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ORGANISATION FOR ECONOMIC CO-OPERATION AND DEVELOPMENT

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This Survey is published on the responsibility of the Economic and Development Review Committee (EDRC) of the OECD, which is charged with the examination of the economic situation of member countries.

The economic situation and policies of Slovak Republic were reviewed by the Committee on 12 March 2007. The draft report was then revised in the light of the discussions and given final approval as the agreed report of the whole Committee on 21 March 2007.

The Secretariat's draft report was prepared for the Committee by David Carey and Andres Fuentes under the supervision of Andreas Wörgötter.

The previous Survey of the Slovak Republic was issued in September 2005.

BASIC STATISTICS OF THE SLOVAK REPUBLIC (2005)

THE LAND

Area (km^2)	49 035
Agricultural area (km^2)	24 330

Inhabitants in major cities (end-2004)	
Bratislava	425 155
Kosice	235 006
Presov	163 743
Nitra	163 764

THE PEOPLE

Population (thousands)	5 387
Inhabitants per km^2	110
Average annual population growth (1995-2005, per cent)	0.1
Infant mortality (per thousand live-births)	7.2
Life expectancy: Males	70.1
Females	77.9
Registered unemployment, per cent of the labour force	14.3
LFS unemployment, per cent of the labour force	16.2
Employment (thousands, *Labour Force Survey*)	2 216

PRODUCTION

GDP (billion SKK)	1 471
GDP per capita (in US$, PPP exchange rate)	15 983
Gross capital formation (per cent of GDP)	29.2

THE GOVERNMENT

Per cent of GDP	
General government revenue	33.9
General government expenditure	37.1
Gross public debt (Maastricht definition)	34.5

Composition of the National Council of the Slovak Republic (June 2006)	Number of seats
Movement for a Democratic Slovakia (HZDS)	15
Slovak Democratic and Christian Union (SOKU)	31
SMER	50
Hungarian Coalition Party (SMK)	20
Christian Democrat movement (KDH)	14
Slovak National movement	20
Total	150

FOREIGN TRADE

Exports of goods and services, % of GDP	77.3
Main exports of goods (% of total):	
Machinery and transport equipment	44.6
Manufactured products	35.3
Chemical products	5.8
Others	14.3

Imports of goods and services, % of GDP	82.4
Main imports of goods (% of total):	
Machinery and transport equipment	37.7
Manufactured products	28.6
Chemical products	9.6
Others	24.1

THE CURRENCY

Monetary unit: Slovak koruna	
Currency units per US dollar (period average):	
Year 2006	29.7
February 2007	26.4
Currency units per euro (period average):	
Year 2006	37.2
February 2007	34.5

Executive summary

Following major economic reforms, the Slovak economy has grown strongly in recent years, driven by rapid productivity growth, but still has far to go to catch up to the per capita income levels in the advanced European countries. The incoming government has made achieving a more equal distribution of income a priority insofar as this can be done without damaging long-term growth prospects. There is considerable scope both to strengthen growth prospects and to reduce income inequality by raising employment rates, improving education outcomes (including by reducing the impact of socio-economic background), and by removing barriers to product-market competition. The new government has also reiterated its commitment to Slovakia's entry into the euro area in January 2009 and has taken steps to make it probable that Slovakia will satisfy the Maastricht criteria for entry on a sustainable basis. Policies may need to be adapted to support macroeconomic stability in the currency union.

Sustaining macroeconomic stability in a currency union. *The decline in real interest rates associated with the elimination of the currency risk premium and adaptation to a rise in steady-state inflation associated with Balassa-Samuelson effects in a currency union could trigger a boom-bust cycle. Fortunately, planned fiscal consolidation through to 2010 will act as a counterweight but more vigorous counter-cyclical fiscal policy may be needed. It will also be important to avoid backtracking on earlier labour-market reforms and to implement policies that support labour- and product market flexibility as this facilitates adjustment to idiosyncratic shocks in the currency union.*

Increase employment rates. *The government needs to lower barriers to the employment of low-skilled workers, including through the possible introduction of an in-work benefit. These measures would also help lower poverty. Measures are necessary to better activate the long-term unemployed and to improve the mobility of workers. In view of significant population ageing setting in from 2030 onwards, hurdles to labour supply of women and older workers need to be removed.*

Improving education outcomes. *To improve education achievement, which is below the OECD average, and reduce the large impact of socio-economic background on performance, the government should expand participation in pre-school education, reduce stratification in the system, and improve teaching quality. Vocational secondary school education needs to be made more pertinent to labour-market requirements to reduce high unemployment amongst graduates of these schools. And tertiary education should be made more attractive to technical secondary school graduates to increase tertiary attainment.*

Remove barriers to product market competition. *Sector-specific barriers to competition are still significant in the network industries and the liberal professions, requiring policy initiatives in both areas. There is significant scope to lower the cost of administrative regulation on enterprises. The benefits of competitive product markets on productivity and consumer welfare could be raised further by public sector reform, notably by improving contract enforcement through further reform of the judicial system and in public procurement.*

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Assessment and recommendations

The major policy challenges are sustaining high economic growth and social cohesion…

Slovakia is enjoying sustained high economic growth. Unemployment has fallen considerably, although long-term unemployment remains stubbornly high. The incoming government has made achieving a more equal distribution of income a priority insofar as this can be done without damaging long-term growth prospects. Ensuring that the benefits of high economic growth are more widely distributed is vital for making such growth sustainable. This objective calls for policies that give more priority to poverty alleviation, strengthen employment and remove barriers to competition in product markets. In the long term, improving education outcomes, including by reducing the impact of socio-economic background on outcomes, will be central to sustaining high economic growth and social cohesion.

… and maintaining macroeconomic stability once inside the euro area

The new government, like its predecessor, is committed to euro area entry in January 2009, with Slovakia being on track to satisfy the entry criteria. This raises the challenge of ensuring that policies support economic performance once in the currency union. A problem that could arise in the first years of euro area membership is that adjustment to the decline in real interest rates associated with the elimination of currency risk and adaptation to a rise in steady-state inflation associated with Balassa-Samuelson effects (estimated to be 1-1½% per year in the long run) in a currency union could contribute to a post-entry boom-bust cycle, calling for a counter-cyclical fiscal policy. In the longer term, adjustment to idiosyncratic shocks will have to occur entirely through changes in domestic wages and prices owing to the absence of a floating national currency. Maintaining macroeconomic stability in these circumstances calls for preserving flexibility in labour and product markets.

The economy is dynamic and short-term unemployment is falling rapidly

Broad based economic growth strengthened markedly in 2006 and the output gap is estimated by the authorities to have turned positive in early 2006. They estimate a potential growth rate of about 7½ per cent in 2006-07, boosted by the coming on stream of two new car plants, falling to 5¼ per cent by 2009. Employment growth accelerated to 2.3%

in 2006 and, with many Slovaks working abroad, national employment grew even more rapidly (3.9%), driving the unemployment rate down sharply, to 13% in late 2006. However, long-term unemployment remains stuck at around 10% of the labour force. Despite the sharp decline in short-term unemployment, real wage rate growth over 2005-2006 was on average around the labour productivity growth rate (close to 5% per person employed). With economic growth projected to remain around 8% in 2007 and to fall back to trend in 2008, the economy is likely to rise further above potential output.

Slovakia is on track to satisfy the criteria for entry to the euro area in January 2009

Slovakia is well placed to meet the conditions for euro adoption in 2009. HICP inflation fell to 2¼ per cent (year-on-year) in early 2007, supported by falling international energy prices, regulators taking a tougher line on margins (notably for electricity and gas), and exchange rate appreciation. Inflation is likely to fall somewhat through 2007-2008, which would correspond to an average annual inflation rate over April 2007-March 2008 below the Maastricht reference rate, which is estimated by the authorities to be 2.9%.

The government adopted a budget for 2007 based on very cautious assumptions that provides for a 0.8 percentage point of GDP reduction in the general government deficit to 2.9%, satisfying the 3 per cent of GDP Maastricht deficit reference value; the debt criterion is easily respected as government debt was 33% of GDP in 2006. Further budget consolidation is programmed through the remainder of the decade aimed at cutting the structural deficit to 0.9% of GDP in 2010, in compliance with the medium-term objectives for the sustainability of public finances agreed for Slovakia in the revised Stability and Growth Pact (SGP). Commendably, budget consolidation is being achieved primarily through expenditure restraint, which increases the likelihood that consolidation will prove durable. Although no problems have come to light so far, the considerable decentralisation of government responsibilities since 2004 raises the risk of general government consolidation commitments being undermined by poorly co-ordinated debt accumulation of lower levels of government. To guard against this risk, *the government should consider introducing a mechanism that allows fiscal policy to be better coordinated across levels of government.*

Concerning the other two Maastricht criteria, the long-term interest rate criterion is likely to be met. Long-term interest rates are already comfortably below the reference value (indeed, 10-year government bond rates are only 40 basis points higher than German rates). As regards the exchange rate criterion, the Slovak koruna has participated in ERM2 since November 2005. The exchange rate has remained within the 15% fluctuation bands around the central ERM2 rate, albeit much closer to the upper band than the lower band. In view of significant inflows of foreign direct investment followed by the progressive acceleration of economic growth and substantial appreciation of the estimated equilibrium real exchange rate, it was mutually agreed in March 2007 to revalue the ERM2 central rate for the Slovak koruna against the euro by 8.5% to SKK 35.4424. This step was well founded and timely. It will support the authorities in maintaining macroeconomic stability.

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Fiscal policy may need to be restrictive to counter post-entry overheating

An immediate issue that the authorities may face following entry to the euro area is a temporary boom. Such a boom could be caused by the decline in real interest rates associated with entry to the euro area, as discussed above. Through multiplier and accelerator effects, adjustment to lower rates would be likely to entail some overheating. In addition to increasing the current account deficit, this would tend to increase domestic inflation (especially for assets such as housing), further reducing real interest rates temporarily and hence reinforcing the boom. The ensuing loss of competitiveness would at some time slow the economy to below the trend rate, eventually enabling competitiveness to be restored and the economy to return to trend, though such an adjustment period could prove painful. It would be desirable to take whatever actions are possible to forestall such a boom-bust cycle. Fortunately, the planned fiscal consolidation through to 2010 means that fiscal policy settings will lean against growth in aggregate demand in the lead up to euro area membership. *It would be prudent to allow automatic stabilisers to work fully. In the event that the economy nevertheless appears to be overheating, an even stronger counter-cyclical fiscal policy stance would be required.*

Convergence in living standards has been slowed by a decline in the employment rate and uneven productivity performance

Sustained high economic growth in recent years is gradually narrowing the gap in living standards between Slovakia and advanced European countries, but there is still a long way to go. GDP per capita (in PPP terms) rose from 44% of the EU15 average in 1998 to 51% in 2005, mainly achieved through rising labour productivity. However, productivity growth was lower in some of the sectors in which it is more difficult to establish competitive market conditions, notably in the utilities and the distribution sectors, although the recent expansion of large retail outlets suggests that productivity growth should improve. Furthermore, labour utilisation detracted from catching up to EU15 living standards, reflecting a growing gap between the employment rate in Slovakia and the EU15 countries. There clearly is considerable scope to support convergence in living standards by increasing the employment rate, especially if the benchmark is taken to be the best performing OECD countries (11 have employment rates over 70% compared with 58% in Slovakia).

Despite a pick-up in job creation, unemployment for some groups remains high while obstacles to participation persist

Strong economic growth has begun to feed through to the labour market, and high demand for skilled workers has led to widening wage differentials. However, job prospects for the most vulnerable groups remain poor. The long-term unemployment rate is the highest in the OECD, and is especially high for youth. To some extent, long-term unemployment can be expected to decline as the impact of strong growth and past reforms of welfare and employment protection legislation work through. However, low regional worker mobility contributes to keeping the duration of unemployment high. At the same time, the overall employment rate is low, with particularly weak labour market participation among older workers and young women. Policies addressing these issues are needed and would also positively impact on poverty.

Labour market policies addressing income inequality need to support employment growth

The government has decided on a number of measures aimed at distributing more of the fruits of high economic growth to low-income earners. It has: increased the minimum wage over and above average wage growth and the government manifesto envisages further such increases; reintroduced legal extension of nation-wide sectoral wage agreements but with the possibility for individual employers to request exoneration from the government on grounds of differences in socio-economic conditions; and proposed changes to the labour code that somewhat tighten employment protection legislation (EPL). *Significant further increases in the minimum wage relative to average wages should be avoided as they would harm employment prospects of the low-skilled and consequently fail to reduce income inequality.Similarly, the authorities should make liberal use of their powers to accept requests for exoneration from legal extension so as to limit the loss of responsiveness of wages to local conditions, which would aggravate unemployment in eastern regions.* By contrast, some of the planned changes in EPL would not harm employment and would promote equity. Indeed, abolishing exemptions from normal EPL provisions for part-time workers would improve their career prospects. *All such exemptions should be abolished.* At the same time, *tightening general EPL provisions, which would significantly increase employment costs, should be avoided.*

High social security contributions still weigh on employment of workers with relatively low earnings potential. As in other countries, disincentives to work inherent in the tax-benefit system are more pronounced in households with children than in other households. *An in-work benefit, which would both support the expansion of employment and reduce poverty, should be considered. Such a benefit should rise with the number of children, should be conditional on a minimum threshold for hours worked and should be phased out above a poverty threshold for household income.*

The pension system generates poverty traps for low skilled workers

There is a substantial risk that many workers with modest earnings potential accumulate pension entitlements in the reformed pension system which will fall short of social assistance entitlements. Pensions will be strictly proportional to contributions in the reformed pension system in most cases and social assistance will continue to be withdrawn rapidly as pension income rises, generating poverty traps and disincentives to work in the legal economy. In the mandatory funded second pillar pension system, risk and return characteristics may in future be impaired by the requirement to invest 30% of asset portfolios in domestic assets, increasing the proportion of pensioners with pension entitlements that fall below social assistance. While this requirement does not at present appear to be binding, it may restrict financial investment choices once the second pillar system matures. To reduce the risk of poverty traps in the pension system a number of measures should be taken:

- *The existing redistribution mechanism in the reformed pension system could be reviewed for possible extension. In this regard, mandatory pensions, which are currently not subject to taxation (i.e., exempt-exempt-exempt(EEE) arrangements) could be subject to personal income tax (either EET or TEE) and resulting revenues be used to raise 1st pillar pensions, leaving the average net pension unchanged.*
- *The rate at which social assistance payments to pensioners are withdrawn as pension income rises should be lowered with budget costs financed by cutting the tax advantages for voluntary third-pillar pension saving schemes.*
- *The requirement that 30% of financial investments in the second-pillar pension scheme be directed to domestic assets should be lifted.*

Activation of the long-term unemployed needs to improve further

Active labour market policies (ALMPs) are heavily geared towards large-scale job creation programmes. Such programmes have proven ineffective in lowering long-term unemployment. Resources for placement services are not yet allocated in a fully effective manner. Improving ALMPs would also have benefits in terms of making wages more responsive to labour market disequilibria. Training measures for the unemployed should be expanded, especially for the young unemployed, while subsidized job creation should be more narrowly targeted. The capacity of PES to provide effective job-search assistance and monitoring needs to be strengthened.

Regional disparities in labour market performance need to be reduced

The virtual absence of a private-rental-housing market, despite some recent improvement, is a barrier to regional labour mobility, contributing to persistently low employment rates in eastern regions, high structural unemployment and a slow transition of youth from education into jobs. Government policies are focussed on construction of subsidised public sector rental housing, for which waiting lists are long, discouraging mobility, and on providing subsidies for households purchasing their own homes. *Priority should be given to removing hurdles to the development of the private rental market, reviewing regulation and improving law enforcement. Public sector housing construction should be targeted to regions where housing demand is the strongest, with public-sector rents for middle and high income households set in line with market rental rates. When the conditions for private rental market development are in place, subsidies for public sector housing construction should be replaced by a cash housing benefit.*

Obstacles to labour market participation of older workers and young women need to be eliminated

Participation rates of older workers are still low, despite recent increases, and participation of young women has been falling markedly. The dramatic impact of demographic ageing on labour supply growth expected from 2030 onwards further raises the need to take steps to improve labour utilisation.

- The statutory retirement age is 62 years for men and will reach this age for women by 2014. This age is relatively low, reflecting lower life expectancy that in other OECD countries; although life expectancy is likely to rise in line with improving living standards. *The statutory retirement age should be indexed to gains in life expectancy once the increase in the retirement age for women has been phased in.*
- Pension adjustments for retirement before or after the statutory retirement age (6 per cent per year) are still lower than implied by actuarial neutrality (around 8 per cent per year) *Pension discounts for retirement before the statutory retirement age and supplements for retirement after the statutory retirement age should be raised to actuarially neutral rates.*
- Experience across OECD countries shows that while parental leave helps parents reconcile family and work life, excessively long such leave harms mothers' career prospects. *The duration of parental leave should be shortened from the current three years with the benefit for the remaining period up to three years being paid in the form of subsidies for childcare.*
- A high tax wedge on second earners, relative to the main earner, in two earner households discourages female labour supply, which is more sensitive to variations in the net wage than men's. *This tax wedge should be eliminated.*

Education has a vital role to play in achieving economic and social sustainability

Improving education outcomes is a vital part of Slovakia's strategy to catch-up with living standards in the advanced European countries. Better outcomes raise productivity and employment prospects and, if distributed more evenly, reduce income inequality and poverty. While some education outcomes are favourable, such as the low secondary-school dropout rate, others have room for improvement:

- Education achievement is below the OECD average according to the 2003 OECD PISA study and is strongly influenced by socio-economic background. Roma children, who are mainly from lower socio-economic backgrounds and represent a significant and growing share of children, have particularly poor achievement;
- Labour-market outcomes for graduates of secondary vocational programmes not leading to tertiary education are poor (unemployment rates for such persons are much higher than for other persons with upper secondary attainment), suggesting that these programmes are not equipping graduates with skills to cope with adverse structural shocks; and
- Tertiary attainment is low (12% of the population aged 25-64), albeit rising (14% of 25-34 year olds, compared with an OECD average of 31%).

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Education reforms are needed to improve student achievement and reduce the impact of socio-economic background

International evidence shows that early childhood education has a significant effect on learning in subsequent stages of education, especially for children from lower socio-economic backgrounds. Accordingly, the authorities plan to increase participation in kindergarten by making it free of charge for five-year olds from 2008 onwards. A practical difficulty with increasing participation is that kindergartens are not available throughout the country, especially in poor districts with large Roma populations. *The government should ensure that municipalities not offering an adequate supply of kindergartens are financially able to do so and in fact do so. Moreover, efforts should be made to increase participation of children from lower socio-economic backgrounds from four years of age.* This would be particularly helpful for Roma children as many do not attend kindergarten but stand to gain much from doing so, notably through greater competence in the language of instruction at school.

International evidence also suggests that the impact of socio-economic background on student performance is greater in countries, such as Slovakia, that have highly differentiated education systems than in other countries. So as to reduce segmentation, the authorities have encouraged the integration of technical secondary schools (55% of students), which prepare students for tertiary education, and vocational secondary schools (20% of students), which lead to early labour-market entry. *This process should be taken further by also encouraging the integration of technical secondary schools and grammar schools, with the general education courses common to both tracks being offered jointly. Moreover, the age of selection into general and vocational tracks should be delayed, until 16.* This would reduce socio-economic segregation in schools and would increase the amount of general education received by vocational secondary school students, providing them with a stronger foundation for subsequent learning.

Raising teacher quality would also improve achievement, especially for children with learning difficulties. The government has increased teacher salaries significantly in the past three years from very low levels by international comparison to attract better quality candidates and is considering further increases that would bring salaries in relation to average earnings near to the OECD average. Particularly large increases are planned for foreign-language teachers to overcome shortages, although there are also shortages of mathematics and science teachers. For higher salaries to be as effective as possible in improving teaching quality, *the authorities should ensure that recruitment and selection mechanisms are well designed, that initial teacher education prepares candidates well, and that teachers are encouraged continuously to upgrade their practice.* School leadership also needs to be strong and to be given flexibility to manage while being held accountable for outcomes. *In this framework, it is essential that school managers be given the competence for hiring and firing teachers. Moreover, the largest salary increases should be used to attract high quality teachers to schools with children from disadvantaged socio-economic backgrounds. The policy of focussing larger pay increases on foreign-language teachers should be generalised to other subjects where there are skill shortages.*

Vocational secondary school education should be made more pertinent to labour-market requirements

Vocational secondary schools lost touch with enterprises following the fall of communism. In the virtual absence of apprenticeship training, applied learning takes place in vocational schools, often using outdated equipment. To make vocational secondary education more relevant to labour-market requirements, *greater employer involvement should be sought both in terms of curricula development and practical training (more apprenticeships)*. The automobile industry provides an encouraging example of how such education can be turned around with greater employer involvement. The measures discussed above to raise achievement and reduce the impact of socio-economic background more generally would also help to prepare students in these schools better for the labour market.

Tertiary education needs to be made more attractive for technical secondary school graduates

A relatively high proportion of technical secondary school graduates, who are qualified to enter university, do not in fact go on to tertiary education. One reason for this is that there are few relatively short (2-3 years) occupationally oriented courses (*i.e.*, tertiary-type B programmes), which are likely to be attractive to many students from the (large) technical secondary school track. *Priority should be given to developing such programmes*. Another tertiary-education barrier for technical secondary school graduates is that they often fail to get high enough scores in university entrance exams to be admitted as full-time students, who do not pay tuition fees, to the most popular universities. In these circumstances, applicants can apply as part-time students paying "unofficial" fees (around €1 000 per year in the most popular universities), in which case they have a much higher chance of being accepted, or of going to a less attractive university. To reduce this barrier to participation and to make the financing of tertiary education fairer, *unofficial fees should be banned. Moreover, the government should reconsider its policy of not introducing tuition fees for full-time students as this reduces incentives for efficiency in the tertiary education sector and undermines social equity, the greatest benefits going to the better off. Any such fees should be aligned for full-time and part-time students and be set so as to make a significant contribution to costs* in light of the high tertiary earnings premium in Slovakia and the limited progression in the tax system. In the event that (official) tuition fees were introduced, *loans with income-contingent repayments, as in a number of other OECD countries, should be made available to ensure that liquidity constraints do not exclude some students and to reduce the risk on returns to private investment in tertiary education*.

Sector specific product market regulation and shortcomings in public sector efficiency still hold back productivity performance

While general economic regulation is conducive to competition, the cost to businesses of administrative regulation is still high in some instances. Regulation in the professional services and in network industries needs to become more conducive to competition.

Government ownership is still high in network industries. Measures mentioned below would intensify product market competition and could raise the purchasing power of labour earnings, aggregate employment and productivity, as well as the resilience of the economy to shocks:

- Competition is not yet established in the energy market. Measures to overcome fragmentation of markets in the region along national borders would offset the impact of high market concentration. *Inter alia, the transmission network over which energy demand and supply are balanced should be extended beyond national borders in co-operation with neighbouring countries. A short-term power trading facility should be established seeking co-operation with the Czech Republic*. Measures to prevent non-price discrimination need to be strengthened. *The network regulator should oblige network operators to make information on network access conditions widely available to market entrants. The regulator should impose more specific obligations on the gas and electricity network operator. For example, rules on the sharing of network connection costs should be set. Authorisation procedures for the construction of new power plants should be streamlined. Further entry of private capital should be encouraged as part of a strategy to make framework conditions more conducive to competition.*
- Regulation of the telecommunications sector needs to encourage competition more vigorously. Government ownership of the telecommunications incumbent can give rise to perceptions of conflicts of interest. The lack of budgetary independence of the regulator compromises its independence, which may further deter market entry of competitors. *Delays in the introduction of remedies to foster competition in fixed line telephony services should be reduced. The government share in the telecommunications incumbent operator should be privatised. The independence of the telecommunications regulator should be strengthened by moving its budget out of the budget of the Ministry of Transport.*
- The preconditions for competition in the railway industry need to be put in place. Government subsidies are directly disbursed to the government-owned passenger transport operator, which discourages market entry. *The subsidies should instead be used to lower high network access prices or be made contestable through the tendering of public service obligations.*
- Administrative burdens on enterprises create entry barriers. For example, different payment procedures are in place for the payment of various social security contributions. Costs of dealing with licenses also appear high by international comparison. These costs should be reduced and *payment procedures for social security contributions should be unified.*
- Deregulation of professional services needs to continue. Compulsory chamber membership should be abolished. The chambers of the professions should not have powers to take decisions concerning the regulation of activities of professional enterprises. Entry requirements with regard to experience that are specific to setting up a business should be abolished. Restrictions on the legal form of business should be eased.
- Management capacity and accountability of the judicial sector still needs to be strengthened. While legislation has been introduced to increase the share of public procurement advertised through a contract notice, scope remains to improve competition. *Public sector reform needs to continue to strengthen contract enforcement and improve competition in public procurement.*

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Chapter 1

Catching up with advanced European countries and entering the euro area

Slovakia has enjoyed a stellar economic performance in recent years. Economic growth has been high and unemployment has fallen considerably, although long-term unemployment remains high. Slovakia is on track to satisfy the Maastricht convergence criteria for entry to the euro area in January 2009. The authorities now need to prepare the economy for life in the euro area. In the short term, this entails heading off a potential post-entry boom. In the longer term, it entails maintaining flexible labour- and product markets so as to facilitate adjustment to idiosyncratic shocks. Slovakia has made solid progress in the past decade in catching up to living standards in the EU15 countries, but still has far to go. This progress has been achieved through high productivity growth. Labour utilisation, however, has detracted from progress. There is still considerable scope to support catch up and reduce relative poverty through increasing employment rates. Similarly, regulatory reform that supports competition in product markets would both strengthen productivity growth and reduce income inequality. In the long term, improving education outcomes, including by reducing the impact of socio-economic background on outcomes, will be central to sustaining high economic growth and reducing income inequality.

The Slovak Republic is enjoying high trend growth as it gradually catches up to the productivity levels and living standards enjoyed in the pre-2004-accession EU countries (*i.e.,* in the EU15). Substantial inflows of FDI, especially in the automobile and flat-screen industries, are making a major contribution to the convergence of productivity to EU15 levels. Joining the EU in 2004 has played an important role in this process, entailing substantial institutional reform to conform to EU requirements, enhanced domestic product market competition and improved access to export markets. The incoming government has made achieving a more equal distribution of income a priority insofar as this can be done without damaging long-term growth prospects.

Some sectors – notably, manufacturing, agricultural, and financial services – have made impressive progress in catching up to productivity levels in the advanced EU countries. Other sectors that have been less exposed to the blast of international competition have made less progress and indeed in some cases have fallen even further behind EU15 productivity levels. There is considerable scope for some sectors – namely, distribution, and electricity, gas and water – to contribute more to lifting overall productivity levels in the Slovak economy towards those in the EU15 countries. Ensuring that product markets are competitive, especially in these sectors, would not only support convergence, it would also contribute to reducing income inequality by boosting employment and real wage rates (by reducing rents).

While short-term unemployment has fallen markedly in recent years, long-term unemployment has not yet declined very much, remaining very high by international comparison, notably amongst the young. Unemployment rates vary substantially across regions and by skill levels; those persons not having (upper) secondary attainment or having upper secondary vocational attainment from the education track leading to direct labour-market entry experience very high unemployment rates. Labour force participation rates of older workers are low, albeit increasing, while those of women aged 25-34 are declining. Despite the rise in labour utilisation in recent years, it deteriorated to such an extent in earlier years that it was still lower in relation to the EU15 average in 2005 than seven years earlier, detracting from convergence in living standards and reductions in income inequality and poverty. More severe population ageing in Slovakia than in western European countries is likely to weigh on convergence in living standards during the first half of the current century.

As Slovakia progresses in catching up to western European living standards, it will become increasingly important to upgrade residents' human capital to keep convergence on track. For the time being, Slovakia is able to enjoy rapid productivity growth by adopting the technology and know-how of firms at the productivity frontier, often through FDI, and becoming more specialised, including by being integrated into international supply networks. Subsequently, however, it will be necessary to migrate into the more human-capital intensive niches occupied by the advanced countries to keep convergence on track; indeed, some MNEs operating in Slovakia are already having difficulty finding the skills that they need. To make this transition, education outcomes will need to be improved: overall achievement is below the OECD average according to the 2003 PISA study; tertiary attainment is low, albeit rising quickly; vocational education for direct entry to the labour market does not seem to be equipping students with skills that are highly valued in the labour market; and Roma children have particularly poor education outcomes. Improving education outcomes, especially reducing the large effect on them of socio-economic background, will also be central to reducing income inequality and poverty.

Slovakia is also on track to satisfy the criteria for entry to the euro area in January 2009. This raises the challenge of ensuring that policies are compatible with maintaining good economic performance in a currency union. A problem that could arise in the first years of euro-area membership is that a boom-bust cycle could develop as a result of the decline in real interest rates associated with the elimination of currency risk and adaptation to a rise in steady-state inflation associated with Balassa-Samuelson effects (estimated by the National Bank of Slovakia to be 1-1½% in the long run) in a currency union. Looking further ahead, adjustment to idiosyncratic shocks will need to occur through changes in domestic wages and prices without any help from changes in the exchange rate. This makes it important to ensure that labour- and product markets remain flexible.

This chapter begins by reviewing progress in convergence to living standards in the advanced European countries as well as developments in income distribution. In the next section the state of the play for satisfying the Maastricht convergence criteria for entry to the euro area is evaluated and policy adjustments to maintain macroeconomic stability once inside it are discussed. Policies to sustain high economic growth and social cohesion – Slovakia's main policy objective – are outlined in the final section.

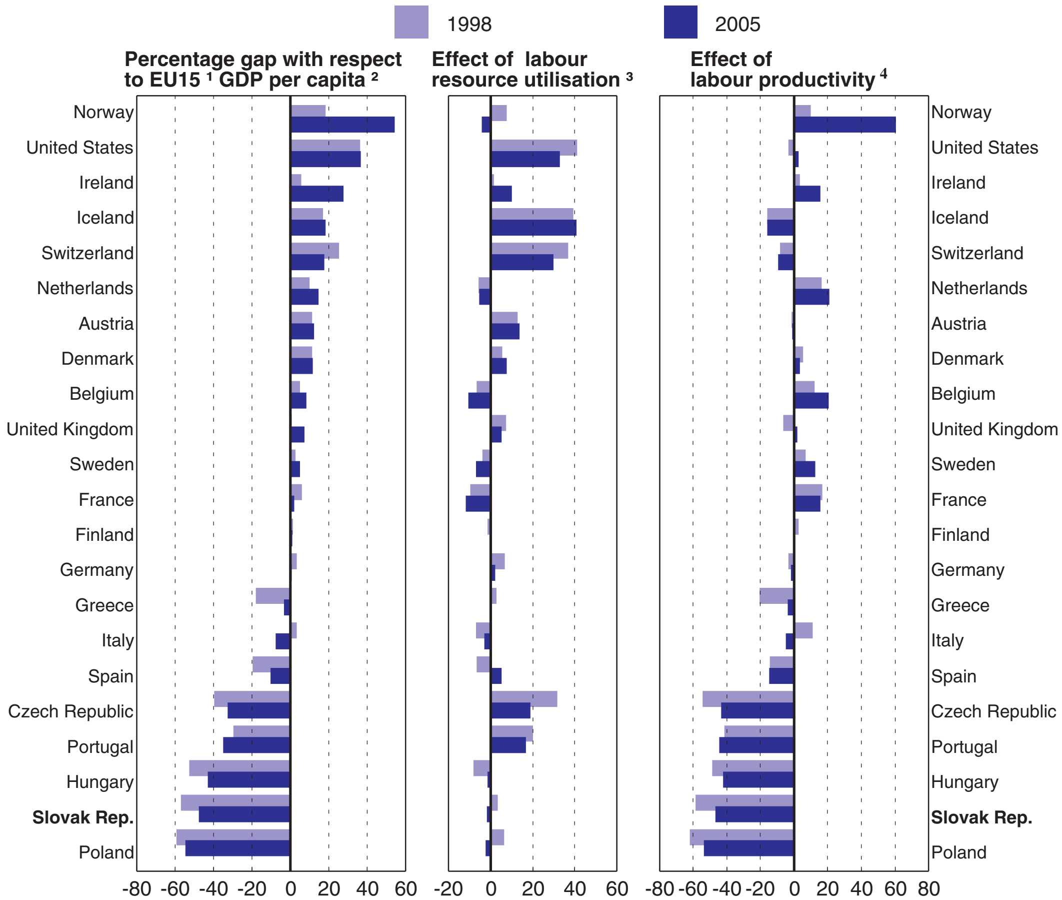
Progress in convergence

Convergence is underway

GDP per capita (in PPP terms) has increased from 44% of the EU15 average in 1998[1] to 51% in 2005 (Figure 1.1). This increase is similar to that in the Czech Republic, which accordingly remains further along the path to convergence in GDP per capita levels (67% of the EU15 average in PPP terms), but less than in Hungary, where GDP per capita rose to 58% of the EU15 average. However, the Slovak performance is better than that in Poland, where GDP per capita only rose by 5 percentage points to 46% of the EU15 average. Convergence in GDP per capita has occurred through rising labour productivity, which has increased from 43% of the EU15 hourly average in 1998 to 52% in 2004. Hourly labour productivity growth averaged 4.2% over 1998-2005, compared with an EU average of 1.3% (Figure 1.2). Slovakia's low initial productivity levels have permitted it to enjoy rapid productivity growth through absorption of more advanced countries' production and organisation techniques and deepening integration with the global economy. The profound economic reforms in recent years and deepening integration in the global economy, especially with European countries, have established the necessary conditions for such catch up to occur. Hourly labour productivity growth has also been high in the other OECD central European transition countries (the Czech Republic, Hungary and Poland) for similar reasons, varying over 1998-2005 from an annual average rate of 4.6% in the Czech Republic to 3.3% in Hungary.

Labour resource utilisation (*i.e.*, hours worked per capita) has detracted from convergence in living standards, falling from 4% above the EU15 average in 1998 to 2%

Figure 1.1. **Progress in convergence**



1. 15 members of the European Union prior to the 2004 enlargement.
2. Based on current purchasing power parities and current prices.
3. Labour resource utilisation is measured as total number of hours worked divided by population.
4. Labour productivity is measured as GDP per hour worked.

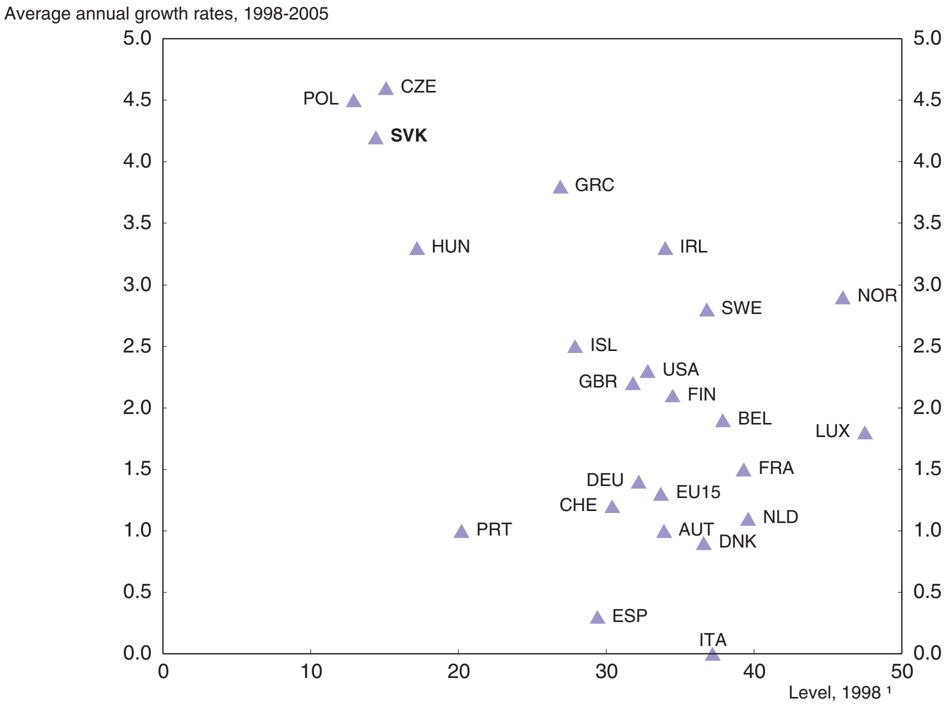
Source: OECD Productivity database, Analytical database, National Accounts database, Burniaux and Causa (2007, forthcoming), and OECD calculations.

below in 2004. The main factor underpinning this decline is the divergence in employment rate developments, falling in Slovakia but rising in the EU15 countries (Figure 1.3). The employment rate fell sharply in Slovakia during the mid-1990s in the context of restructuring uncompetitive enterprises from the communist period but has been rising since 2000, boosted by considerable FDI. At the same time, employment rates rose in EU15 countries following labour-market reforms. More favourable demographic developments in Slovakia than in the EU15 (the share of the population of working age rose in Slovakia but was virtually unchanged in the EU15) and, to a lesser extent, a smaller reduction in working time attenuated the relative decline in labour utilisation.

Progress in productivity convergence is uneven across sectors

High labour productivity growth (real value added per person employed)[2] in Slovakia over 1995-2004 mainly reflects within sector (also known as intra-industry) effects (Table 1.1); the shift-share methodology is described in Annex 1.A1. The combined effects

Figure 1.2. **Hourly labour productivity: level and growth**



1. US dollars at year 2000 PPP exchange rates.

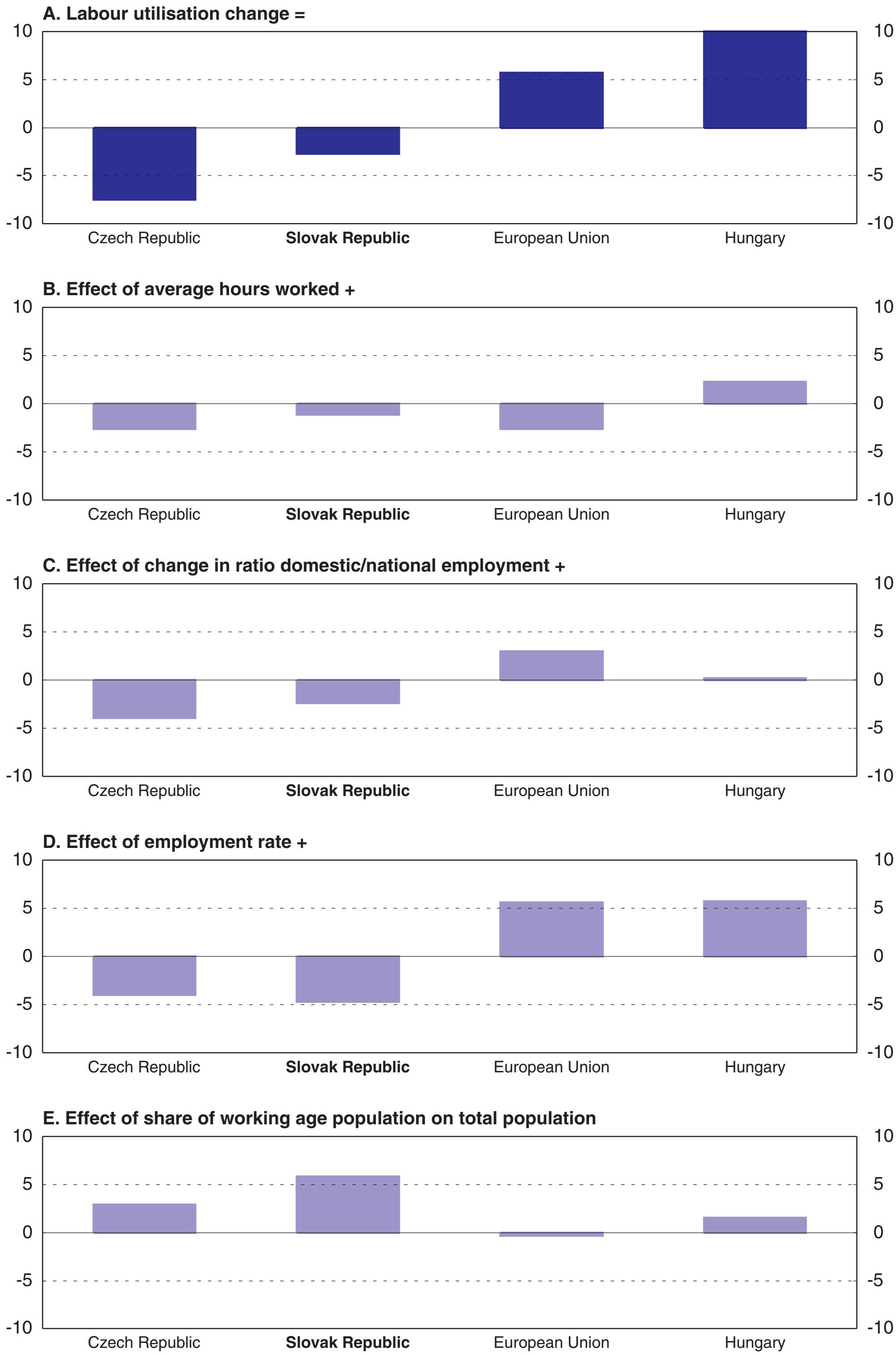
Source: OECD National accounts database, OECD productivity database, and Burniaux and Causa (2007, forthcoming).

of shifting resources across sectors (*i.e.*, the shift effect, reflecting the effect of shifting resources between sectors with different productivity levels, plus the interaction effect, which reflects the effect of shifting resources to sectors with different productivity growth rates) is relatively low, similar to that in the EU15 countries less Ireland.[3] This pattern, which is also found in the Czech Republic (the other transition country with available data over 1995-2004), contrasts with what occurred in some of the advanced EU member countries (notably France) in the post World War II period when shifting resources from the relatively low productivity agricultural sector to the manufacturing sector contributed significantly to productivity growth. Contributions to productivity growth from shifting resources between sectors are likely to remain low as Slovakia does not have particularly large pools of labour in low productivity sectors.[4]

The largest within sector contributions to labour productivity growth (*i.e.*, sector labour productivity growth weighted by initial output shares) came from the manufacturing and agricultural sectors, which together contributed 2¼ percentage points (Table 1.2). The contribution from the manufacturing sector was similar to that in the Czech Republic (the other transition country with available data over 1995-2004) but far larger than in EU14 countries while the contribution of the agricultural sector was the largest of any country. These large contributions to labour productivity growth largely reflect very high labour productivity growth in these sectors: 5.1% on average over 1995-2004 in the manufacturing sector and 13.8% in the agriculture sector (Figure 1.4).[5] Labour productivity in the manufacturing sector has benefited from the large infusion of FDI while in the agriculture sector there has been a drastic restructuring to cope with the opening of agricultural markets to foreign competition: value added in agriculture has remained

Figure 1.3. **Decomposition of labour utilisation**

Per cent change, 1998-2005



Source: OECD Productivity database, OECD Labour force database, OECD Analytical database, Burniaux and Causa (2007, forthcoming).

Table 1.1. **Shift-share analysis of labour productivity growth per person**[1]

Decomposition (percentage points), 1996-2004

	Slovak Republic	Czech Republic	EU14[2]
Within sector effect	3.8	3.1	1.2
Shift effect	0.5	0.3	0.4
Interaction effect	–0.3	–0.2	–0.1
Total Market sectors[3]	4.0	3.2	1.5

1. See Annex 1.A1 for a description of the methodology.
2. EU members before enlargement in May 2004, except Ireland (owing to unavailable data), weighted by employment shares. Data for Portugal cover 1996-2003.
3. All sectors except: public administration and defence, compulsory social security; education; health and social work; other community, social and personal service activities; private households with employed persons; and extra-territorial organisations and bodies.

Source: OECD, *Annual National Accounts*.

Table 1.2. **Within sector contributions to labour productivity growth per person**

1996-2004, percentage points

	Slovak Republic	Czech Republic	EU14[1]
Agriculture, hunting, forestry and fishing	0.8	0.3	0.1
Mining and quarrying	0.1	0.1	0.0
Total manufacturing	1.5	1.4	0.6
Electricity, gas and water supply	0.0	0.0	0.1
Construction	0.1	0.0	0.0
Wholesale and retail trade	0.2	1.2	0.2
Restaurants and hotels	–0.1	–0.2	0.0
Transport and storage and communication	0.6	0.3	0.3
Financial intermediation	0.2	0.2	0.2
Real estate, renting and business activities	0.1	–0.4	–0.3
Total market sector	3.5	2.8	1.2

1. EU members before enlargement in May 2004, except Ireland (owing to unavailable data), weighted by employment shares. Data for Portugal cover 1996-2003.

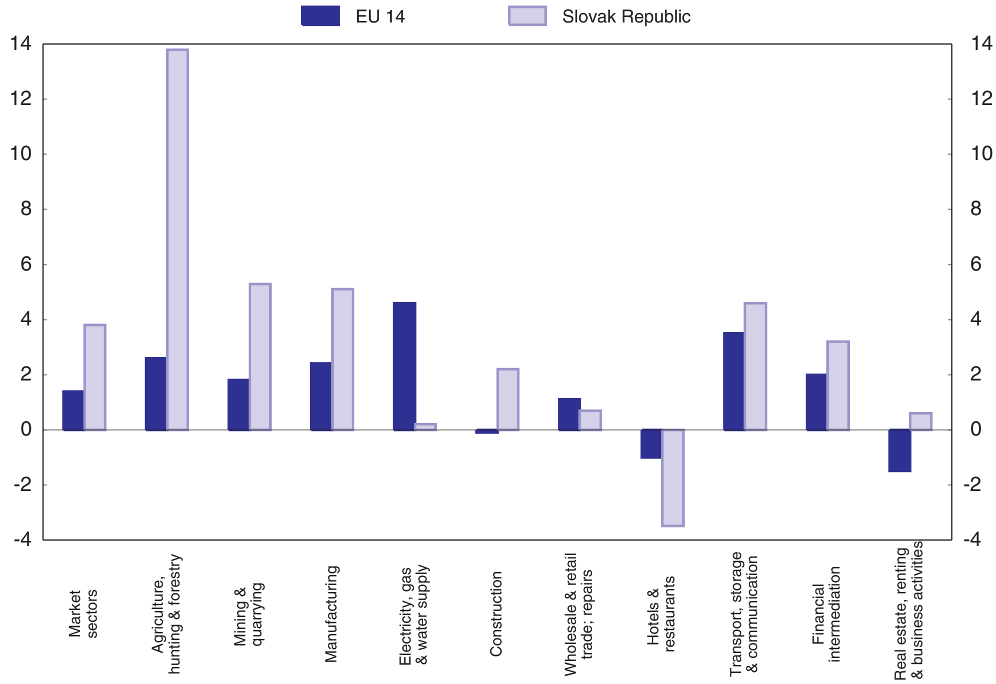
Source: OECD, *Annual National Accounts*.

constant as a share of total market sector value added while labour inputs have fallen by more than half. Compared with the Czech Republic, the within-sector contribution from the distribution sector was weak, albeit in line with that in the EU14 countries.

With such high labour productivity growth, the agricultural sector has made phenomenal progress in catching up to EU14 productivity levels. Productivity has leapt from slightly below one half of the EU14 level in 1995 to somewhat above the EU14 level in 2004 (Figure 1.5); this does not mean, however, that the potential for high catch-up growth is over as the global productivity frontier in this industry is far beyond the productivity levels found in the EU. Most other sectors also have made progress in catching up towards EU14 levels, ranging from 4 percentage points in the mining sector to 19 percentage points in the financial services sector. Among these sectors, however, productivity levels remain considerably lower than those in the EU14 except in the financial sector, where productivity is close to the EU14 average. On the other hand, productivity levels in electricity, gas and water (EGW), distribution and in the hotels and restaurants sectors have fallen further from EU14 productivity levels. Productivity in the EGW sector was flat in Slovakia whereas it grew strongly in the EU14 in the context of market liberalisation (see Figure 1.4). In the distribution sector, productivity growth was higher in the EU14 than in Slovakia, while in the hotels and restaurants sector productivity

Figure 1.4. **Labour productivity growth per person by sector in Slovak Republic and the EU14**[1]

Annual growth rate, 1996-2004



1. EU members before enlargement in May 2004, except Ireland (owing to unavailable data), weighted by employment shares. Data for Portugal cover 1996-2003.

Source: OECD National Accounts database.

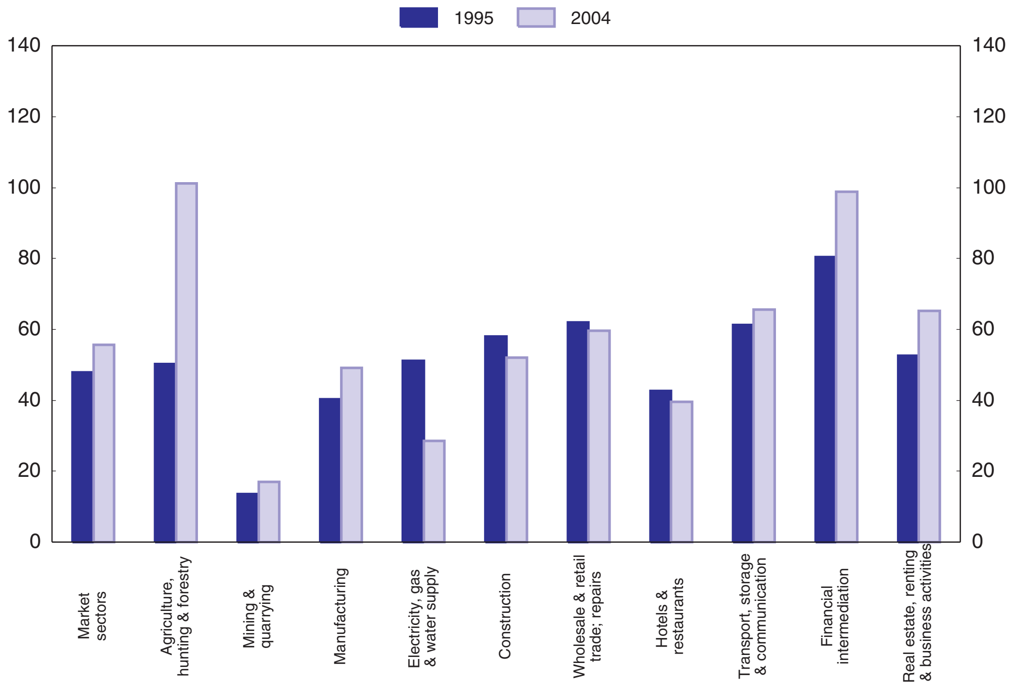
fell more strongly in Slovakia than in the EU14. The poor performance of the distribution sector weighs heavily on the overall process of catching up as it is large (it accounts for 23% of market sector employment). While the EGW and the hotels and restaurants sectors are small, the productivity gap with the EU14 is so big that these sectors also have the potential to contribute handsomely to convergence in overall productivity levels in the future.

While income inequality and relative poverty rates are below the EU15 average, relative poverty gaps are above average

Income inequality is low by international comparison. The Gini coefficient (26 in 2005) is below the EU15 average (30). Similarly, the relative poverty rate (13% in 2005), defined as the proportion of the population that lives in a household with income below 60% of median equivalent income (*i.e.,* adjusted for household size) after social transfers, is below the EU15 average (16%). For children (aged less than 16), the relative poverty rate is much higher (18%), a larger difference than in most other EU countries. The relative poverty rate for older persons (aged 65 or over), on the other hand, is only 7%, which is much lower than in most EU15 countries, though looking ahead this rate is likely to rise as replacement rates for low-income persons in the new pension scheme are lower than in the old scheme. While overall relative poverty rates are below the EU15 average, the relative poverty gap (23% in 2005), defined as the difference between the median equivalent total net income of persons below the 60% of median income threshold and the 60% threshold, expressed as a percentage of this threshold, is above the EU15 average (21%). Thus, a lower proportion of

Figure 1.5. **Progress in labour productivity per person catch up to EU14[1] levels**

Percentages



1. EU members before enlargement in May 2004, except Ireland (owing to unavailable data), weighted by employment shares.

Source: OECD National Accounts database and OECD calculations.

the population is in relative poverty in Slovakia than is average for EU15 countries but the poor have lower incomes in relation to the national relative poverty threshold than on average in EU15 countries.

Entry to the euro area and maintenance of macroeconomic stability thereafter

Satisfying the convergence criteria for entry to the euro area in January 2009

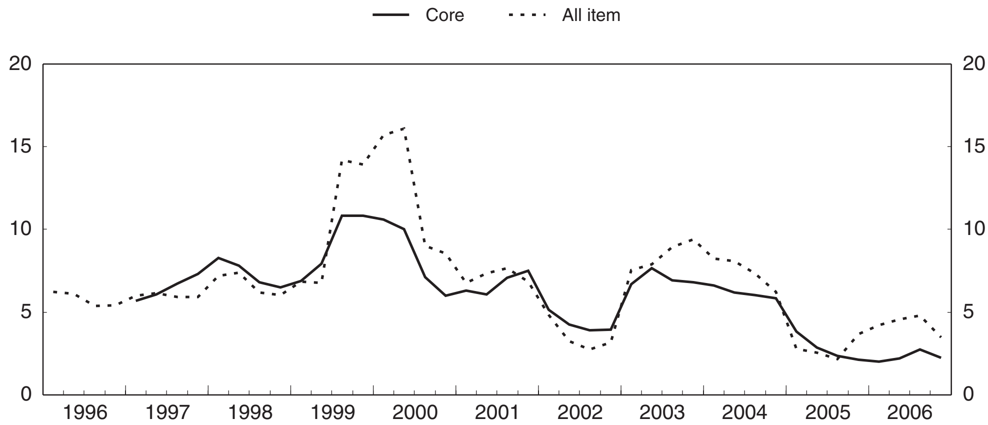
Price stability

The Maastricht criterion for price stability is that the annual average HICP inflation rate over the reference period (expected to be April 2007-March 2008) must be no higher than 1.5 percentage points above the average of the three best-performing Member States in terms of price stability. In addition, the achieved degree of inflation convergence should be sustainable. The government currently estimates this average rate to be 2.9%.

HICP inflation increased markedly from the third quarter of 2005 mainly owing to the rise in energy prices, reaching a peak of 4.8% (y-o-y) in the third quarter of 2006 (Figure 1.6). The increase in energy prices also fed through to some extent to core inflation,[6] which picked up to 2.7%. Such feed through also occurred on previous occasions when energy-price inflation increased or fell rapidly. To counter the rise in inflation, the central bank (National Bank of Slovakia, NBS) tightened monetary policy markedly during the course of 2006, increasing the official interest rate by 175 basis points since the beginning of the year, to 4.75% in September. High economic growth and growing confidence in the new government's commitment to entering the euro area on schedule contributed to a marked

Figure 1.6. **HICP inflation**

Year-on-year percentage change



Source: OECD Main Economic Indicators database.

appreciation of the exchange rate (see the discussion below on meeting the exchange rate criterion, tightening monetary conditions.

Following concerns about high gas prices, the regulator adopted a tougher line on profit margins in the electricity and gas sectors in late 2006. With this approach and the fall in international energy prices (especially expressed in Slovak koruna), increases in regulated energy prices were modest in the final months of 2006 and such prices declined in January 2007, January being the month in which changes in regulated energy prices are concentrated. This development resulted in the contribution of regulated energy prices to annual inflation falling by 1 percentage point in January 2007 as the large increase in such prices one year earlier dropped out of the base, cutting HICP inflation to 2.2% (y-o-y). The NBS forecasts a decline in the contribution of regulated energy prices to inflation from 2.2 percentage points in 2006, to 0.4 percentage point in 2007 and to 0.3 percentage point in 2008. Allowing for this evolution, the NBS forecasts that HICP inflation should fall to 1.5% (y-o-y) by the end of 2007 and reach 2% by the end of 2008, which would likely bring the average inflation rate below the Maastricht reference value (Table 1.3).

Table 1.3. **National Bank of Slovakia inflation forecasts**

	2004	2005	2006	2007f	2008f
End of year					
HICP	5.8	3.9	3.7	1.5	2.0
HICP core	4.9	1.2	2.5	1.9	2.4
Annual average					
HICP	7.5	2.8	4.3	1.6	2.0
HICP core	6.5	1.7	2.1	1.7	2.3

Source: Statistical Office of Slovak Republic, National Bank of Slovakia.

The major risk to satisfying the Maastricht inflation convergence criterion would be a renewed large increase in international energy prices, which could for example result from the global economy being stronger than anticipated and/or conflict in the Middle East. Energy prices have a much larger weight in the HICP in Slovakia than in EU countries. The authorities will also need to remain vigilant to contain domestic inflation pressures given that the economy is estimated to be operating above potential in 2007 and that the labour market has tightened rapidly. With scope for tightening monetary policy constrained by the need to keep the Slovak crown within its ERM2 currency bands (see below) and in view of the time lag before such a tightening would impact on the economy, fiscal policy would need to play a role in easing such short-term pressures.

Budget deficit and debt

The Maastricht fiscal criterion for entry to the euro area is that Slovakia must be taken out of the Excessive Deficit Procedure (EDP) by the time of the examination (expected to be mid-2008). Reducing the budget deficit to 3% of GDP or less (making no allowance for the budget costs of second-pillar pension reform) would satisfy this requirement; Slovakia already respects the other EDP criterion, namely that government debt must be 60% or less of GDP, by a comfortable margin (government debt was 33% of GDP in 2006). Alternatively, Slovakia could be taken out of the EDP even if the deficit exceeded the reference value, while remaining close to it, insofar as this excess reflected the budget costs of the pension reform introducing a mandatory, fully funded second pillar and the deficit had declined substantially and continuously. In this case, the net cost of the reform would be taken into account on a linear degressive basis for a transitory period of five years, starting in 2005.

The budget deficit (including the costs of pension reform) is estimated to have risen by 0.6 percentage point of GDP in 2006 to 3.7% (Table 1.4). However, one-off effects significantly increased the budget deficit in 2005 but had a small favourable effect in 2006, in all reducing the deficit by 0.9% of GDP in 2006 from the year before.[7] Adjusting for these effects, the budget deficit is estimated to have increased by 1.5% of GDP in 2006; the cyclical component is estimated by the authorities to have been unchanged. Of this increase, 0.6% of GDP is attributable to the budget costs of the pension reform, which diverts contributions from the social security system to private pension funds.[8] The rest of the increase reflects a reduction in government revenue (other than for the pension reform

Table 1.4. **Budget consolidation, 2005-2009**

% of GDP

	2005	2006e	2007b	2008b	2009b
Net borrowing/lending	**–3.1**	**–3.7**	**–2.9**	**–2.4**	**–1.9**
One-offs	0.8	–0.1	0.0	0.0	0.0
Cyclical component	0.0	0.0	0.1	0.0	0.0
Cyclically adjusted balance excl. one offs (MTO) (1 + 2 + 3)	**–2.3**	**–3.8**	**–3.0**	**–2.5**	**–1.9**
Effects of implementation of 2nd pillar of the pension scheme	0.6	1.1	1.1	1.2	1.2
Balance adjusted by the 2nd pillar (4 + 5)	–1.7	–2.6	–1.9	–1.3	–0.7
Interest payments	1.7	1.8	2.0	1.9	1.8
Adjusted primary balance (6 + 7)	**0.1**	**–0.8**	**0.1**	**0.6**	**1.0**
Consolidation efforts (year-to-year change in (6))	**1.3**	**–1.0**	**0.7**	**0.6**	**0.6**
Memorandum items					
Cyclically adjusted balance excluding one offs degressively adjusted for the 2nd pillar[1]	–1.7	–2.8	–2.3	–2.0	–1.7
Economic growth	*6.1*	*6.6*	*7.1*	*5.5*	*5.1*
Output gap	0.0	0.2	0.4	0.2	0.0

1. Excludes 100% of 2nd pillar pension reform budget costs in 2005 and 20 percentage points less on a linear degressive basis in each subsequent year.

Source: Ministry of Finance (2006), *Convergence Programme for Years 2006 to 2010, Update 2006*.

and one-off effects) that was only partially compensated for by a reduction in expenditure as a percentage of GDP. Policy measures by the new government had only a minor impact on the deficit in 2006.

The 2007-09 budget voted by Parliament provides for a 0.8 percentage point reduction in the deficit in 2007 to 2.9% of GDP, thereby laying the ground for Slovakia to be taken out of the EDP if realised. As the budget is based on very conservative growth assumptions- the Ministry of Finance assumes economic growth of 7.1% in 2007, whereas the OECD projected growth of 8.0% in *Economic Outlook 80*, for example (see Box 1.1 for a summary of the OECD's short-term projections for Slovakia) –, there is an in-built safety margin, although it is limited by the low degree of progressiveness in the income tax system and low social spending, which reduce the sensitivity of the budget balance to economic developments. In addition, some explicit expenditure promises made by the new government in the areas of healthcare and pensions have not been incorporated. Vigilance will be required to ensure that deficit outcomes are no higher than budgeted, especially in 2007.

Budget consolidation is being achieved through a reduction in expenditure in relation to GDP (Table 1.6). Expenditure on wages and salaries is being cut in relation to GDP through an ambitious reduction in staff numbers: government departments are required to reduce civil servant numbers by up to 20% during the course of the year. Social benefits and aid also decline significantly in relation to GDP, mainly reflecting declining numbers of social assistance beneficiaries. There is also a large reduction in capital expenditures. Even so, expenditure on public capital goods will remain above 3% of GDP in 2007 (and the subsequent two years), reflecting increased drawing of funds from structural funds and the Cohesion Fund of the EU for projects in the field of infrastructure and environment and the use of entities outside the general government sector (such as the National Highway Organisation) for the provision of some public infrastructure. Government revenues also decline as a share of GDP, notably for social contributions and non-tax revenues, albeit by less than the decline in expenditures. According to the Ministry of Finance, the fall in social contributions is greater than that in tax revenues owing to the Social Insurance Agency's conservative approach to estimating revenues; accordingly, there is an upside risk to the projections for this item (*ibid*., p. 57). The fall in non-tax revenues as a share of GDP is attributable to the decline in dividends from state-owned enterprises. There is also a large decline in VAT revenues following the government's decision to cut the rate on medicines and selected medical aid tools from 19% to 10%. However, this only has a very small impact on the budget as 80% of such VAT is paid by health insurance agencies, which are mostly in the general government sector.

As a member of the EU, Slovakia is also required to comply with the revised Stability and Growth Pact (SGP) medium-term objectives for the sustainability of public finances. The deficit reductions budgeted for 2008-09, which are estimated by the authorities to be structural, are some 0.5% of GDP per year.[9] Moreover, a large reduction in the deficit (1% of GDP) is planned for 2010, to bring the structural deficit down to 0.9% of GDP. This deficit falls within the range (0.5-1.0% of GDP) set as the medium-term objective for Slovakia within the framework of the revised SGP. The Ministry of Finance estimates that achieving this deficit would enable Slovakia to respect the basic rules of the SGP (budget deficits and government debt should not exceed 3% and 60% of GDP, respectively) through 2080 without further policy changes provided that pensions are indexed to prices (instead of half to prices and half to wages, as currently) and that non-population-ageing-related government expenditures remain constant as a share of GDP. Further fiscal consolidation beyond that planned (for example to stabilise the debt-to-

Box 1.1. **The OECD's short-term projections for Slovakia***

Economic growth strengthened markedly in 2006, taking real GDP growth for the year to the third quarter of 2006 to almost 10%. This performance was underpinned by high growth in private consumption, exports, and investment. The output gap is estimated by the authorities to have turned positive in early 2006. They estimate a potential growth rate of about 7½ per cent in 2006-2007, boosted by the coming on-stream of two new car plants, falling to 5¼ per cent by 2009. Employment growth has been strong, driving the unemployment rate (Labour Force Survey) down sharply, to 13.5% in the second quarter. Real wage growth over 2005-2006 has been in line with labour productivity growth. Headline inflation (CPI) reached a peak in August 2006 and has since fallen sharply, to 3.7% in the year to October 2006, as lower fuel prices and telecom discounts took effect. Regulated price increases, which contributed 1½ percentage points to headline inflation, are likely to be lower over the next two years as global energy prices weaken and regulators take a tougher line on margins.

Economic growth is projected to remain around 8% in 2007 supported by the production build-up at the new automobile plants and to ease thereafter as this effect passes. Unemployment should continue to decline, albeit more slowly than in recent years as the pool of short-term unemployed shrinks to low levels. Inflation should fall to 2.2% by 2008. The general government deficit is projected to fall to 2.2% of GDP by 2008. With the completion of the new automobile plants, which export most of their production, the current account deficit should fall sharply, from 6½ per cent of GDP in 2006 to 3¼ per cent in 2008.

Table 1.5. **Short-term projections**

	2003	2004	2005	2006	2007	2008
	Current prices SKK billion	Percentage changes, volume (2000 prices)				
Private consumption	687.6	4.2	7.0	6.2	6.2	5.3
Government consumption	249.1	2.0	–0.6	4.5	2.9	2.0
Gross fixed capital formation	302.8	5.0	17.5	9.5	5.9	6.8
Final domestic demand	1 239.5	3.9	8.1	6.8	5.5	5.1
Stockbuilding[1]	–4.3	2.3	0.6	0.8	0.0	0.4
Total domestic demand	1 235.2	6.2	8.6	7.4	5.3	5.4
Exports of goods and services	927.7	7.9	13.8	17.1	14.9	9.6
Imports of goods and services	950.3	8.8	16.6	15.7	11.9	9.2
Net exports[1]	–22.5	–0.9	–2.8	0.5	2.4	0.3
GDP at market prices	1 212.7	5.4	6.0	8.2	8.0	5.7
GDP deflator	_	6.0	2.4	3.3	3.5	3.0
Memorandum items						
Consumer price index	_	7.5	2.7	4.5	2.8	2.2
Private consumption deflator	_	7.4	2.6	4.5	2.8	2.2
Unemployment rate	_	18.1	16.2	13.5	12.2	11.7
General government financial balance[2]	_	–3.0	–3.1	–3.7	–2.7	–2.2
Current account balance[2]	_	–3.5	–8.7	–6.4	–3.9	–3.3

1. Contributions to changes in real GDP (percentage of real GDP in previous year), actual amount in the first column.
2. As a percentage of GDP.
Source: OECD Economic Outlook 80 database.

The main risk to these projections is that energy prices, which have a much greater impact on inflation in Slovakia than in euro area countries, turn out significantly differently than in the central projection. Higher prices would make achieving the Maastricht inflation target extremely difficult, while lower prices would facilitate meeting the target, allowing some relaxation in the stance of monetary policy.

* These projections were finalised in November 2006 and published in *OECD Economic Outlook*, No. 80.

Table 1.6. **General government revenue and expenditure, 2006-2009**

Per cent of GDP

	2006E	2007B	2008B	2009B	2009B-2006E
TOTAL REVENUE	**35.4**	**34.5**	**33.9**	**33.9**	**–1.5**
Tax revenues	**17.1**	**17.0**	**16.9**	**16.9**	**–0.2**
Personal income tax	2.5	2.6	2.7	2.8	0.3
From dependent activity	2.2	2.3	2.4	2.5	0.3
From self-employment	0.4	0.4	0.4	0.4	0.0
Corporate income tax	2.7	2.8	2.8	2.9	0.2
Withholding income tax	0.3	0.2	0.2	0.2	0.0
Property taxes	0.4	0.4	0.3	0.3	–0.1
Value added tax	7.7	7.4	7.3	7.3	–0.5
Excise taxes	3.0	3.2	3.1	2.9	–0.1
Road tax	0.2	0.2	0.2	0.1	0.0
Taxes from international trade and transactions	0.0	0.0	0.0	0.0	0.0
Taxes on specific services (municipalities)	0.2	0.2	0.2	0.2	0.0
Other taxes	0.0	0.0	0.0	0.0	0.0
Social contributions	**12.6**	**12.3**	**12.0**	**12.0**	**–0.6**
Social Insurance Agency	7.8	7.6	7.5	7.4	–0.4
Health Insurance companies	4.8	4.7	4.5	4.5	–0.2
National Labour Office	0.0	0.0	0.0	0.0	0.0
Non-tax revenues	**3.9**	**3.5**	**3.0**	**2.8**	**–1.1**
Of which interests	0.4	0.4	0.4	0.3	–0.1
Grants and transfers	**1.7**	**1.8**	**2.0**	**2.2**	**0.5**
Of which from the EU	1.7	1.8	1.9	2.2	0.5
TOTAL EXPENDITURE	**37.9**	**36.3**	**35.2**	**34.6**	**–3.3**
Current expenditures	**34.0**	**33.2**	**32.1**	**31.4**	**–2.5**
Compensation of employees	6.9	6.6	6.4	6.3	–0.6
Wages and salaries	5.1	4.8	4.7	4.7	–0.4
Employers' social contributions	1.7	1.7	1.6	1.6	–0.1
Goods and other services	**5.1**	**4.9**	**4.8**	**4.5**	**0.6**
Use of the EU funds	0.1	0.1	0.1	0.1	–0.0
Other	5.1	4.8	4.7	4.4	–0.6
Grants and transfers	**20.2**	**19.8**	**19.1**	**18.9**	**–1.4**
Agricultural subsidies	0.9	1.0	1.0	1.1	0.2
Transport subsidies	0.7	0.6	0.6	0.6	–0.1
Support for housing	0.2	0.1	0.1	0.1	–0.1
Active labour market policies	0.3	0.3	0.3	0.3	0.0
Health care	4.5	4.4	4.3	4.3	–0.2
Sickness benefits	0.3	0.3	0.3	0.3	0.0
Old-age and disability pensions	7.1	7.0	6.8	6.7	–0.4
Unemployment benefits	0.2	0.1	0.1	0.1	0.0
State social benefits and aid	2.1	1.8	1.6	1.6	–0.5
Social contributions on behalf of certain groups	1.8	1.9	1.7	1.7	–0.1
Transfers to the EU budget	0.8	0.9	0.9	0.8	0.0
Transfer of 2% of income tax to the third sector	0.1	0.0	0.0	0.0	0.0
Other	1.3	1.2	1.1	1.1	–0.2
Interest payments	**1.8**	**2.0**	**1.9**	**1.8**	**0.0**
Capital expenditures	**3.9**	**3.2**	**3.1**	**3.2**	**–0.7**
Capital asset acquisition	2.0	1.6	1.4	1.3	–0.7
Capital transfers	1.9	1.6	1.7	1.9	0.0
General government balance	**–2.5**	**–1.8**	**–1.3**	**–0.7**	**1.8**
Impact of the 2nd pillar	–1.1	–1.1	–1.2	–1.2	–0.1
GG balance incl. of impact of the 2nd pillar	**–3.7**	**–2.9**	**–2.4**	**–1.9**	**1.7**

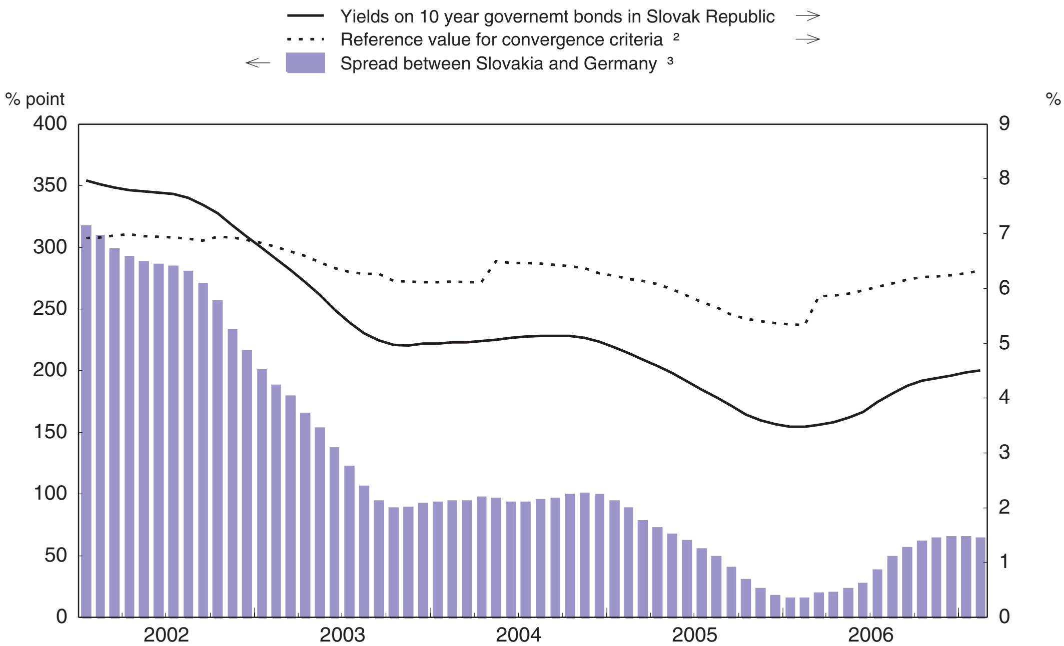
Source: Ministry of Finance of the Slovak Republic (2006).

GDP ratio at the current level) or beyond what might be needed to counter a post-euro entry b oom would not be attractive in Slovakia as the real interest rate is likely to remain below the growth rate for many years to come[10] and current generations will have to bear substantial transition costs that contribute to making future generations much richer. Government investment spending with returns exceeding real interest rates would provide a better means to shift spending power into future periods than reductions in government debt.

Interest rates

The Maastricht interest rate convergence criterion, that long-term government bond rates should not exceed by more than 2 percentage points the average of the rates in the three best-performing Member States in terms of price stability in the reference period, should be easy to satisfy: Slovak long-term rates have been well below the reference rate for the past three years (Figure 1.7). The spread between Slovak and German government 10-year bonds has narrowed to only 40 basis points in recent months.

Figure 1.7. **Convergence of long-term interest rates**[1]



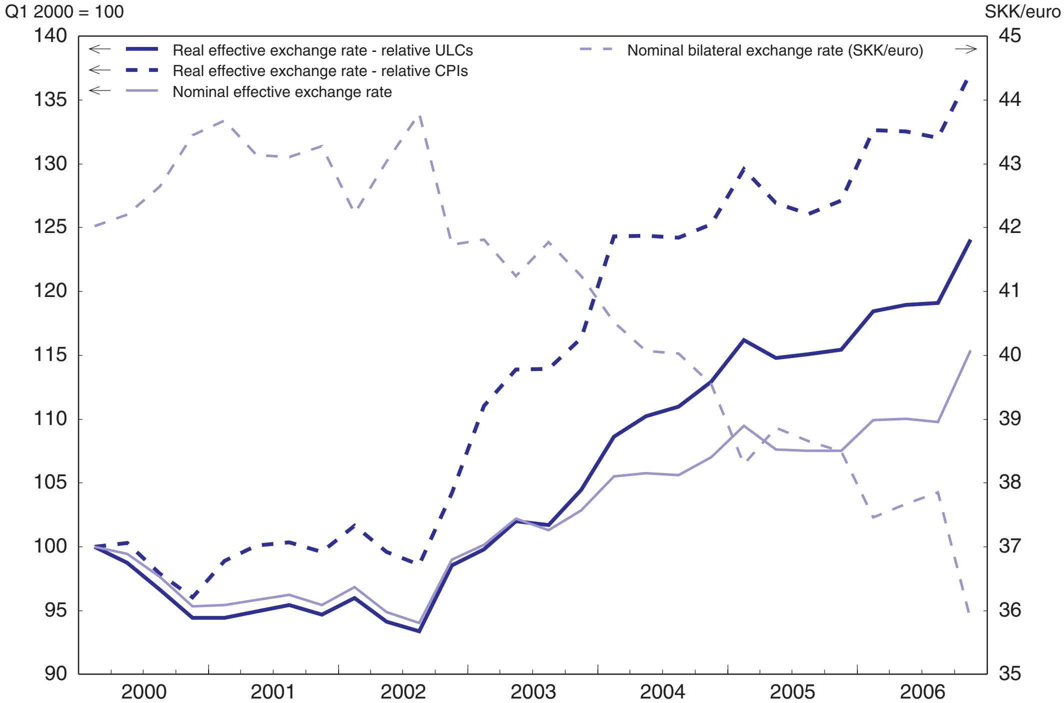
1. 12-month moving averages.
2. Average of long-term interest rates of the three best-performing EU Member States in terms of price stability plus 2 percentage points.
3. Difference in percentage points between Slovak and German yields on 10-year-government bonds.

Source: Eurostat and OECD calculations.

Exchange rate

The Slovak koruna has remained within the 15% bands around the central parity of SKK 38.455/euro since entering the ERM2 regime in November 2005 (Figure 1.8). The currency weakened in mid-2006 when there was uncertainty about the new government's commitment to entering the euro area on time but strengthened markedly as it became clear that the new government was committed to entry on time and that the probability of doing so was high. The Slovak crown has been trading in a range 9-12% above the central parity in recent months. In

Figure 1.8. **Nominal and real exchange rate trends**



Source: OECD, Analytical database.

view of significant inflows of foreign direct investment followed by the progressive acceleration of economic growth and substantial appreciation of the estimated equilibrium real exchange rate, it was mutually agreed in March 2007 to revalue the ERM2 central rate for the Slovak koruna against the euro by 8.5 to SKK 35.4424. This step was well founded and timely. It will support the authorities in maintaining macroeconomic stability.

The real exchange rate (relative Unit Labour Costs) has appreciated sharply in recent years, rising at annual average rate of 4% over 2000-2006, with the increase being particularly strong in recent months. The National Bank of Slovakia estimated that in the long run the equilibrium rate of real exchange rate appreciation (or equivalently, the Balassa-Samuelson effect) in Slovakia is around 1-1½ per cent per year. On this basis, currency appreciation may have got ahead of fundamentals recently, although it must be recognised that there is a great deal of uncertainty about equilibrium real exchange rate values.[11]

Maintaining macroeconomic stability once inside the euro area

Policymakers need to ensure that policy settings are such that Slovakia copes well with being in the euro area. As a consequence of joining the euro area, the currency risk premium in interest rates will disappear and inflation expectations will need to adapt to a rise in steady-state inflation associated with Balassa-Samuelson effects (estimated to be 1-1½ per cent in the long run) in the absence of currency appreciation. These factors will reduce real interest rates, especially in the first years of membership, stimulating increased investment expenditure and reduced domestic saving. Through multiplier and investment accelerator effects, adjustment to lower real interest rates is likely to entail a temporary overshooting of aggregate demand relative to trend. Such an overshooting would increase the current account deficit and the price of non-traded goods, encouraging a transfer of resources from the traded- to the non-traded sector to meet the higher demand for non-traded goods. As inflation expectations are partly adaptive, the increase in non-traded prices would lead to an increase in inflation expectations and consequently a further decline in real interest rates, aggravating the overshooting. Eventually, the overshooting would erode profits, resulting in cut-backs in investment and employment that would send the whole process into reverse. To avoid such a boom-bust cycle, fiscal policy would need to counter the initial overshooting in aggregate demand. Fortunately, the planned fiscal consolidation through to 2010 means that fiscal policy settings will lean against aggregate demand growth in the first years of euro area membership. Indeed, it would be prudent to allow the automatic stabilisers to work fully to slow growth in aggregate demand. In the event that the economy still appears to be overheating, an even stronger counter-cyclical fiscal policy stance would be required.

The most important weapon for coping with life in the currency union is to have flexible labour- and product markets. In such markets, prices adjust quickly to disequilibria, restoring market equilibrium. For example, if Slovakia were to be hit by a shock that necessitated a real exchange rate depreciation to return to equilibrium – such as a decline in demand for the products that Slovakia specialises in – this could be achieved with less of a loss in output and employment if wage and price inflation were highly responsive to the output gap. In other words, institutional arrangements that make the sacrifice ratio low reduce the output and employment costs of adjusting to shocks. Such arrangements include low levels of EPL, low generosity in benefits for the unemployed, effective ALMPs, decentralised or highly centralised wage fixing arrangements but not intermediate arrangements, modest minimum wage rates, and low barriers to product market competition. Entry into the currency union increases the return from these arrangements, which of course also contribute directly to speeding convergence to GDP per capita levels in the advanced EU countries by enhancing labour utilisation and productivity. Most of these arrangements in Slovakia contribute to making labour- and product markets reasonably flexible, although there is room for improvement in ALMPs and reducing barriers to product-market competition, as discussed below. It will also be important not to undo existing flexibility, notably by adopting a restrictive approach to approval of individual employers' requests for exoneration from legal extension of collective agreements, tightening employment protection on full-time employment contracts, or substantially raising the minimum wage in relation to average earnings (see below). Improving education outcomes would also help to make workers more adaptable, helping them to take advantage of evolving labour-market opportunities and in particular to avoid long periods of unemployment when redundancy strikes.

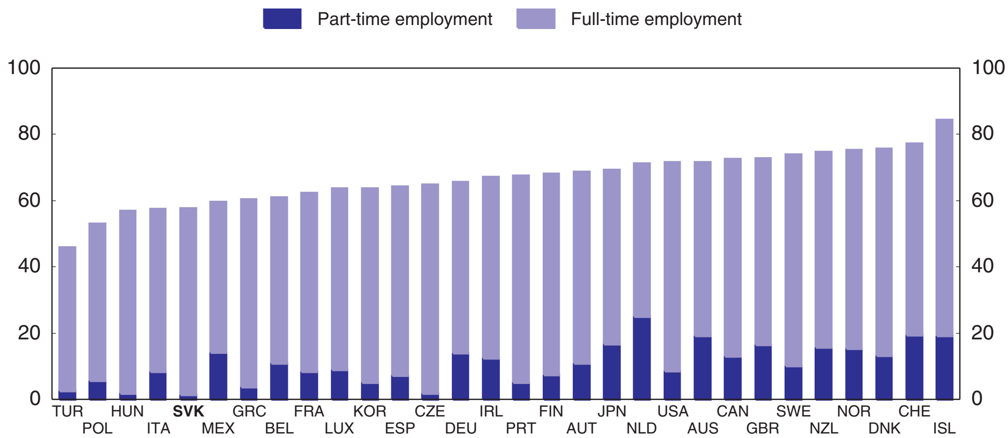
Policies to sustain high economic growth and social cohesion

Increasing employment rates (Chapter 2)

Despite acceleration of employment growth in 2005 and 2006, employment rates remain very low by international comparison (Figure 1.9). The long-term unemployment rate remains the highest in the OECD, although policy settings on benefit replacement rates and employment protection legislation (EPL) are not conducive to high long-term unemployment.[12] Indeed benefit replacement rates for the long-term unemployed were lowered significantly in the welfare reform in 2004 and EPL for workers on permanent contracts was liberalised considerably in 2003. To some extent the favourable impact on long-term unemployment of strong economic growth as well as of past welfare and EPL

Figure 1.9. **Employment rates**

% of 15-64 aged population, 2005



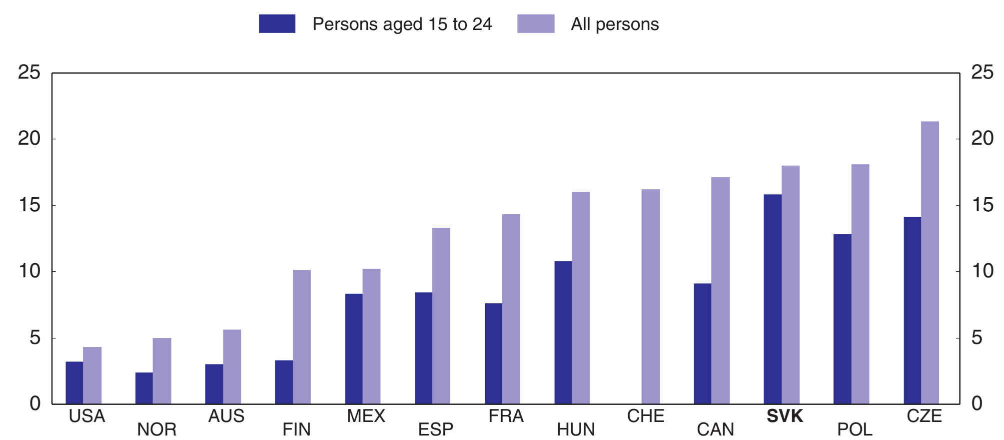
Source: OECD Labour Force database and OECD calculations.

reforms is likely to arise with a lag. Indeed short-term unemployment reached a peak only in 2004, keeping the inflow into long-term unemployment still high in 2005. The lower stock of short-term unemployment at present is reducing inflows into long-term unemployment, resulting in a reduction in long-term unemployment in recent quarters. While this process should continue, reducing long-term unemployment nevertheless remains an important policy challenge.

By international comparison, the duration of unemployment is particularly long among the young (Figure 1.10) and unemployment is concentrated among workers with inadequate skills, including many graduates from secondary vocational schools (see Chapter 3). Long unemployment duration of the young raises concerns about the employability over the whole active life of workers entering the labour market. Education policies that facilitate the transition from education to work and the acquisition of skills by poorly qualified unemployed are therefore vital. Skill mismatches also contribute to sharp differences in sectoral vacancy rates. For example, in the financial sector, the rate of vacancies, relative to

Figure 1.10. **Average uncompleted duration of current unemployment spells**

Number of months, 2005



Source: OECD Labour Force Statistics database.

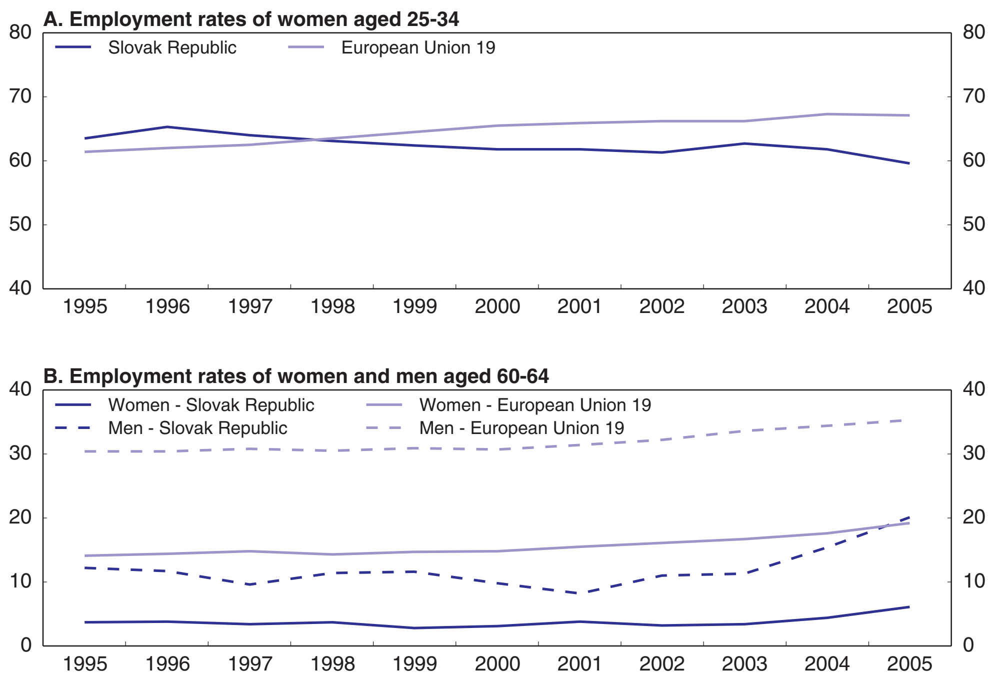
employment, is almost twice as high as in the economy as a whole, although wages tend to be higher than average in this sector. Vacancies have been rising in the manufacturing sector, which has been subject to significant green-field inward foreign direct investment in recent years.[13] Moreover, policies are needed to improve employment prospects for individuals with relatively poor skills, as reforms to increase the employability of graduates will only gradually impact on the composition of labour supply in decades to come.

The regional dispersion in employment rates in the Slovak Republic is among the highest in the OECD, while internal migration is low,[14] constraining the extent to which unemployment can fall without generating wage pressures. Barriers to mobility contribute to slowing the transition of young people into a first job, raising the incidence of long-term unemployment among the young, and are likely to discourage investment in human capital by reducing job prospects. Policies are therefore needed to support the mobility of workers across regions to reduce the discrepancy in regional employment rates.

Policies to raise labour market participation are also necessary to raise employment (Figure 1.11). Such policies will become critical once demographic change sets in. As a result of population ageing, potential labour supply may decline by 25% between 2025 and 2050.[15] While recent policy measures lowering incentives to retire early have had a positive impact on employment rates of older workers, participation in the age group between 60 and 64 is still low, even for men, for whom the increase in the standard retirement age has been fully phased in by 2006. Further policies are needed to raise the still low participation rate in this age group. Moreover labour market participation of young women has fallen, with potentially negative future effects for labour market performance of women over their life-

Figure 1.11. **Employment rates among specific categories**

As percentage of working aged population



Source: OECD, Labour Force Statistics database.

time, potentially exacerbating the negative impact of demographic change on labour supply growth. Policies are therefore needed to remove hurdles for female labour market participation, notably for women with young children. With the incidence of part-time work being among the lowest in the OECD (Figure 1.9), a related challenge is to remove hurdles to part-time work, which can help women to reconcile work with raising children.

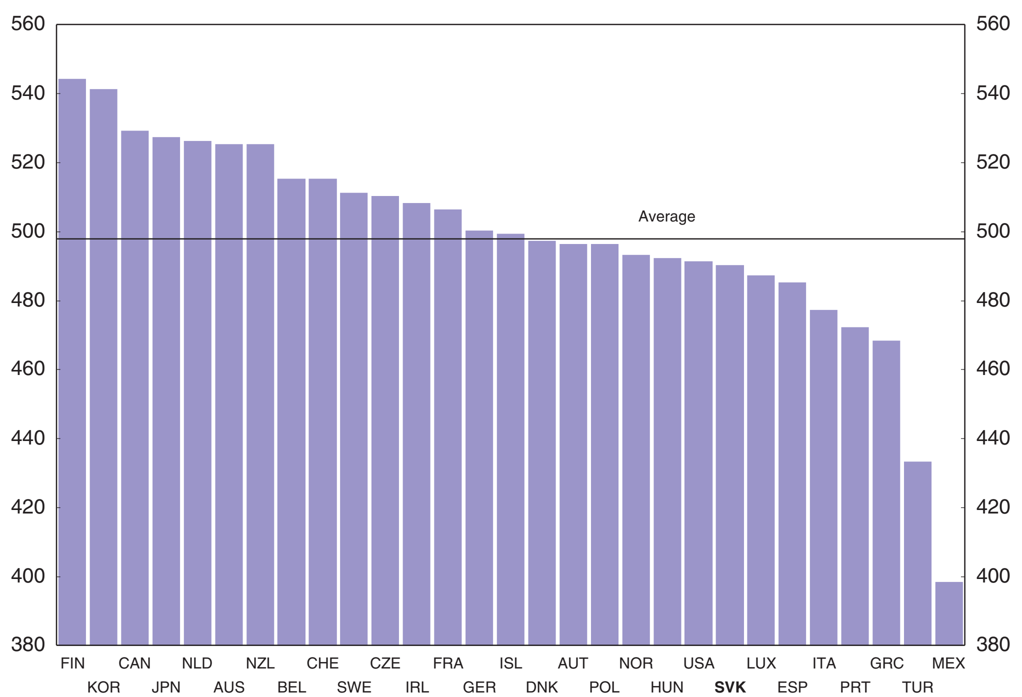
Improving education outcomes (Chapter 3)

Improving education outcomes is an important part of the government's strategy for achieving convergence of GDP per capita with the EU15 countries as quickly as possible. Education supports economic growth by making workers more productive (see for example: OECD, 2003; Coulombe, Tremblay and Marchand, 2004) and by increasing the probability of their being employed (OECD, 2006b, Indicator A8). The direct effect of skills on growth is reinforced by indirect effects, such as attracting more FDI or improving health and social cohesion (World Bank, 2003; UNESCO and OECD, 2003). These indirect effects can in turn contribute to further development of human capital in a virtuous circle (Miyamoto, 2003). By making workers more adaptable, improving education outcomes is also important for coping with life in the euro area.

While some education outcomes are already favourable, such as the high proportion of students who complete secondary school, others have room for improvement: education achievement is below the OECD average (Figure 1.12) according to the 2003 OECD PISA study and is strongly influenced by social background; tertiary attainment is low, albeit rising quickly; Roma children (who are mainly from disadvantaged socio-economic

Figure 1.12. **Average of student performance in mathematics, reading, science, and problem solving**

In the 2003 OECD PISA study



Source: OECD, PISA 2003.

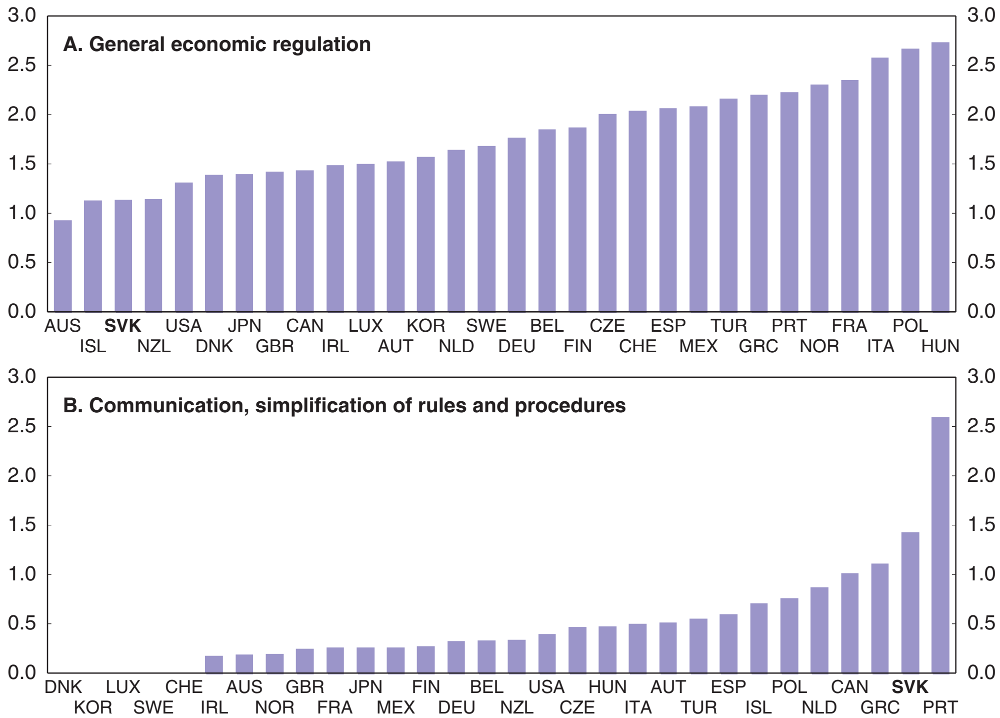
backgrounds) have particularly poor education outcomes; and labour-market outcomes for graduates of secondary vocational programmes not leading to tertiary education are low. Reforms are underway to address these weaknesses but more needs to be done.

Removing barriers to product-market competition (Chapter 4)

More competitive product markets help raise living standards through various channels. Firms in competitive product markets produce more output at lower prices than firms in non-competitive markets, boosting consumer welfare and the purchasing power of labour earnings directly. Moreover, regulatory reform in favour of product market competition also stimulates productivity growth. Competitive markets for goods and services used as intermediate products – such as professional or telecommunications services – have knock-on effects on productivity in downstream firms which use these goods and services as intermediate products. Some evidence also suggests that competition-friendly regulation makes prices more responsive to changes in demand.

General economic regulations of product markets are broadly conducive to fostering competition in the Slovak economy. However, administrative barriers to competition are significant in some areas (Figure 1.13) and these are likely to weigh particularly on small firms and on firm entry. Moreover sector-specific barriers to competition remain significant in the professional services, despite some progress in removing barriers for lawyers in 2004.[16] Although progress has been made in unbundling vertically integrated suppliers, in some cases beyond the requirements set by European Union legislation, conditions for competition need to improve in all network industries.

Figure 1.13. **General economic regulation and costs of administrative communication, rules and procedures across OECD countries, 2003**



Source: OECD, *Indicators of Product Market Regulation.*

Notes

1. This is the first year for which estimates of hours worked per person employed in Slovakia are available on an internationally comparable basis. These estimates can be found in OECD (2007a).
2. Productivity data based on employment rather than on hours worked are used because the latter data are not available for many countries. Data come from the National Accounts. Such data for Slovakia are available from 1995.
3. Such resource shift effects are not correlated with the initial level of labour productivity across OECD countries whereas intra-industry effects are highly negatively correlated with the initial productivity level. Data are not available for Ireland.
4. For example, there are three market sectors in Slovakia with productivity levels at least one half of one standard deviation below the simple average of productivity levels across sectors: construction; wholesale and retail trade; and hotels and restaurants. These sectors accounted for 36% of market-sector employment in 2004. The same sectors plus agriculture had relatively low productivity levels in the EU14 and accounted for 44% of market-sector employment.
5. The larger weights on these sectors in Slovakia than in the EU14 countries – 6% *versus* 3% in agriculture, and 28% *versus* 23% in manufacturing – was also a factor in the large intra-industry contributions to labour productivity growth of these sectors. Had Slovakia had the EU14 industry weights, the high labour productivity growth rates in the agricultural and manufacturing sectors would have instead contributed 0.5 and 1.2 percentage points, respectively, to within sector labour productivity growth.
6. HICP inflation excluding food, energy, tobacco and alcohol.
7. In 2005, remission of receivables from foreign governments increased the deficit by 0.9% of GDP while a fine paid by the company Slovnaft reduced the deficit by 0.1% of GDP. In 2006, the abolition of anonymous deposits reduced the deficit by 0.1% of GDP. (Ministry of Finance of the Slovak Republic, 2006, p. 39.)
8. The Slovak Ministry of Finance estimates that this reform will reduce the budget deficit by 2.4% of GDP by 2050 (Ministry of Finance of the Slovak Republic, 2006, p. 65).
9. There is considerable uncertainty about estimates of potential growth in Slovakia and hence on the extent to which the budgeted reduction in the deficit is structural as opposed to cyclical. For instance, the European Commission estimates a lower potential growth rate and accordingly calculates that the structural budget consolidation over 2007-2009, when good times are expected to occur, is only ¾ % of GDP.
10. With international capital mobility, long-term nominal interest rates are largely determined by developments in global capital markets. Given Balassa-Samuelson effects, nominal interest rates in Slovakia will correspond to a lower real rate for Slovak residents than for foreign investors. Consequently, real interest rates in Slovakia are likely to be significantly below trend growth rates for many years to come. The National Bank of Slovakia estimates Balassa-Samuelson effects at 1-1.5% per year – in other words, the Slovak real exchange rate should appreciate at about this rate. In a fixed exchange rate regime, this means that the equilibrium inflation rate should exceed the world (euro area) rate by approximately this amount. Concomitantly, the real interest rate in Slovakia would be about this much lower than the euro area average.
11. See for example OECD (2005 Annex 2.A1) for a discussion of these issues.
12. The proportion of workers on temporary contracts is low, although regulation of temporary contracts is liberal, indicating that regulation of permanent contracts is not overly restrictive. Indeed, redundancy payments are not very high by international comparison, especially for workers with middle and long tenure. Unemployment insurance payments are available for 6 months and the benefit replacement rates for short and long-term unemployed are well below the OECD average. See for example OECD (2007).
13. See vacancy data provided by the National Statistical Office of the Slovak Republic.
14. See OECD (2005b, 2006a) for a comparison of coefficients of variation of regional employment rates and data on regional migration flows.
15. According to projections in European Commission (2006).
16. OECD (2005a), which also shows that barriers to competition are still high in other professions.

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ANNEX 1.A1

Shift-share analysis of labour productivity growth

The productivity-decomposition analysis used in Chapter 1 is based on the shift-share analysis described in EC (2003), which decomposes aggregate changes in labour productivity into an intra-industry, a shift and an interaction effect. The "intra-industry effect" measures productivity growth within each sector. The "shift effect" measures the effect on total economy productivity of the displacements of resources between industries of varying productivity levels. Finally, the interaction effect accounts for labour re-allocation effects between industries with varying productivity growth rates. The methodology was applied using the OECD STAN database.

For each individual industry i labour productivity is defined as output (Y) divided by labour input (L):

$$LP_{it} = \frac{Y_{it}}{L_{it}}$$

$$LP_t = \frac{Y_t}{L_t} = \sum_i Y_{it} / \sum_i L_{it}$$

When expressed in nominal terms, labour productivity can be written as a weighted sum of the intra-industry productivity values:

$$LP_t = \sum_t LP_{it} \frac{L_{it}}{L_t}$$

This gives, in difference terms:

$$\Delta LP = \sum_i \Delta(LP_i) \frac{L_{it-1}}{L_{t-1}} + \sum_i LP_{it-1} \Delta(\frac{L_i}{L}) + \sum_i \Delta(LP_i) \Delta(\frac{L_i}{L})$$

Dividing by LP_{t-1} to get the growth (percentage change) and rearranging the terms:

$$\frac{\Delta LP}{LP_{t-1}} = \sum_i \frac{\Delta LP_i}{LP_{it-1}} \frac{Y_{it-1}}{Y_{t-1}} + \sum_i \frac{LP_{it-1}}{LP_{t-1}} (\frac{L_{it}}{L_t} - \frac{L_{it-1}}{L_{t-1}}) + \sum_i \frac{1}{LP_{t-1}} (\Delta LP_i) \Delta(\frac{L_i}{L})$$

The first component is the intra-industry effect, *i.e.*, the sum of industry productivity growth rates, weighted by the initial (nominal) output shares.

- The second component is the shift effect, *i.e.*, the sum of changes in input shares, weighted by the relative productivity level (*i.e.*, the ratio of industry productivity to average productivity). This effect could also be written and decomposed as the sum of industry labour input growth rates, weighted by initial output shares, minus total labour input growth.

- The sign of the residual (interaction) component is usually negative (in the economy there is a majority of industries where the productivity change and the labour input change have opposite signs). It may, however, be positive when beneficial restructuring of the economy occurs (in this case, most of the industries enjoying productivity growth are at the same time attracting more resources).

The decomposition described above would strictly hold only in the case of (discrete) percentage changes. The logarithmic approximation (used throughout the study) entails an error of magnitude often comparable to the interaction effect. We have, however, defined the intra-industry effect and the shift effect analogously to the discrete case. A corresponding decomposition for the continuous time assumption can be found in Nordhaus (2002), who has also shown that when "old-fashioned" price index methods are used (*i.e.,* not the Törnqvist method), one should add to the decomposition an additional term accounting for the drift in prices.

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ANNEX 1.A2

Implementation of previous OECD recommendations

Past recommendations	Action taken
Panel A: Labour markets	
Implement substantive reductions of social security contribution rates at the low wage end of the labour market, and fund this measure with government expenditure cuts in lower priority areas.	Considered but not implemented due to budgetary constraints.
Implement pilot projects to test the abilities of commercial placement services to support public job placement.	Implemented.
Monitor closely the effectiveness of active labour-market programmes. Fund the re-training programmes on a competitive and "money follows the student" basis.	Periodical monitoring of the effects of the programmes.
Further reduce the implicit tax on continued work for those past the retirement age. Change the parameters of the pension system, such as by raising the standard retirement age.	None.
Panel B: Education	
Facilitate the establishment of private universities. Ensure that the Accreditation Commission for universities does not impose excessively high barriers to entry. Consider increasing the proportion of international experts who participate in the work of the Commission.	1) Criteria for the establishment of private universities did not change, but new private higher education institutions were established. 2) Number of international experts who participate in the work of the Accreditation Commission is regulated by law.
Encourage and advertise successful co-operation of regional governments with local businesses to enhance vocational school curricula.	None.
Monitor the performance of decentralised schools and make information on the performance of different schools public. Consider raising funding for primary and secondary education and strengthen results-oriented resource allocation to schools.	Funding has been increased.
Introduce policies to achieve a more equitable distribution of primary and secondary school learning outcomes.	None.
Reform the content of education with a new core curriculum and improved teaching methods.	None.
Introduce tuition fees to the tertiary education sector to ensure that its expansion is sustainable.	Tuition fees for part-time tertiary students are to be introduced. The proposal to charge fees to all students was defeated in Parliament.
Clarify responsibility and accountability for addressing the learning needs of adults.	None.
Panel C: Housing market	
Facilitate the development of a market for private rented housing. Review the civil code regulation on tenant protection. Abolish the requirement for owners to provide replacement housing in the event of eviction.	None.
Introduce an efficient, and regionally-differentiated, housing allowance system to provide support to those on low incomes. This should be funded by winding back the current system of housing subsidies and bonuses granted to savers.	A housing allowance is awarded only as part of social assistance. Modifications of this allowance are under consideration.

Past recommendations	Action taken
Ensure the effective management of privatised multi-family housing, *via* the clarification of legal title and obligations for maintenance of communal areas.	Many problems in administration of multi-family housing were eliminated in legislation introduced in 2004.
Make separate ownership of a building and ownership/lease of the land it occupies legally impossible.	Implemented.
Panel D: Product markets	
Continue with the privatisation process. Open passenger services to competition. Continue rationalisation of the Slovak Railways.	Privatised 66% of Slovenske Elektrarne. Privatised a regional airport.
Further reduce the intensity of the regulation of the professional services. Monitor the qualification criteria imposed by professional and business groups to ensure that they do not act as entry restrictions.	The Antimonopoly Office of the Slovak Republic has been investigating anti-competitive regulation in several professions. It has published a report.
Strengthen the resources and competition advocacy role of the Anti-Monopoly Office (AMO).	AMO provided advice and support for competition policy and implementation, including on • the procurement process of an electronic toll system, the proposals were adopted by the government; • competition for universal service obligations in postal services, the proposals were adopted by the government; • proposals to reveal anticompetitive behaviour of bidders in public procurement AMO also provided training for judges.
Further enhance competition in energy industries and accelerate the liberalisation process.	Implemented most EU regulation on legal and managerial separation: managerial separation of electricity distribution to be completed by July 2007.
Panel E: The financial sector	
Continue improving the professional expertise of the Financial Market Authority so that insider trading and price manipulation can be detected.	On 1 January 2006, the Financial Market Authority was integrated into the National Bank of Slovakia.
Relax restrictions on pension funds and insurance companies on financial investments in venture capital and private equity funds.	In 2006, a high-level working group on investment in pension funds was established. The objective of the working group is to re-evaluate the regulation of financial investments in the funded second and third pillar pension regimes
Panel F: Innovation	
Reduce barriers to cross-border flows of technology and human capital. Harmonize tax incentives and business support opportunities for domestic and foreign firms.	A Government Innovation Strategy is under preparation giving reduction of barriers to cross-border flows of technology and human capital and the harmonization of tax incentives and business support opportunities for domestic and foreign enterprises high priority.
Strengthen the *quality* of public institutions that are involved in any co-financing of private sector R&D.	None.
Reduce ICT skill impediments to the growth of SMEs.	The need to reduce ICT skill impediments to the growth of SMEs will be a high priority in the Government Innovation Strategy,
Panel G: Public sector reform	
Encourage greater use of results and performance information in the budget process in all government departments. Encourage greater use of accruals-based accounting.	None.
Publish annual consolidated general government accounts on a national accounts basis.	Implemented.
Introduce a rule on the fiscal deficits generated by sub-central governments.	None. Municipalities and regions can use deficit financing only for capital spending.
Obtain minimum efficient scales of provision of cost-effective and adequate quality services in small municipalities.	None.
Fully enforce the provisions of the Law on Conflicts of Interest, and the other instruments of the legal framework for fighting corruption in the sub-central government layers. Build public support for the adoption of the new draft Law on the Forfeiture of Illegally Acquired Assets.	Legislation requiring the provision of evidence on the origin of assets was at first adopted but the law was annulled.
Eliminate any loopholes for quasi-fiscal (non-commercial) borrowing by municipal corporations.	Legislation introduced in 2004 prevents municipalities and regional governments from issuing loan guarantees.

Past recommendations	Action taken
Strengthen the management capacity and lines of accountability for judicial sector outcomes.	No action since a law went into force in July 2004 improving accountability for maladministration.
Introduce new procedures to reduce corruption in public procurement.	Legislation was passed in 2006 making the requirement of publishing a contract notice more widely applicable.
Upgrade the audit infrastructure to the level of the other budgetary institutions. Extend the authority of the Supreme Audit Office to regional and municipal governments.	The authority of the Supreme Audit Office has been extended to regional and municipal governments.
Introduce market mechanisms in the provision of public services.	None.
Provide public policies in support of the Roma minority with a reliable information base. Facilitate the voluntary provision of information by reducing the stigma associated with being Roma.	None.
Panel H: Sustainable development	
Introduce differentiated road taxes for vehicles according to their emission characteristics.	Fees for heavy vehicles, differentiated by total weight, number of axles and emission class, are under preparation.
Strictly enforce the emission-charge system.	Monitoring and reporting systems are gradually being improved.
Drop the ban on imports of pollution permits into areas where regional emissions are above target.	None.
Raise energy prices to ensure at least cost recovery.	Implemented with the exception of electricity prices for the purpose of heating.

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Chapter 2

Improving employment prospects: building on past reforms

While employment growth has accelerated, allowing unemployment to fall significantly since 2005, many low-skilled workers are still unemployed and the duration of unemployment spells is still long. The introduction of an in-work benefit for workers in low-income households, subject to a minimum of hours worked, could lower barriers to higher employment which result from a relatively high tax wedge on low-skill workers, as would the elimination of poverty traps in the pension system. Measures to improve mobility of workers across regions, notably housing policy reform, would lower long unemployment durations, as would the provision of more training to the unemployed. Impediments to higher labour market participation of young women and older workers need to be removed.

The Slovak Republic has introduced reforms of substantial depth and breadth in recent years to improve labour market performance. Employment protection legislation (EPL) was liberalised in 2003 for workers on both permanent and temporary contracts. Welfare reform, effective since 2004, reduced means-tested social assistance benefits, lowering benefit replacement rates for the unemployed after expiry of unemployment insurance benefits, which are paid over a period of 6 months. Pension reform raised the statutory retirement age to 62 years for men and to this age for women by 2014 and increased the pension discounts applicable in early retirement. The reforms have had a noticeable impact on labour market performance. Employment rates of older workers have risen markedly. Unemployment has fallen significantly since 2005, as the labour market has benefited from strong economic growth.

Nonetheless, the Slovak Republic continues to face considerable challenges in the labour market. Unemployment is still high and the recent decline in unemployment has been accompanied by a strong increase in vacancies – by 67% between the second quarter of 2004 and the second quarter of 2006 –, suggesting that the decline has to some extent been cyclical. To lower structural unemployment, the following policy challenges need to be addressed:

- Unemployment is particularly high among workers with inadequate skills, which includes graduates from upper secondary vocational schools not leading to tertiary education. Reforms in the education system therefore play a crucial role in improving employment prospects in the longer term (Chapter 3). However, education policies take time until they substantially affect the composition of labour supply. While replacement rates of benefits available to the unemployed are already low, measures are still needed to remove employment barriers resulting from a relatively high tax wedge for low-skill workers. Moreover it is necessary to ensure that the statutory minimum wage remains at a level that does not reduce labour demand for low-skill workers.
- The long-term unemployment rate is the highest among OECD countries and has fallen little. Long-term unemployment is particularly widespread among young workers. To some extent the favourable impact of strong economic growth as well as past welfare and EPL reforms on long-term unemployment is subject to lags and has to a large extent not been visible yet (Chapter 1). Nonetheless, as shown below, policy settings still need to be made more conducive to reducing the duration of unemployment spells.
- Disparities in regional labour market performance remain large. Unemployment rates are higher in Eastern regions than in Western regions, contributing to overall low labour utilisation and to regional income inequality. Low mobility of workers across regions contributes to these disparities and slows the transition of the unemployed into jobs, contributing to the long duration of unemployment spells. Policies to address low regional labour mobility and to ensure flexibility of wages across regions are thus necessary.

- To safeguard the continued expansion of employment, it is important that the labour market can absorb economic shocks without generating persistent unemployment. The government is currently preparing employment protection legislation (EPL) amendments. If changes to EPL significantly increase the cost dismissing workers, the ability of the labour market to adjust to such shocks may be harmed.

Barriers to higher labour market participation are also limiting employment growth: Notwithstanding recent improvements, participation rates of workers above the age of 55 are still relatively low, including among men, for whom the legislated increase in the statutory retirement is already fully phased in. Participation of young women has been falling. Hurdles to higher labour market participation of these groups need to be removed. Removing such hurdles would also help softening the adverse impact of population ageing on living standards over the next four decades, which is among the most severe in the OECD.

The remainder of the chapter discusses these challenges and proposes policies to address them.

Employment barriers for low-skill workers are still significant

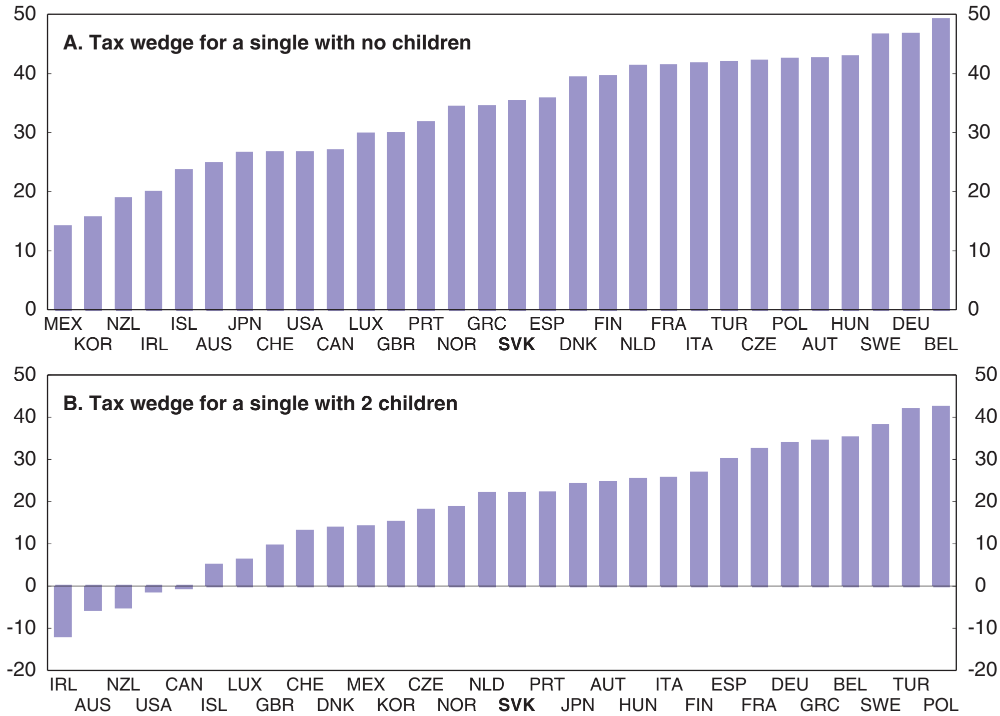
In recent years, the tax wedge on labour has fallen. Income tax reform, effective since 2004, contributed to this development, mostly by lowering marginal tax rates at higher income levels. Social security payroll contributions also fell, mostly as a result of the introduction of the second-pillar funded pension scheme. Total pension contributions amount to 18% of gross wage income. One half of the pension contributions paid on behalf of workers who entered the labour market from 2005 onwards are directed to the new compulsory funded second-pillar pension scheme. In addition, other workers had the option of signing up to the second pillar until June 2006. Workers not enrolled in the new second-pillar scheme continue to pay the full 18% contribution into the earnings-related pay-as-you go (PAYG) pension regime. Excluding the contributions to the new second-pillar scheme, which are not included in the OECD measure of the tax wedge, the measured tax wedge on low-skilled workers is slightly higher than the average of OECD countries (Figure 2.1). At the same time, unemployment is high among poorly qualified workers (Figure 3.11).

Poverty traps in the pension system generate disincentives to work for low-skill workers

There is a risk that contributions to both the reformed first pillar[1] and the second pillar pension regimes are to a large extent perceived as taxes, in particular by workers with modest earnings capacity, creating disincentives to work in the legal economy. A substantial proportion of workers appears likely to reach a pension in retirement that does not exceed social assistance benefits significantly (see Box 2.1). Pension payments in both the reformed first pillar and the second pillar are strictly proportional to contributions made in most cases, resulting in relatively low pension benefits for workers with relatively low earnings. The tax treatment of first and second-pillar pensions reinforces the proportional relationship between benefits and earnings, as contributions are not included in taxable income and accruals and pension benefits are tax-exempt (*i.e.,* exempt-exempt-exempt (EEE) arrangements). For pensioners with a contribution record of 25 years, social assistance is withdrawn at a rate of 75% as the pension increases, with the withdrawal rate diminishing by one percentage point for each additional year of contribution record. The proportion of workers who will be entitled to social assistance under the reformed pension

Figure 2.1. **Average tax wedge at 67% of average wage earnings (AW)**

As % of labour costs, 2005



Source: OECD (2006), *Taxing Wages*, Table II.1.

system could be reduced by extending redistribution in the system. To this end mandatory pensions could be subject to personal income tax (either EET or TEE) and resulting revenues be used to raise first pillar pensions, leaving the average net pension unchanged. Moreover, to reduce poverty traps in the pension system further, the rate at which social assistance payments to pensioners are withdrawn as pension income rises should be lowered.

The risk that a substantial proportion of future pensioners may receive social assistance reinforces the need to raise the statutory retirement age to ensure that pensioners accumulate sufficient financial wealth in the second-pillar pension system to receive an annuity which lifts their overall pension entitlement above social assistance.

Performance of the second-pillar pension scheme could be depressed by the requirement that at least 30 % of financial investments in the scheme be used to purchase domestic financial assets. At present, this requirement does not appear to be binding, as investment funds invest considerably more than 30% of portfolios in domestic assets. However, the value of asset portfolios in the second pension pillar is still relatively small and will grow very substantially over the next three decades. In view of the small size of the capital market in the Slovak Republic, especially with regard to higher-return equity, fulfilling this requirement may become increasingly difficult as the portfolios grow in size, with adverse affects on the risk-return characteristics of second-pillar pension portfolios as they grow in size. In this case, a deterioration of portfolio performance could contribute to raising the risk that pensioners will depend on social assistance. The requirement that

Box 2.1. **A significant proportion of pensioners who will retire under the reformed pension system will be entitled to social assistance**

A single worker who pays all payroll contributions into the reformed first-pillar pension scheme will need to earn more than 70% of average earnings during an uninterrupted contributions record from age 20 to the statutory retirement age of 62 in order to accumulate a pension entitlement that, on average over the whole retirement period, exceeds the social assistance entitlement, assuming that social assistance entitlements are adjusted over time in line with average wage growth. According to earnings distribution data from 2004, about 37% of all full-time workers have wage earnings less than 70% of the average earnings. Since the social assistance entitlement is more generous for a couple than for a single person, workers with a non-working spouse would need to earn more than 110% of average earnings to receive a pension which is worth more than the social assistance entitlement[1] Since the employment rate is low, especially for low-skill workers, interrupted work records are frequent, increasing the risk that workers will receive social assistance when retiring. Moreover, while female labour market participation is still high, participation of young women has been falling, as noted above.[2]

The risk that pension entitlements may not exceed social assistance entitlements is also significant for workers who contribute to the second pillar pension system. The productivity convergence process raises real wage growth and depresses the real return on assets, relative to higher income countries. If the real return on assets in the second pillar is below the growth of real wages, the pension entitlement accumulated in the second pillar could be less than the pension entitlement accumulated in the first pillar.[3] Real trend productivity growth, which determines real wage growth in the long run, is currently estimated at 4%. With the nominal interest rate on long-term euro area government bonds between 4 and 4.5 %, the low-risk real return could be as low as 1%, assuming a inflation rate of 2% for the euro area and a trend inflation differential for the Slovak Republic *vis-à-vis* the euro area of 1 to 1.5%, in line with the trend real appreciation in the long run estimated by the Slovak National Bank. On the other hand investments in equities have a significantly higher expected return than government bonds, lowering the risk that pensioners will be entitled to social assistance.

1. The pension entitlement of a worker with full contribution record from age 20 to 62 is equal to 48.6% of the average wage upon retirement (see OECD, 2005e). Pension growth during retirement is half indexed to prices and half to wages. Since pensions grow less than real wages, the risk of pensioners receiving social assistance rises during retirement if social assistance increases in line with real wages as assumed here. It is assumed that economy-wide real wage growth over the residual life expectancy amounts to 3%, as projected in the baseline projection of the European Commission (2006). The social assistance allowances for a single retiree amounts to 30% and for a couple 47% of the average wage (including supplements such as for housing). See OECD (2006).
2. Workers in two-earner couples need to earn more than 50% of average earnings over a complete contributions record in order to obtain a pension entitlement that exceeds social assistance.
3. Pension contributions in the first pillar are revalued in line with wage growth in the course of the contribution history.

30% of financial investments in the second-pillar pension scheme be directed to domestic assets should be phased out.

Voluntary funded pension schemes (the third-pillar pension schemes) benefit from the same tax advantages as the first and second-pillar schemes, with contributions tax deductible and accrued interest and pension annuities not subject to taxation, creating a significant loophole in the tax system. While third-pillar pensions can, in principle, provide revenues to top up pensions from the first and second pillar-pension system, there are no statutory limits to the early withdrawal of savings accumulated in the third-pillar pension system, creating incentives to withdraw the savings early in order to be able to receive social assistance as retirement income. Third-pillar pensions should be subject to personal income tax. The resulting revenues could be used to reduce the rate at which social assistance benefits are withdrawn as pension entitlements rise. The degree to which lump sum withdrawals from third-pillar pension schemes are allowed should be limited so long as these schemes benefit from preferential tax treatment.

In-work benefits can improve employment prospects of low-skill workers and reduce child poverty

One instrument a number of OECD countries have used to improve employment prospects among low-skill workers while at the same time reducing poverty are in-work benefits. In-work benefits supplement the disposable income of households in which at least one adult works but in which household income is nonetheless insufficient to keep the family out of poverty, improving incentives to take up work among workers with low earnings potential, notably in households in which no adult works. The level of such in-work benefits can depend on the number of children in the household, helping to alleviate child poverty. Indeed, poverty in the Slovak Republic is concentrated on households with children (see Chapter 1). Moreover, as in other countries, disincentives to work for social assistance recipients are more pronounced in households with children than in other households. On the other hand, as the in-work benefits would be withdrawn as household income rises, the in-work benefit generate disincentives to work at higher income levels, which may in particular lower labour supply in two earner households.[2] Therefore, in-work benefits should not be seen as the only tool to improve employment prospects of low-skill workers. Improvements in the education system are essential to reduce the incidence of low-skill unemployment (Chapter 3). However, such improvements take time to reach a substantial share of the labour force.

The Slovak Republic has introduced some benefits to facilitate the transition from non-employment into work. In particular, working parents receive a *tax bonus*, a cash benefit paid to (at most) one employed parent, provided the parent earns more than 50% of the earnings of a full-time worker earning the minimum wage. The benefit currently amounts to SKK 540 per month (3.5% of average monthly wage earnings) per dependent child and is not subject to an income test. In addition, long-term unemployed social assistance recipients receive an *activation allowance* worth SKK 1900 (10% of average monthly wage earnings) for a period of 6 months once they take up employment.[3]

The tax bonus raises incentives to take up work and contributes to alleviating child poverty to some extent. However the scheme is not well targeted at low wage workers, who face the most severe disincentives to work. Moreover, the *tax bonus* is subject to an earnings floor, rather than a floor on hours worked, which also makes it less well targeted to the low-skilled. The activation allowance does not durably improve work prospects and income of workers with low skills.[4] The introduction of an in-work benefit should be considered, with the level of the benefit depending on the number of children in the household. Any such benefit should be subject to a minimum requirement on hours worked and be phased out gradually above a household income level determined by a poverty threshold. The in-work benefit could replace the tax bonus and the temporary wage subsidy for social assistance recipients, contributing to the funding of such a benefit. In addition, it could be funded from reductions of subsidies to agriculture and the abolition

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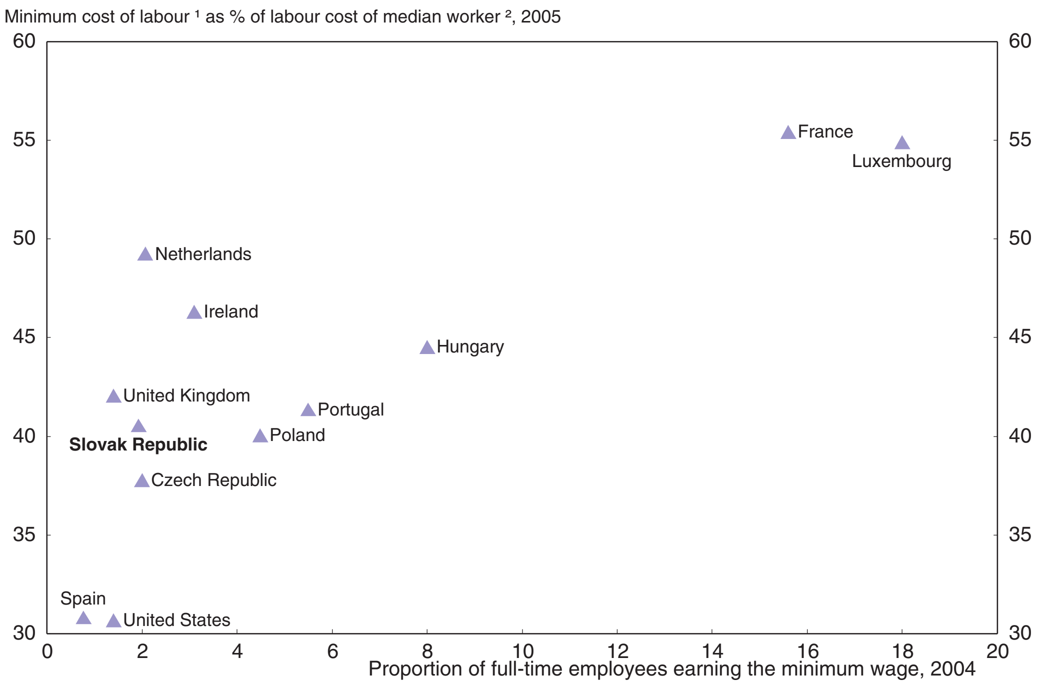
of the annual bonus payments for current pensioners that were introduced in 2006. The incidence of poverty is very low among current pensioners, suggesting that these bonus payments are poorly targeted.

Minimum wages need to be set such as to preserve employment prospects of poorly skilled workers

An in-work benefit can only raise employment prospects if the minimum wage is sufficiently low such that it does not reduce employment. If this condition is not met, employment is constrained by the labour demand side, so measures to increase labour supply at a given level of labour costs – such as an in-work benefit – would not raise employment. Minimum compensation – taking into account employer-paid social security contributions – does not appear high relative to median compensation and the proportion of workers earning the minimum wage is low, suggesting that the minimum wage does not result in significant employment losses overall (Figure 2.2). While the government raised the minimum wage by 10.1% in October 2006, which is 2.4 percentage points more than average wage growth,[5] this increase is not sufficiently large to change the situation substantially.[6] However, no evaluation of the employment effects of the minimum wage exists. While the government manifesto[7] calls for incremental increases of the minimum wage, the government recognizes that a high minimum wage entails risks for employment prospects for low-skill workers.

Figure 2.2. **Minimum compensation and proportion of full-time workers earning the minimum wage**



1. The cost of labour is the sum of the wage level and the corresponding social security contribution paid by employers.
2. Exactly half of all workers have wages either below or above the median wage.

Source: Eurostat and OECD (2007), *Going for Growth.*

Experience from other OECD countries suggests that employment prospects of youth are particularly likely to be adversely effected by excessively high minimum wages. For this reason, the UK, where the ratio of minimum compensation relative to median compensation at the standard rate is similar to the ratio observed in the Slovak Republic, applies a minimum wage to workers below the age of 22 that is 15% lower than the standard minimum wage. In the Slovak Republic, lower minimum wage rates apply to youth below the age of 18 and 16. Most of these youth are, however, in full time education. The impact of minimum wages on employment should be assessed. Such an assessment should be used to determine whether a higher age threshold is required for the lower minimum wage rate applying to young workers. In addition to the absolute minimum wage, a range of four additional minimum wages is set in the Slovak Republic, with each minimum wage linked to specific job characteristics (such as amenities and skill requirements). This practice entails the risk that flexibility in relative wages across skills and across regions is hampered. It should be abandoned.

Decisions on minimum wages are taken in a two-stage process, involving both the social partners and the government. If the social partners agree on a minimum wage increase in the first stage, the agreed minimum wage increase is legislated. The government takes a decision on a minimum wage increase only if the social partners do not reach an agreement. While social partners have typically failed to reach an agreement in recent years, allowing the government to take the decision, this decision-making structure entails the risk that minimum wages would be set too high, as part of potential costs of minimum wage increases – namely unemployment-related benefit payments – would be born by the government which might not be party to the agreement. Significant increases in the minimum wage relative to the average wage should be avoided. Decisions on the minimum wage level should exclusively be taken by the government, based on evaluated employment effects of the minimum wage and its effectiveness in reducing poverty. The government intends to minimize the risk that minimum wages would be set too high by setting up a list of criteria which would need to be taken into account by all parties involved in the setting of the minimum wage.

Reforming health care funding could help lower the tax burden on labour

Broadening the assessment base for health care contributions to all household income would lower the tax burden on labour to some extent, improving the employability of low-skill workers. Since health care insurance benefits – in contrast to pension and unemployment insurance benefits – bear no relation to labour earnings, both efficiency and equity considerations suggest funding of healthcare benefits ought not to be based on payroll contributions but on a broader measure of income.

Further measures can be taken to reduce long-term unemployment

Active labour market policies need to be improved further

The government has taken substantial steps in recent years to make active labour market policies (ALMPs) more effective. Counselling of job seekers is in the process of being made more closely adapted to their individual circumstances, for example, with the introduction of individual action plans and by increasing resources. The government is committed to continuing this reform process. Indeed, some weaknesses still need to be addressed; for example, a recent evaluation of counselling services has shown that the public employment service offices' equipment and staff resources are more limited in eastern regions, where unemployment is particularly high.[8]

The government also took a number of measures to strengthen the effectiveness of ALMPs. For example, acceptance of offers to participate in ALMPs was made compulsory for most measures and incentives for participants in training measures to make effective use of training have been raised by making the degree of reimbursement of training fees to participants to some extent dependent on subsequent take-up of a job. However, while evaluation of ALMPs is conducted, observers have noted that the design of ALMPs is not sufficiently linked to evaluation of their effect in terms of helping the unemployed to obtain unsubsidized jobs.[9]

Spending on active labour market policies (ALMPs) overall is relatively low (Table 2.1). Moreover, the number of participants in training measures, relative to the labour force, is very small, notwithstanding high unemployment, while the number of participants in direct job creation schemes, relative to the size of the labour force, is one of the largest in the OECD. Participants in direct job creation schemes do volunteer jobs for municipalities or non-profit organisations and receive a supplement to social assistance worth about 25% of full-time minimum wage earnings while the non-profit organisations and municipalities offering jobs in the scheme receive subsidies to cover any non-wage spending (such as capital outlays) related to the creation of these jobs. The target group of the scheme are the "disadvantaged job applicants", comprising the registered unemployed who have been unemployed for more than 6 months, as well as unemployed graduates under the age of 25 and unemployed workers above the age of 50, regardless of the duration of their unemployment spell, although the primary target group is low-skill workers receiving social assistance who have registered as unemployed for more than 6 months. Placement in the scheme can be made compulsory on a case-by-case basis, although registered unemployed in the target group can also voluntarily apply for a place in the scheme.

Table 2.1. **Active labour market measures in cross-country comparison, 2004**

Programme categories and sub-categories	Austria		Belgium		Czech Republic	
	Public expenditure as a percentage of GDP	Participant stocks as a percentage of the labour force	Public expenditure as a percentage of GDP	Participant stocks as a percentage of the labour force	Public expenditure as a percentage of GDP	Participant stocks as a percentage of the labour force
1. PES and administration	0.17	..	0.23	..	0.12	..
2. Training	0.28	1.67	0.20	2.71	0.02	0.15
3. Wage subsidies	0.06	1.09	0.15	1.27	0.05	0.47
4. Direct job creation	0.04	0.12	0.46	2.54	0.03	0.19
5. Start-up incentives	..	0.02	–	0.02	0.01	0.12

Programme categories and sub-categories	Hungary		Netherlands		Slovak Republic	
	Public expenditure as a percentage of GDP	Participant stocks as a percentage of the labour force	Public expenditure as a percentage of GDP	Participant stocks as a percentage of the labour force	Public expenditure as a percentage of GDP	Participant stocks as a percentage of the labour force
	2004	2004	2004	2004	2004	2004
1. PES and administration	0.11	0.10	0.32	..	0.081	..
2. Training	0.08	0.05	0.36	8.74	0.01	0.18
3. Wage subsidies	..	0.09	0.03	0.58	0.01	0.22
4. Direct job creation	0.06	0.05	0.18	0.05	0.04	3.78
5. Start-up incentives	0.01	0.01	..	..	0.02	0.11

Note: Includes only spending on placement and related services, data on benefit administration not available.
Source: OECD data base on active population statistics.

Effective ALMPs play an important role in raising the employability of the long-term unemployed.[10] Effective ALMPs are not only useful because of their direct impact in raising the effectiveness of job search of the unemployed but also because a higher degree of search effectiveness helps to damp wages when unemployment is high. Indeed, empirical evidence suggests that ALMPs reduce the extent to which aggregate unemployment responds to adverse economic shocks.[11] Cross-country evidence shows that the impact of ALMPs on subsequent labour market performance of participants varies strongly depending on programme design, indicating that evaluation of all schemes is important. Training measures for the unemployed, in particular, are associated with lower unemployment. Recent evaluation studies show that training measures compare favourably to other types of ALMPs especially if their long-term effects on employment prospects and wages of participants are taken into account.[12]

Short training programmes have proven effective in reducing unemployment durations, for example, in Germany, even in the short term. Recent micro-econometric evidence suggests that the evaluated measures have raised exit rates into employment by up to 70% over a period of 6 months following participation in such a programme.[13] The training measures comprise aptitude tests, courses teaching presentation techniques for job applicants, as well as, in some cases, specific vocational skills, with durations lasting between several weeks and at most 3 months. This scheme proved particularly effective in raising transitions to employment for unskilled workers, for whom these measures were focussed on aptitude testing with subsequent vocational training.[14]

Public job creation schemes for the unemployed, by contrast, have often proven ineffective in reducing unemployment durably, as the schemes are likely to displace workers on unsubsidized jobs and subsidies entail deadweight costs. Participants may be further detached from the unsubsidized labour market if job search diminishes as a result of participation. Indeed, in the Slovak Republic, social assistance recipients who participate in the public job creation scheme have to report less frequently for interviews at the Public Employment Service[15] than other registered social assistance recipients and interviews for participants in these schemes are considerably shorter, which is likely to reinforce the detachment of participants from the labour market.[16]

Public job creation schemes can, however, still be effective if used in a highly targeted fashion. Targeting employment creation schemes exclusively to the long-term unemployed minimises the risk that participants' entry into the unsubsidised labour market is delayed as a result of participation, as the long-term unemployed typically have lower exit rates into employment than the short-term unemployed. In countries where individual profiling is not yet developed, making participation in job creation schemes compulsory for all workers above a duration threshold may be a useful strategy. In Denmark such a duration threshold for compulsory participation in job creation schemes was introduced as part of efforts to improve activation in the course of the 1990s. The threshold was gradually reduced, as long-term unemployment declined.[17]

Training measures for the unemployed should be expanded, especially for youth, while subsidized job creation should be more narrowly targeted. It should be ensured that introduction of new ALMPs is consistently linked to evaluation of the impact of the measures on transition from unemployment to unsubsidized jobs.

Registration requirements need to be widened

Registration of social assistance recipients who are capable of doing paid work as unemployed in the Offices is not compulsory. While benefit replacement rates for the unemployed are low, so most benefit recipients are likely to have some incentives to search for a job, compulsory registration could help to ensure that all social assistance recipients are included in activation measures. The social assistance supplement paid for an adult dependent is relatively large in relation to the standard allowance. The supplement lowers – as in most OECD countries – incentives for either partner to take up work, as both the standard allowance and the supplement are lost as one person moves into a job. Cohabitating partners of social assistance benefit recipients should therefore also in general be required to register as unemployed. Continuing to reform the Public Employment Service to raise its effectiveness and reforming ALMPs is important to make sure that wider registration leads to an increase in placements into jobs.

Large regional differences in employment rates require regional wage differentiation and policies to encourage worker mobility

Housing policies could be more supportive of worker mobility

As noted in the 2005 *Economic Survey*, migration across the regions of the Slovak Republic is very low, contributing to a wide dispersion of employment rates across regions. Lack of mobility may severely constrain potential growth in future, as strong labour demand in prosperous regions is not met by excess labour supply in relatively poor regions. Moreover, insufficient mobility among youth slows the transition into a first job[18] and may restrain educational achievement, as lack of mobility reduces access to job opportunities and hence scope to amortise education investments.

The lack of development of the private rental market plays an important role in restraining mobility. Indeed the private rental market is very small, despite some recent growth. Letting apartments appears to be unattractive for private landlords because landlords find it difficult to enforce eviction, for example for non-payment of rents, as legal procedures appear to be excessively long. Moreover, the 2005 *Economic Survey* noted that regulations remain onerous for landlords, and no legislative initiatives have been taken to improve the development of the private rental market since.

Government policies have encouraged owner-occupancy, through subsidies for private household housing loans (see the 2005 *Economic Survey*). Moreover, the government intends to introduce an additional mortgage subsidy for families purchasing housing for own occupation. High rates of owner-occupancy across OECD countries appear to be associated with higher unemployment.[19] Moreover, if euro area entry is achieved, real interest rates are likely to be very low, which suggests that housing loan subsidies would further fuel a credit boom and a steep rise in housing prices, which would adversely impact mobility. With housing prices already rising steeply in some regions, availability of land for residential construction is important.

The government is committed to stepping up construction of public sector-provided rental housing, which has long waiting lists, discouraging mobility. Central government subsidies for public housing construction are made available to the municipalities which are in charge of realising construction projects. With all municipalities eligible to central government housing construction subsidies, there is a risk that the subsidies may not be sufficiently targeted at those regions where housing demand is growing the strongest.

Indeed, steep housing price increases in Bratislava suggest that housing demand growth is not regionally balanced.

Priority should be given to removing hurdles to private rental market development, reviewing regulation and improving law enforcement. Mortgage interest subsidies should be abolished while the availability of land for residential construction should be ensured. Public sector housing construction should be targeted to regions where housing demand is the strongest, with rents for middle and high income households set in line with market rental rates. Ensuring that middle and high-income households occupying public sector housing pay market rental rates could help reduce waiting lists in public sector rental accommodation and contribute to better targeting of subsidies. In the longer term, when the private rental market develops, public sector housing construction should be replaced by a cash housing benefit, as recommended in the 2005 *Economic Survey*.

Moreover, in view of substantial upfront relocation costs, mobility is constrained by liquidity constraints faced by low-income workers – especially in middle-income countries such as the Slovak Republic –, as these workers cannot borrow against future income arising from a new job taken up in a more prosperous region.[20] A small subsidy – 1 000 SKK (7.5% of the average monthly wage in 2005) – was available to the long-term unemployed to meet moving costs when taking up a job in a different location. It was however abolished in 2005 owing to low take-up.[21] Liquidity constraints among the unemployed might be more effectively addressed through a government-sponsored loan scheme, for example, for the long-term unemployed, which would minimize budgetary costs while allowing the amount of support to be larger. Consideration could be given to introducing a government loan scheme to assist with mobility costs for the long-term unemployed, subject to evaluation.

Regional flexibility of wages needs to be safeguarded

Wage flexibility across regions is important to ensure higher employment in relatively weakly developed regions, especially in view of low regional mobility. Nation-wide sectoral wage settlements – as practiced in the Slovak Republic – entail risks for regional wage differentiation, especially if settlements are legally extended to firms not covered by the agreements. Moreover, empirical evidence suggests that moving from nation-wide industry-level bargaining to firm-level bargaining increases the degree to which wage setting responds to macroeconomic shocks with benefits for resilience, especially after the planned entry in the euro area.[22] A step towards ensuring such decentralisation of wage setting was the abolition of legal extension of sectoral wage settlements in 2004. Legislation was however passed in February 2007 to reintroduce the legal extension of collective wage bargaining outcomes to firms which do not participate in collective wage bargaining, although with the possibility for individual employers to request exoneration from legal extension by the government on grounds of differences in socio-economic conditions, such as firm characteristics or local labour market conditions. Legal extension of collective bargaining could adversely impact employment in regions where employment rates are already relatively low. *The authorities should make liberal use of their powers to accept requests for exoneration from legal extension so as to limit the loss of responsiveness of wages to local conditions,*

Infrastructure development should be given priority over subsidies for large investment projects

The government introduced a new system of subsidies for large greenfield investment projects in 2005, which aims at both supporting job creation in relatively poor regions as well as at attracting investment in industries considered to have high technological potential. The scheme, foresees paying subsidies at a fixed rate relative to the cost of the investment, with the rate depending on the level of unemployment in the district in which the investment project is to be made as well as on the sector of the industry. High unemployment districts are eligible for higher subsidy rates. For any given district, industries considered to have a high technological potential – such as biotechnologies and ICT – attract higher subsidy rates.

While little empirical evidence on the impact of investment subsidies for regions with poor employment performance is available, evidence for such subsidies in the UK point to limited effectiveness of such schemes in raising employment performance in targeted regions. A factor that could limit effectiveness in the Slovak Republic is that the subsidies encourage capital-intensive production rather than labour-intensive production, adding to incentives in favour of capital-intensive production inherent in the tax system, which taxes the returns of capital relatively modestly and the returns of labour, notably unskilled labour, relatively highly. Empirical evidence suggests that fiscal incentives – as measured by effective corporate tax rates – do not play a large role in determining foreign direct investment flows, although how such incentives compared with incentives set by neighbouring countries seems to play a larger role.[23] Moreover, in the case of subsidies, further deadweight loss arises because the subsidies cannot target net direct capital inflows into targeted regions, as the subsidies are not generally repayable when subsidised production plants are closed down. Moreover the project size threshold favours large enterprises, which distorts competition across firms of different size. In addition, large firms are generally found to be more likely to pay wage *premia* over and above market-clearing wages, reflecting the presence of firm-specific rents related to firm size, which may further limit the scheme's effectiveness in fostering employment, and the subsidies may further raise such *premia*.

Thus, while foreign direct investment has clear macroeconomic benefits, notably in terms of productivity growth, the case for providing subsidies for large-scale investment projects is less clear. Indeed the *OECD Jobs Study* has reached the conclusion that public investment in infrastructure is a preferable means to strengthen labour demand in less developed regions. The government plans to increase government infrastructure investment, notably in projects to improve road and railway transport links of the less developed central and eastern regions with western regions, supported by contributions from the European Union. Infrastructure development should be given priority over subsidies for large investment projects in supporting the economic development of the low employment regions. The government is planning to revise the subsidy scheme. The subsidy scheme could be given a fixed time span sufficient to allow evaluation of the employment and productivity spill-over effects. A subsequent decision to renew the subsidy scheme should be made dependent on evidence on the effectiveness of the scheme.

Caution is required in reforming employment protection legislation

In current employment protection legislation (EPL), compensation and reinstatement provisions applying to unfairly dismissed workers are relatively generous in comparison with other OECD countries, while the definition of unfair dismissal is relatively narrow.[24] This may well be an appropriate policy setting to deter discriminatory behaviour by employers. At present, employment protection for permanent contracts, while not among the most liberal in the OECD, does not appear overly restrictive. Indeed, the moderate stance of EPL has helped to keep the proportion of workers on temporary contracts relatively low, at about 5%, even though the regulatory stance on temporary contracts is relatively liberal: restrictions on the use of such contracts are modest; there are no limits to "chains" of temporary contracts; and a temporary contract can last up to three years.

The government is considering legislation to tighten EPL. In particular, the government is planning to widen severance pay entitlements to all workers who have been made redundant. At present redundancy entitlements only arise if workers decide to leave the dismissing firm before the expiry of the notice period, in which case workers receive a severance payment equal to the pay in the remaining notice period, up to a maximum of two months pay. In addition, the government is considering, *inter alia,* restricting regulation of temporary contracts. In particular, the government is planning to reduce the reasons which allow the use of temporary contracts as well as to limit "chains" of subsequent fixed-term contracts and to shorten the maximum duration of such contracts. According to the plans temporary workers would have the right to the same level of pay as workers accomplishing comparable tasks on permanent contracts. Planned changes also include the introduction of social criteria in redundancy rules. In particular, mothers of young children who are less than 3 years old would be protected from redundancy.

While the empirical evidence does not establish a negative impact of tight EPL on overall employment in general, tightening EPL can have some undesirable effects. Empirical evidence suggests that stricter EPL can reduce the responsiveness of nominal wages and prices setting to labour market conditions, which might reduce the resilience of the economy to shocks.[25] Moreover, the impact of tighter EPL on overall employment can only be neutral if costs associated with tighter EPL are passed on to workers, which entails a lower wage level. Stricter EPL reduces employment prospects of women and youth, relative to men and older workers,[26] and lengthens the duration of unemployment spells. Tightening EPL for workers on permanent contracts also tends to lead to labour market segmentation, entailing an increase in the number of workers on temporary contracts and with precarious work conditions. Stricter EPL can interact with significant increases in the minimum wage, as a binding minimum wage would limit the extent to which such costs could be passed on to wages, which would result in a negative impact of tighter EPL on overall employment. While there is no clear evidence that stricter EPL reduces productivity,[27] strict EPL reduces the reallocation of workers, including through lower voluntary job mobility, especially if the degree of protection increases with job tenure, which may be of particular importance in a country such as the Slovak Republic that is undergoing fast technological change.

A case can be made in favour of severing the link between redundancy pay and the timing of the worker's departure to another job, as envisaged in the government manifesto. Assuming workers can be gainfully employed during the advance notice period, the current rules imply higher costs for dismissing workers who can find another job quickly, which would tend to bias firms' redundancy decisions towards making those workers redundant who are the least likely to find another job, which may in turn raise unemployment. However, while it appears to be envisaged that redundancy payments remain limited to two months of pay, it would need to be ensured that redundancy

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payment is low for short tenures, given that regulation of temporary contracts may be tightened. Introducing protection for special groups would need to be weighed against potential barriers in hiring, for example, of young women. The government should avoid imposing significant increases in employment costs through reform of employment protection legislation.

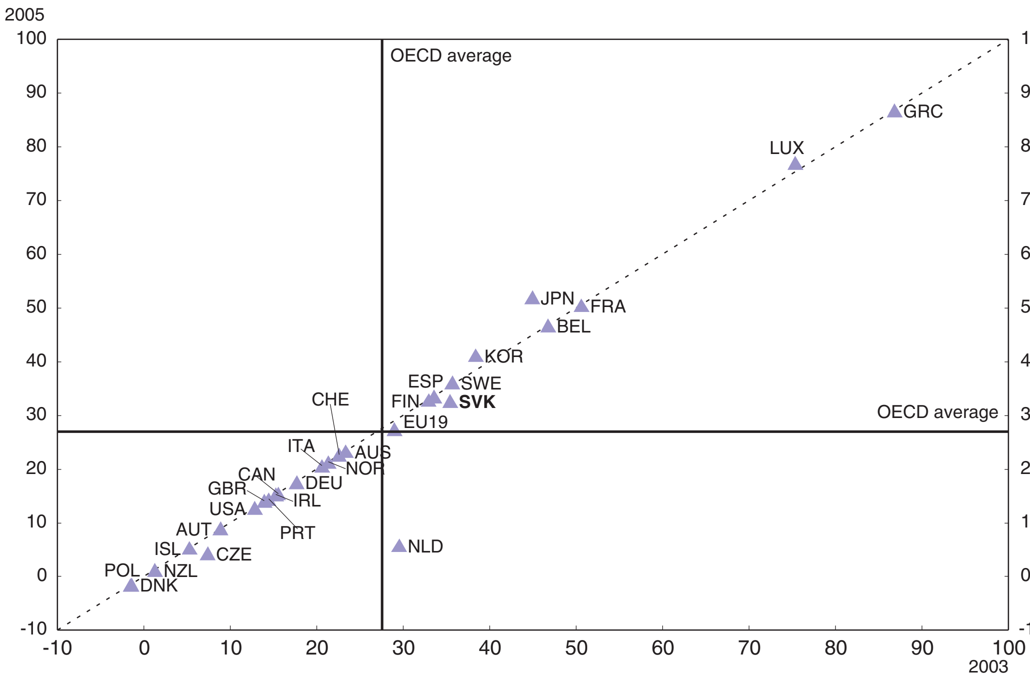
Disincentives to supply labour among older workers need to be lowered

Low participation rates of older workers result in part from the relatively low statutory retirement age. The standard retirement age reached 62 years for men in 2006 and is being raised to 62 for women by 2014, which is still lower than in most OECD countries. While life expectancy is at present shorter than in high-income OECD countries, which brings the duration of retirement relative to economically active life broadly into line with other OECD countries, life expectancy is likely to increase relatively quickly as living standards rise. Adjusting the age of retirement in line with gains in life expectancy is therefore essential.

Incentives to retire early also result from relatively small pension discounts which apply to the first-pillar pay-as-you-go earnings-related pension for retirement before the standard retirement age. Pension discounts for earlier retirement and supplements to pensions for later retirement were raised to 6% per year in 2004 but remain below the level implied by actuarial neutrality (around 8%). The implicit tax on continued work – the loss in the present value of expected pension payments received, net of the present value of pension insurance contributions made, as a result of working for one additional year – is higher than in many other OECD countries (Figure 2.3).

Figure 2.3. **Implicit tax rate on continued work**[1]

Percentage of average worker earnings



1. Implicit tax on continued work in regular old-age pension systems, for 60 year-old.

Source: Duval, R. (2003), "The retirement effects of old-age pension and early retirement schemes in OECD countries" and OECD calculations.

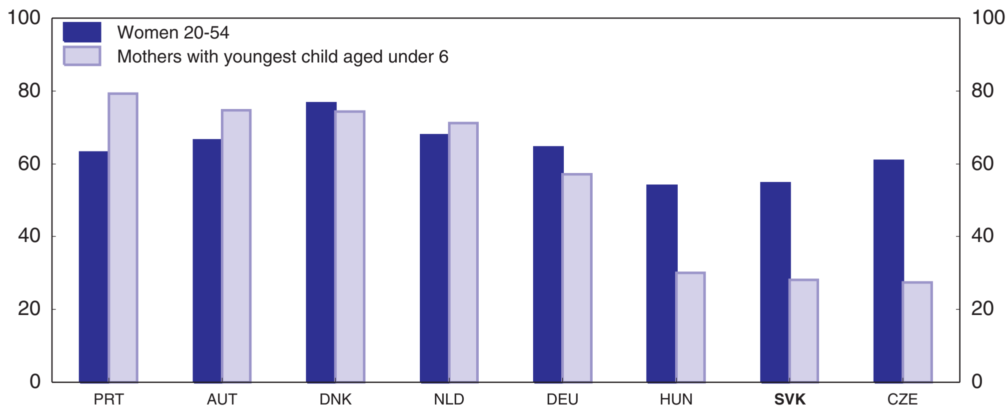
This avenue into early retirement is curtailed to some extent – notably for workers on relatively modest earnings – by the requirement that workers may only retire before the statutory retirement age if they have accumulated sufficient contributions to qualify for a pension above a minimum level equivalent to roughly the minimum wage. However, this provision, together with the relatively low pension discounts, implies redistribution of income from workers with small pension entitlements to workers with large pension entitlements, as workers with large pension entitlements can raise the present value of their pension entitlement by retiring early while having the increase in their pension wealth financed by the contributions of other workers. Raising the discounts applying to old-age pensions in early retirement to actuarially neutral rates would thus be desirable both on efficiency and equity grounds.

Policies need to become more supportive of female labour supply

Relatively low average household income levels and a tradition of strong female labour supply are still sustaining a relatively high participation rate among prime-age women. However, childcare policies are likely to be one factor contributing to the decline in participation of young women over the past decade. The difference in the employment rate of women with children less than 6 years old and women with no children is similar to that in other central European countries that adopted similar policies but is considerably larger than in other OECD countries (Figure 2.4). Prolonged non-employment among young women raises the risk that some young women may not return to work and that, for those who do, career progression is slowed. The resulting reduction in labour input would reinforce the decline in potential employment resulting from demographic development, lowering living standards.

Figure 2.4. **Employment rates of women with young children**

As percentage of female working age population, 2002



Source: OECD (2005b) and OECD Labour Force Statistics database.

Non-employment among women with children is also likely to increase poverty risk. To lower the incidence of poverty among families with children, the government has recently increased child cash benefits. While child benefits can help to lower child poverty and child benefits are relatively low in the Slovak Republic,[28] the loss of labour income that results from non-participation of women in the labour market would be difficult to offset even with a generous child benefits system and would need to be financed through taxation which in turn weighs on labour supply. Moreover, payment of child benefits itself lowers female labour supply, suggesting that measures encouraging stronger labour market attachment for young women would both help to raise average living standards and reduce child poverty.

Reform of parental benefits would boost labour supply of young women

Parental leave benefits, which currently amount to about 20% of the average monthly wage, are paid for a period of up to three years and are tied to a statutory right to return to the job held previously. The benefit is generally conditional on one parent working and one parent staying at home to look after the child, although a parent can also receive the benefit if both parents work, if the full amount of the benefit is used to pay for childcare.[29] However, if the child is sent to a government-subsidized childcare facility, the benefit entitlement is relinquished and few parents appear to have found the option of combining benefit receipt with work worthwhile taking up. Substantial scope remains to raise coverage of children by formal early education and childcare facilities (see Chapter 3).

Empirical evidence suggests that payment of parental leave benefits linked to a guaranteed re-entry into the job occupied before parental leave can have a positive impact on women's decisions to work, as parental leave makes it easier for women to reconcile work and the raising of children, provided the duration of the entitlement is not excessively long. The reemployment guarantee raises the cost to employers of employing leave beneficiaries, which can be expected to result in lower wages, and if the cost is sufficiently large, lower employment. Prolonged absence from the labour market may also lead to skill attrition. Indeed, empirical evidence suggests that a negative effect of parental leave entitlements on women's wages sets in if the duration of parental leave exceeds 8 months while a negative effect on female employment is estimated to arise if parental leave entitlements exceed 20 months.[30] At the same time, raising the coverage of children with childcare facilities has a significant positive impact on female labour supply, both on account of a reduction in financial childcare costs as well as a reduction in commuting time owing to a denser network of childcare facilities.[31] In view of these considerations, the duration of the parental leave benefit entitlement should be shortened considerably, with the benefit for the remaining period up to three years being paid in the form of subsidies for childcare. Chapter 3 presents detailed recommendations on policies towards childcare and early childhood education.

Hurdles to part-time employment need to be removed

Exemptions of part-time employment from various EPL provisions may make part-time work less attractive, potentially reducing labour supply among workers who would only consider working part-time, such as women raising children. While dismissing full-time workers requires an advance notice of at least two months, the advance notice period is 15 days for employees working less than twenty hours. In addition, provisions related to unfair dismissals and to collective dismissals do not apply to part-time workers. These exemptions are likely to foster labour-market segmentation, making part-time work more precarious, and may reduce the amount of training part-time workers receive on-the-job. While easing employment protection in general raises employment rates of women, as shown in OECD (2005c), exempting part-time workers is unlikely to have the same favourable impact.[32] Moreover, the EPL regime for regular workers is, at present, not overly restrictive in the Slovak Republic. Eliminating exemptions from EPL for part-time workers is therefore unlikely to lower labour demand for such workers under current EPL rules. Indeed the government is considering lowering the threshold below which exemptions apply to 15 hours per week and plans to increase the notice period applying to part time workers to 30 days. The arguments above suggest, however, that exemptions of part-time workers from employment protection legislation provisions could be abolished entirely, making EPL the same regardless of working time, provided the general EPL regime is not made significantly more restrictive in the current revision of labour law.

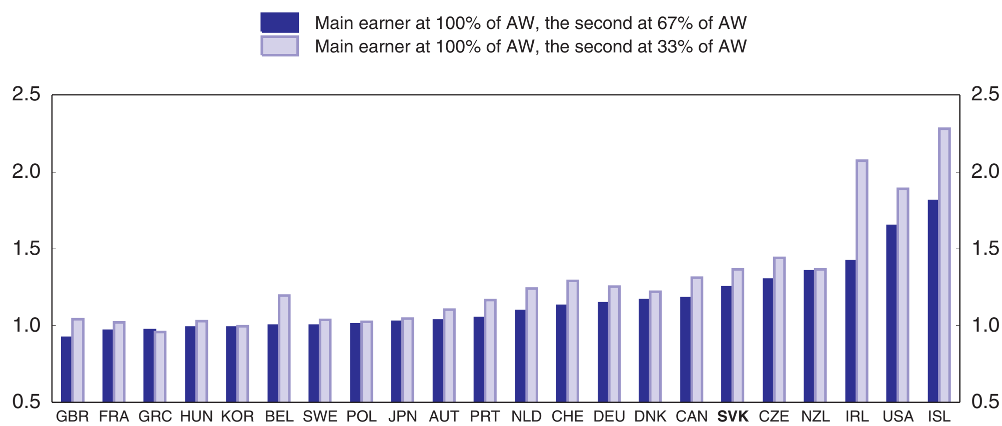
The tax system discourages labour supply of second earners

A relatively high tax burden on labour supplied by second earners in households, relative to the tax burden on the main earner, also tends to discourage female labour supply. Since women's labour supply decisions are typically more sensitive to variations in the net wage than men's, reducing the extent to which second earners are taxed relative to main earners raises overall labour supply; the downside is that such a step typically compromises horizontal equity, in the sense that disposable income of one-earner households with a non-working spouse is pushed below the disposable income of a two-earner household with the same gross earnings.

In the Slovak Republic, the tax wedge on the earnings of a secondary earner in a household, relative to the tax wedge on the main earner, is higher than in many OECD countries (Figure 2.5). The relatively high tax wedge on the second earner mainly results from the structure of personal income taxation. In particular, single earners with a non-working spouse benefit from a doubled basic income tax allowance, with earnings from the spouse taxed from the first koruna onwards once the spouse decides to take up work.[33] A further option to rebalance the tax wedge on the main and the secondary earner would be to introduce a health insurance surcharge for households with couples in which only one person works. At present non-working spouses are insured for free. The tax wedge on second earners in two-earner households should be reduced by lowering the tax allowance for non-working spouses. Consideration should be given to introducing a surcharge on health insurance for non-working spouses, with resulting revenues used to lower the health care insurance payroll contribution rate. Such a surcharge is in place in Austria.

Figure 2.5. **Relative tax wedge on second earners, 2005**

One-earner married couple with 2 children at 100% of average earning = 1



Source: OECD (2006), Taxing Wages database.

Box 2.2. Policy recommendations to improve labour market performance

Lower barriers to the employment of low-skill workers with an in-work benefit

The introduction of in-work benefit should be considered, with the level of the benefit depending on the number of children in the household. The benefit should be subject to a minimum requirement on hours worked and be phased out gradually above a household income level determined by a poverty threshold. The in-work benefit could replace the tax bonus and temporary wage subsidies for social assistance recipients moving to a job.

The assessment base for mandatory health insurance should be widened to a comprehensive measure of household income.

Reduce the risk of poverty traps in the reformed pension system

Redistribution should be introduced among mandatory pensions. To this end mandatory pensions could be subject to personal income tax (either EET or TEE) and resulting revenues be used to raise 1st pillar pensions, leaving the average net pension unchanged.

The rate at which social assistance payments to pensioners are withdrawn as pension income rises should be lowered with budget costs financed by cutting the tax advantages for voluntary third-pillar pension saving schemes. The old-age social assistance supplements could be reviewed.

The requirement that 30% of financial investments in the second-pillar pension scheme be directed to domestic assets should be phased out so as to returns and hence, reduce the proportion of pensioners with entitlements that fall below social assistance.

Ensure minimum wages are set such that they do not harm employment prospects of low-skill workers

Significant increases in the minimum wage relative to the average wage should be avoided. Decisions on the minimum wage level should exclusively be taken by the government.

The impact of minimum wages on employment should be assessed to determine whether a higher age threshold is required for the lower minimum wage rate applying to young workers.

The practice of setting several minimum wages for jobs with different characteristics should be abandoned.

Improve activation of the long-term unemployed

Training measures for the unemployed should be expanded, especially for youth, while subsidized job creation should be more narrowly targeted. Introduction of new ALMPs should be consistently linked to evaluation of the impact of the measures on transition from unemployment to unsubsidized jobs.

All social assistance recipients as well as jointly assessed adult dependents not in full-time education who are capable of taking up a job should be required to register as unemployed and be subject to job search and job acceptance requirements.

The capacity of PES to provide effective job-search assistance and monitoring needs to be strengthened.

Remove impediments to mobility of workers within the Slovak Republic

Priority should be given to removing hurdles to the development of the private rental market, reviewing regulation and improving law enforcement.

Mortgage interest subsidies should be abolished while the availability of land for residential construction should be ensured.

Public sector housing construction should be targeted to regions where housing demand is the strongest. Middle and high-income households occupying public sector rental housing should pay unsubsidized market rental rates. In the longer term, when the private rental market develops, public sector housing construction should be replaced by a cash housing benefit, as recommended in the 2005 Economic Survey.

Box 2.2. **Policy recommendations to improve labour market performance** *(cont.)*

Consideration could be given to introducing a government loan scheme to assist with mobility costs for the long-term unemployed, subject to evaluation.

Focus government spending to support economic growth in high unemployment regions on infrastructure development

Infrastructure development should be given priority over subsidies for large private sector investment projects in supporting the economic development of the low employment regions.

Ensure wages adjust to disequilibria in the labour market

The authorities should make liberal use of their powers to accept requests for exoneration from legal extension so as to limit the loss of responsiveness of wages to local conditions

No substantial additional employment costs should be imposed through reform of employment protection legislation.

Remove barriers to higher participation of older workers and women

The statutory retirement age should be indexed to gains in life expectancy once the increase in retirement age for women to 62 has been phased in by 2014.

Pension discounts for retirement before the statutory retirement age as well as supplements for retirement after the statutory retirement age should be raised to levels implied by actuarial neutrality.

The duration of parental leave benefit entitlement should be shortened, with the benefit for the remaining period up to three years being paid in the form of subsidies for childcare.

The tax wedge on second earners in two-earner households should be reduced. To this end the tax allowance for non-working spouses should be reduced by lowering the marital income allowance. Consideration could be given to introducing a surcharge on health insurance for non-working spouses, with resulting revenues used to lower the health care insurance contribution rate.

Notes

1. The first pillar PAYG pension system was reformed in 2003 and will be fully applied to pension payments from 2015 onwards. See OECD (2005e) for a detailed description of the reformed pension regime and the 2004 *Economic Survey of the Slovak Republic* for a description of the new funded second pillar pension regime.
2. The share of households in which no adult works in the Slovak Republic is significant, albeit not among the highest of European countries for which Eurostat data are available. The number of children living in workless households is also relatively large. These data suggest that an in-work benefit tied to a household-income test would still generate significant improvements in work incentives among households in which no adult works. If the objective is to preserve work incentives among two-earner households, the in-work benefit could be tied to a test of individual earnings rather than a test of household income. In this case the in-work benefit would be less well-targeted on poverty.
3. As social assistance, the allowance is withdrawn at a rate of 75% as labour earnings rise.
4. A temporary wage subsidy – which has a lower fiscal cost – would be more appropriate, relative to a permanent in-work benefit, in countries where income distribution is not a concern. The in-work benefit would combine improved work incentives with some income redistribution in favour of low-income households.
5. Year-on-year growth of average gross wage earnings amounted to 8% in the third quarter of 2006.
6. However, the proportion of workers earning the minimum wage may not be a sufficiently reliable guide to potential employment effects of the minimum wage. If the tail of the earnings distribution below the minimum wage level were long in the absence of the minimum wage, a low proportion

of workers earning the minimum wage might be observed even if employment effects are substantial. Conversely, in a purely monopsonistic labour market in which a minimum wage (if set low enough) would have no adverse employment effects, workers whose market-determined wage would be below the minimum wage would all earn a wage equal to the minimum wage, resulting in a large share of workers earning the minimum wage, even though the minimum wage would not have negative employment effects (but possibly positive employment effects).

7. The Manifesto of the Government of the Slovak Republic, 2006.
8. Hanzelová and Kostolná (2006).
9. D. Zachar (ed.) (2006).
10. See *e.g.* Martin (2001) for a description of which active labour market policies are effective.
11. OECD (2005c).
12. See OECD (2005c), which shows that higher spending on training measures relative to GDP is associated with lower unemployment rates across OECD countries. See also J. Boone and J. Van Ours (2004).
13. See Hujer, Thomsen and Zeiss (2006).
14. B. Kurtz (2003).
15. Participants in the public job creation programme are required to report to the Offices for Labour every month, whereas non-participants are required to report to the Labour Offices every week. Duration of follow-up interviews at the Public Employment Service – the Offices of Labour, Social Affairs and Family – are between 5 and 15 minutes long, rather than 20-60 minutes for the registered long-term unemployed who do not participate.
16. Hanzelová and Kostolná (2006).
17. OECD (2005b), *OECD Employment Outlook*.
18. Many youth live in fact with their parents, as shown in OECD (2007).
19. OECD (2005c).
20. See Huber (2006).
21. INEKO (2005).
22. For evidence on the UK, see F. G. Faggio and S. Nickell (2005). See also OECD (2005c).
23. See D. Hajkova *et al.* (2006), who investigate fiscal incentives provided by corporate tax systems.
24. See OECD (2004).
25. The evidence in Cournède *et al.* (2005) suggests that higher EPL flattens the short-term Phillips curve when unemployment exceeds the nonaccelerating inflation unemployment rate. OECD (2005c) and references therein show that stricter EPL *lowers* the magnitude of an increase in unemployment following a shock but lengthens the time span needed to reverse the increase in unemployment.
26. See OECD (2005c).
27. See OECD (2003) for empirical evidence.
28. The difference in the tax payments – net of all child benefits – between households without children and households with children is among the lowest in the OECD according to Anna Cristina d'Addio and Marco Mira d'Ercole (2005), although childcare benefits have undergone changes since.
29. This provision is recent and is therefore not reflected in the statistics presented in Figure 2.4.
30. See Jaumotte (2003) and the references cited therein.
31. See Jaumotte (2003) for estimates of the impact.
32. By increasing worker turnover, and thereby the hiring rate, a liberal EPL regime for all workers favours female employment because women are more likely than men to desire multiple entries into the labour market over their working life. This effect is much reduced if liberalisation is restricted to part-time work.

33. Formally, the main earner's allowance for the non-working spouse is withdrawn in line with increasing labour earnings of the spouse until the spouse's earnings exceed the basic income tax allowance. Both earners, however, remain subject to separate assessment for tax purposes.

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Chapter 3

Improving education outcomes

Improving education outcomes is vital for achieving convergence with GDP per capita levels in Western European countries and for reducing income inequality. While some education outcomes are favourable, such as the low secondary-school drop-out rate, others have room for improvement: education achievement is below the OECD average and strongly influenced by socio-economic background; Roma children, who are mainly from disadvantaged socio-economic backgrounds, have particularly poor achievement; labour-market outcomes are poor for graduates of secondary vocational programmes not leading to tertiary education; and tertiary attainment is low, albeit rising. Reforms have been made in recent years or are planned to address many of these weaknesses, but much remains to be done. In particular, more progress needs to be made in increasing participation in early childhood education and care, reducing stratification in the education system, helping Roma children to integrate into the education mainstream, and in attracting high quality graduates to teaching, especially in socio-economically disadvantaged schools. In addition, secondary vocational education not leading to tertiary education needs to be made more pertinent to labour-market requirements. Tertiary education also needs to be made more attractive for technical secondary school graduates.

Education is critical to the process of converging to living standards in advanced European countries and strengthening social cohesion. Better education outcomes raise productivity and employment prospects and, if distributed more evenly, reduce income inequality and poverty. Slovakia already does well in certain respects, such as the low secondary-school drop-out rate, but performs less well in some others: overall education achievement is below the OECD average and socio-economic background has a large impact on results, with Roma doing particularly badly; graduates of upper secondary vocational programmes not giving access to tertiary programmes experience low earnings and high unemployment even in prime-working-age groups, suggesting that such education is not well adapted to labour-market requirements; tertiary attainment is low but rising quickly; and rather limited use of lifelong learning is being made to overcome weaknesses in the skills of the adult population and help with continuous adaptation to changing labour-market demand. Reforms are being undertaken or considered to overcome these weaknesses, but more needs to be done. Following a review of the key education outcomes that need to be improved, this chapter examines the causes of these weaknesses and makes suggestions for further reforms to improve performance.

Education outcomes are below the OECD average

Overall achievement is below the OECD average and is significantly affected by social background

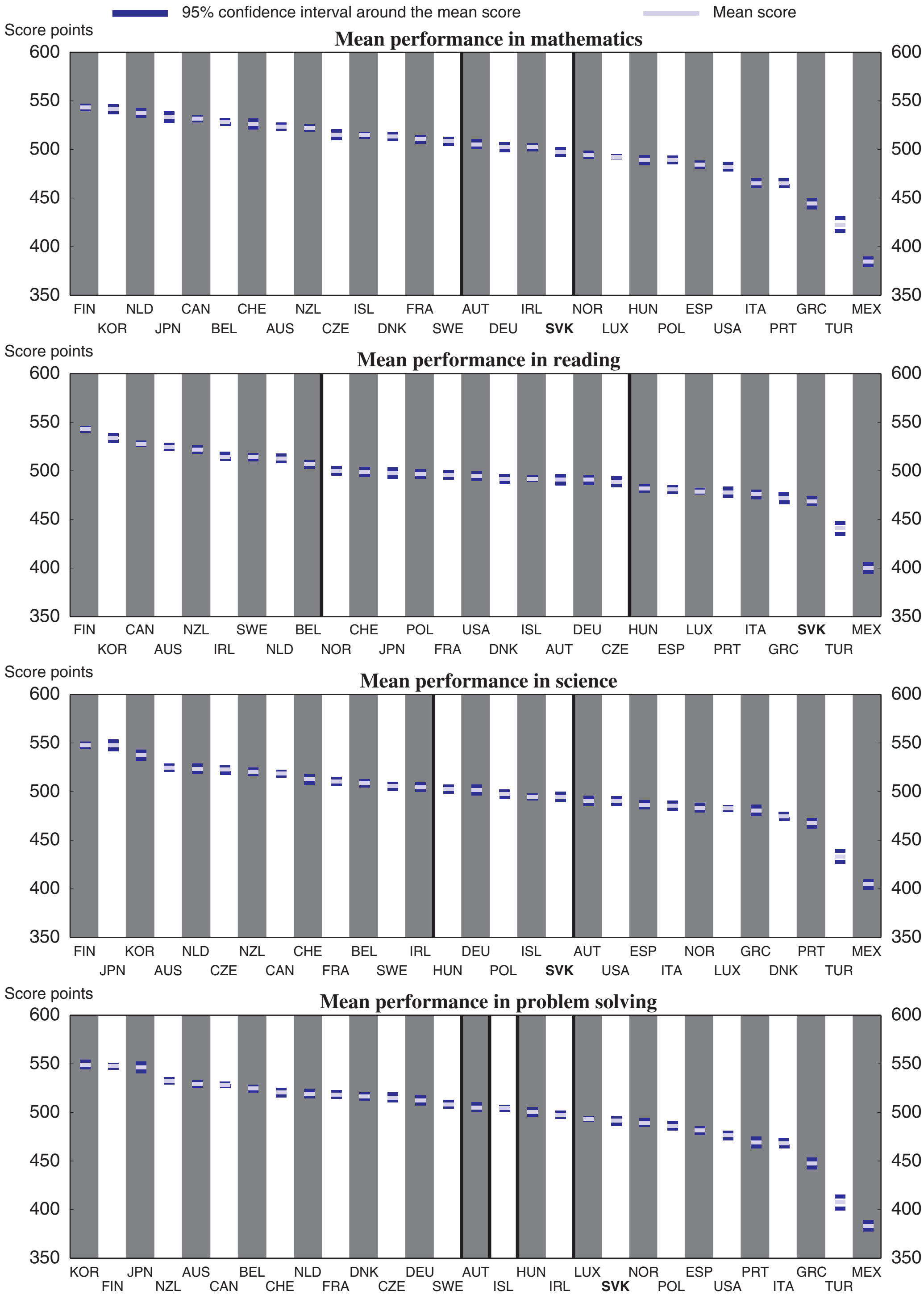
Slovak students' overall achievement in the 2003 OECD PISA study was below the OECD average (see Figure 1.12). Scores were around the OECD average in mathematics and science but below average in reading and problem solving (Figure 3.1). Performance in reading was particularly weak. A multivariate regression analysis of the 2003 PISA results shows that they are more sensitive to socio-economic background (represented by the occupational status of parents) than in most other countries (Carey and Ernst, 2006, Table 1; Figure 3.2).[1]

The large impact of socio-economic background in Slovakia on PISA scores is also evident in the in-depth bivariate analysis of mathematics results included in the 2003 PISA study (OECD, 2004a). This analysis shows that the economic, social and cultural status (ESCS) of students has one of the largest effects on results among OECD countries (*ibid.*, Figure 3.2), despite there being less variation in ESCS in Slovakia than in most other OECD countries (*ibid.*, Table 3.3a). A decomposition of this effect (*ibid.*, Table 3.11) shows that it reflects a high degree of segregation by socio-economic background between schools[2] (*ibid.*, Table 3.5) and a strong impact of a school's average student ESCS on performance (*ibid.*, Figure 3.13).[3]

Tertiary attainment is rising but remains well below the OECD average

Tertiary education attainment is low in Slovakia. Only 12% of the population aged 25-64 has completed tertiary education compared with an OECD average of 25%

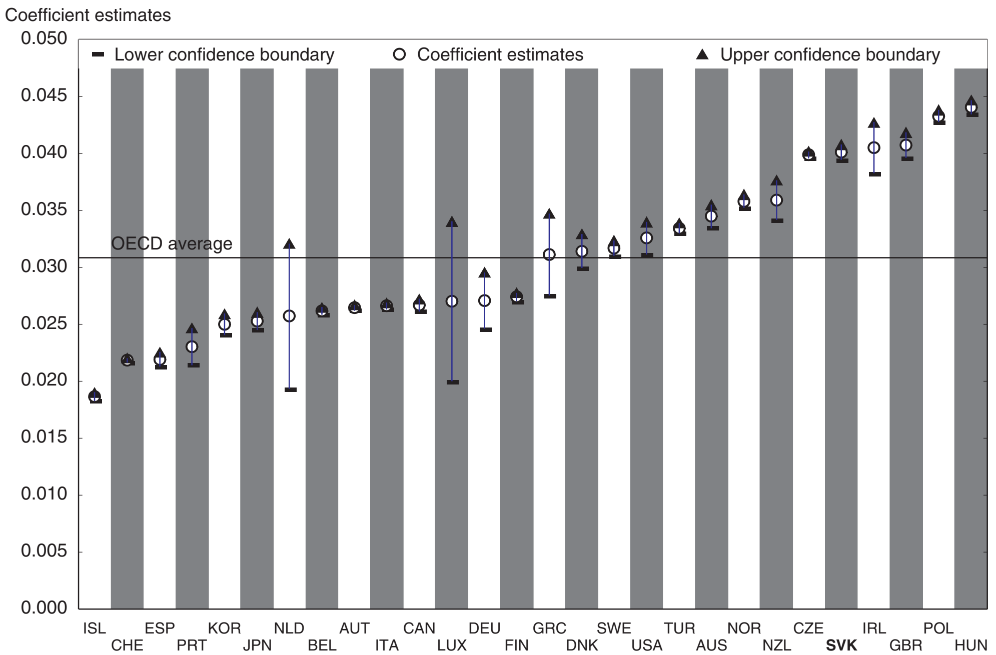
Figure 3.1. **Student performance in the 2003 OECD PISA study**[1]



1. Mean scores are not significantly different from the OECD average in countries in the middle sector of each panel. Countries to the left have mean scores that are significantly above the OECD average while countries to the right have scores that are significantly below the OECD average. Although the mean score in problem solving in Iceland is lower than in Austria, this score nevertheless is significantly above the OECD average while that in Austria is not, owing to the narrower confidence interval around the mean for Iceland than for Austria – the 95% confidence interval around Iceland's mean lies above OECD average while that for Austria includes the OECD average.

Source: OECD PISA 2003 database. For further explanation, see OECD (2004a) and OECD (2004b).

Figure 3.2. **The effect of students' socio-economic background on 2003 PISA scores in selected OECD countries**[1]



1. This graph shows coefficient estimates with 95% confidence intervals for the variable 'Highest occupational status of parents' from the multiple regression analysis in Carey and Ernst (2006) (summarised in Table 1 and described in more detail in Annex A1 of Carey and Ernst, 2006). The OECD average is calculated for all OECD countries with available data (see *ibid.*, Table 1).

Source: OECD, PISA 2003 and OECD calculations.

(OECD 2006a, Table A1.3a). This proportion is still only 14% for the 25-34 age group compared with an OECD average of 31%. Moreover, tertiary graduation rates in 2004, mostly from relatively long (5-6 years) programmes, were still considerably lower than the OECD average (Figure 3.3).[4] Low tertiary attainment may be partly attributable to weak incentives to obtain tertiary qualifications until recently. For example, gross earnings of persons with tertiary-type-A attainment in 1998 were only around 120% of earnings for persons with upper secondary attainment. Since then, however, the relative earnings advantage of persons with such qualifications has increased markedly, to some 190% in 2004. This earnings premium is high by international comparison (Figure 3.4), possibly reflecting the low supply of persons with tertiary attainment. Moreover, the recent tax reform introducing a flat 19% income tax rate above a tax-free income allowance further increased the return on tertiary-type-A[5] attainment.[6] Tertiary-type-B[7]-earnings premiums, by contrast, have barely changed, remaining low. Another factor may be the limited supply of tertiary-type-B programmes, which are shorter than type-A programmes, more occupationally oriented and usually lead to direct access to the labour market. In the absence of such programmes, some students may choose not to acquire tertiary qualifications at all rather than to pursue a longer and less occupationally-relevant type-A programme.

Net entry rates into tertiary education have increased markedly in recent years, exclusively in tertiary-type-A programmes. Net entry rates into such programmes rose by 10 percentage points from 2000 to 2004, to 47% (Figure 3.5, Panel A).[8] However, such

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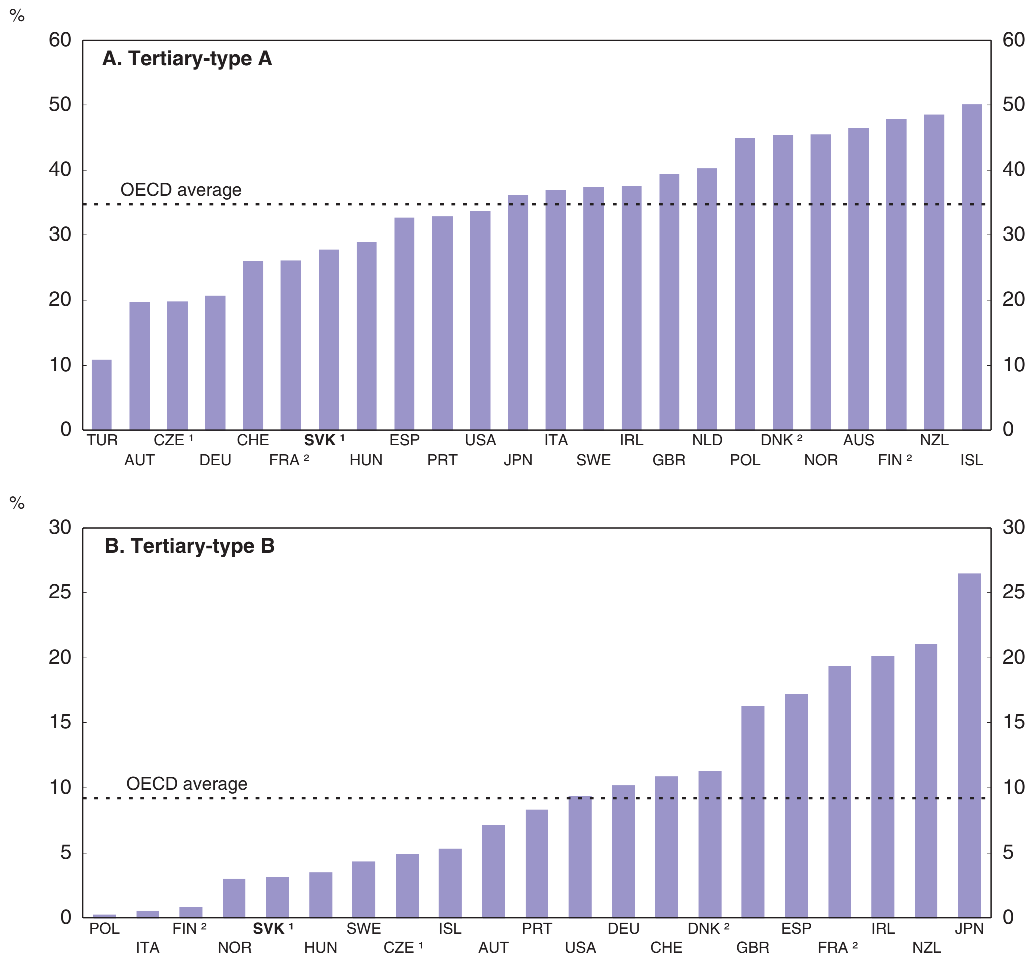
Figure 3.3. **Tertiary graduation rates, 2004**



1. Gross graduation rate may include some double counting.
2. Year of reference 2003.

Source: OECD (2006), *Education at a Glance*, Table A3.1.

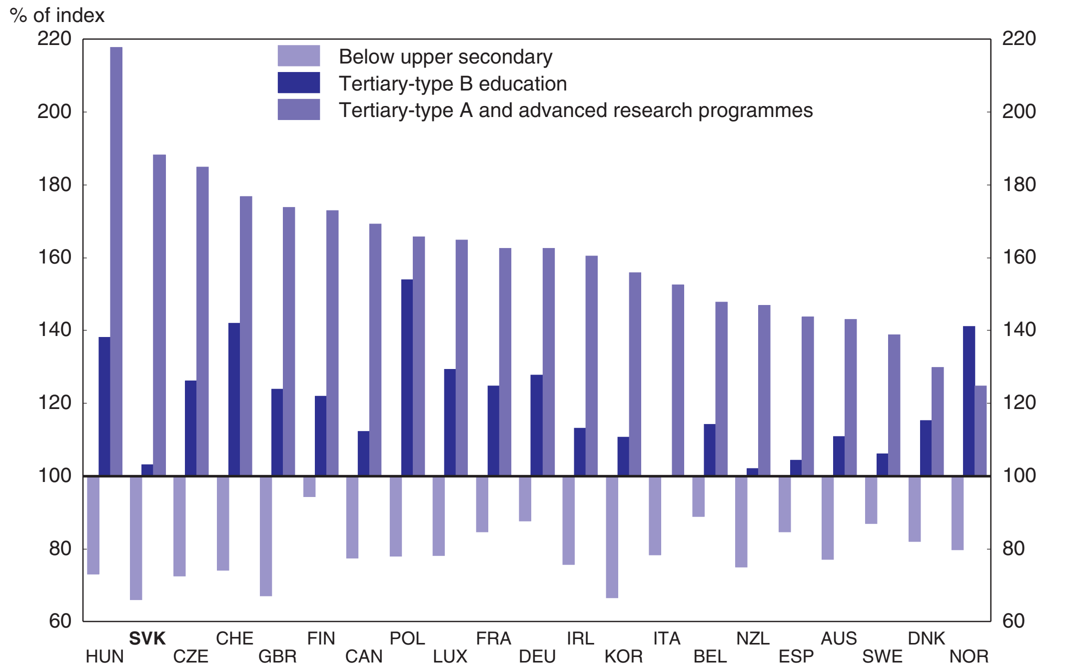
entry rates increased by almost as much on average in other countries, with the result that the gap between Slovakia and the OECD average in net entry rates into tertiary-Type A programmes barely changed (it was 6 percentage points in 2004). This gap largely corresponds to the shortfall in net tertiary-type-A graduation rates in Slovakia from the OECD average (see Figure 3.4, Panel A). Net entry rates into tertiary-type-B programmes, like graduation rates from such programmes, remain very low in Slovakia (Figure 3.5, Panel B).

The below OECD average net entry rate into tertiary-type A programmes in Slovakia contrasts with the high graduation rate from secondary programmes designed to prepare students for such studies (Figure 3.6). While there are also other countries (Belgium, Greece, Ireland, Japan, and Turkey) in which a large proportion of students qualified for such studies do not undertake them, these countries tend to have high net entry rates into tertiary-Type-B programmes, in contrast to Slovakia.

Figure 3.4. **Relative earnings from employment (2004 or latest available year)**[1]

By level of educational attainment for 25-to-64 year-olds

(upper secondary and post-secondary non-tertiary education = 100)



1. Years of reference: 2001 for Australia; 2002 for Ireland, Italy and Luxembourg; 2003 for Belgium, Canada, Denmark, Finland, Korea, Norway and Sweden.

Source: OECD (2006), *Education at a Glance*, Chart A9.2, and Statistical Office of the Slovak Republic.

The Roma population has particularly poor education outcomes

Education attainment is extremely low for the Roma population (Table 3.1). According to the 2001 population census, three quarters of Roma only had primary school attainment or less, compared with about one quarter for the rest of the population.[9] Only 2% of Roma had completed upper secondary school and almost none held tertiary qualifications. Attainment remains weak for young cohorts of Roma. Based on official data from the Institute of Information and Forecasting of Education, there were only 170 Roma children studying at secondary schools (4 of them in grammar schools) out of around 88 000 students and 15 Roma children studying at higher education institutions out of around 28 000 students in 2004/2005 (Salner, 2005a, p. 8 for numbers of Roma students,[10] and OECD 2006a, Table C4.4a, for estimates of the total secondary and tertiary student populations), even though Roma represent around 13% of the relevant age cohorts.[11] Most Roma graduates of primary school do not take any vocational training and do not build any professional career (Dluhošovà, 2005). According to the State School Inspection, achievement in schools where Roma pupils make up a significant share is unsatisfactory (*ibid.*).

Roma are estimated to make up about 7% of the Slovak population (Vãno, 2005, p. 28). Their share in the total population is projected to rise to about 10% by 2025 owing to their high birth rate: the fertility rate for Roma women of child bearing age is 2.7, compared with 1.2 for other Slovak women. The share of Roma in compulsory-school-age children (aged 6-15) is projected to rise to around 17% by 2025.[12] With these demographic developments, Roma could make a significant contribution to the national economy if they acquired the

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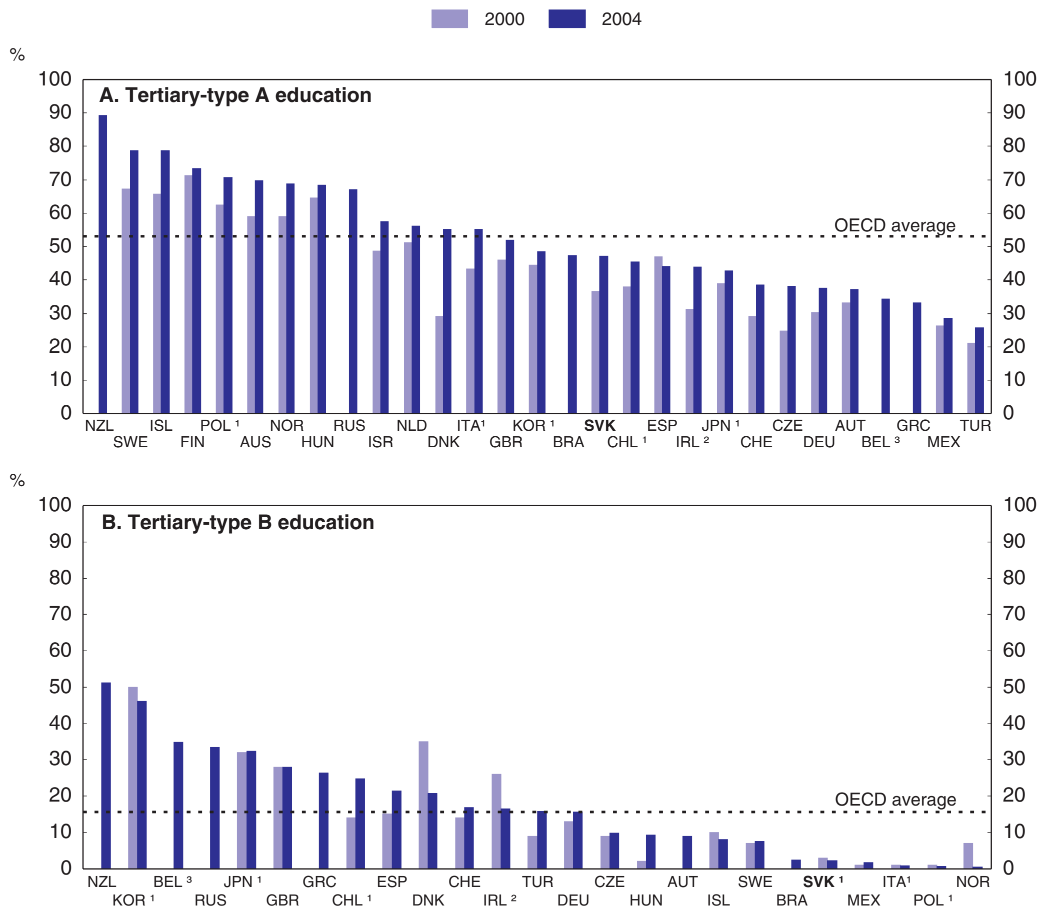
Figure 3.5. **Entry rates into tertiary education**

Sum of net entry rates for each year of age



1. Entry rate calculated as gross entry rates. This applies to Italy and Poland only in 2000 and to Slovak Republic only in 2000 for tertiary type-B programmes.
2. Full-time entrants only.
3. Excludes the German-speaking Community of Belgium.

Source: OECD (2006), *Education at a Glance*, Table C2.1.

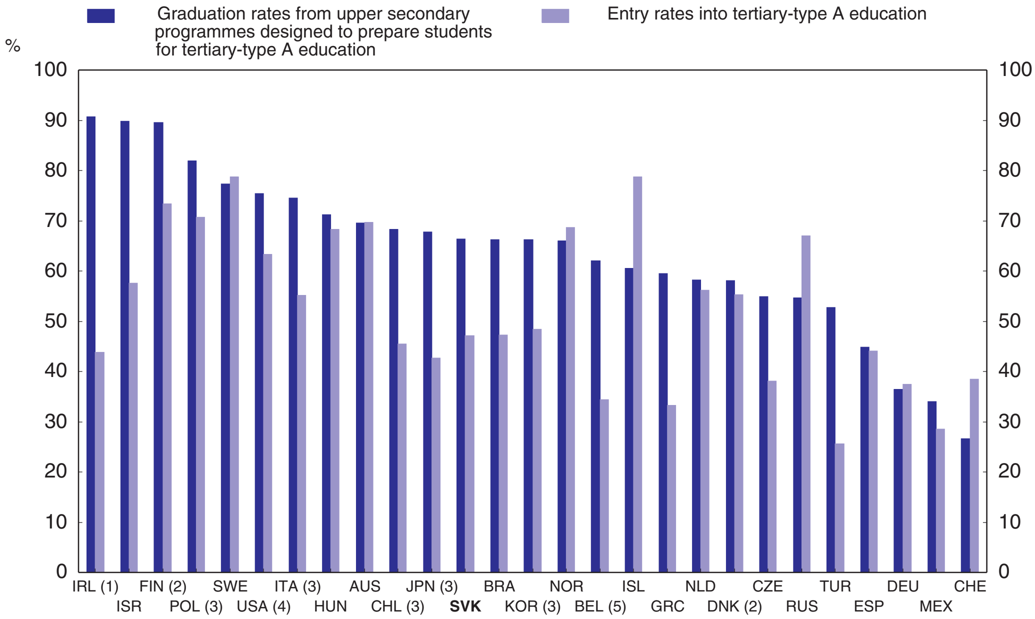
Table 3.1. **Level of education attained according to the 2001 Census**

In per cent

Highest level of education attained	Women		Men	
	Roma	Slovak	Roma	Slovak
Primary (including incomplete)	79.5	30.0	74.1	18.9
Vocational	8.2	18.3	14.0	32.1
Secondary vocational	1.4	4.5	2.4	5.5
Complete secondary	1.9	36.4	2.2	30.2
Higher	0.2	9.2	0.4	11.6
No education	4.3	0.3	3.1	0.3
Data not available	4.5	1.3	3.8	1.4

Source: Statistical Office of the Slovak Republic, 2001, as reported in Salner (2004, Table 4).

Figure 3.6. **Access to tertiary-type A education for upper secondary graduates, 2004**



1. Full-time entrants only.
2. Year of reference 2003.
3. Entry rate for tertiary-type A programmes calculated as gross entry rates.
4. Tertiary-type A education includes tertiary-type B education.
5. Excludes the German-speaking Community of Belgium.

Source: OECD (2006), *Education at a Glance*, Chart A2.2.

skills necessary to participate productively in a modern economy. Failure to obtain such skills would result in an increasingly large cost to the welfare system.

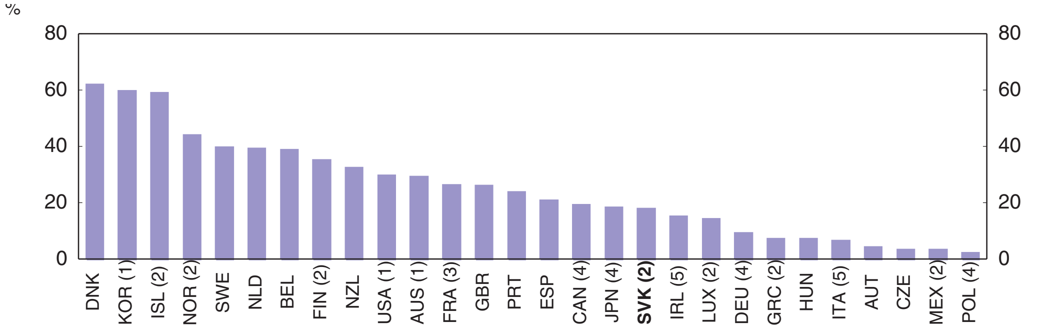
Reforms to enhance outcomes

Increase participation and investment in early childhood education and care

The cornerstone of lifelong learning is early childhood education and care (ECEC), which covers both childcare arrangements for infants and toddlers and pre-school education (kindergarten in Slovakia). The skills acquired in ECEC impact on learning in subsequent stages of education – as Carneiro and Heckman (2003) put it, "skill begets skill". High-quality centre-based programmes enhance school-related achievement and behaviour of young children, especially of poor children and of children whose parents have little education (Brooks-Gunn, 2003).[13] By developing cognitive and non-cognitive skills that are important for success both in education and in the labour market, quality ECEC can contribute more effectively than later policy interventions to increasing the proportion of the population gaining tertiary qualifications (Carneiro and Heckman, 2003). Less than 20% of Slovak children aged less than 3 participate in formal childcare arrangements, which is relatively low by international comparison (Figure 3.7). By contrast, the net enrolment rate of children aged 3-5 in pre-school/school education is 71%, which is around the OECD average (Figure 3.8).

Unfortunately, the children not participating in ECEC are more likely to be from disadvantaged socio-economic backgrounds than are children participating: the opportunity cost of mothers caring for their own children is lower for low-skilled women,

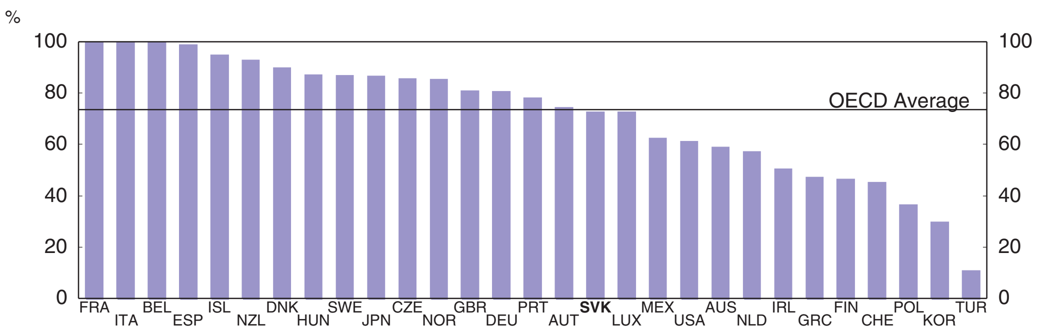
Figure 3.7. **Proportion of children aged 0-2 using formal childcare arrangements, 2004**



1. Year of reference 2000.
2. Year of reference 2001.
3. Year of reference 2002.
4. Year of reference 2003.
5. Year of reference 2005.

Source: OECD Family database, Table PF11.1.

Figure 3.8. **Enrolment rates of children aged 3-5 in pre-school, 2004**



Source: OECD Education database.

both because potential earnings are lower and because the probability of being employed is lower; childcare- and pre-school fees represent a larger proportion of the budget of low-income households; and disadvantaged socio-economic households may place less value on education.[14] The participation rate in pre-school education of Roma children, who come from the most disadvantaged households in Slovakia,[15] is only about one half of that of the rest of the population according to a survey carried out by the Methodological Centre Prešov (MPC) in 2000 (Salner, 2005). The low participation of Roma children is unfortunate as they stand to gain most from such participation both because they generally come from poor households and because it could help them master the language of instruction and become familiar with the majority culture before beginning primary school.[16]

To encourage higher participation in pre-school education, especially of children from less advantaged socio-economic backgrounds, the authorities plan to make kindergarten free of charge for five year olds from 2008 onwards (at an annual cost of about 0.1% of GDP), which would be particularly beneficial for the Roma minority. A practical difficulty with increasing participation is that kindergartens are not available throughout the country as some municipalities are too small and too poor to be able to provide these facilities, especially where there are Roma settlements. Another problem with the provision of pre-school education is that there are large differences in the quality of kindergartens across the country related to the regional differences in wealth; responsibility for financing kindergarten was shifted from the central government to the regions and municipalities in 2004. To address both of these problems, the government should establish quality standards that must be respected in all parts of the country, including reasonable access to such facilities, and ensure that all municipalities have sufficient resources to be able to respect these standards, effectively by transferring tax revenues from wealthy municipalities with low social spending demands to less well off municipalities with high social spending requirements. In view of the substantial external benefits and contribution to social cohesion of pre-school education, the authorities should encourage greater participation of children from disadvantaged socio-economic backgrounds from age 4. Means tested subsidies for additional expenses, such as meals and out-of-school-hours care, should also be made available to ensure that these costs do not pose significant additional burdens on low-income households.[17]

In order to increase participation in early childhood care (*i.e.,* childcare for infants and toddlers aged up to 2-3), subsidies for such care should be increased and more tightly targeted on low-income households so that cost does not represent a barrier to participation of children from such households. This measure, together with the improvements in access to pre-school education discussed above, would also tend to reduce childhood poverty by increasing employment rates for mothers from low-income households. Such a reduction in child poverty would further reduce the impact of socio-economic background of education outcomes.

The increase in expenditure on ECEC being recommended here comes in the context of strong demands to increase public expenditure at other levels of education, including tertiary education. In deciding priorities, it should be borne in mind that expenditure on ECEC has high social returns – other things being equal, the rate of return on human capital investments is higher early in a person's life than later because they can be amortised over a longer period and because they raise the productivity of subsequent human capital investments (Carneiro and Heckman, 2003, p. 7);[18] OECD 2006b, Annex IV provides a summary of international evidence in favour of public investment in ECEC – and enhances equity as low-income households benefit more than from some other public expenditures, such as those on tertiary education, which mainly benefit high-income households.[19] This prioritisation is line with OECD (2007)[20] and EC (2006)[21] recommendations.

The OECD study (OECD, 2006b) on ECEC that was based on thematic country reviews, contains many recommendations on what works well in ECEC and what does not to help policymakers distil reform strategies to improve the efficiency and equity of their country's ECEC. In this regard, Slovakia would do well to ensure that ECEC is well integrated into the education programme for children up to around 8 years old. There should also be a lead ministry in charge of ECEC issues to ensure that policies in this area are coherent. Moreover, early childhood care should be regulated to ensure that it meets high quality standards and public subsidies should only be available to centres that respect these standards. It is also important to have well trained staff for both early childhood care and pre-primary education.[22]

The improvement in access to quality early childhood care envisaged here would undermine the rationale for the extremely long (3 years) parental-care-leave provisions in Slovakia, which are intended to allow parents to look after their children themselves.

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Parental leave of about 6 months to one year, with an adequate replacement wage or benefit and a guarantee of a return to the same or similar position at work, as found in most European countries, appears to be valuable both to infants and their parents (especially the mother) (OECD, 2006b, p. 12). The long duration of parental leave in Slovakia is likely to damage female career prospects (see Chapter 2) and may not be in the developmental interests of children, especially those from lower socio-economic backgrounds. It would be preferable to shorten the duration of parental leave with the benefit for the remaining period up to three years being paid in the form of subsidies for childcare.

Targeted interventions to help young children from disadvantaged backgrounds should also be developed. Experience with such interventions in other countries has been very positive. For example, some such interventions in early childhood in the United States have had lasting effects on learning and motivation (Carneiro and Heckman, 2003, p. 46). In the Perry Preschool (longitudinal) programme, which entailed intensive mentoring of 4-5 year olds as well as interventions to involve parents in the education of their children, estimated cost-benefit ratios were very high.[23] In a similar vein, Olmsted and Montie (2001) conclude from a summary of research on the effects of parental involvement in early childhood education that when parents are encouraged and trained to carry out specific reading tasks with their children, positive effect on children's language and pre-literacy skills are reported. These findings are corroborated by the longitudinal project (EPPE) in the United Kingdom (Siraj-Blatchford *et al.* 2002, 2003; Sylva *et al.* 2003). Indeed, according to EPPE, parental support for emergent literacy in this period of development has an even greater impact than social class: "what parents do is more important than who they are" (OECD, 2006b, p. 66). In view of the large impact of socio-economic background on achievement in Slovakia and the dire situation of much of the Roma community, the potential payoff from such family-based interventions would likely be very high indeed.

Help Roma children to integrate into the education mainstream

As noted above, Roma education attainment and achievement are extremely low. This contributes to low labour market participation and extremely high unemployment – the unemployment rate approaches 100% in some segregated communities. Roma tend to be very poor. Poverty in the segregated communities is such that families cannot provide a home environment with appropriate study conditions for children (Vantuch and Jelínková, 2004, p. 31). Many Roma children are placed in special primary schools for the mentally handicapped.[24] Academic expectations are extremely low in these schools, making it impossible to re-integrate the mainstream. The assessment tests for making these placement decisions have until very recently been linguistically and culturally biased.[25] In some cases, such placement has been used as a means of segregating Roma children (Salner, 2005, p. 9).[26] Teaching quality in special primary schools is substandard according to the State Inspection and lacks a special pedagogical approach adapted to the students (Dluhošovà, 2005, p. 49). Roma children that remain in standard primary schools often have to repeat grades: 62.4% of children in the 10th year (*i.e.,* repeating at least one year) in 2003/2004 were Roma (Salner, 2005, p. 7).

The Slovak authorities have progressively implemented reforms from PHARE projects, which aim to improve education outcomes for Roma minorities in central European countries. In this regard, the profession of teaching assistant was created in 2002. Teaching assistants help pupils to overcome language, social and health barriers to education in kindergartens, primary schools and special primary schools.[27] Experience with teaching assistants has been positive. However, there are still not enough of them and they need more training. The authorities also introduced in 2002 the zero (pre-school) grade in primary school for children reaching the compulsory school attendance age (six-years old) but who are not yet ready for primary school education. However, this is unlikely to prove to be a satisfactory solution to the problem as international evidence suggests that effectively holding children back a grade does not contribute to higher achievement subsequently and may reinforce the influence of social background on outcomes (OECD, 2007, Chapter 4, pp. 3-4). It would be preferable to prepare such children for primary education earlier by making kindergarten compulsory from ages 4, as suggested above. The authorities should also eliminate financial incentives for schools to have children classified as in special education. Instead, the additional resources for teaching socio-economically disadvantaged children should be allocated on the basis of the socio-economic backgrounds of school's student populations.

Again, in the context of the PHARE project, the authorities have prepared revised diagnostic tests that are intended not to be linguistically and culturally biased for determining whether children should be placed in standard primary schools or in specialised primary schools for the mentally handicapped. Following a positive experience with these tests when they were applied to a small sample of children in late 2005, their use has since been generalised. Unfortunately, the Pedagogical and Counselling Centres that make such placement recommendations have been severely under funded, notably in areas with large Roma populations (Salner, 2005, pp. 14). The government has decided to address this problem by shifting the funding of these centres from a per capita- to a per client basis. It may also be necessary to increase overall funding for these centres.

In another PHARE project, "Integration of Roma Children into Standard Elementary Schools," the revised diagnostic tests were used in September 2005 to identify children that had been misplaced in 20 specialised primary schools so that measures could be taken to re-integrate them in standard primary education. The project demonstrated that if a specific and individual approach to the development of the mental abilities of these children is adopted they are able to handle the transfer to standard primary schools. It will be necessary to continue to provide specialised help for these children to enable them to keep up with the standard primary school curriculum – they still suffer from the handicaps of extreme poverty and weak educational motivation that contributed to their being misplaced in specialised education in the first place. Experience in Hungary with a similar project demonstrated that failure to continue to provide individualised help resulted in Roma children again falling behind in standard primary school. While mainstream primary schools in Slovakia are supposed to provide individual intervention services for Roma students, schools often fail to do so despite repeated warnings from the Ministry of Education (Vantuch and Jelínková, 2004). The Ministry should provide tied grants for these services and make schools accountable for the use of these resources. Following the kindergarten example, greater parental involvement in primary education should also be encouraged. Second chance education for persons not having successfully completed lower secondary school (*i.e.*, less than ISCED 2) also needs to be improved (*ibid.*, p. 32), enabling them to complete this level of education and continue to subsequent levels if desired.

The measures discussed above to improve Roma education outcomes would be even more effective if complemented by measures to reduce poverty amongst Roma. Labour-market arrangements that enable low-skilled persons to work are particularly important in this regard (see Chapter 2). The introduction of in-work benefits, as suggested in Chapter 2, would help to make work pay for low-skilled persons such as most Roma. The effects of such a reform would be more favourable if calls to increase the minimum wage as a share of the average wage were resisted and the authorities made liberal use of their powers to accept requests for exoneration from legal extension of sector-collective agreements so as to limit the loss of regional wage flexibility following the re-introduction of legal extension. It would also be important not to make EPL more restrictive, as this would reduce employers' willingness to take a chance with persons, such as Roma, who have weak labour market attachment. More effective enforcement of anti-discrimination legislation would also help, not only by making it easier for Roma to obtain employment, but also by increasing incentives for Roma to invest in human capital development. More also needs to be done to ensure that Roma have adequate housing, including by connecting Roma settlements to running water and sewage services. This would also help to improve health among Roma, another weak point in their social condition. Finally, Roma wanting to leave the segregated communities to integrate more fully into the majority community should be helped to do so, notably through access to social housing.[28]

Reduce stratification in the education system

Slovakia's education system is highly stratified: it has a high number (five) of tracks into which students are sorted; selection between tracks starts at a young age (10); and academic (grammar school) and vocational education are separately provided (OECD, 2005a, Chart D6.1, and Table D6.1; and Annex 3.1, which describes the structure of the Slovak education system). Approximately 25% of each cohort enters the academic track (grammar schools) and a further 55% enters the advanced vocational track (Technical Secondary School) that also leads to upper secondary qualifications for entry to tertiary-type-A studies. Selection is mainly based on ability, with the best students going to grammar school, the least able going to vocational secondary school (VSS, which does not give access to tertiary education), and those in between going to technical secondary school (TSS). Within tracks, students are also sorted according to performance. An analysis of the 2003 PISA mathematics results suggests that the distribution of student scores between schools is wider and the impact of socio-economic background on student scores is larger in countries, such as Slovakia, which have more differentiated systems (Table 3.2[29]). On the other hand, this analysis suggests that stratification does not significantly affect a country's average score on the 2003 PISA mathematics scale (see Table 3.2[30]), although it did so on the 2000 PISA reading scale (*ibid.*, pp. 403; OECD, 2005b).

Highly stratified education systems tend to have a high degree of socio-economic segregation between schools: the correlation coefficient in the PISA 2003 study in mathematics between the proportion of the variation in socio-economic background that is between schools and the differentiation index[31] is 0.65. Slovakia conforms to this pattern, having a higher proportion of the variation in socio-economic background between schools than in most other OECD countries.[32] Children from advantaged socio-economic backgrounds tend to enter tracks that provide better preparation for higher education whereas children from disadvantaged backgrounds do not. In highly stratified systems, these tracks are found in different schools. Early tracking tends to reinforce this social segregation because young children are more dependent upon their parents and parental resources (OECD 2005a, p. 404). Socio-economic segregation between schools is inversely related to average PISA scores (in mathematics)[33] and positively related to the impact of socio-economic background on results.[34] Judging by international patterns, this feature of the Slovak education system may well be undermining average performance and contributing to weak social equity in education achievement.

Focusing on early tracking,[35] Hanushek and Wößmann (2005) find that it increases inequality in achievement at the secondary-school level once the inequality that already existed at the primary-school level is taken into account. This analysis was based on comparing results in the various recent international achievement tests at primary-school level (TIMMS 1995 and 1998, which tested 4th grade students in maths and science; PIRLS 2001, which tested 4th grade students in reading) with the corresponding secondary-school level results (TIMMS 1995, 1999, and 2003, which tested 8th grade students in maths and science; and PISA 2000/02 and 2003, which, for the purposes of this analysis, tested students in reading) for participating countries. These authors also found that early tracking had a significant negative effect on average reading achievement but obtained mixed results for mathematics and science achievement: only one of the three mathematics comparisons yielded a significant coefficient (and only at the 10% level of significance), which was negative, as for reading; in science, two of the three comparisons yield significant positive coefficients (although one of them is only significant at the 10% level). These results corroborate the PISA 2003 analysis concerning the impact of stratification on inequality of achievement and also point to a possible adverse effect on reading achievement. They suggest that early tracking may be contributing to the high social inequality of achievement in Slovakia highlighted by the PISA study as well the low average achievement in reading.

There are a number of reasons why socio-economic segregation between schools, which tends to be associated with early tracking, increases the impact of a student's socio-economic background on achievement. Schools with an above average socio-economic background offer a number contextual advantages relative to schools with a below average socio-economic background: advantaged schools are likely to have fewer disciplinary problems, better student-teacher relations, more talented and motivated teachers, and a general school climate characterised by higher performance expectations (OECD, 2004a, p. 190). In addition, peer interactions are likely to reinforce performance in advantaged schools as talented students interact with each other. Other possible explanations for system differentiation increasing the impact of a student's socio-economic background on achievement include that: students not meeting performance standards can be relegated to other schools, tracks or streams with lower expectations in a highly differentiated system rather than being helped to improve their performance; and teachers may be obliged to give more individual attention to students in an environment that has a greater variety of abilities and backgrounds (OECD, 2005a, pp. 404).

Stratification in the education system, and hence the impact of socio-economic background on achievement, could be reduced by delaying the age at which students are sorted into different tracks. For example, lower secondary education could be made comprehensive, with sorting into tracks delayed until age 16 (after the completion of compulsory education); this is the age at which first selection occurs in many other OECD countries. This would limit socio-economic segregation up to this age, providing children from disadvantaged socio-economic backgrounds with a school environment more conducive to good performance. Such a reform would also reduce the risk of late developers being locked into dead-end tracks. This is particularly important for social

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Table 3.2. **Intercorrelation matrix of averages of structural features across the OECD countries**[1]

	Number of school types or district educational programmes available to 15-year-olds	Proportion of 15-year-olds enrolled in programmes that give access to vocational studies at the next programme level or direct access to the labour market	First age of selection in the education system	Proportion of repeaters in primary education	Proportion of repeaters in lower secondary education	Proportion of repeaters in upper secondary education	Performance on the mathematics scale- Mean score	Performance on the mathematics scale-standard deviation	Total variance in student performance between schools	Strength of the relationship between the index of economic, social and cultural background, and student performance
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Number of school types or district educational programmes available to 15-year-olds.	1									
Proportion of 15-year-olds enrolled in programmes that give access to vocational studies at the next programme level or direct access to the labour market	**0.50**	1								
First age of selection in the education system	**0.76**	**0.52**	1							
Proportion of repeaters in primary education	**0.39**	0.27	0.23	1						
Proportion of repeaters in lower secondary education	0.22	0.02	0.11	**0.56**	1					
Proportion of repeaters in upper secondary education	**0.45**	0.22	**0.53**	0.23	0.27	1				
Performance on the mathematics scale- Mean score	0.09	0.26	0.23	0.21	0.17	0.40	1			
Performance on the mathematics scale- standard deviation	0.25	0.19	0.29	0.05	0.06	**0.58**	0.08	1		
Total variance in student performance between schools	**0.62**	0.63	**0.70**	0.15	0.16	**0.65**	0.14	**0.62**	1	
Strength of the relationship between the index of economic, social and cultural background, and student performance	**0.51**	0.24	**0.53**	0.29	0.17	**0.43**	0.19	**0.48**	**0.57**	1

1. Data marked in bold are statistically significant at the 0.05 level (2-tailed). The proportion of explained variance is obtained by squaring the correlations shown in this figure.
Source: OECD PISA 2003 database; OECD Education database.

equity because talented children from homes with less social capital tend to develop later, when they are less dependent on parental social capital. The authorities have started to reduce stratification by encouraging the integration of Technical Secondary School (TSS) and Vocational Secondary Schools (VSS). This process should be taken further by also integrating TSS, which like grammar school (GS) leads to qualifications for entry to tertiary-type-A studies, and GS. Under such an arrangement, the common general education courses in the GS- and TSS tracks could be offered to students in joint classes, with students separating for courses that are not offered in both tracks. Another reform to reduce stratification would be to strengthen the linkages between the different education tracks, which would make it easier for students to move up to more promising and demanding tracks. Streaming[36] should also be reduced, especially for younger children, to reduce the risk of a lack of stimulation and low expectations undermining performance of weaker students. Reducing streaming tends not to affect average achievement, but does narrow its distribution. More heterogeneous classes do, however, place greater demands on teachers, obliging them to show a greater interest in individual student learning (OECD, 2007).

Target increases in teacher salaries on overcoming skill shortages and attracting the best teachers to socio-economically disadvantaged schools

Education expenditure per (full-time equivalent) student in relation to GDP per capita has been low in Slovakia until recently (Figure 3.9).[37] Such expenditure varied from 69% of the OECD average for secondary education in 2003 to 88% for tertiary education; for primary education this proportion is 75%. Such low expenditure mainly reflected low teachers' salaries.[38] They were below the average wage in 2003 (Figure 3.10) and must have been very low indeed in relation to salaries for other employees with tertiary qualification given the very high earnings premium for tertiary education in Slovakia (see Figure 3.4). This situation has resulted in difficulties in recruiting and retaining teachers with skills that are valued in the private sector,[39] notably fluency in foreign languages (especially English), though not in enrolling students in teacher education.[40] Unqualified teachers taught up to 25% of primary classes, 30% of lower secondary classes, and 15% of vocational classes in 2001 (OECD, 2005b, p. 49).

Teacher quality has a major impact on student achievement (OECD 2005b, pp. 12 and pp. 26). An indicator of quality that is positively correlated with student achievement is teachers' own test scores (Hanushek, 2002 and 2003). At the same time, the academic ability of entrants to the teaching profession is related to teaching salaries and career prospects relative to those in other occupations (OECD 2005b, pp. 71).[41] Hence, making teaching financially more attractive not only enables the education system to recruit more teachers qualified to teach subjects in which there are presently many unqualified teachers, but also to recruit more able graduates, contributing to higher student achievement.

Salaries for teachers have been substantially increased in Slovakia in the past three years and now stand at around 5% above the national average wage. The Ministry of Education has submitted a proposal to increase average teachers' wages to 140% of the national average wage over the next few years, which would bring this ratio to around the OECD average; such a measure would cost SKK 13 billion (0.9% of GDP) if implemented immediately. It is also proposed to increase from 2007 the monthly salary offered to young language teachers with previous work experience from SKK 19 000 to SKK 26 000 (*i.e.,* to

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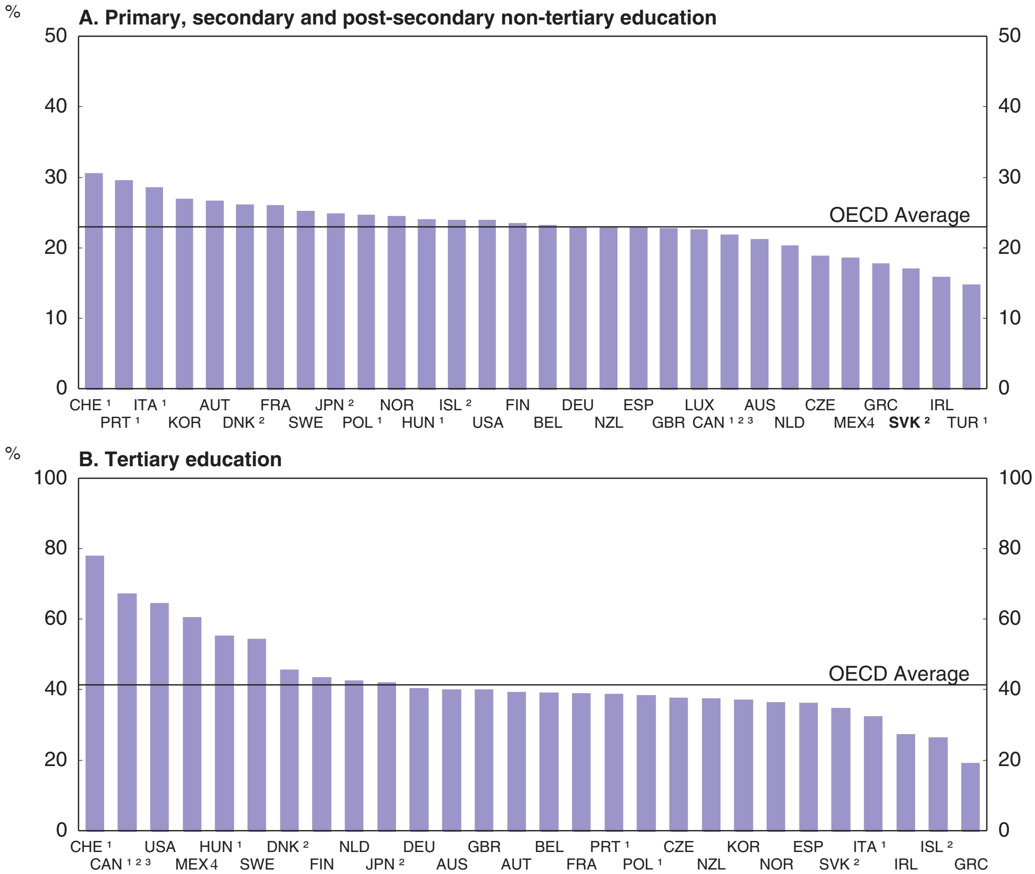
Figure 3.9. **Annual expenditure on educational institutions per full-time equivalent student relative to GDP per capita, 2003**



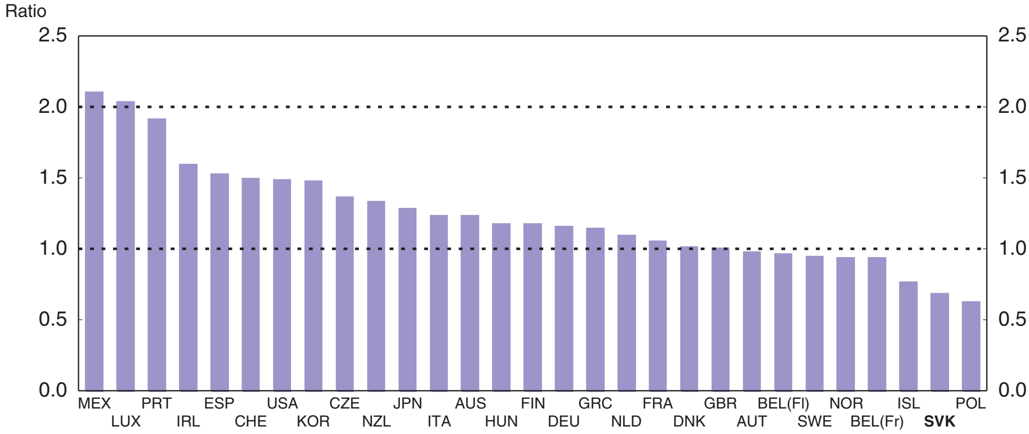
1. Public institutions only.
2. Post-secondary non-tertiary is included or partially included in tertiary education.
3. Year of reference 2002.
4. Research and development expenditure and thus total expenditure is underestimated.

Source: OECD (2006), *Education at a Glance*, Table B1.1C; OECD National Accounts Statistics.

about 25% above the overall average wage for teachers, but comparable to wages offered in private schools).[42] There is also to be wage differentiation based on teaching quality and effort, but not according to private sector demand for the skills in question. The planned pay increases would be more effective in overcoming skill shortages if this factor were taken into account, resulting in larger pay increases for foreign-language, mathematics, and science teachers.

For higher salaries to be as effective as possible in improving teacher quality, recruitment and selection mechanisms should be evaluated and reformed as necessary to ensure that they support the selection of the best candidates from the wider pool made available by the higher salaries. Similarly, it will be important to ensure that initial teacher education prepares candidates well and that teachers are encouraged to upgrade their skills continuously. Ensuring that school leadership is strong and given flexibility to manage while being held accountable for outcomes would also contribute to improving teaching quality. In this regard, school managers need to be given the competence to hire

Figure 3.10. **Ratio of teachers' salaries in lower secondary education to average earnings, 2003**[1]



1. Teachers' salaries after 15 years of experience.

Source: OECD (2003), *Education at a Glance*, Table D3.1 and OECD Taxing Wages database.

and fire teachers, which would require changing teachers' employment contracts so that they can be terminated.

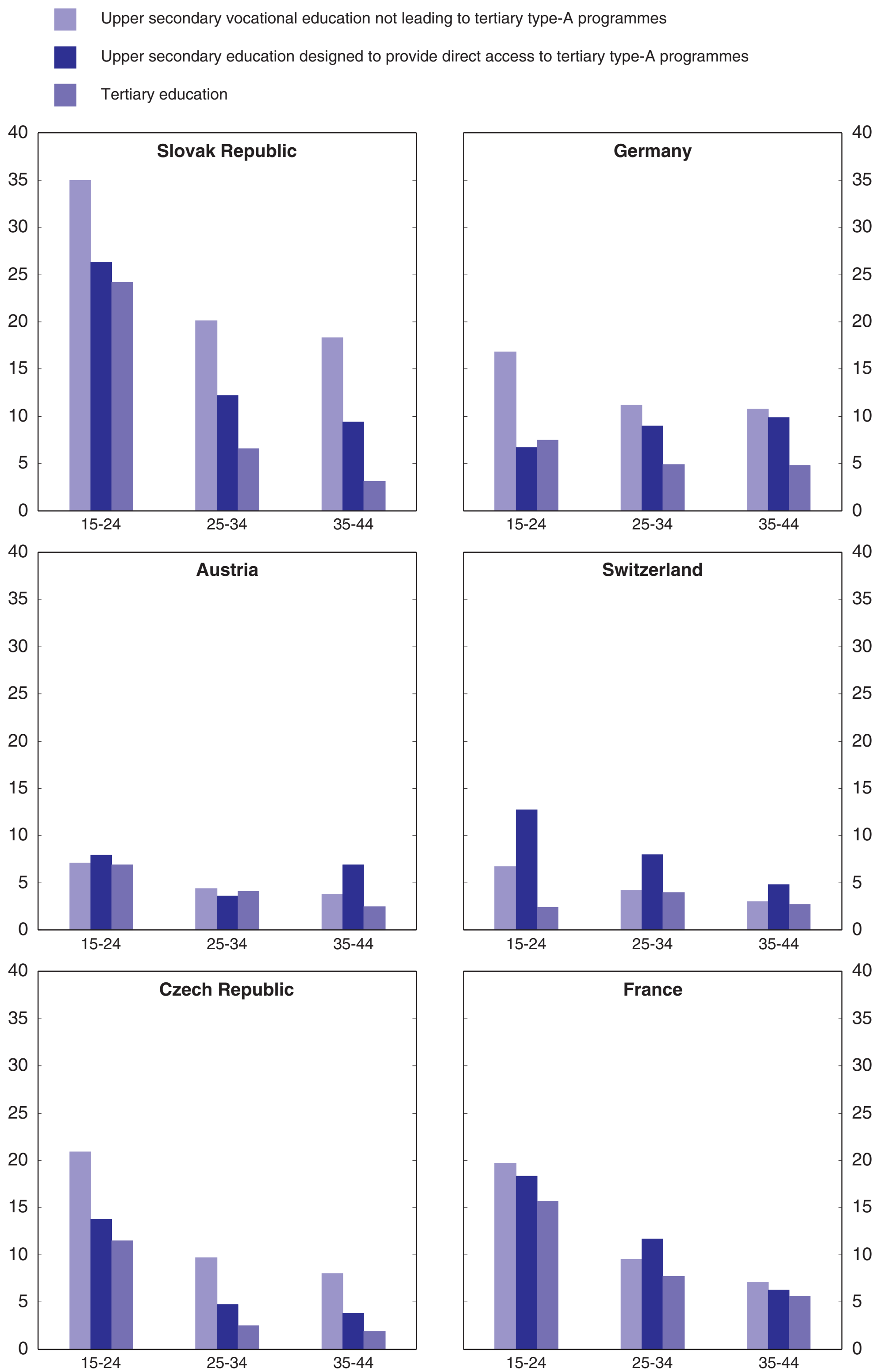
The authorities should also take the opportunity to offer substantially higher salaries to attract high quality teachers to schools with children from disadvantaged socio-economic backgrounds as such children stand to gain the most from high quality teaching (Rivkin, Hanushek, and Kain, 2001, based on US evidence). Presently, there is no difference in teacher salaries between public-sector schools. In other countries with such arrangements, schools with students from disadvantaged socio-economic backgrounds are likely to have a succession of inexperienced teachers as the latter seek to transfer to an easier environment as soon as possible. There is no reason to believe that the consequences of such arrangements would be any different in Slovakia. This raises concerns about continuity of the education programme in such schools (OECD 2005c, p. 49-50). Moreover, schools in Slovakia with children mainly from disadvantaged socio-economic backgrounds have the lowest proportion of qualified teachers (*ibid.*, p. 52). It is vital that salary increases to attract high quality teachers to difficult schools be targeted and not general.[43] Based on US evidence, the salary supplement needed to attract quality teachers to disadvantaged schools could be up to 50% (*ibid.*). Implementing such a policy would entail providing more funding per student to schools with students mainly from disadvantaged socio-economic backgrounds than to other schools instead of providing the same funding per student to all schools, as presently occurs.

Make vocational secondary school education more pertinent to labour-market requirements

Unemployment rates for persons with upper-secondary-vocational attainment not leading to tertiary-type-A programmes[44] are high in Slovakia, even in prime-age groups (Figure 3.11). Although these rates decline in successively older age groups, unemployment rates for persons with higher education attainment fall more quickly. As a result, the unemployment rate for graduates of vocational secondary school rises from 130% of the rate for other persons with upper secondary attainment in the 15-24-age group to almost double this rate for the 35-44-age group. The comparison with unemployment rates for

Figure 3.11. **Unemployment rates by level of education attainment and age group**

Per cent, 2004



Source: OECD Labour Force Statistics database.

persons with tertiary attainment is even more unfavourable. These ratios are particularly high by international comparison. They suggest that vocational secondary schools in Slovakia are not providing students with skills that are in demand in the labour market.

Vocational secondary schools (VSS), which prepare student for direct entry to the labour market rather than for tertiary studies, lost touch with enterprises following the fall of communism (Vantuch and Jelínková, 2004). There is no typical apprenticeship training in Slovakia and there are no apprentices (*ibid.*). Practical training is usually VSS-school based (*ibid.*).

Greater employer involvement in VSS education is the key to making such education more pertinent to labour-market requirements. Links have been established recently between employers and VSS in some sectors, notably the automobile industry. Automobile firms have worked with regional VSS to revise curricula so that students acquire the skills that are needed in the industry. These arrangements appear to be very promising, although it will be necessary to ensure that curricula retain enough general education content to facilitate subsequent retraining if that should be necessary. More progress still needs to be made in involving employers in other sectors in curricula development. It would also be helpful to develop an apprenticeship system for the practical training component of VSS programmes, as in most other countries.

Moves to amalgamate VSS and Technical Secondary School (TSS) in new entities known as Associated Secondary Schools (ASS), as discussed above, could help to raise education standards for students in the VSS track, thereby preparing them better for labour market entry. In the first year since 2002/2003, when it became possible to create ASS, 90 were created; by comparison, there were still 287 TSS and 214 VSS in 2003/2004 (Vantuch and Jelínková, 2004, p. 18).

Make tertiary education more attractive for technical secondary school graduates

A relatively high proportion of TSS students gaining the "*maturita*" certificate, which is a prerequisite for university admission, do not in fact enter university. TSS graduates represent 40% of entrants to tertiary education whereas they make up around two thirds of graduation rates from upper secondary programmes designed to prepare students for tertiary type-A education. This is what underlies the relatively large gap between graduation rates from programmes preparing for tertiary type-A programmes and actual entry rates to such tertiary programmes (see Figure 3.6). By contrast, the overwhelmingly majority of grammar school graduates enter tertiary programmes.

One of the reasons for a relatively high proportion of TSS graduates not going on to tertiary education is that there are few relatively short (2-3 years) occupationally oriented programmes (*i.e.,* tertiary-type-B) in Slovakia (see Figure 3.5).[45] Such programmes have played a key role in the expansion of tertiary education in recent years in many other countries. One striking example is Finland, where the creation of tertiary-B institutions contributed to the doubling of higher education enrolments in 10 years (1990-2000) (OECD, 2006d). The expansion in tertiary education has often occurred mainly through tertiary-B programmes in some other countries because: such programmes tend to be cheaper per student (except in France); institutions are geographically spread more widely, facilitating participation by less well-off students;[46] and such programmes are more attractive to students who are not so interested in academic learning as in quickly entering the labour market with valuable skills. Based on experience in other countries, tertiary-B programmes that are most in demand prepare students for "modern" occupations that require academic competences (jobs related to business, technology, high level of IT, health occupations and social services) as opposed to "traditional" occupations, which are predominantly manual.[47] Graduates in "modern" occupations benefit from higher wage rates and more stable employment than graduates in "traditional" occupations. Tertiary-B education in "modern" occupations can also be continued at the university level as universities offer equivalent programmes (Grubb, 2003, p. 13).

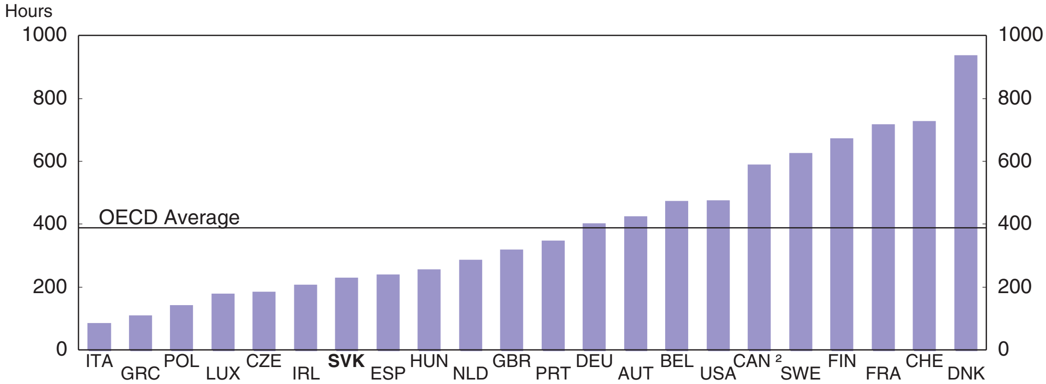
In developing tertiary-B programmes, there a number of features of such programmes in the Netherlands (higher professional education, HBO) that aim to prepare students well for working life (Marginson *et al.*, 2007) that would be worth emulating: employers are involved in the education process – they participate in supervisory boards of HBO institutions, advise on development of programmes and their quality assurance; students gain practical experience in the workplace; students' labour-market outcomes are monitored; and the dropout rate and timely completion of studies are taken into account for the distribution of financial support.

Another barrier to higher participation in tertiary education by TSS graduates is that they often fail to get high enough scores in entrance exams to be admitted to the most popular universities as full-time students, obliging them to pay high fees (around € 1 000 per year) as part-time students or to study elsewhere; these arrangements also discourage participation in lifelong learning. Such fees have been unofficial until now but the government plans to make them official. Popular universities have been tightly restricting access for full-time students, increasing scope for fee income from part-time students: in the most popular universities, only 20% of students applying for full-time studies are accepted, whereas 60% of applicants for part-time studies are accepted. To reduce this barrier to participation and to make the financing of tertiary education fairer – the students accepted as full-time students are likely to come from more socio-economically advantaged households and to have higher life-time earnings – tuition fees should be aligned for full-time and part-time students, as is the case in most other countries. In setting such fees, the authorities should take into account not only the costs of tuition but also potential earnings net of tax. Given that the tertiary-A-earnings premium is high, and that there is limited progression in the tax system[48] and relatively little redistribution through the social security system (old-age pensions are proportional to contributions, unemployment benefit duration is short), there is considerable scope to raise fees for such students without making such education unattractive. Concomitantly, fees for tertiary-B students would need to be set at lower rates to reflect lower earnings premiums. At the same time, loans with income-contingent repayments, as in number of other OECD countries, would need to be made available to ensure that liquidity constraints do not exclude some students and to reduce the risk on returns to private investment in tertiary education.

Increase participation in continuing vocational education and training (CVET) and lifelong learning (LLL)

Participation in non-formal job-related education and training is relatively low by international comparison (Figure 3.12). On average, Slovaks can expect to spend 225 hours over the course of a typical working life (from 25-64 years of age) in such training compared with an OECD average of 389. This low participation reflects a low number of hours per participant in CVET – the proportion of the labour force participating in CVET is around the OECD average (OECD, 2006a, Table C5.1a) – suggesting that participation is unlikely to have

Figure 3.12. **Expected hours in non-formal job-related training, 2003**[1]

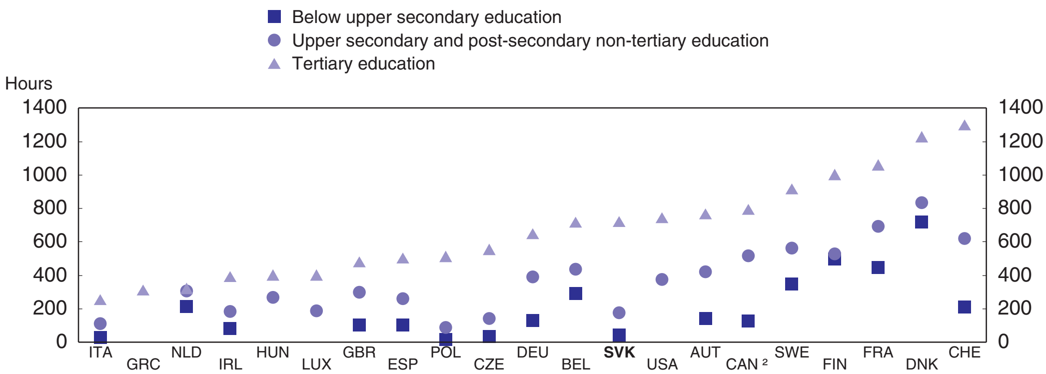


1. This chart shows the expected number of hours that individuals can expect to spend in non-formal job-related education and training over a typical working life (from 25-to-64 years old).
2. Year of reference 2002.

Source: OECD (2006), *Education at a Glance*. Table C5.1a.

a large effect on participants' productivity. The expected number of hours spent in CVET over a typical working life is particularly low for persons without tertiary education attainment (Figure 3.13). CVET is being used less than in wealthier OECD countries to develop the skills of persons with upper secondary attainment.

Figure 3.13. **Expected hours in non-formal job-related education and training by level of educational attainment, 2003**[1]



1. Expected number of hours in non-formal job-related education and training for 25-to-64-year-olds in the population by level of educational attainment.
2. Year of reference 2002.

Source: OECD (2006), *Education at a Glance*. Table C5.1a.

A barrier to development of the CVET/LLL markets is that there are no national policies introducing quality assurance (Vartuch, 2004). This may help to explain the particular weakness in participation in longer duration courses, where participants' investments and hence potential losses from making a poor choice are larger. Another weakness is that arrangements for supporting the validation of non-formal and informal learning within the national and European qualifications frameworks are not yet in place. Putting these arrangements in place is important for promoting equity because many of the least advantaged build up key competences and skills in non-formal and informal education EC

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(2006). Validating such learning would remove dead ends in learning pathways (*ibid*). It would also encourage greater participation in CVET courses by persons needing to complement their validated learning with additional study to obtain recognised qualifications. The government should ensure that official accreditation is available for programmes that meet certain minimum standards and should give priority to putting in place arrangements for the accreditation of non-formal and informal learning within the national and European qualifications frameworks. This may necessitate some clarification of responsibilities for LLL between the Ministry of Education and the Ministry of Labour.

Another factor that may help to explain the weaker participation in CVET in Slovakia than in most other countries is that there are no fiscal incentives (Vartuch, 2004). While firms are able to deduct the costs of their employees participating in training, employees are not able to do likewise. A neutral tax policy would be to allow them to deduct costs for certified training against future earnings.

Box 3.1. **Policy recommendations to improve education outcomes**

Improving student achievement and reducing the impact of socio-economic background

The planned reform to make kindergarten free of charge from age 5 should be taken further by encouraging increased participation of children from lower socio-economic backgrounds from age 4. The government should ensure that municipalities not offering an adequate supply of kindergartens are financially able to do so and in fact do so. This reform is vital for improving Roma education outcomes.

Roma children should be helped to integrate into the education mainstream by:

- Extending the PHARE pilot project that identified children that had been misplaced in specialised education and helped them to reintegrate the education mainstream to all special schools and continuing to provide specialised assistance to children transferring to standard primary schools to enable these children to keep up with the standard curriculum.
- Eliminating financial incentives for schools to have children classified as participating in special education, instead making the extra payments based on children's socio-economic backgrounds.
- Increasing the supply of teaching assistants and giving them more training; they help pupils to overcome language, social, and health barriers to education.

Stratification in the education system should be reduced by:

- Taking the recent reform permitting the integration of technical secondary schools and vocational secondary schools further by also encouraging the integration of technical secondary schools and grammar schools, with the general education courses common to both tracks being offered jointly.
- Delaying the age at which first selection into education tracks is made until 16, and reducing streaming of young children.

For increases in teacher salaries to be as effective as possible in improving teacher quality, especially in schools with children from disadvantaged socio-economic backgrounds, the authorities should:

- Ensure that recruitment and selection procedures are well designed to recruit the best candidates, that initial teacher education prepares candidates well, and that teachers are encouraged continuously to upgrade their practice;

Box 3.1. **Policy recommendations to improve education outcomes** *(cont.)*

- Give school principals the flexibility to manage, notably by being able to hire and fire teachers, and hold principals accountable for outcomes;
- Give the largest salary increases to high quality teachers willing to teach in schools with children from disadvantaged backgrounds (such children stand to gain the most from high-quality teaching) and to teachers in subjects in which there are skills shortages (foreign languages, mathematics and science).

Making vocational secondary school education more pertinent to labour-market requirements

Employer involvement in vocational secondary school curricula development should be increased to adapt such education better to labour-market requirements. The automobile industry's experience with such involvement has been very positive but needs to be emulated in other sectors.

An apprenticeship system for the practical training component of vocational secondary school programmes should be developed.

Making tertiary education more attractive to technical secondary school graduates

Short (2-3 years) occupationally oriented programmes (i.e., tertiary B) should be developed. Such programmes are likely to provide more attractive pathways to tertiary attainment for many technical secondary school graduates than the more academic (tertiary-A) programmes almost exclusively on offer.

The high "unofficial" tuition fees paid by part-time students, who are often technical secondary school graduates, in popular universities should be banned. The government should also reconsider its policy of not introducing tertiary fees for full-time students as this reduces incentives for efficiency in the tertiary education sector and undermines social equity, the greatest benefits going to the better off. *Any such fees should be aligned for full-time and part-time students and be set so as to make a significant contribution to costs* in light of the high tertiary earnings premium in Slovakia and the limited progression in the tax system.

Loans with income-contingent repayments should be made available to ensure that liquidity constraints do not exclude some students and to reduce the risk on returns to private investment in tertiary education.

Increasing participation in continuing vocational education and training (CVET)/lifelong learning (LLL)

The government should ensure that official accreditation is available to programmes meeting certain minimum quality standards.

Priority should be given to putting in place arrangements for the accreditation of non-formal and informal learning within the national and European qualifications frameworks.

Employees' costs of participation in CVET/L should be made tax deductible.

Notes

1. High inequality in educational opportunity can also be seen in the much higher odds for students from less favourable socioeconomic backgrounds (represented by the index of economic, social and cultural status of students, ESCS) performing at the lowest proficiency levels in mathematics, the subject for which results were analysed in depth in the 2003 PISA study, than for students from more favourable backgrounds than in most other countries (OECD 2006a, Table A6.1).
2. The proportion of variation in socio-economic background that is between schools (η^2) can be considered as a measure of segregation by socio-economic background (Wilms and Paterson, 1995): theoretically, η^2 can range from zero, in which case the distribution of socio-economic background

is the same in every school, to one, in which case students within schools have the same socio-economic background but the schools vary in their average socio-economic background (OECD, 2004a, p. 205). $1 - \eta^2$, which can be considered as an index of socio-economic inclusion, is low in Slovakia (*ibid.,* Table 3.5, column 12).

3. The overall gradient (β_t) between student performance and socio-economic background is related to the between- (β_b) and within- (β_w) school gradients through the segregation (η^2) and inclusion ($1 - \eta^2$) indices as follows (*ibid.*, footnote 18, p. 205):

$$\beta_t = \beta_b * \eta^2 + \beta_w * (1 - \eta^2).$$

4. A similar picture emerges from data on new tertiary graduates as a proportion of the population aged 20-29: this proportion was 2.7% for males and 3.7% for females in 2004, compared with OECD averages of 3.7% and 5.1%, respectively.
5. Tertiary-type-A programmes lead to university degrees corresponding to a Bachelor's or a Master's degree in the Bologna system. These degrees are classified in the International Standard Classification of Education (ISCED) as ISCED 5A. Such programmes take at least three years to complete (for a Bachelor's degree or its equivalent).
6. Assuming that a person with tertiary attainment earns 167% of the earnings of a person with upper secondary attainment, the tax reform reduced the tax rate on a single tertiary graduate's additional labour earnings by 8.1 percentage points from 2003 to 2005, to 43.3%. By contrast, the tax rate on average earnings of a single person only declined by 4.6 percentage points to 38.3%; this tax rate is also relevant because it affects the opportunity cost of lost earnings while studying. Hence, the tax reform increased the return on tertiary-type A education.
7. Tertiary-type-B programmes are classified at the same level of competencies as tertiary-type-A programmes but are more occupationally oriented and usually lead to direct labour market access. The programmes are typically shorter than type-A programmes – usually two to three years – and generally are not intended to lead to university-level degrees. Such programmes are classified as ISCED 5B.
8. Net entry rates (OECD, 2006, Table C2.1) represent the proportion of persons of a synthetic age cohort who enter a certain level of tertiary education at one point during their lives. The net entry rate is defined as the sum of net entry rates for single ages. The total net entry rate is therefore the sum of the proportions of new entrants to tertiary education aged i to the total population aged i, at all ages. Since data by single year are only available for ages 15 to 29, the net entry rates for older students are estimated from data for 5-year age bands. This approach gives lower entry rates than reported in the Annual Report on the State of Higher Education in Slovakia (Ministry of Education of the Slovak Republic, 2006), where entry rates are calculated as new entrants of all ages relative to the population aged 19. Such a calculation yields an entry rate to tertiary education (full-time and part-time) in 2005 in Slovakia of 66.9%.
9. A survey examining the education standard of the Roma population in 1999 in the Eastern Slovak district of Gelnica showed that a relatively high percentage of Roma parents (40.8% of Roma mothers and 41.2% of Roma fathers) had not completed even primary education. Approximately the same proportion of Roma parents had completed primary education, and 14.6% of Roma mothers and 15.5% of Roma fathers had completed vocational training. Only 1.3% of Roma parents have completed full-fledged secondary education, which in Slovakia is considered to correspond to completing a four- or five-year ISCED 3A or 3B course with a "maturita" school leaving certificate (Mrázová, 1999, reported in Dluhošovà, 2005).
10. Actual numbers are probably slightly higher as this is based on self-reporting.
11. Vaño (2005) estimates that Roma make up 14.3 % of compulsory-school-age children (6-15) in 2005.
12. The share of children below the age of 15 in the Roma population is 34% and increasing; by contrast, this share in the total population is 18% and declining (Vaño, 2005, for this and the following sentences). Children make up 40% of the Roma population in segregated settlements, 33% in partially integrated communities and a similar proportion to the national average for integrated Roma. 50 000 children below 15 live in segregated settlements, 65 000 in partially integrated communities and 15 000 in a completely integrated environment.
13. Access to quality ECEC arrangements also facilitates increased labour-force participation and hours worked by women by making it easier for mothers of young children to reconcile family and work responsibilities. It also has a positive impact on fertility rates (d'Addio and Mira d'Ercole, 2005).

14. Chiswick and DebBurman (2006) and Bainbridge *et al.* (2005) find that family income is one of the predictors of enrolment in early education and care programmes where they are not free of charge.

15. Mizsei (2006, p. 2) reports states "that the conditions in which most Roma live are alarming: long-term unemployment, very often linked with extreme poverty, lack of hygiene and basic health care, and a strong dependency on social assistance." The State School Inspection reports that Roma children's basic biological needs (*i.e.*, food, clothing, footwear etc) are often unsatisfied (Dluhošovà, 2005, p. 55). Unemployment in Roma settlements is often around 100%. Settlements often have neither running water nor sanitary facilities. Another indicator of poverty is the high child mortality rate for Roma (20 per 1000), which is twice the national average; in settlements, the rate rises to 2.5 times the national average (Vaño, 2005, p. 29).

16. Many Roma do not speak Slovak at home. They frequently have difficulty understanding instructions (in Slovak) at primary school – the State School Inspection has found that "…, even in higher grades of primary schools, Roma pupils encounter problems with understanding read text" (Dluhošovà, 2005, p. 54). The Inspection concluded that "Roma pupils' substandard language skills and poor vocabulary negatively affect their education results" (*ibid.*, p. 55).

17. Free meals for children from low-income families would be particularly helpful for Roma children, who probably often arrive at school hungry judging by the experience of Roma in Hungary reported in Rona and Lee (2001). By ensuring that they are adequately nourished, education would undoubtedly be more efficient and their long-term educational development and health status enhanced. Free meals in Hungary proved effective in attracting increased participation in pre-school of children from low-income households, including Roma children.

18. A central empirical conclusion of Carneiro and Heckman (2003, p. 7) for the United States is that "at current investment levels, efficiency in public spending would be enhanced if human capital investment were directed more toward the young and away from the old, unskilled and illiterate persons for whom human capital is a poor investment".

19. "Spending on pre-primary and compulsory education significantly narrows income inequalities as it is the population in the lower tail of income distribution that benefits the most. Expenditure on tertiary education sometimes makes no difference to income inequality, but in many countries it favours the affluent, widening income inequality" (OECD, 2007, based on OECD, 2006c); unfortunately, Slovakia was not included in this analysis.

20. "Countries charging for early childhood education but not for tertiary education need to review their policies, since this approach does not appear consistent with equity" (OECD, 2007).

21. The EC encourages countries to invest more in pre-primary education and to revise their funding policies in the tertiary sector towards more equitable outcomes – free access to higher education does not necessarily guarantee equity.

22. Research indicates that young children emerge from early childhood care environments with better language skills when these environments are staffed by well educated personnel (Shonkoff and Philips, 2000; EPPE, 2004).

23. The programme returned $5.70 through to age 27 per dollar spent and is projected to return $8.70 through to the end of participants' lives per dollar spent (Carneiro and Heckman, 2003, p. 46).

24. Not only are many Roma children directly placed in special primary schools at 6 years of age, many others are transferred to such schools or otherwise removed from the education process during the course of primary education. According to the Methodological Centre Prešov (MPC) survey in 2000, the proportion of Roma children in primary school gradually decreases from 11.1% in the fist year to 6.8% by the 9th year (Salner, 2005, p. 7).

25. Indeed, there is a growing body of evidence that the placement of a large proportion of children in special education is not justified and that they do not suffer from any mental handicap (Salner, 2005, p. 9).

26. This conclusion has been borne out by a number of international and domestic organisations (ERRC, SGI). Following the Slovak Governance Institute's petitions, the State School Inspection investigated eight schools suspected of practicing discrimination and concluded that these suspicions were justified (Salner, 2005, p. 9).

27. Their presence is also important to help combat the high rate of truancy among Roma children: a survey conducted by the Methodological Centre Prešov (MPC) in 2002 established that 55% of all absent classes were missed by Roma pupils and that their share of truancies was 95%, even though Roma children only made up 35% of the population in these schools (Dluhosva, 2005).

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28. Thirty per cent of Roma live in segregated settlements, where there is normally extreme poverty – often there is no running water or sanitary services. Fifty per cent of Roma are semi-integrated, and the remaining 20% are fully integrated into society (Vano, p. 27).
29. See row 9 and columns 1-3 and 6, row 10 and columns 8-9.
30. See row 7.
31. The differentiation index is a measure of the degree of stratification in school systems. This index is derived by averaging the standardised (mean zero, standard deviation of one) indices of first age of selection, the number of school types or distinct educational programmes available to 15-year olds, the proportion of grade repeaters at different levels, and the proportion of 15-year olds enrolled in programmes that give access to vocational studies at the next programme level or direct access to the labour market (OECD 2005a, Table D6.1, footnote 3). Values of the index are reported in the final column of Table D6.1 in OECD (2005a).
32. The proportion of the variation in socio-economic background that is between schools, η^2, is 32% in Slovakia, compared with an OECD average of 25% (OECD, 2004a, Table 3.5, 12th column – note that the "inclusion index" is defined as $1 - \eta^2$).
33. The correlation coefficient between OECD countries' socio-economic segregation between schools and average PISA scores in mathematics is –0.43.
34. The correlation coefficient between OECD countries' socio-economic segregation between schools and the impact of socio-economic background on students' PISA scores is 0.30.
35. This is defined as tracking before the age at which the relevant secondary-school test is performed. For PISA, this is before age 15, while for TIMMS it is before age 14.
36. Streaming refers to sorting students within a track and school into different classes most often based on academic performance.
37. Low expenditure per (full-time equivalent) student in relation to GDP per capita is not explained by Slovakia's relatively low level of GDP per capita – there is no relationship across OECD countries between these variables based on the following regression estimates (t-statistics are in brackets):

$$\underset{(10.462)}{\text{EPSPSNT} = 20.586} + \underset{(1.278)}{0.087}\ \text{GDPC} + \varepsilon$$

No. of observations = 30; Adjusted $R^2 = 0.021$.

$$\text{ET} = \underset{(4.281)}{39.322} + \underset{(0.335)}{0.112} + \varepsilon$$

No. of observations = 28; Adjusted $R^2 = -0.034$.

Where:

EPSPSNT is annual expenditure on primary, secondary, and post-secondary non-tertiary education per full-time equivalent student relative to GDP per capita in 2003 (as shown in Figure 3.10, panel A);

ET is annual expenditure on tertiary education per full-time equivalent student relative to GDP per capita in 2003 (as shown in Figure 3.10, panel B); and

GDPC is GDP per capita converted to dollars at PPP exchange rates.

38. Again, there is no relationship across OECD countries between the ratio of teachers' salaries to average wages and GDP per capita (in PPP terms) based on the following regression estimates (t-statistics are in brackets):

$$\text{SR} = \underset{(4.574)}{1.091} + \underset{(0.318)}{0.003}\ \text{GDPC} + \varepsilon$$

No. of observations = 27; Adjusted $R^2 = -0.036$

Where:

SR is the ratio of teachers' salaries to average wages; and

GDPC is GDP per capita converted to dollars at PPP exchange rates.

39. Santiago (2004) provides (non-Slovak) empirical evidence for the importance of salaries and alternative employment opportunities for the attractiveness of teaching. He finds that teacher salaries relative to those in other occupation influence: the decision to become a teacher after graduation; the decision to return to teaching after a career interruption; and the decision to

remain a teacher. Relative earnings seem to be less important when the decision is whether to enrol in teacher education or another course (Hanushek and Pace, 2005).

40. The number of students entering initial teacher education programmes in Slovakia increased by more than 40% between 1995-97 and 1999-2001, one of the largest increases in the OECD (OECD 2005b, Figure 3.8). Many of these students subsequently choose not to enter the teaching profession. There is international evidence that enrolment in initial teacher education programmes is often a second- or third choice or a fall-back option in case the graduate labour market deteriorates (*ibid*., pp. 53-54).

41. Corcoran *et al.* (2002) found that in the United States the likelihood that a female from the top of her school class will eventually enter teaching fell from 20% in 1964 to 4 % in 1992 owing to the substantial increase in other job opportunities for talented women over this period. Similar conclusions are reported by Stoddard (2003). For the UK, Nickell and Quintini (2002) conclude that the decline in teachers' relative salaries has been associated with a fall in the average academic quality of males entering the profession between the late 1970s and the early 1990s. Leigh (2006) finds that a one per cent rise in teacher starting salaries boosts the average aptitude of students entering teacher education in Australia by 0.6 percentile ranks, with the effects being strongest for students near the median.

42. The latter measure aims to attract some of the many young lawyers able to work in foreign languages.

43. Empirical evidence from the United States shows that "… salaries relative to other districts rather than the absolute level of salaries is the important factor, as salaries appear to have a larger impact on the probability of switching than on exiting altogether" (Hanushek, Kain and Rivkin, 2001, pp. 19-20).

44. In Slovakia, persons with such attainment are graduates of vocational secondary schools. Programmes in these schools do not lead to either tertiary-A or tertiary-B programmes.

45. This is considered to be one of the major bottlenecks in the education system that is contributing to low enrolment in higher education (Vantuch and Jelínková, 2004, p. 32).

46. For example, in Norway there are only four universities but 26 state colleges (tertiary B).

47. These occupation definitions come from Grubb (2003). In the United States, 85% of community college students enrol in courses leading to "modern" occupations (Grubb, 2003).

48. Taxation of the extra labour earnings that tertiary-A graduates achieve can be approximated by assuming that they earn on average 167% of the earnings of persons with upper secondary attainment; this premium is somewhat below that in Slovakia (see Figure 3.4) but is representative for many OECD countries. Taking the case of a single taxpayer, taxation of the additional labour earnings achieved by graduates over and above upper secondary earnings is 43.3% in Slovakia (OECD Taxing Wages Database, 2005). This rate is comparable with that in the United Kingdom (42.5%). However, whereas 30% of funding for tertiary education institutions in the United Kingdom in 2003 came from private sources, this proportion was only 14% in Slovakia (OECD, 2006a, Table B3.2b). On the other hand, countries such as France and Germany in which private sources of finance for tertiary education are relatively low, at 19% and 13% respectively, have higher taxation of graduates' additional labour earnings: such tax rates are 57.6% and 56.3%, respectively.

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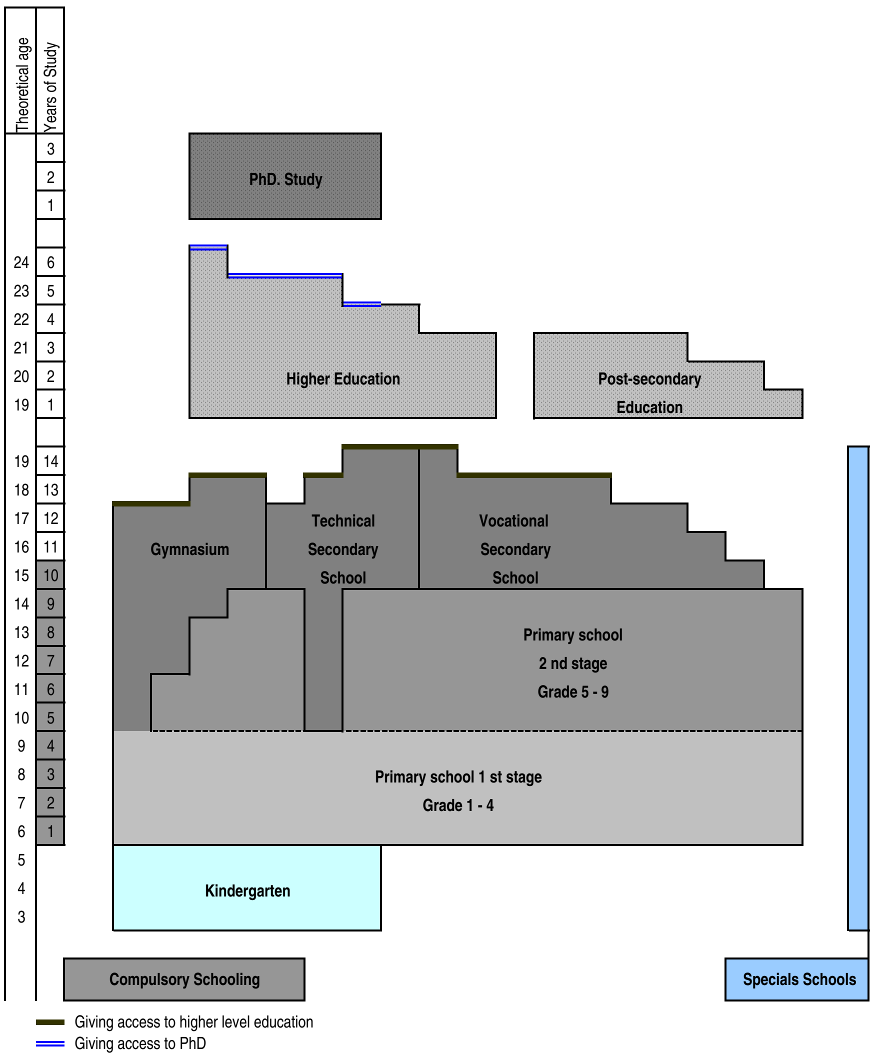
ANNEX 3.A1

Structure of the school system



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Chapter 4

Renewing policy initiatives to strengthen product market competition

While general economic regulation does not create substantial impediments to competition, making sector-specific regulation in the network industries and in the liberal professions more competition-friendly could make a significant contribution to boosting consumer welfare and productivity growth as well as raise the share of labour earnings in GDP. In the energy industry, discrimination of market entrants needs to be more effectively prevented and the national market more closely integrated with neighbouring countries. In telecommunications measures to foster the entry of new market participants need to be taken more quickly and the independence of the regulator should be strengthened. In the liberal professions price regulation and entry barriers need to be removed including through abolition of compulsory chamber membership. Public sector reform could help reap the benefits from competitive product markets, by reducing administrative burdens on enterprises, strengthening contract enforcement through reform of the judicial system and encourage competition in public procurement.

The Slovak Republic has developed a relatively competition-friendly framework of economic regulation for product markets, reflected in relatively favourable OECD product market regulation indicator values in 2003, and reforms in this area have continued until 2005, including progress in privatisation, partial liberalisation of professional services and steps to open up network industries to competition (see the 2005 *Economic Survey* of the Slovak Republic). However, competition in network industries has not developed to the extent seen in OECD countries where aggressive policies to promote competition in this sector have been implemented, although the telecom, energy and rail network industries have, in principle, been opened to market entry. The government has emphasised that it intends to improve framework conditions for competition, notably in the energy sector, where it has noted that prices remain high relative to production costs. Scope also remains to improve regulatory policy in the telecommunications industry and preconditions for competition to arise in the railways sector are not yet in place. Where framework conditions for competition are in place privatisation would enhance the benefits of competition. Moreover, entry barriers for businesses need to be reduced, lowering administrative burdens on enterprises and reducing entry costs in the liberal professions. Policy initiatives are needed in all of these areas.

The competition-friendly policy stance towards economic regulation has contributed to the strong productivity growth in the Slovak Republic.[1] Contributions to productivity growth have, however, been relatively modest in the retailing and the energy sectors. In the retailing sector, large surface outlets – which have made a significant contribution to productivity gains in OECD countries where such outlets are not restrictively regulated, such as in the neighbouring Czech Republic, – developed relatively late, from about 2000 onwards. The contribution of these outlets to productivity growth is thus not yet visible in trend productivity growth. In 2005 the density of large-scale grocery retailing outlets approached the level of high income European countries.[2] Moreover, economic regulation of the retail industry – as reflected in the OECD indicator on regulation of the retailing industry – is not restrictive in international comparison. In the energy sector, significant scope remains to raise productivity performance and avoid excessively high prices through more intense competition, as discussed below.

Privatisation of government stakes in the business sector should resume

The government has halted privatisation of government stakes in the business sector and plans to maintain government ownership in those sectors that it considers to be strategic for the Slovak economy. While no decision has yet been reached over which sectors will be deemed strategic, no major privatisation is currently planned. Government ownership is still substantial in all network industries. The government retains a share of 34% in the main electricity producer (*Slovenské Elektrárne, SE*). The government also owns majority shares of 51% in the 3 regional electricity distribution and retailing companies, although it relinquished managerial control to the private minority owners. It also owns a

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51% share in the national gas distribution monopolist and a 49% share in the fixed line telephony incumbent, which in turn owns the largest mobile telephone operator.

To strengthen economic performance, privatisation is desirable in all sectors in which competition is established or can be established through an adequate regulatory framework. Moreover, government ownership of vertically integrated companies offering services in network industries generate perceptions of conflict of interest which can reduce the willingness of new firms to enter the market. Conflicts of interest can arise because access of new market entrants to the networks needs to be ensured in the regulatory framework provided by the government, while access of private sector enterprises to the network may reduce profits of the state-owned incumbent. These arguments suggest that privatisation of the telecommunications incumbent should proceed. Privatisation of remaining government shares in companies active in electricity generation and trade as well as in gas trade should be pursued as part of a strategy to strengthen framework conditions for competition (see below). If the framework conditions for competition are not in place, increasing private ownership would increase the risks of abuse of market power. Moreover, privatisation of companies with monopoly power would result in the transfer of monopoly rents from the government to the private sector, so that the resulting reduction in government revenue shortfall would, in principle, need to be offset through distortionary taxation. The prerequisites for competition are not in place in railway transport services, especially with regard to passenger transport. Thus, privatisation decisions concerning the railways can be postponed until framework conditions have sufficiently improved, at least in passenger transport services. Moreover, no consensus has yet emerged as to the degree of vertical integration of network and transport services that is desirable in the railways.[3]

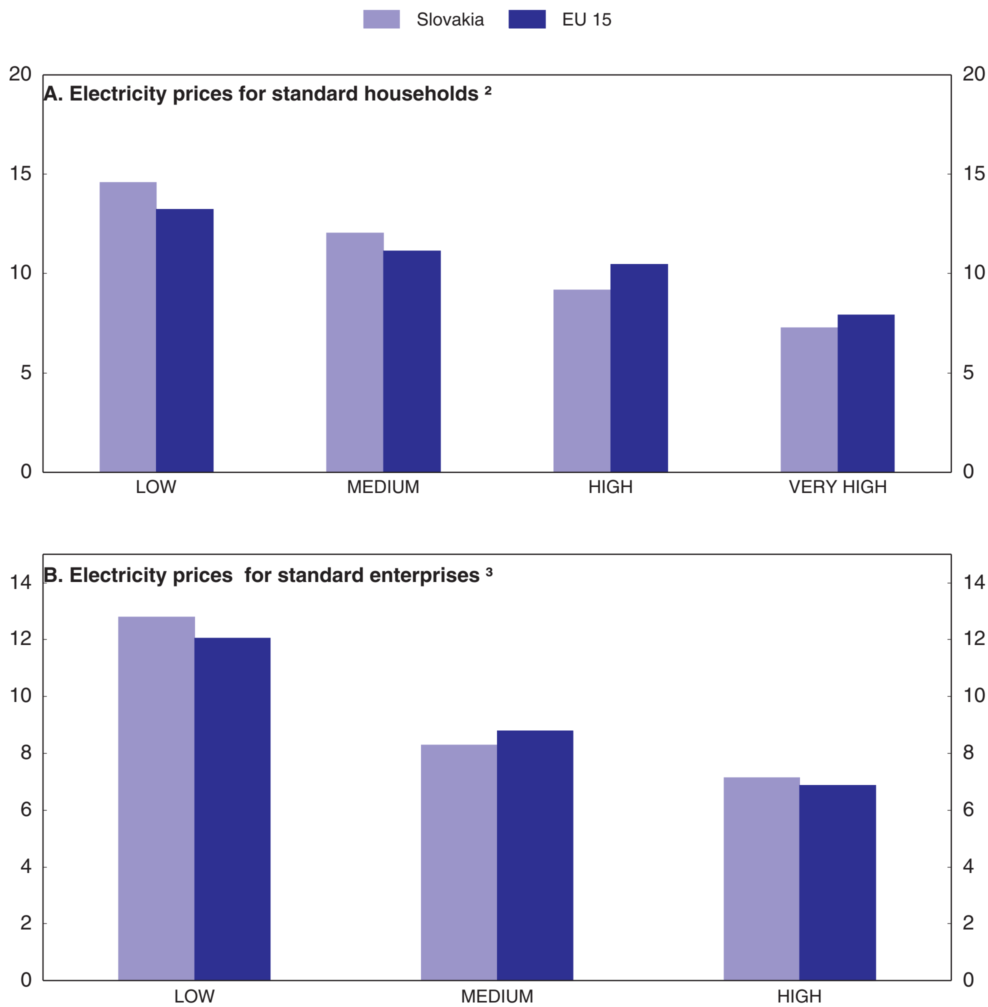
Competition in energy markets is still weak

The Slovak Republic implemented wide-ranging reforms to introduce competition in energy markets in recent years. Managerial separation has been put in place in both the gas and electricity transport networks. Legal unbundling of companies operating gas and electricity network is virtually complete, with legal unbundling of electricity distribution networks to be finalized by July 2007, in line with the deadlines set in European Union legislation. Moreover, ownership of the electricity transmission network was legally unbundled from ownership of electricity generation assets before the partial privatisation of the incumbent company owning most generation capacity (SE), which allows ownership separation to be achieved in electricity transmission. Indeed, experience from other OECD countries has shown that ownership separation of electricity transmission from generation is a prerequisite for effective competition to arise in electricity generation.[4] A network regulator, introduced in 2002, is in charge of regulating network access conditions. Retail prices for electricity and gas for business customers have been market-determined since 2004, whereas retail prices for private households are still set by the network regulator.

Unregulated electricity prices for business customers were mostly above the average of European Union countries in 2006 (Figure 4.1), although the impact of relatively high oil and gas prices on the cost of electricity generation across EU countries was less pronounced in the Slovak Republic, owing to the relatively large share of nuclear and hydroelectric energy in electricity generation.[5] Competition in both the electricity and gas industries has not arisen to a significant extent. Very few industrial customers have

Figure 4.1. **Electricity prices excluding taxes**

Euros per 100 KWh, 2006[1]



1. Taxes are excluded. Arithmetic average of half-yearly 2006 data.
2. The selected standard households are classified "Low" with an annual consumption of 1.2 MWh, "Medium" with 3.5MWh, "High" with 7.5MWh and 'Very high' with 20 MWh.
3. The selected standard industries are classified "Low" with an annual consumption of 30 MWh, "Medium" with 1.25 GWh and "High" with 24 GWh.

Source: Eurostat and OECD calculations.

switched suppliers and the three regional electricity utilities have hardly engaged in the retailing business outside their regional distribution networks. However, competition may begin to intensify, as recently a large car manufacturer switched to a supplier of electricity which does not own the distribution network in the region concerned.

Steps need to be taken to overcome the adverse effects of geographic market segmentation…

The geographic segmentation of energy markets contributes to the lack of competition. Indeed the energy market in the Slovak Republic is relatively small, reducing the number of potential market players. The conditions for integrating markets across national borders are not yet in place. High concentration aggravates the consequences of geographic segmentation. The electricity generation incumbent was privatised as a monopolist without prior partial divestiture of its generation assets and currently owns 80% of generation capacity. The remaining electricity generation capacity is mostly owned by the regional electricity utilities and is thus vertically integrated with the distribution network, giving the major purchasers of wholesale electricity incentives to discriminate against entrants in electricity generation. The gas retail business is entirely held by the incumbent company owning the distribution network.

While the interconnection capacity of the electricity grid is abundant on the border with the Czech Republic, some bottlenecks still exist along the Hungarian and Polish borders and interconnection is weak with Austria. Moreover, the electricity transmission network on which balancing energy[6] is supplied is confined to the national borders of the Slovak Republic, which tends to strengthen the monopoly position of the electricity generation incumbent. Widening the transmission network over which electricity demand and supply are balanced would allow more suppliers of balancing energy to compete with the electricity generation incumbent. Moreover, establishing a short-term trading facility would encourage the emergence of a liquid spot market for electricity. To obtain a sufficient market size, it would be necessary to set up such a trading facility with the Czech Republic, as pointed out in the report by the International Energy Agency.[7] In the gas industry, all gas imports are sourced from Russia. A further option to strengthen competition in electricity generation would be to require divestiture of assets by the electricity generation incumbent, in particular, if international market integration does not bring about sufficient competition. Consideration should be given to requiring regional electricity distribution companies to divest their electricity generation capacity.

... as well as measures to strengthen the regulatory framework

In response to weak competition in energy markets the government plans to extend regulation of gas and electricity retail prices paid by private households by 5 years and to reintroduce regulation of retail prices paid by business customers as well as regulation of wholesale prices of electricity for a period of 3 years. Subjecting wholesale and retail prices to regulation entails risks. Extending price regulation may delay the development of competitive market structures, for example, by deterring the entry of new firms to the market. These considerations apply particularly to the electricity market, where gains from competition are likely to be larger, and conditions are more conducive to competition.[8] Moreover, extending electricity price regulation could potentially give rise to risks of an energy supply crisis if the margin between costs and prices is squeezed, especially if political considerations were to influence regulated prices. An alternative to extending price regulation is to ensure that market-dominating operators are subject to investigation for abuse of market power if there are suspicions for such abuse.

The government has modified the institutional framework of energy market regulation. In particular, the government has split the regulator into two separate units, creating a separate Regulatory Board, which is independent from the Regulatory Office for Network Industries (RONI). The Regulatory Board is in charge of developing guidelines on regulation policy within the existing legislative framework and takes decisions on price regulation rules, while RONI is in charge of implementing rules set by the Regulatory Board. However, economies of scope between determining network access rules and their implementation are likely to be significant. Indeed, it has been recommended – for example in Germany – to reduce the extent to which details of the regulation process are prescribed to the energy market regulators so as to enable regulators to learn from regulatory practice. At the same time, it will need to be ensured that independence of the Regulatory Board from the government is safeguarded. The European Commission has voiced concerns that the independence of regulation from the government might be compromised. The institutional setup of energy should ensure that economies of scope between designing and implementing network access rules are safeguarded.

Creating the appropriate framework conditions for competition to work should therefore be priority. Network access prices are not high in international comparison,[9] suggesting that non-price discrimination of competitors by integrated distribution network owners plays the most important role in explaining the low propensity to switch suppliers. Nonetheless some further room exists to lower electricity distribution network access prices. At present, network access price regulation is based on price caps set for a period of three years, based on the assessment of operating costs of each operator. In electricity distribution, further scope for reducing network access prices could be exploited by determining access prices on the basis of the costs of the most efficient regional electricity distribution network operator. Observers have also noted that the regulated cost of balancing energy is kept high by high allowances for administrative costs of the electricity generation incumbent.[10] Consideration should be given to using cost benchmarks, in addition to price-caps, in the regulation of the regional distribution networks. The effectiveness of cost benchmarks could be raised further by seeking to take into account distribution networks in neighbouring countries.

Significant scope exists to reduce non-price discrimination. For example, ensuring that network owners make information on access conditions available to potential market entrants is crucial for competition to arise, as vertically integrated owners of networks would otherwise have an information advantage over market entrants. A recent report from the European Commission has highlighted that electricity market participants in the Slovak Republic have less access to information concerning network access conditions than in most other EU countries, for example, concerning access prices and available capacity on networks and international interconnections.[11] Indeed, the government has recognised the need to strengthen transparency. Imposing more specific obligations on network operators could also help prevent non-price discrimination. For example, there are no rules imposed *ex ante* as to the reasons for which network operators can cancel contracts with their clients, which is a potential source of discrimination. In addition, there appear to be no rules in place relating to the allocation of connection costs between network operator and market entrants.[12] Authorisation procedures for new power plants appear complex, especially with regard to public enquiries, and the perceived neutrality of authorisation procedures may suffer from the fact that decisions are taken by the government rather than by the network regulator.[13] In sum, measures to prevent non-price discrimination should be strengthened. The network regulator should oblige market participants to make information on network access conditions widely available. The regulator should impose more specific obligations on gas and electricity network operators. For example network operators should only be allowed to cancel contracts for reasons specified ex-ante by the regulator. Rules on the sharing of network connection costs should be set. Authorisation procedures for the construction of new power plants should be streamlined. Permission for construction of power plants should be granted by the network regulator, as recommended by the IEA.

The benefits of a regulatory framework that is conducive to competition would be enhanced by further privatisation in the energy industry, notably in the electricity industry. However, care should be taken to avoid cross-ownership between companies operating the gas distribution network and companies engaged in electricity generation, as gas-fired power plants have been a preferred means of market entry in electricity generation in a number of OECD countries.

Auctioning carbon dioxide permits would lower the cost of achieving pollution abatement

The government has decided to allocate permits for carbon dioxide emissions for free to existing enterprises in the sectors participating in the EU carbon-dioxide (CO_2) permit trading scheme, which are mostly electricity generation companies.[14] Pollution permits are allocated on the basis of past pollution records. Selling CO_2 emissions through an auction mechanism instead would help attain environmental targets at lower efficiency cost to the economy, for two reasons. First, potential incentive problems in grandfathering schemes could be avoided. In particular, to the extent that agents can anticipate future grandfathering rules, incentives to abate pollution may be reduced and non-viable incumbent firms may have incentives to stay in business to receive free pollution permits. Second, selling pollution permits through an auction mechanism would help reduce government debt without resorting to distortionary taxation. Moreover, auctioning pollution permits would not raise electricity prices above the level that is reached with free pollution permits. Indeed, the introduction of CO_2 permits generates marginal opportunity costs in the production of electricity, and therefore increases electricity prices, regardless of whether the permits are auctioned or allocated for free. Moreover, since free allocation of permits is only available to existing companies, auctioning would not increase the costs of entry. Grandfathering of pollution permits should be phased out. CO_2 pollution permits should subsequently be sold through auctions to the extent permitted by EU legislation.

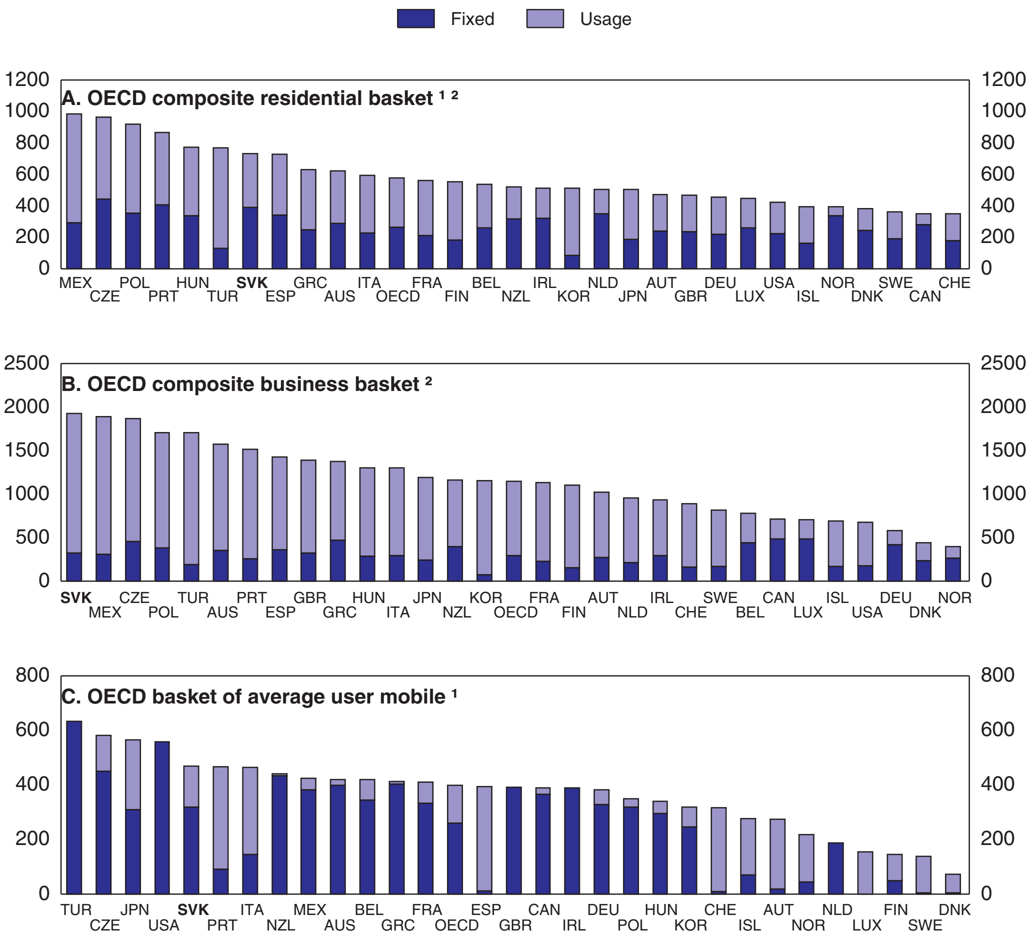
Regulation could be more competition-friendly in the telecommunications sector

Prices of fixed line telephony are relatively high, and roll-out of high-speed internet services has been limited, including through ADSL (Figures 4.2 and 4.3). Regulatory remedies to ensure competition in service provision on the fixed-line network were taken later than in other European countries, allowing the incumbent operator to enjoy large market shares. For example, cost-based regulation of call termination in the fixed telephone network was only introduced in December 2005, later than in almost all other EU countries. The first reference offer for access to the unbundled local loop was introduced in August 2005 only after intervention of the National Competition Authority, following a decision that the absence of such a reference offer constituted abuse of the dominant market position of the incumbent. The costs for competitors to access the unbundled local loop were considerably higher than in other EU countries thereafter, although prices were lowered in August 2006. Delays in the introduction of remedies to foster competition in fixed line telephony services should be reduced.

The perceptions of conflict of interest resulting from government ownership of the telecommunications incumbent are raised further by the lack of budgetary independence, as the telecommunication regulator's budget is included in the budget of the Ministry of Transport, which is also in charge of drafting government legislation on

Figure 4.2. **Telecommunication tariffs**

in August 2006, USD PPP

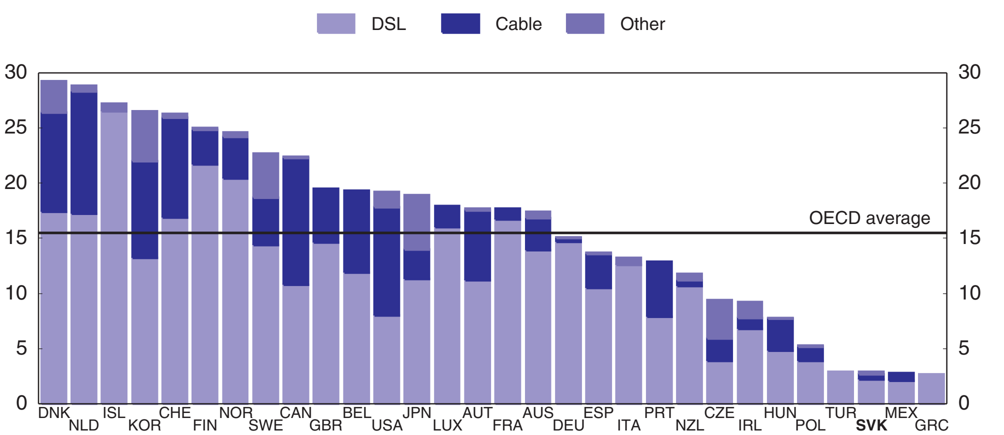


1. VAT included.
2. Refers to fixed network. Calls to Mobile Networks and international calls included.

Source: OECD and Teligen T. Baskets, August 2006.

Figure 4.3. **OECD Broadband penetration rate**

Subscribers per 100 inhabitants, June 2006



Source: OECD, *www.oecd.org/sti/ict/broadband*.

telecommunications. The independence of the telecommunications regulator should be strengthened by moving its budget out of the budget of the Ministry of Transport.

The preconditions for competition in the railway industry need to be put in place

The attractiveness of the railway network as a transport mode is at present diminished by relatively weak development of the infrastructure, which also reduces the scope for market entry in the provision of train services on the network. However, substantial upgrading of the network infrastructure is planned. It is therefore becoming increasingly important to design government policies towards the railways industry in such a way that they encourage efficiency in the incumbent network operator and allow competition to develop.

The government disburses subsidies to the railway industry directly to the government-owned incumbent transport operators – which are legally and managerially separated from the railway network operator – and the volume of these subsidies is subject to discretionary changes. For example, at the end of 2006 the government decided to increase subsidies to the passenger transport company in 2007 by 8% over the previously budgeted amount, to SKK 5.4 billion (0.3% of GDP) to ensure that transport services and employment would not be cut by the operator. However, discretion in funding decisions is likely to weaken incentives to achieve cost savings. Moreover, the direct disbursement of the subsidies to incumbent transport operators reduces scope for entry of competitors as they are subjected to a cost disadvantage. Railway network access prices, by contrast, aim at full average cost recovery.

Given increasing returns to scale in the use of the railway network, at least when the network is not congested, prices which aim at covering average cost and do not take marginal costs into account are likely to be inefficiently high and deter entry. Some OECD countries have also achieved substantial cost savings through the tendering of public service obligations – for example for railway commuting services – linked to fixed subsidy payments. For example, cost savings from such public tendering of public service obligations were estimated to amount to between 20 and 40% in Germany.[15] Discretion in the allocation of subsidies to the railways industry should be avoided, for example, by fixing subsidy levels over several years. Subsidy payments to railway transport service operators should be redirected. Instead of disbursing subsidies to the incumbent transport service operator, the subsidies should be used to lower network access prices or be made contestable through the public tendering of public service obligations.

Denial of access to the incumbent's rolling stock is a significant hurdle to competition across OECD countries, as incumbents tend to have an effective monopoly on rolling stock. While the Slovak Republic has introduced a railway network regulator, in line with EU requirements, access to rolling stock is not regulated in the Slovak Republic. To make competition operational, it will be necessary to ensure that market entrants in the provision of transport services have access to the incumbent's rolling stock.

Professional services need to be deregulated further

Entry barriers as well as barriers to competition arise from compulsory registration in a chamber required to exercise professional services. To obtain authorization to establish a business, membership in a chamber is compulsory for architects, civil engineers, auditors, lawyers, notaries and tax advisers. Incumbent businesses have incentives and scope to use chamber membership systematically to create barriers to competition. Costs from compulsory chamber membership arise, for example, because registration periods are long.[16] In some professions, the professional governing bodies determine rules on, for example, advertising, and set compulsory price schedules in the case of architects. Barriers to competition in professional services are also created by law: for example, self-employed notaries have to be citizens of the Slovak Republic and the number of notary places is fixed by the Minister of Justice. The government also sets price schedules for notaries.[17] The legal form of businesses is restricted for notaries, lawyers, auditors, tax advisers and pharmacists. For example, tax advisors are only allowed to create a limited liability company if they own 75% of the company's voting rights or capital.[18] Moreover, professional workers face qualification requirements which apply when they open a business, which are tied to chamber membership. For example, entry into the architects' chamber includes – in addition to a postgraduate degree in architecture – professional experience and the passing of an entry exam.

Public sector reform can increase the benefits reaped from competitive product markets

A well-developed legal framework for contract enforcement is essential for the economy to reap the potential benefits of competition in product markets. The 2005 *Economic Survey* of the Slovak Republic concluded that the management capacity and accountability of the judicial sector needed to be strengthened. There appears to have been little progress with regard to the recommended reforms (see Table 1.A2).[19] The reforms recommended in the 2005 *Economic Survey* on improving public sector accountability thus remain valid.

The *Economic Survey* also concluded that procedures to reduce corruption in public procurement were required, for example, through the international benchmarking of procurement costs. Indeed, the size of public procurement contracts is growing at a quick pace, reaching a volume equivalent to 7% of GDP in 2005.[20] Further growth is to be expected, notably in construction, given the inflow of EU funds which will in part be used in public sector construction. Transparent competitive tendering of contracts is therefore important. Legislation was passed making the requirement of such a contract notice more widely applicable in 2006. In a recent effort to strengthen awareness of competition issues in public procurement within the public sector, the Anti-Monopoly Office noted that public sector providers of procurement contracts supplied little information to the Office on suspicious behaviour of bidders.[21] One way to uncover excessively high procurement prices would be to benchmark them internationally.

Administrative burdens create entry barriers

Notwithstanding progress in recent years, costs for enterprises related to public administrative procedures are still high. Administrative costs on businesses are likely to weigh particularly heavily on small enterprises, discouraging firm creation. According to business surveys, procedures for the payment of social security contributions are perceived as generating particularly high administrative costs. For example, different payment procedures are in place for the payment of various social security contributions, raising tax compliance costs. Consistent with this assessment, the *World Bank Doing Business* (2006) database has found high costs for tax compliance in the Slovak Republic in comparison to other OECD countries, in part on account of social security contributions. Similarly,

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Box 4.1. Policy recommendations to strengthen product market competition

Resume the privatization process

The remaining government shares in the telecommunications incumbent should be privatised.

Further entry of private capital in companies active in electricity generation and trade as well as in gas trade should be pursued as part of a strategy to strengthen framework conditions for competition. In doing so, cross-ownership between companies operating the gas distribution network and companies engaged in electricity generation should be avoided.

Strengthen competition in energy markets

Market integration with neighbouring countries should be strengthened. To this end, cross-border interconnections of electricity transmission and gas pipeline networks should be expanded further. The transmission network over which energy demand and supply are balanced should be extended beyond national borders in co-operation with neighbouring countries. A short-term power trading facility should be established seeking co-operation with the Czech Republic.

Measures to make the domestic market structure more conducive to competition should be considered. Consideration should be given to requiring regional electricity distribution companies to divest their electricity generation capacity. If cross-border competition in wholesale electricity does not develop, a further option to strengthen competition in electricity generation would be to require divestiture of assets by the electricity generation incumbent.

Room to lower network access prices should be fully exploited. To this end, consideration should be given to using cost benchmarks, in addition to price-caps, in the regulation of the regional electricity distribution networks.

More steps to prevent non-price discrimination should be taken. To this end, the network regulator should oblige network operators to make information on network access conditions widely available to market entrants. Rules on the sharing of network connection costs should be set. Network operators should only be allowed to cancel contracts with customers for reasons specified ex-ante by the regulator.

Authorisation procedures for the construction of new power plants should be streamlined. Permission for construction of power plants should be granted by the network regulator, as recommended by the IEA.

Lower the costs of policies towards greenhouse gas emission abatement

Grandfathering of pollution permits should be phased out. CO_2 pollution permits should subsequently be sold through auctions to the extent permitted by EU legislation.

Strengthen competition in the telecommunications sector

Delays in the introduction of remedies to foster competition in fixed line telecommunications services should be reduced.

The independence of the telecommunications regulator should be strengthened by moving its budget out of the budget of the Ministry of Transport.

Make the disbursement of subsidies to the railways industry more conducive to competition

Discretion in the allocation of subsidies to the railways industry should be avoided, for example, by fixing subsidy levels over several years.

Subsidy payments to railway transport service operators should be redirected. Instead of disbursing subsidies to the incumbent transport service operator, the subsidies should be used to lower network access prices or be made contestable through the public tendering of public service obligations.

Box 4.1. **Policy recommendations to strengthen product market competition** *(cont.)*

Remove barriers to competition in the public sector

The share of public procurement contracts for which a contract notice is published should be raised. Procurement costs should be benchmarked internationally.

Management capacity and accountability of the judicial sector still needs to be strengthened. Public sector reform needs to continue to strengthen contract enforcement and further improve competition in public procurement.

The cost of obtaining permits to businesses should be reduced, for example, through the introduction of one-stop shops. Administrative costs of paying social security contributions should be reduced by unifying related administrative procedures.

Remove barriers to competition in the regulation of liberal professions

Compulsory chamber membership should be abolished. The chambers of the professions should not have powers to take decisions concerning the regulation of activities of professional enterprises. Entry requirements with regard to experience that are specific to setting up a business should be abolished. Restrictions on the legal form of business should be eased.

business associations report duplication of reporting requirements for different levels of administration. The cost of obtaining permits which are necessary to operate a business also still seem high. For example, while economic regulation of the retailing industry is not restrictive, procedures to obtain permits in the sector appear to be more onerous than in other countries.[22] Costs of dealing with licenses also appear high in international comparison, according to the *World Bank Doing Business* database. One-stop shops could reduce the costs related to obtaining permits.

Notes

1. See Nicoletti *et al.* (2006) for evidence on the relationship between productivity growth and product market regulation.
2. Euromonitor International (2006) *Retailing in Slovakia*. *www.euromonitor.com*.
3. OECD (2006b).
4. See *e.g.* IEA (2001) and Hunt (2002).
5. On average over the year as a whole, prices were above the EU average (European Commission 2007b). Nuclear energy and hydroelectric power account for 74% of electricity generation while oil and gas accounted only for 11%. For the EU, the respective shares are 45% and 25%. Commission of the European Communities (2007).
6. Balancing energy refers to the adjustments of electricity supply needed to ensure supply matches demand on the transmission network in real time.
7. IEA (2006).
8. Productivity gains resulting from competition in the electricity industry are likely to be most significant in electricity generation rather than trade. See *e.g.* Hunt (2002). In the gas industry, competition is limited to trade.
9. European Commission (2006), on the basis of data from 2005.
10. Péter Kaderják (2005).
11. European Commission (2007c).
12. IEA (2006).

13. IEA (2006).
14. In addition, enterprises engaged in the production and processing of ferrous metals, the mineral industry and the pulp and paper industry for installations of a certain capacity participate in the scheme.
15. See OECD (2006a).
16. See Business Alliance of Slovakia, The Republic Union of Employers (2006), who report that the duration of chamber registration can amount to 3 months.
17. National Competition Authority of Slovakia (2005).
18. National Competition Authority of Slovakia (2005).
19. Public Procurement Office of the Slovak Republic (2006).
20. Public Procurement Office of the Slovak Republic (2006).
21. Anti-Monopoly Office of the Slovak Republic (2006) *Indications of anticompetitive conduct of entrepreneurs within public procurement.*
22. According to OECD data on retailing regulation.

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