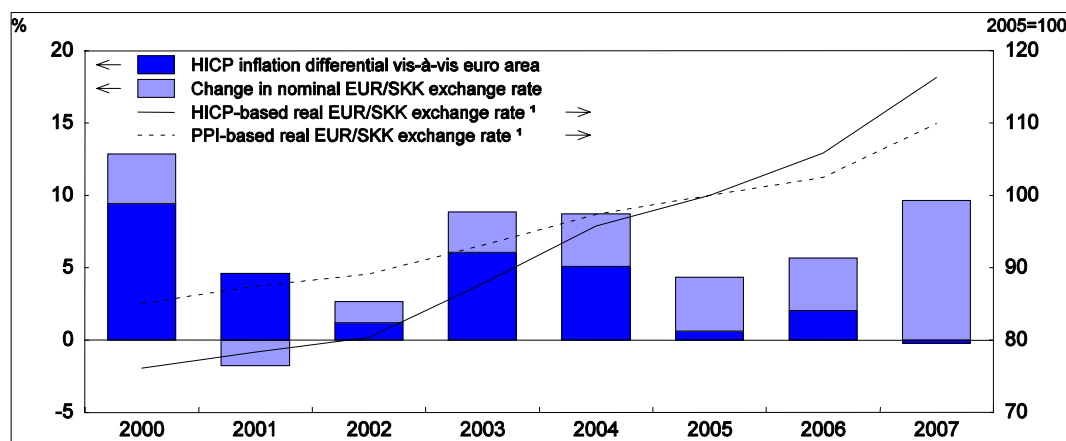


1. Austria, Belgium, Finland, France, Germany, Ireland, Italy, Luxembourg, Netherlands, Portugal and Spain.
 2. The wage rate in the private sector is defined as the ratio of wages and salaries (sometimes including social security contributions paid by the government) to the dependent employment in the private sector.
 3. The wage rate in the private sector is a forecast figure.
- Source: OECD, *Economic Outlook* database.

... but are catching up

As GDP *per capita* and productivity levels in the Slovak Republic catch up with the levels seen in other euro area countries, the prices of goods and services will catch up as well.² In the past, this catch up in prices occurred through a combination of nominal exchange rate appreciation and higher inflation (Figure 4). Between July 2000 and July 2008, when the conversion rate *vis-à-vis* the euro was fixed, the nominal exchange rate of the Slovak koruna appreciated by almost 40% against the euro, implying an average appreciation of around 4¼ per cent per year over that period. The appreciation was particularly strong in recent years with the central parity of the Exchange Rate Mechanism II being revalued twice, once by 8½ per cent in March 2007 and once by 18% in May 2008. The inflation differential *vis-à-vis* the euro area added another 2½ percentage points to the annual real appreciation of the koruna when measured based on consumer prices and ¼ of a percentage point when measured based on producer prices. As the adoption of the euro in January 2009 rules out any further nominal appreciation against the euro, catch up in prices will henceforth be entirely reflected in an inflation rate that exceeds the average inflation rate in the euro area. This catch-up inflation is an equilibrium phenomenon which mirrors mainly the catch up in productivity levels in the open sectors.

Figure 4. The koruna real exchange rate



1. An increase (decrease) indicates an appreciation (depreciation).

Source: OECD, *Economic Outlook* database and *Main Economic Indicators* database; IMF, International Financial Statistics.

The most widely used explanation for the way nominal convergence takes place is the Balassa-Samuelson hypothesis. The hypothesis relies on labour mobility between the traded and non-traded goods sectors and hence equalized wage growth despite different productivity growth in the two sectors (Box 1). As the Balassa-Samuelson effect is reflected in rising prices of non-tradable goods it cannot fully account for the observed real appreciation. Although the real exchange rate based on consumer prices appreciated by more than the one based on producer prices,³ the latter also appreciated markedly, revealing deviations from purchasing power parity. Empirical studies that have tried to estimate the size of annual real appreciation attributable to the Balassa-Samuelson effect generally conclude that the effect is relatively small, contributing not more than 1.5 percentage points per year to the real appreciation of the Slovak koruna (Box 1). This falls far short of the actual real appreciation observed over the past years.

Box 1. The Balassa-Samuelson effect

The Balassa-Samuelson hypothesis was put forward by Balassa (1964) and Samuelson (1964) to explain differences in price levels and inflation rates between catching-up economies and advanced economies. The price level effect rests upon the idea that catching-up economies such as the Slovak Republic are characterised by productivity levels in the open sectors that are lower than those in the advanced economies, whilst productivity differences in the sheltered sectors are negligible. If tradable prices are given by purchasing power parity (PPP), lower productivity levels in the open sectors imply lower wages in these sectors. If labour is fully mobile or wage setting is solidaristic, wages will equalise across sectors so that the sheltered sectors are also characterized by wages that are lower than those in the advanced economies. With productivity levels in the sheltered sectors similar to those in the advanced economies and the nominal exchange rate determined by purchasing power parity in the open sectors, non-tradable goods and services should cost less in the Slovak Republic than in advanced economies, implying a lower overall price level.

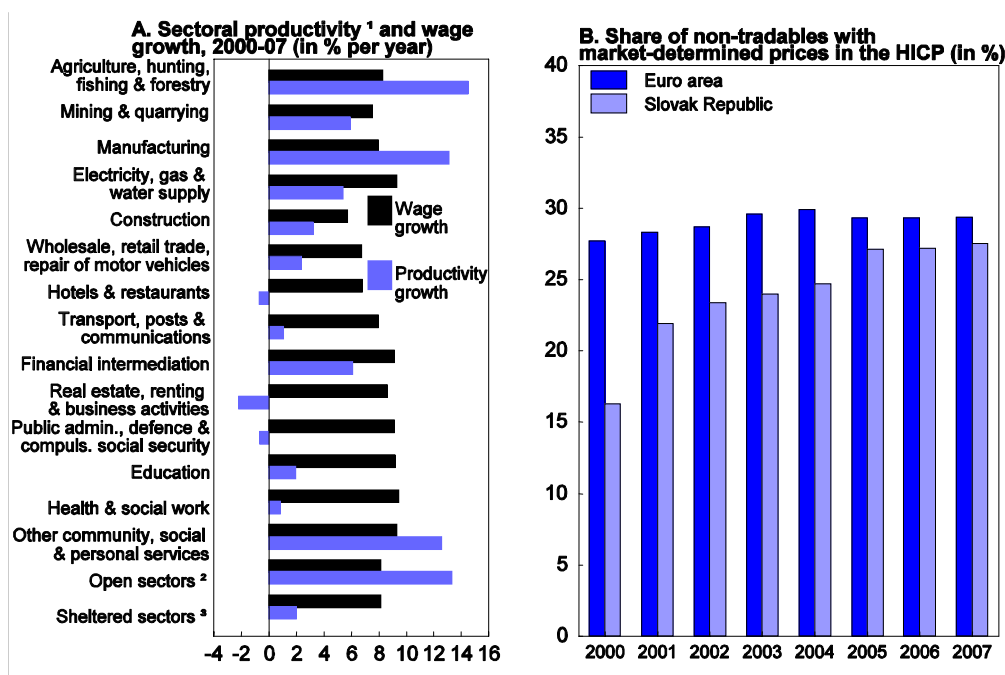
In its dynamic form, the hypothesis postulates that productivity will improve faster in the open sectors than in the sheltered sectors. Rising productivity in the open sectors allows wages to increase without raising the prices of the tradable goods and services produced. Rising wages in the open sectors (in line with productivity developments) will spill over to the sheltered sectors, pushing up wages and thereby the prices of non-tradable goods.¹ Thus, if the productivity growth differential between the open and the sheltered sectors in the Slovak Republic exceeds that of the euro area, the real exchange rate will appreciate *vis-à-vis* the euro, either through some combination of nominal appreciation and higher inflation (if the exchange rate is flexible) or through a higher overall inflation rate (if the nominal exchange rate is fixed). On average over the period 2000 to 2006, productivity growth differentials have indeed been larger for the Slovak Republic, with productivity growth in the open sectors exceeding that in the sheltered sectors by 11% compared with only 3% in the euro area.²

Empirical studies estimate that the Balassa-Samuelson effect in the Slovak Republic amounts to around 1.5% per year (Table 1). At first, this figure seems surprisingly low given the strong productivity growth in the open sectors, particularly in automobile manufacturing and electronics, where large inflows of foreign direct investment contributed to a marked increase in productivity growth in recent years. However, the transmission of this primary impulse seems to have been damped by a number of factors (Vladová; 2007; Égert and Podpiera, 2008). First, wage growth in the open sectors did not reach the growth rate of labour productivity; particularly in recent years (Figure 5, panel A). Second, although average wages in the sheltered sectors increased at a similar rate to average wages in the open sectors, labour productivity growth in the sheltered sectors compensated for a certain part of the wage growth so that producers were not forced to pass on the entire wage growth to prices. Finally, although the share of market services (only those non-tradables for which prices are market-determined and not administered should ultimately matter for the Balassa-Samuelson effect) has risen markedly in the Slovak Republic, it still accounts for only one quarter of the Harmonized Index of Consumer Prices (HICP) (Figure 5, panel B). So even if a given productivity growth differential between the open and sheltered sectors would translate one-to-one into higher prices of non-tradable goods and services, the overall HICP would still rise by only one quarter of the productivity growth differential.

Table 1. Selected estimates of the Balassa-Samuelson effect in the Slovak Republic

Study	Dependent variable	Sample period	Estimated size of BS effect (in % p.a.)
Vladová (2007)	Inflation differential <i>vis-à-vis</i> euro area	1997-2006	1.2
Égert (2007)	Domestic inflation	1995-2005	0.4-2.1
NBS (2006)	Inflation differential <i>vis-à-vis</i> euro area	1996-2005	1.0-1.8
Mihaljek and Klau (2008)	Inflation differential <i>vis-à-vis</i> euro area	1999-2008	2.0
Kovács (2004)	Domestic inflation	1995-2001	1.0-2.0
Lojschová (2003)	Inflation differential <i>vis-à-vis</i> euro area	1995-2002	0.4-2.5
Égert <i>et al.</i> (2003)	Inflation differential <i>vis-à-vis</i> Germany	1995-2000	1.4-1.6
Égert (2002)	Inflation differential <i>vis-à-vis</i> Germany	1996-2001	0.02-0.9

Figure 5. The Balassa-Samuelson effect in practice



1. Labour productivity is defined as gross value added (in constant 2000 prices) per employment.
2. The open sectors include agriculture, hunting, fishing, and forestry, mining and quarrying, and manufacturing.
3. The remaining sectors not classified as open sectors are classified as sheltered.

Source: Eurostat, Statistical Office of the Slovak Republic, *OECD National Accounts* database and OECD calculations.

1. MacDonald and Ricci (2002) and Benigno and Thoenissen (2003) argue that productivity improvements in the tradable sector might also have a negative effect on the price of home-produced tradables *via* an increase in product variety (which leads to a decline in mark-ups due to higher competition), thereby attenuating the Balassa-Samuelson effect.
2. Productivity is defined as gross value added (in constant 2000 prices) per employment. Agriculture, hunting, fishing & forestry, mining & quarrying, and manufacturing are classified as open sectors; all remaining sectors are classified as sheltered.

Another factor that appears to have contributed to the strong real appreciation of the Slovak koruna is the quality bias, which occurs when statistical agencies fail to adequately reflect improvements in product quality, thereby falsely attributing the quality-related part of the price increase to inflation (Hanousek and Filer, 2001; Mikulcová and Stavrev, 2001). Filtering out quality effects is difficult in practice, especially in catching-up economies where quality improvements happen more rapidly than in advanced economies. The quality bias occurs both on the consumer side, with households switching to higher quality goods and services as their disposable income increases, and on the producer side with foreign competition and direct investment inflows causing a shift in the product mix towards high quality products.⁴ Whilst in the past, the upward-adjustment of regulated prices towards cost-recovery levels and the rising share of non-tradable goods and services in private consumption also contributed noticeably to the real exchange rate appreciation, the importance of both factors has declined in recent years.⁵

Nominal convergence will continue for several years ...

Although nominal convergence is ultimately a price level effect, it is a lengthy process and may thus affect inflation for a substantial period of time.⁶ Estimating a simple convergence model (see Box 2) suggests that the GDP *per capita* level of the Slovak Republic is likely to reach 70% of the euro area⁷ average by around 2015 (the simulation assumes that GDP *per capita* in the EU will continue to grow at 1.7% per year). Using EU population projections, this means that Slovak real GDP will grow at an annual average rate of about 3¾ per cent until 2015 which is somewhat lower than the average growth rate of around 5% achieved over the period 1996 to 2007 (that number is pushed upwards by the extraordinarily high growth since EU entry in 2004).

The relationship between relative GDP *per capita* and the relative price level suggests that the price level of the Slovak Republic will also reach 70% of the euro area average by around 2015, implying an average annual inflation rate that is more than 2 percentage points above the euro area average until around 2015. The inflation differential can be expected to be particularly high during the first years of euro area membership where it is estimated at above 2½ percentage points. Such an inflation differential would be more than ¾ percentage points higher than the maximum inflation differential observed for the euro area (see Figure 6, panel B). With nominal interest rates equal across all member countries, real interest rates will thus be around 2 percentage points lower in the Slovak Republic than in the other euro area countries for several years to come. The difference is likely to be smaller for long-term real interest rates due a higher risk premium of the Slovak Republic compared with the average euro area country.

Box 2. Real and nominal convergence

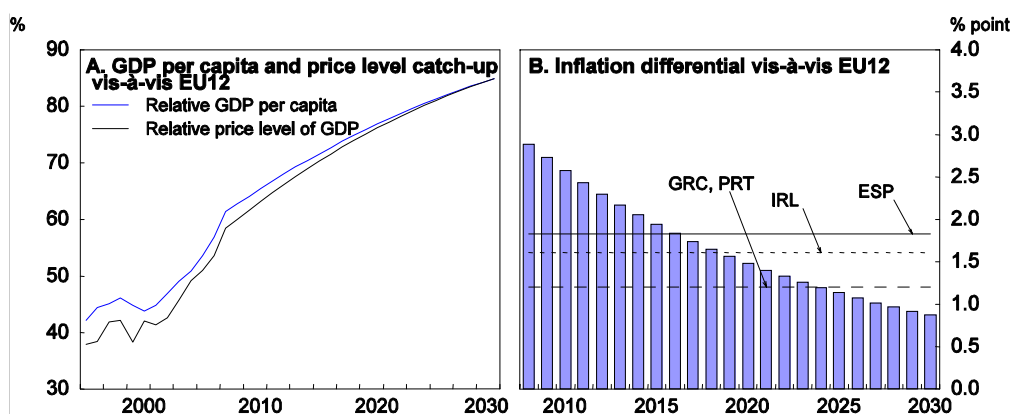
Although remarkable progress has been made in terms of catching up to the advanced economies, both the GDP *per capita* level and the price level of the Slovak Republic are still well below the euro area average. The catch-up process is thus likely to continue for several years to come. To assess the likely time horizon of this process, an unconditional convergence model is estimated for a panel of eight countries¹ from central and eastern Europe over the period 1995 to 2007 that relates the change in real GDP *per capita* (measured in 2000 purchasing power parities) to the relative real GDP *per capita* level (measured *vis-à-vis* the euro area) of the previous period:

$$\Delta \ln \text{GDPCAP}_t = \alpha + \beta \ln(\text{GDPCAP}_{t-1} / \text{GDPCAP}_{EU12,t-1}).$$

The steady-state growth rate of real GDP *per capita* (that is, the value of the constant α) is assumed to be equal to 1.7% for all eight countries, which is the average real GDP *per capita* growth rate observed over the period 1995 to 2007 in the euro area.² The estimates suggest that the eight countries from central and eastern Europe did indeed converge towards the euro area in terms of their GDP *per capita* level over the period 1995 to 2007 with the slope coefficient β being significantly negative.³ The convergence speed is estimated at 4.6% per year, meaning that the remaining GDP *per capita* gap between the central and eastern European countries and the euro area is reduced by 4.6% every year. If the Slovak Republic continues to converge at that rate going forward, its GDP *per capita* level can be expected to reach 70% of the euro area average by around 2015 (see Figure 2, panel A).⁴

As GDP *per capita* in Slovakia converges towards the euro area average, the price level should follow suit. To gauge the likely impact of the catch-up process on prices, a simple equation is estimated relating the relative price level of an economy to its relative GDP *per capita* level measured in purchasing power parities (both in logarithms).⁵ The equation is estimated for a panel of 24 EU countries over the period 1995 to 2007.⁶ The estimation yields an elasticity of 0.88 meaning that an increase in GDP *per capita* (in purchasing power parity units) relative to the EU12 average by 1% is associated with an increase in the relative price level by 0.88%. This is in line with the results of Čihák and Holub (2005) who obtain elasticities between 0.7 and 0.9 for a panel of European OECD and EU accession countries. Applying this elasticity to the GDP *per capita* projection obtained from the convergence model implies that the GDP price level of the Slovak Republic will reach 70% of the euro area average by 2015.⁷ Assuming that the inflation rate of the euro area will be equal to 1.8% up to 2015 (which is equal to the average inflation rate over the period 1995 to 2007), this means a theoretical inflation differential of more than 2½ per cent during the next years which will gradually decline to around 2% in 2015 (Figure 6, panel B).

Figure 6. Simulation of the convergence process



1. The horizontal lines show the average inflation differentials vis-à-vis the euro area average for Spain, Portugal, Ireland and Greece since their entry into the euro area (1999 for Spain, Portugal and Ireland, 2001 for Greece).

Source: OECD calculations based on Eurostat data.

1. The sample comprises the Slovak Republic, the Czech Republic, Hungary, Poland, Slovenia, Estonia, Latvia and Lithuania.
2. This assumption implies that both the level and the growth rates of Slovak GDP *per capita* will converge towards the euro area average. The assumption is made for reasons of simplicity and should be taken with care as GDP *per capita* growth rates are very heterogeneous even within the euro area.
3. The residuals of the estimated relationship are stationary at the 1% significance level, indicating that the GDP *per capita* levels of the central and eastern European countries are co-integrated with the GDP *per capita* level of the euro area.
4. In the simulation it is assumed that GDP *per capita* in the euro area will grow at a rate of 1.7% per year.
5. Estimating a convergence equation for the relative price level is complicated by the fact that changes in the relative price level do not necessarily match inflation differentials (Égert, 2007). Reasons include the incomplete exchange rate pass-through (if the pass-through is weak, exchange rate changes have little influence on inflation but move up or down the relative price level) and differences in data collection and construction. In the simulation it is assumed that changes in the relative price level exactly match inflation differentials, which is justified as the pass-through does not matter as exchange rate changes vis-à-vis the euro are ruled out after euro area entry, whilst the other factors are assumed to be zero.
6. The sample includes all EU15 countries except Luxembourg, the Slovak Republic, the Czech Republic, Hungary, Poland, Slovenia, the Baltic countries, Bulgaria and Romania. Luxembourg is excluded from the regression as an outlier.
7. In 2007, the GDP price level of the Slovak Republic was below the value implied by the estimated relationship between the relative GDP *per capita* level and the relative price level (see also Figure 1, panel A). For the projection it is assumed that the implicit residual gradually declines over time at a diminishing rate.

... its speed is surrounded by uncertainty ...

The convergence speeds underlying these calculations depend on several assumptions and vary considerably across countries and over time. Estimating the GDP *per capita* convergence equations for each central and eastern European country individually shows that the catch up over the period 1995 to 2007 was faster in Slovenia and the three Baltic countries (over 5% per year) than in the four Visegrad countries (less than 4% per year). A similar observation can be made for the first-wave euro area member countries. While Ireland managed to increase its relative GDP *per capita* level from $\frac{3}{4}$ of the euro area average at the beginning of the 1990s to over 130% in 2007, Greece and Spain reached only 90% by 2007, starting from approximately the same level as Ireland. Portugal achieved only a minimal catch up in terms of GDP *per capita* over the same period, raising its relative position by only 3 percentage points. Regarding the variation over time, the convergence process of the central and eastern European countries appears to have accelerated in recent years: Since the EU entry of the eight countries in 2004, their GDP *per capita* levels have converged at an annual rate of over 8% towards the GDP *per capita* level of the euro area.

The speed of convergence appears to depend on the level of economic integration of the catching-up economy and its macroeconomic policy settings, both of which are ignored in the simple model outlined in Box 2. Economies that are more open to trade and foreign direct investment tend to experience faster GDP *per capita* convergence because openness helps to promote a more efficient allocation of resources and facilitates technology diffusion.⁸ To the extent that euro area membership encourages further trade and financial integration with existing euro area countries, the convergence process of the Slovak Republic might even accelerate going forward.⁹ However, the benefits from increased economic integration do not accrue automatically. Proper institutions, a conducive macroeconomic environment, a sound financial system and investments in human capital and research and development (R&D) appear to be important for enabling economies to benefit from increased openness.¹⁰

A faster (slower) catch up in GDP *per capita* is likely to be accompanied by a faster (slower) catch up in relative price levels. Table 2 shows the expected inflation differential *vis-à-vis* the euro area for different assumptions for the convergence speed. If the convergence process continues at about the speed observed since EU entry, the GDP *per capita* level of the Slovak Republic would reach $\frac{3}{4}$ of the euro area average by 2015. However, this faster convergence is likely to be accompanied by a faster catch up in prices, leading to an inflation differential *vis-à-vis* the euro area of close to $3\frac{1}{2}$ percentage points. Such a rapid catch up does not seem unlikely given the implied real GDP growth rate of 5% per year on average over that period, which is 1% below the current estimate of potential growth.

Table 2. Real and nominal convergence scenarios for the Slovak Republic

Speed of convergence	Relative GDP price level (EU12 = 100)		Avg. annual inflation differential <i>vis-à-vis</i> EU12 (in %)		Relative GDP <i>per capita</i> level (EU12 = 100)		Average annual real GDP growth ² (in %)	
	2015	2030	2008-15	2016-30	2015	2030	2008-15	2016-30
	3.5% (Visegrad avg. 1995-07) ¹	68	81	2.0	1.2	69	81	3.4
4.6% (CEEC8 avg. 1995-07)	70	85	2.4	1.3	72	85	3.8	2.7
8.2% (CEEC8 avg. 2004-07)	76	92	3.4	1.3	78	93	5.0	2.7

1. Czech Republic, Hungary, Poland, and Slovak Republic.

2. Real GDP growth rates are derived from real GDP *per capita* growth rates using Eurostat population projections.

Source: Eurostat and OECD calculations.

... and it also entails a catch up in wages

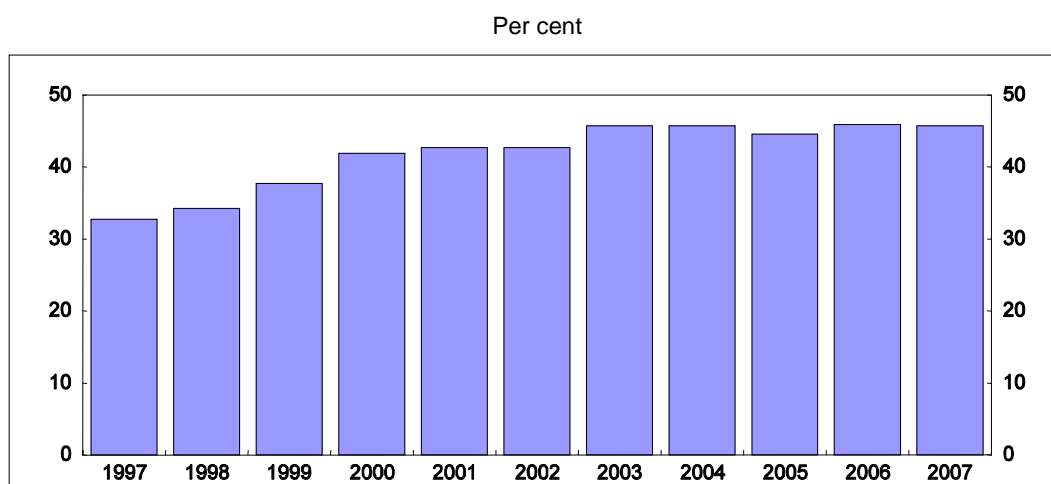
As part of the convergence process wages in the Slovak Republic are also catching up with the levels seen in advanced economies. As long as wages in the open sectors rise in line with productivity growth, wage catch up does not jeopardize competitiveness. In the past, wage growth in the open sectors was roughly in line with (or even lagging behind) productivity growth in these sectors, whilst wage growth in the sheltered sectors outstripped productivity growth: the Balassa-Samuelson effect (see Figure 5, panel A). Going forward, there is a risk that the catch-up potential that was built up in those sectors of the economy where wage growth was lagging behind productivity growth in the past might unwind and thus weaken the international competitiveness of these sectors. Moreover, the higher wage and price transparency *vis-à-vis* existing euro area member countries that comes with euro adoption might lead to an additional level effect, thus leading to a wage catch up to the levels in those countries which is too fast. The *Declaration of social agreement to adopt and use the euro* in which all social partners agreed to keep wage raises in line with productivity growth after euro adoption should help contain the risk of excessively high wage increases.

Raising wage flexibility

Wage flexibility across regions and sectors helps the economy to better adapt to a changing economic environment. Economy-wide sectoral wage settlements inhibit regional wage differentiation, especially if collective wage bargaining outcomes are legally extended to companies that are not covered by the agreements.¹¹ As a consequence, wage agreements may not sufficiently respond to macroeconomic shocks, reducing the adjustment potential of the economy. Legal extension exists in the Slovak Republic since 1991, but the regulation had been significantly relaxed in 2004 by granting employers the right to veto an extension to their company. This veto right was abolished in 2007. Under the new legislation, collective wage agreements may be extended to firms which do not participate in collective wage bargaining, although these firms have limited ground on which to ask for exoneration.¹² Although the number of extensions has been low in recent years, the measure may hamper wage flexibility and may be damaging to employment. Legal extension should therefore be abolished. Alternatively, the conditions for exoneration should be eased and the authorities should make generous use of their powers to accept requests for exoneration. Whilst relevant for all sectors of the economy, such measures are particularly pertinent for the sheltered sectors given that wages in these sectors tend to grow much faster than productivity, thereby generating inflationary pressures.

Another way to maintain wage flexibility is to avoid significant increases in the minimum wage. Evidence suggests that a moderate minimum wage is generally not problematic, but overly high minimum wages risk limiting employment prospects of youth and other vulnerable groups (OECD, 2006). Although minimum wages in the Slovak Republic are still low by international standards, they have tended to rise relative to the median wage in the past (Figure 7). Further increases in the minimum wage should be implemented only insofar as they do not have negative impacts on employment opportunities. Under current law, the minimum wage is set by an agreement between the social partners. If they cannot reach an agreement, the government specifies the increase in the minimum wage based on the average growth of wages two years ago.¹³ Decisions on the minimum wage level should take into account advice from an independent expert commission, as happens in several other OECD countries.

Figure 7. Minimum wage to median wage ratio

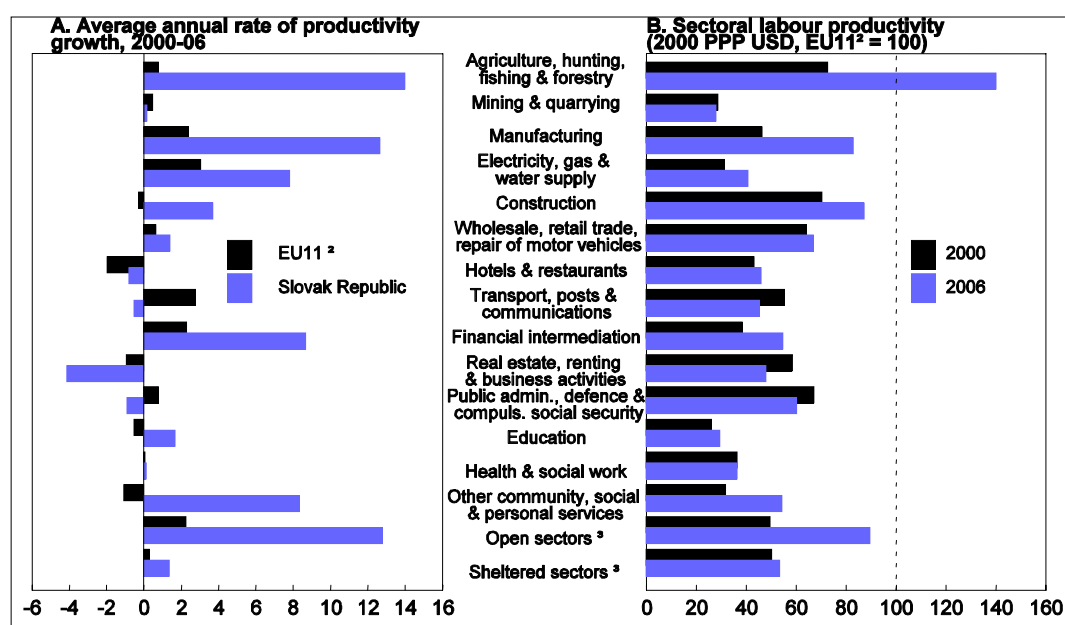


Source: Ministry of Finance.

Raising flexibility in the sheltered sectors

While productivity in the open sectors grew strongly over the past years, owing not least to rising competitive pressures from abroad, productivity growth has generally been quite low in the sheltered sectors (Figure 8, panel A). This poor performance is particularly disappointing given that labour productivity in most sheltered sectors is well below the levels achieved in other euro area countries suggesting a large catch-up potential (Figure 8, panel B).¹⁴ A notable exception is the financial sector where productivity almost doubled between 2000 and 2006 thanks to the technological advances brought into the country through foreign banks. Productivity growth was also strong in the electricity, gas and water sector owing to wide-ranging reforms aimed at introducing competition in energy markets (see OECD, 2007, for details). However, productivity in this sector is still only about half of the euro area average. The Slovak Republic fell even further behind the euro area in the transport, posts and communications sector, in real estate, renting and business activities and in public administration. In general, the public sector still displays the largest productivity differences *vis-à-vis* the euro area.

Figure 8. Sectoral labour productivity¹



1. Labour productivity is defined as gross value added (in constant 2000 prices) per employment.
2. Austria, Belgium, Finland, France, Germany, Greece, Italy, Luxembourg, Netherlands, Portugal and Spain.
3. The open sectors include agriculture, hunting, fishing, and forestry, mining and quarrying, and manufacturing. The remaining sectors not classified as open sectors are classified as sheltered.

Source: OECD, *National accounts* database and Eurostat.

The poor productivity performance, especially of the sheltered sectors, calls for further action to liberalize the regulatory framework and foster competition. This should improve the flexibility of the economy, thereby raising its adjustment potential in the wake of macroeconomic shocks. At the same time, higher productivity growth in the sheltered sectors should help dealing with the risk of a too rapid pick up of wages in these sectors during the convergence process. In those areas where productivity growth was lower than in the euro area -- transport, posts and telecommunication, business services and public administration -- measures should be taken to encourage firms to offer new services, create employment with higher-value added and boost productivity growth to the growth rates seen in more advanced countries.

Table 3. Ease of starting a business

	Rank in the world (from least to most restrictive)	Procedures (number)	Time (days)	Cost (% of income per capita)	Minimum capital (% of income per capita)
New Zealand	1	1	1	0.4	0
Canada	2	1	5	0.5	0
Australia	3	2	2	0.8	0
Ireland	5	4	13	0.3	0
United States	6	6	6	0.7	0
United Kingdom	8	6	13	0.8	0
France	14	5	7	1	0
Denmark	16	4	6	0	40.1
Iceland	17	5	5	2.6	13.6
Finland	18	3	14	1	7.4
Belgium	20	3	4	5.2	19.9
Hungary	27	4	5	8.4	10.8
Sweden	30	3	15	0.6	30.3
Norway	33	6	10	2.1	21
Portugal	34	6	6	2.9	34.3
Turkey	43	6	6	14.9	10.9
Slovak Republic	48	6	16	3.3	30.4
Netherlands	51	6	10	5.9	51.7
Switzerland	52	6	20	2.1	27.6
Italy	53	6	10	18.5	9.7
Japan	64	8	23	7.5	0
Luxembourg	69	6	26	6.5	21.3
Czech Republic	86	8	15	9.6	31.8
Germany	102	9	18	5.6	42.2
Austria	104	8	28	5.1	52.8
Mexico	115	9	28	12.5	11
Korea	126	10	17	16.9	53.8
Greece	133	15	19	10.2	19.6
Spain	140	10	47	14.9	13.1
Poland	145	10	31	18.8	168.8

Source: World Bank (2008).

Promoting competition in service sectors

Unduly strict product market regulations have been found to impede productivity growth in service sectors by reducing competitive pressures (Nicoletti, 2001). The burden of inappropriate regulations appears to be particularly high in ICT-using sectors such as retail trade and business services (Nicoletti and Scarpetta, 2005; and Arnold *et al.*, 2008). Within the regulatory framework, regulations that limit entrepreneurship tend to be particularly harmful. As argued by Arnold *et al.* (2008), easing the entry of new firms should foster competition and promote a more efficient allocation of resources, thereby stimulating business investment, innovation, technological catch up and ultimately productivity growth.

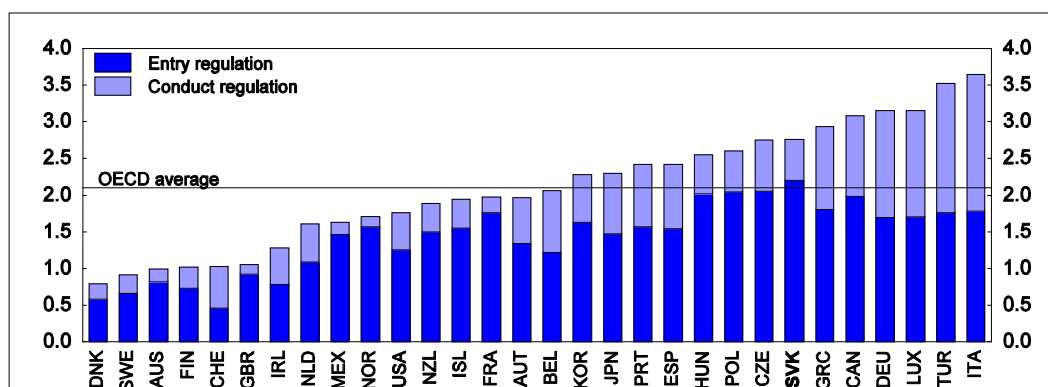
According to the *Doing Business* survey by the World Bank, the Slovak Republic has made some notable progress in facilitating the start up of new businesses leaping from 23rd in the OECD in the 2007 survey to 17th in the 2008 survey (Table 3).¹⁵ The picture is slightly worse for the overall score on the ease of doing business, where the Slovak Republic is placed 20th in the OECD. Nonetheless, starting a new

business is still more complicated, costly and time-consuming than in many other OECD countries. This picture is confirmed by the executive opinion survey conducted by the World Economic Forum which canvasses the views of business executives in 131 countries. The Slovak Republic scores relatively poorly on the burden of government regulation, ranking 21st in the OECD (World Economic Forum, 2008). In sum, these indicators suggest considerable scope to further reduce market-unfriendly regulations.

The Slovak government has acknowledged the need for further reforms in this area and has made improving the regulatory framework and the entrepreneurial environment a priority in its *Modernization Programme Slovakia 21*. Within this programme, the government intends to perform a comprehensive evaluation of administrative burdens on businesses, in particular on small and medium sized enterprises, which will then feed into an action plan and concrete measures for their decrease. While the government initiatives to reduce administrative obstacles to doing business in the Slovak Republic are welcome, a timetable for their completion is needed as euro area entry adds to the urgency of the reforms.

Professional services are subject to a number of specific regulations that unduly restrict competition. As shown in Figure 9, entry regulations are particularly restrictive in the Slovak Republic. In order to obtain authorization to establish a business, registration in a chamber is mandatory for architects, auditors, civil engineers, lawyers, notaries and tax advisers. Such compulsory chamber membership represents a significant hurdle for setting up a new business as registration periods are generally long. Conduct regulations, by contrast, are relatively low in the Slovak Republic. One notable exception is legal and notary professions, with advertising prohibited by law,¹⁶ the form of business restricted to sole practitioners and price schedules for notaries set by the government. To foster competition in professional services and to help raise productivity growth towards the growth rates seen in other OECD countries, entry and conduct regulation should be eased, while maintaining required standards of professional qualification.

Figure 9. Regulation in the professional services
(Scale is 0 - 6 from least to most restrictive of competition)



Note: The indicator covers conduct and entry regulation in legal, accounting, engineering and architecture professions.

Source: Conway, P. and G. Nicoletti (2006), Product market regulation in the non-manufacturing sectors of the OECD countries: measurement and highlights", OECD Economics Department Working Paper No. 530.

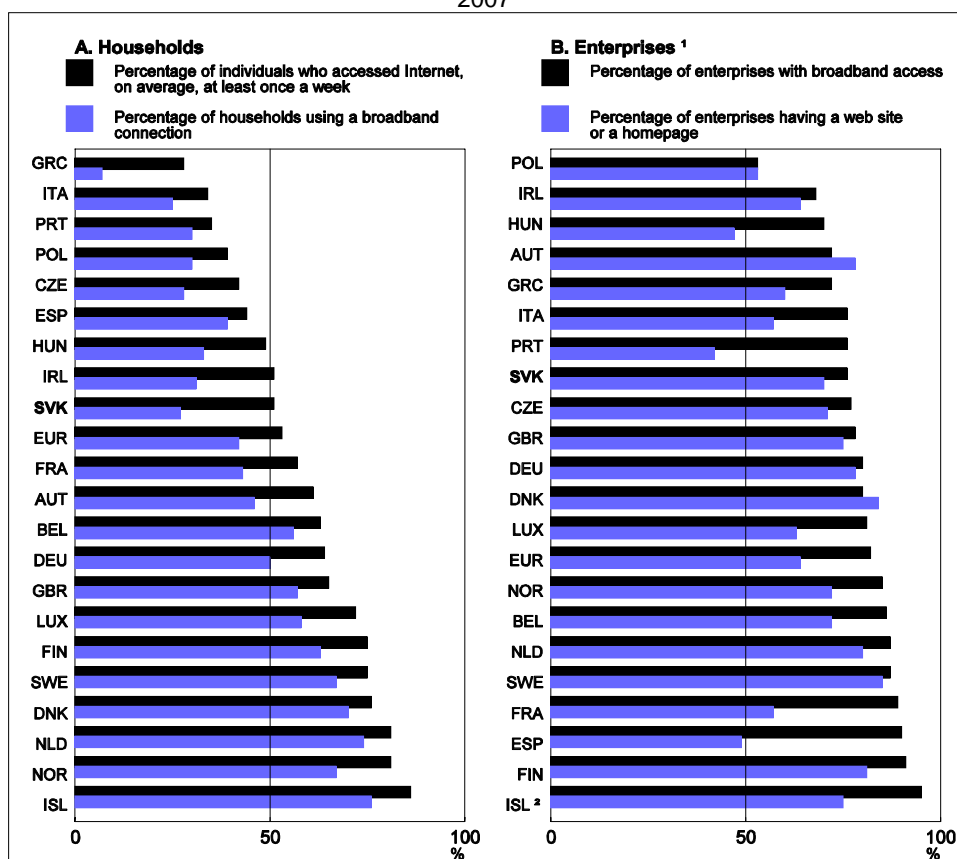
In line with the EU directive on services in the internal market, the Slovak government is planning to establish points of single contact for entrepreneurs to facilitate the entry into new business activities. Such a system would enable entrepreneurs to perform all administrative acts necessary to start and carry on a business at one single point, thus considerably shortening the administrative processes and making them more efficient. The planned points of single contact are already operational for small enterprises (with the small business offices serving as the points of single contact), but they are still lacking for the liberal professions. The authorities should quickly proceed with the planned set up of points of single contact for the liberal profession. In doing so, they should extend the points of single contact that already exist for small enterprises to entrepreneurs from the liberal professions.

Improving the framework conditions for e-business and e-commerce

Sector and firm level studies on the economic impact of ICT investment suggest that ICT raises labour productivity in service sectors as it enables firms to restructure their organisations, to reengineer business processes and to develop completely new products (OECD, 2004a). However, the experience of other OECD countries shows that encouraging better use of ICT is a challenging task as the mere availability of ICT technology does not automatically translate into electronic commerce or more sophisticated electronic business applications. For example, the gains from ICT are contingent on complementary ingredients such as skill upgrade and organisational change (OECD, 2007b) as well as an overall competition friendly regulatory environment.

Indicators of the overall access and use of ICT by enterprises and individuals rank the Slovak Republic in the middle of OECD economies (Figure 10). For example, in 2007, 27% of all households in the Slovak Republic had broadband connection compared with 42% in the euro area. However, when it comes to e-commerce, the Slovak Republic has one of the worst scores among member countries (Figure 11). Despite some increase in recent years, total business-to-consumer and business-to-business e-commerce represented only 3% of the turnover of Slovak companies in 2007. Better use of ICT is thus an obvious means by which to raise productivity growth in service sectors.

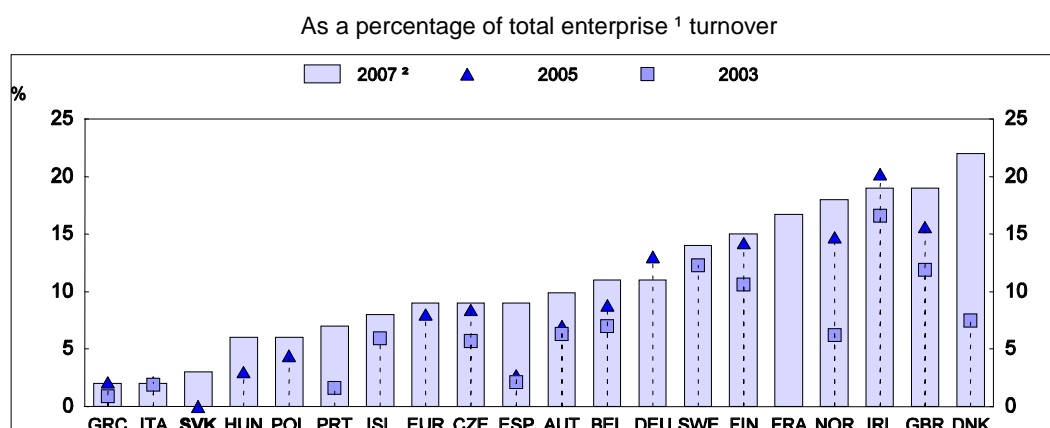
Figure 10. ICT access and use
2007



1. All, without financial sector (10 employed persons or more).

2. Values refer to 2006.

Source: Eurostat.

Figure 11. Percentage of enterprises' total turnover from e-commerce, 2003-07

1. All, without financial sector (10 employed persons or more).
2. 2006 for Austria, France and Iceland.

Source: Eurostat.

Small firms in particular tend to have a limited understanding of the potential of electronic business and electronic commerce (OECD, 2004b). Establishing centres that provide comprehensive information on the benefits of business and e-commerce, disseminate best practices, offer training courses and workshops as well as support services for the establishment of e-business activities can help overcome this obstacle. These centres could be set up as an integral part of the small business offices. Such strategies should be carried out in conjunction with business and industry associations in order to gain economies of scale in developing and delivering the information and training services and to better tailor the offered services to the needs of specific industries.

Although the attachment to existing shopping habits appears to be the most important impediment to Internet purchases among consumers, lack of trust about receiving and returning goods and security and privacy concerns also play a role. To address the problem of consumer acceptance and trust, several private initiatives have emerged in OECD countries to provide online business certification, such as quality labels or trust seals, that certify compliance with a pre-specified set of rules on honest business conduct that indicate a good past track record. Whilst such private initiatives can help build trust in Internet commerce, a strong and efficient regulatory framework that addresses concerns about consumer protection, privacy, and security of transactions can reinforce these efforts. Currently, these issues are governed by different laws that are under the competencies of different agencies. The resulting lack of transparency risks reducing consumers' trust in e-commerce. The government should therefore reassess the current regulatory framework to increase transparency and to ensure that it does not inhibit e-commerce activities. In addition, it should ensure that efficient out-of-court dispute settlement mechanisms are in place as they appear to be crucial for building consumer confidence in electronic commerce.

High Internet access costs present another barrier for the wider use of electronic commerce both between firms and between firms and consumers (OECD, 2004b). Although there have been significant drops in broadband prices in recent years thanks to important liberalization steps in the telecommunications sector, prices are still higher than in most other OECD countries (OECD, 2007c), placing a heavy burden especially on small firms. Further steps are needed to foster competition in the telecommunications sector. Most importantly, the independence of the telecommunications regulator should be strengthened as stressed in the 2007 *Survey* (OECD, 2007a). Similarly, insufficient supply of private distribution and logistics services could potentially constrain the development of electronic commerce in the Slovak Republic by limiting efficient product delivery. Currently, Slovenska Posta (a

joint stock company which has all of its shares owned by the state) dominates the market with a share of about 85%. The government should quickly proceed with the privatization of Slovenska Posta in order to set a basis for the development of fair competition in the postal sector. In addition, the 2008 amendment to the Postal Act that grants Slovenska Posta the exclusive right to deliver hybrid mail¹⁷ should be abolished.

Ensuring a timely introduction of e-government

Better use of ICT is also an important channel by which to increase the productivity of public administration (OECD, 2005b). The Slovak government estimates that e-government could reduce the public administration headcount by at least 3 900 workers (out of around 430 000 employed in the public sector¹⁸), saving approximately 0.07% of GDP per year.¹⁹ Since 2004, the government has approved several documents, formulating the strategic objectives of e-government in the Slovak Republic as well as associated action plans (Box 3).²⁰ However, implementation has been slow due to unclear accountability and insufficient monitoring and co-ordination. Only a limited number of services are offered electronically and citizens still spend an average of five days per year at public administration offices. Co-operation between offices is low, with registers not mutually interconnected or even duplicated and investment decisions not harmonised across offices, so that little use is made of systems already developed by other offices. Moreover, the e-procurement portal that has been set up is hardly used for public procurement. As a result, the Slovak Republic is ranked second last in the OECD on e-government readiness by the United Nations in its *e-government Survey 2008*.

Box 3. The e-government strategy of the Slovak Republic

The e-government strategy of the Slovak Republic formulates the following main objectives:¹

Increasing satisfaction of citizens, businessmen and other public bodies with public administration

- A central portal for e-government services will be created with fully functional personalised electronic accounts. Citizens will need to update their data in a single action and this information will be shared across offices.
- Electronic services of public administration will be available to a large degree through intermediaries from the private sector.
- E-government services will be made available to all citizens including handicapped people and socially disadvantaged groups.
- Citizens will spend a maximum of two days at public administration offices in unavoidable instances.
- Information safety will be ensured for the communication between citizens and the public administration and within the public administration.

E-enabling public administration processes

- Basic registers will be set up and interconnected. They will also be used by commercial entities.
- Citizens will be able to obtain different services from different offices and institutions in one step. Mediators and providers of services from the private sector will be able to combine their own packages of services with the services of the public administration.
- Electronic identity cards and electronic signatures will be fully available.
- The legal framework will be adjusted to the needs of e-government.

Making public administration more effective and efficient

- ICT financing will be managed centrally in accordance with the actual process of the state budget creation.
- Central applications will be developed and jointly used by different offices.
- Public procurement will take place electronically. The offices will co-operate in procurement which will improve effectiveness, transparency and ultimately procurement costs.

Increasing the competence of public administration employees

- People working with ICT will be computer literate.
- Employees of public administration will meet demands of a knowledge-based society.
- Electronic training will be available to employees.

1. Ministry of Finance of the Slovak Republic (2008).

To revitalise the e-government initiative, the government approved the *e-government strategy of the Slovak Republic* and the *National concept of public administration informatization* in 2008, specifying new time goals for the implementation of the e-government strategy and laying out the architecture of the public administration information system. It is vital that the government make every effort to ensure that the new timetable is met and that e-government is implemented by the target date of 2013. Regarding priorities, the training of employees in computer and Internet skills should take place at a very early stage, as should the adoption of the legal framework to the requirements of e-government services. To avoid past problems, such as insufficient co-ordination and lack of accountability, the responsibility for the introduction of e-government initiatives was given to one single state body, the Ministry of Finance. Whilst having a central co-ordinating agency is welcome, it is also essential to assign a high-level representative in each ministry responsible for the implementation of the action plan in that ministry.

Box 4. Recommendations to raise flexibility in labour and product markets

Avoid wage growth in excess of productivity growth

- Abolish the legal extension of collective wage settlements. Alternatively, ease the conditions for exoneration and make generous use of the scope for exoneration.
- Implement further increases in the minimum wage only insofar as they do not have negative impacts on employment opportunities.
- Take into account advice from an independent expert commission when making decisions about the minimum wage level.

Reduce regulatory barriers to promote competition in service sectors

- Ease entry conditions for the liberal professions, while maintaining required standards of professional qualification.
- Ease conduct regulation in legal and notary professions. For example, reconsider the law that prohibits advertising in legal and notary professions and reduce price regulation in these sectors. In addition, ease restrictions on the legal form of the business.
- Extend the points of single contact that already exist for small enterprises to entrepreneurs of the liberal professions.

Ensure that framework conditions do not inhibit the spread of e-business and e-commerce

- Establish centres (possibly as an integral part of the small business offices) that provide comprehensive information on the benefits of e-business and e-commerce, disseminate best practices, offer training courses and workshops as well as support services for the establishment of e-business and e-commerce activities. Consider the involvement of business and industry associations in order to gain economies of scale and to better tailor the offered services to the needs of specific industries.
- Reassess the current regulatory framework on consumer protection, privacy and security to increase transparency and to ensure that consumers participating in e-commerce activities are sufficiently protected from any misuse.
- Introduce efficient and fair out-of-court dispute settlement mechanisms to build consumer confidence in electronic commerce.
- Strengthen the independence of the telecommunications regulator.
- Quickly proceed with the privatization of Slovenska Posta. Abolish the 2008 amendment of the Postal Act that grants Slovenska Posta the exclusive right to deliver hybrid mail.

Speed up the implementation of e-government

- Make sure that the e-government is implemented by the target date of 2013.
- Make sure that the training of employees in computer and Internet skills as well as the adoption of the legal framework to e-government services takes place at an early stage of the implementation phase.
- Assign a high-level representative in each ministry responsible for the implementation of the action plan.

NOTES

1. The low level of public sector wages might be at the root of the low price level of public services. In the past, prices that were kept at an artificially low level because of political considerations also contributed to the low overall price level of the public sector. However, most of these price distortions have by now been eliminated (OECD, 2005a). Whilst in the Slovak Republic wage differences between the public and the private sector are negligible, public sector wages in the advanced economies are higher than private sector wages.
2. Čihák and Holub (2005) argue that the catch-up process is not only associated with a convergence in aggregate price levels but also with a convergence in the structure of relative prices. As such, the catch-up process is likely to lead to a decline in the dispersion of prices in the catching-up economies.
3. With the producer price index (PPI) mainly reflecting movements in the prices of tradable goods and services, the Balassa-Samuelson effect can theoretically only explain the difference between the appreciation of the HICP-based real exchange rate (6¼ per cent per year on average between 2000 and 2007) and the appreciation of the PPI-based real exchange rate (3¾ per cent per year).
4. Empirical support for the quality bias hypothesis in the Slovak Republic is provided by Cincibuch and Podpiera (2006) and Égert *et al.* (2006).
5. A rising share of non-tradable goods and services affects aggregate consumer prices in two ways. First, assuming that non-tradables have a higher inflation rate than tradables, by increasing the weight of non-tradables within the HICP, aggregate inflation will increase through a simple accounting effect. Second, the higher demand for non-tradable goods will push up the prices of these goods, thereby raising the aggregate price level. Whilst theoretically, such a shift in preferences towards non-tradable goods and services should only lead to a shift in relative prices, with the prices of tradables determined on the world market the price level will be affected as well.
6. Lein-Rupprecht *et al.* (2007) show that inflation in the EU countries of central and eastern Europe is to a large extent structural in nature, driven by the nominal convergence process. In the case of the Slovak Republic, these convergence effects appear to be particularly long-lasting (the authors estimate that it takes around 9 years to reduce a given price level gap by half).
7. Unless stated otherwise, the euro area is defined as the pre-2007 euro area countries, *i.e.* Austria, Belgium, Finland, France, Germany, Greece, Ireland, Italy, Luxembourg, Netherlands, Portugal, and Spain.
8. Hervé *et al.* (2007) estimate for a panel of nine economic regions that a 10 percentage point increase in trade openness (measured as exports plus imports over GDP) raises the rate of *per capita* output convergence towards the long-run equilibrium by 0.3 percentage points per annum.
9. Rose and Stanley (2005) use a meta-regression analysis to quantify the trade effect of monetary union and put the contribution of monetary union to bilateral trade within an interval of 30 to 90%. The National Bank of Slovakia (2006) expects euro adoption to raise total foreign trade of the Slovak Republic by approximately 50% in the long run.
10. For a literature review on the growth effects of economic integration and their contingency on R&D and human capital investment see Hervé *et al.* (2007), Box 2.

11. About ¼ of all Slovak employees are covered by collective agreements.
12. An exemption is applicable to an employer mainly in the following cases: Another higher-level collective agreement is applicable to the employer, a petition of bankruptcy is filed against the employer, the employer is in liquidation, the employer employs fewer than 20 employees, more than 10% of persons employed by the employer are handicapped persons, the employer was affected by an extraordinary event and the consequences of such an event persist.
13. In 2008, the social partners could not reach an agreement regarding the increase in the minimum wage for January 2009 and consequently the increase was specified by the government. The government decided to increase the minimum wage to SKK 8 902 (295) which is more than allowed by law. The higher increase was made possible through an amendment to the Minimum Wage Act (approved in September 2008) that gave the government the scope to raise the minimum wage by more than stipulated by law.
14. The existence of a productivity gap in the sheltered sectors deviates from the Balassa-Samuelson assumption of equal productivity in these sectors across countries.
15. Although such opinion surveys might not be representative of the actual state of regulations but simply represent the subjective opinion of the participants, it is these subjective opinions that ultimately determine business decisions.
16. According to the EU directive 2006/123/EC on services in the internal market, total prohibitions on advertising in one or more given media have to be abolished by end-2009 in all member countries.
17. Hybrid mail is bulk mail (such as invoices) which can be electronically sent closer to the destination and then printed, sorted and delivered to the final customer.
18. The figure refers to public administration, defence and compulsory social security, education and health and social work.
19. See Ministry of Finance of the Slovak Republic (2008). The calculations assume that citizens use the internet for 20 basic categories of services provided by the public administration. The cost savings are based on the average wage of a public sector employee for the 1st quarter of 2007 (SKK 20 921 or 694).
20. The strategic objectives of e-government were formulated in the documents *Strategy of informatization of the society in the Slovak Republic* (approved by the Slovak government in 2004) and *Strategy of competitiveness of the Slovak Republic by 2010* (approved in 2005). The main implementation plan was laid out in the document *Road map for the introduction of electronic services of public administration* (approved in October 2005) and the financing of the project was specified in the document *Operational program information society 2007-2013* (approved by the European Commission in September 2007).

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