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

The economic situation and policies of Poland were reviewed by the Committee on 23 April 2008. 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 14 May 2008.

The Secretariat's draft report was prepared for the Committee by Alain de Serres and Rafal Kierzenkowski under the supervision of Peter Jarrett. Research assistance was provided by Sylvie Foucher-Hantala.

The previous Survey of Poland was issued in June 2006.

BASIC STATISTICS OF POLAND

(2007 unless noted)

THE LAND

Area (sq.km)	312 679
Arable land (in per cent of total area)	59

THE PEOPLE

Population (million, mid-year)	38.1	Employment (million)	15.2
Rural population (% of total, mid-year)	38.7	Employment by sector (% of total, 2006):	
Life expectancy at birth (2006): Male	70.9	Agriculture	15.7
Female	79.6	Industry (including construction)	28.3
Infant mortality (per thousand, 2006)	6.0	Services	56.0

Labour force survey unemployment (% of labour force)	9.6
Number of pensioners (million, 2006)	9.2

PARLIAMENT

Bicameral Parliamentary system	
Sejm membership (lower house)	460
Senate membership (upper house)	100
Number of political parties in Sejm	6

PRODUCTION

GDP (Zl billion, current prices)	1 166.7
GDP per capita (US$, market exchange rate)	1 1069
Gross fixed capital formation (% of GDP)	22.1

PUBLIC FINANCE

General government budget balance (% of GDP)	–2.0
General government revenues (% of GDP)	40.4
General government expenditures (% of GDP)	42.4
State treasury debt (end-year, % of GDP)	52.9

FOREIGN TRADE AND FINANCE

Exports of goods and services (% of GDP)	40.9
Imports of goods and services (% of GDP)	43.2
Official reserves assets (US$ billion, end-year)	65.7
Total external debt (US$ billion, end-year)	229.9

CURRENCY

Monetary unit: zloty

Currency units per:	US$	€
Average: 2007	2.7653	3.7824
April 2008	2.1859	3.4418

Executive summary

Poland has been catching up to the rest of the OECD more quickly in the past two years, thanks to strong growth performance. Substantial job creation has followed years of stagnation. Nonetheless, the economic boom has failed to draw inactive people into the labour market, and unemployment has plunged to below sustainable levels. The short-term outlook is clouded mainly by strong excess-demand pressures and rising inflation, despite weakening activity abroad. In the medium term, the sustainability of the expansion is also threatened by adverse demographics and persistently low labour-force participation.

- *Monetary policy needs to tighten further to avoid a possible wage-price spiral and to facilitate the eventual adoption of the euro. The government should help by offsetting the fiscal loosening induced by recent budgetary measures.*
- *Further reductions in the labour tax wedge are needed to improve work incentives, but, tax reform should not endanger the deficit-reduction path presented in the up-dated Convergence Programme, so as to ensure the sustainability of public finances.*
- *The gaps in housing and transport infrastructures need to be addressed, not least to facilitate labour mobility, reduce regional disparities and ease the restraints on aggregate supply.*

A tightening of macro policies is desirable from both short- and medium-term perspectives. *The economy continues to grow at above-potential rates, further stoking capacity pressures at a time when headline inflation has already surged well beyond the official target. To prevent jeopardising hard-won credibility, the process of policy rate increases initiated already in April 2007 should be continued. Also, the release of additional information to markets about the Central Bank's expectations of future economic and interest rate developments should be considered insofar as it bolsters perceptions of its commitment to price stability in the medium term. The structural budget deficit narrowed in 2007, but the stance of fiscal policy is expansionary in 2008, complicating the task of monetary policy. With further tax cuts planned, the authorities need to provide a credible plan for containing spending so as to cut the deficit to sustainable levels.*

Further cuts in the labour tax wedge would raise work incentives but should be funded. *Cuts should be targeted on low-income earners so as to ensure cost effectiveness and can be partly funded by reforming early-retirement pensions, but other sources of financing will need to be tapped. There is little scope for raising VAT or corporation tax. Yet, revenues from taxes on immovable property – one of the least distortive bases – are low, offering scope for some increase.*

Better labour-market outcomes would result from greater labour mobility. *The first priority would be to overhaul housing policies. The supply of housing is hampered both by the absence of urban zoning plans and by regulatory barriers to the development of a rental market. This limits access to affordable housing, especially in major cities. The solution is to further ease controls on rent increases and enforce eviction of non-paying tenants. More efficient means to facilitate access to home ownership than subsidising borrowing costs should also be considered. For instance, eliminating stamp duties on house purchases would do so with less harm to labour mobility.*

Future growth prospects are also darkened by several other barriers. *Closing the gaps in transport infrastructure is a key to raising potential***.** *A major challenge is to implement the ambitious spending plans sufficiently rapidly so that the substantial EU funds can be fully and efficiently absorbed without massive cost overruns. Access to the labour market for foreign construction workers should be further facilitated. Public procurement legislation should also be reformed, notably to limit the abuse of appeal procedures and to simplify the delivery of building permits and environmental impact assessments. Public-private partnerships should be given more consideration as they have the potential to enhance efficiency. Growth would benefit from efforts to strengthen competition so as to foster entrepreneurship and innovation.*

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Assessment and recommendations

Strong growth has pushed income levels closer to the EU average

During the past two years, Poland has recorded its best economic performance since the late 1990s, with growth exceeding 6%. This was also the second-best performance among OECD countries, allowing for a significant narrowing of the income gaps *vis-à-vis* the average EU and OECD levels. Since Poland joined the European Union in 2004, GDP per capita has moved from 44 to 48% of the pre-2004 enlargement EU average. Furthermore, after nearly a decade of relative stagnation, employment has finally begun to contribute markedly to gains in living standards, rising by some 3% per year. Meanwhile, labour supply has shrunk, despite a still expanding working-age population. This further decline in labour force participation rates, to especially low levels for older workers and the least skilled, is of great concern. The result has been a spectacular decline in the unemployment rate, from nearly 18% in 2005 to 8½ per cent in the fourth quarter of 2007. At the same time, productivity gains have slowed from the growth rates recorded in the early 2000s.

But it has led to rising pressures on capacity

The flip side of this strong performance has been increasing demand pressures, further abetted by the ongoing global food and energy price shocks, with all the risks that this pernicious combination entails in terms of a wage-price spiral, asset price bubbles and a hard landing further down the road. Thus far, these risks have not materialised to a significant degree, and the spill-over effects from the economic slowdown abroad may offset them. Real GDP is expected to slow to near 6.0% this year and 5.0% in 2009. Nevertheless, headline price inflation has already surged far past the 2.5% official target, and labour shortages have emerged in many sectors, causing real wage increases to outpace productivity gains throughout 2007. Meanwhile, a risk could arise that firms' capacity to absorb rising unit labour costs by squeezing margins approaches its limit implying upward pressures on prices. The public sector is also feeling the pinch, as wage demands by various groups have come to the fore, while administered prices are being raised substantially.

Macro policies should focus on stabilising the economy and structural policies on raising labour supply

In this context, the best way for macro policies to help steer the economy to a soft landing is by taking appropriate action to ensure they are on track to achieve their medium-term objectives. In the case of monetary policy, this means bringing inflation down to its target with an appropriate tightening of monetary conditions. For fiscal policy, this implies providing a credible plan for a sustainable reduction in the general government cyclically-adjusted deficit to reach the 1% of GDP official target in 2011. As regards structural policies, the fact that excess-demand pressures have arisen in a context of still relatively high unemployment and stubbornly low participation rates for many groups is a symptom that the functioning of the labour market is being hindered by significant barriers. One of the key priorities is therefore to lift these barriers in order to fully exploit the substantial scope for boosting employment rates so as to sustain strong potential growth despite the imminent demographic reversal. Two policy areas deserve particular attention in this regard. One is the design of the tax and benefit systems: the high tax wedge on low-wage workers prices some of them out of the labour market and leaves others with too few incentives to seek registered employment. And on the benefit side, a substantial share of older workers can withdraw from the labour force on favourable conditions well before statutory retirement age.

The second area concerns policies that impinge on labour mobility within Poland. In spite of widening discrepancies in economic activity across regions, there is little tendency for workers to migrate from high unemployment areas to those with many unfilled jobs (in major cities). The result is a high dispersion of employment rates, both across and within regions. Yet, the fact that a large number of Poles are prepared to move abroad to take job opportunities suggests that the low mobility observed inside the country is not so much a cultural phenomenon, but the result of specific hurdles. Indeed, access to affordable housing in fast-growing urban areas is limited. Housing policies may thus play a key role, not least as regards the persistent under-development of the private rental market. Another contributing factor is the lack of sufficient transport infrastructure, which makes commuting even over relatively short distances difficult.

Monetary policy should be tightened to lower the risk of higher inflation

It is perhaps of limited surprise that headline inflation has risen from less than 1% per year in 2006 to 4% most recently, given the adverse food and energy shocks and the economy's growth performance. While the first factor was naturally unpredictable, excess demand in both labour and product markets has resulted despite a pick-up in potential growth to over 5% per year. The Monetary Policy Council began to raise official rates in April 2007. However, since inflation has risen faster than nominal interest rates, real *ex post* interest rates have actually fallen. Nevertheless, the real exchange rate has appreciated considerably, leading to a tightening of monetary conditions. Even so, unless this begins quickly to bear down on underlying inflationary pressures, the risk is that inflation expectations will jump and the National Bank of Poland's (NBP) hard-won credibility will be harmed, raising the cost of bringing inflation down to the NBP's 2.5% target. Achieving the target will also most likely enable the EU price stability criterion for joining the euro area to be satisfied.

The NBP has gone a long way in providing more information to the markets in its periodic publications. Additional steps in that direction could involve the publication of one or more scenarios involving paths of interest rates that would – in the Bank's view – return the economy to the official inflation target over the forecast horizon. Above all, it should be clear that only the members of the Monetary Policy Committee have the authority to speak publicly on policy matters.

Fiscal policy could also help achieve a better policy mix

One clear benefit of the favourable conjuncture in 2007, and in particular of the sharp decline in unemployment, has been a substantial reduction in the general government deficit to 2.0% of GDP, down from 3.8% in 2006 and a peak of 6.3% in 2003. Both buoyant tax revenues and, to a lesser extent, savings on social security outlays have contributed to this better-than-expected outcome. Also, by bringing the deficit to such a level Poland has paved the way for the abrogation of the Excessive Deficit Procedure initiated by the European Union in 2004. This positive development notwithstanding, a further reduction in the deficit will most likely prove more difficult to achieve in the short run. Two factors point to a widening deficit in 2008 and, barring policy changes, beyond. *First*, when activity slows to a more sustainable level, the contribution from the business cycle to budgetary outcomes will become less favourable: the OECD estimates that this will cost the budget about 0.7 percentage point of GDP. *Second*, the 2008 budget contained measures that together imply a loosening of the fiscal stance (of around 0.8 percentage points of GDP). This makes the task of the NBP more difficult.

In March 2008, the government updated its Convergence Programme, which involves an increase in the deficit in 2008 and steady consolidation thereafter. In this context, the priority for fiscal policy is to stick to the deficit targets as laid out in the Programme so as to keep public finances on a sustainable path. This would result in a structural deficit of 1% of GDP in 2011, an objective that the government is committed to achieve. In the near term, this objective will be difficult to reconcile with the commitment to reduce income taxes in 2009, and the strong upward pressures on expenditures related notably to the co-financing of EU-funded infrastructure investments and the strong increase in public-sector wages. Expenditure restraint could be exercised more easily if a multi-year planning framework that includes limits on overall spending were to be adopted. In addition, the government should renew its efforts to raise public-sector efficiency, including by considering reductions in employment in the public administration in return for better pay. Beyond that, the authorities could eventually achieve substantial savings by completing the long-overdue final stage of social security reform, in particular the elimination of most of the early-retirement schemes. A good step in this direction has been taken with the recently announced intention to shorten the list of professions eligible for early retirement.

A more complete reform would also involve the integration of the special pension system for farmers into the general regime. However, experience has shown that major changes in this sensitive area should not be introduced with a view to realising short-term budgetary gains, but should instead be motivated on efficiency and equity grounds. There may even be some costs involved in the short term, for instance if some form of compensation is offered to those who stand to lose most from reform. Nevertheless, the long-term budgetary gains can be substantial, as they arise not only from the savings on transfer payments, but also from an increase in tax receipts. Hence, such reform should not be deferred even if it increases short-term pressures on the budget. In fact, all measures that stimulate employment, including well designed measures on the tax side, will facilitate the task of the budgetary authorities, at least in the medium term.

Tax reform should be geared towards improving work incentives

The tax wedge on labour income remains above the OECD average, despite recent reductions. It contributes to low employment rates in the official sector, especially among low-skill workers. To a large extent, this reflects high rates of social security contributions used to finance basic public pension regimes, which, combined with other income-support schemes (including early-retirement and disability benefits), lead to a low effective retirement age. Personal income tax is not particularly high, with the vast majority of taxpayers being in the 19% bracket. Against this background, a longer-term strategy for tax reform should be developed with a view to shifting the overall mix away from labour taxation and on to less distorting bases such as property and environmental externalities. Although a reduction in the overall tax burden would be desirable from a longer-term efficiency perspective, it should not be envisaged before public finances have been put on a clearly sustainable path. In any case, a cautious approach to estimating endogenous revenue gains from growth-enhancing tax reforms should be adopted.

Personal tax rates will be cut in 2009, but a flat tax is being considered

Personal income tax (PIT) rates will be reduced for most taxpayers in 2009 in the context of a simplification of the tax structure. The number of brackets will be streamlined, leaving only two brackets, set at 18 and 32%, respectively. Following this, Poland will have one of the lowest top marginal tax rates in the OECD, both in statutory and effective terms. Nevertheless, the possibility of going one step further and adopting a flat tax – set at a rate similar to corporate income tax (though that might not yield enough revenue for current needs) – is being envisaged. A flat tax would have the advantage of discouraging tax avoidance and encouraging entrepreneurship, but it would provide less redistribution than the current progressive rate structure. Given that under the Polish system capital and labour income are taxed at different rates – consistent with a semi-dual income tax system – the desire to harmonise the top marginal rate with the 19% rate on corporate income is also understandable, at least in principle, so as to avoid creating fiscal incentives to incorporate. However, the gap between the two rates does not seem large enough for this to be a major concern. In any case, given the overarching objective of boosting employment, especially among low-skill individuals, a higher priority is to reduce the tax wedge so as to enhance work incentives.

Targeted cuts in social security contributions would be a good way to shrink the tax wedge

In order to maximise the cost-effectiveness of reductions in the tax wedge, cuts should be substantial, targeted at the bottom end of the wage distribution and focused on social security contributions. More specifically, their size should be highest at the minimum wage level and gradually withdrawn so as to be zero at around 70% of average earnings (which corresponds to 1.75 times the minimum wage). All components of social security contributions could be considered for a reduction, except old-age pensions in order to preserve the actuarial neutrality of that system. Targeted cuts would also help to raise the very low degree of progressivity of the tax system. Another pro-work measure that the government could consider is to introduce an earned-income tax credit. This would encourage labour market participation of marginal groups. However, to be most effective such a measure should take place in the context of a broader welfare-to-work strategy, with stronger emphasis on effective public employment services.

Beyond raising labour supply the priority should be on base broadening

Further reform of the PIT should instead focus on broadening the tax base by eliminating a number of tax allowances. In this regard, the deduction for internet subscriptions has little justification and therefore appears as a prime candidate. Also, the recently introduced child tax relief should be reconsidered. In principle, another sensible measure to broaden the base would be to eliminate the PIT exemption granted to farming revenues. However, it may be politically difficult to reform or, better still, eliminate the special pension regime for farmers and subject their income to personal taxation at the same time. In such a case, reforming the pension regime should be seen as more pressing.

Reduction in labour taxation will necessitate drawing on alternative tax bases

Even if the reform of the social security system were to create some room for the recommended narrowing of the tax wedge, it may not be sufficient to cover its cost, and therefore alternative sources of revenues may have to be sought. Even though statutory and effective corporate income tax (CIT) rates are among the lowest in OECD countries, they are comparable to rates observed in other Central and Eastern European countries, including those that have recently joined the European Union. Considering the high mobility of capital, raising CIT would be inappropriate to finance the reduction in labour taxation. On the other hand, further CIT rate reductions could be contemplated in the context of a base broadening that would leave the average rate largely unchanged *ex ante*. Another potential source is consumption tax, but both the main value-added tax (VAT) rate and excise duties are fairly high, thus limiting the scope for raising more revenues from these tax bases. VAT reform should focus on the simplification of procedures to reduce compliance costs for businesses. More generally, the tax code should be written more clearly so as to obviate the need for local legal interpretation of specific provisions and to reduce the vulnerability of businesses to arbitrary (and often conflicting) decisions by the two main tax-inspection bodies. The merging of these two agencies would eliminate the duplication of controls and generate useful savings.

Little revenue is collected from residential property tax

One prime candidate for raising revenues is taxation on immovable property, which is low by OECD standards. This is one of the tax bases with the least adverse effect on economic efficiency. Poland is one of the few OECD countries without a full *ad valorem* (or cadastral) tax on property, even though the technical obstacles to such tax being implemented have basically been lifted. A move to such a tax would raise revenues for municipalities, allowing the central government to reduce its subsidies to sub-national administrations. Alternatively, local authorities could use the higher property tax revenues to eliminate stamp duties on housing transactions, thereby improving labour mobility. In order to facilitate the introduction of an *ad valorem* property tax, the rate should be set initially at a low level and be accompanied by measures to ensure that house-rich/income poor households can afford the tax without having to liquidate their property.

The supply of housing is constrained by the absence of zoning plans and by labour shortages

Another important advantage of an *ad valorem* tax would be to provide municipalities with stronger incentives to release zoning plans, given the prospects of higher revenues from new housing developments. By limiting the straightforward availability of land, the absence of such plans is currently contributing to the long-term shortage of housing, in addition to being a potential source of corruption. Their release should in any case be made compulsory. In the short run, however, the main housing-supply constraint is rising construction costs owing to labour shortages in that sector. To ease the constraint, the government should enhance its vocational training programmes so as to raise the proportion of unemployed and inactive individuals that can be recruited to this sector. Even so, such measures may take time to bear fruit; in the meantime the authorities should provide easier access to the domestic labour market for all foreign workers, not only for those from its eastern neighbours, as has recently been done.

Mortgage subsidies are not an efficient way to promote home ownership

As in many other OECD countries, the Polish government has also introduced a number of initiatives to facilitate access to home ownership. The success of these measures in closing housing gaps has generally been mixed. One of them, the deductibility of mortgage interest payments has been repealed for new loans since 2007. This is appropriate, given that without taxation of imputed rents or capital gains, there was no justification for allowing interest costs to be deducted. However, another form of borrowing subsidy was put in place in 2006 whereby half of the mortgage interest costs are absorbed by the government for the first eight years of a loan. The programme is legitimately aimed at low-income households, but its design constraints are such that it squeezes out potential beneficiaries in large cities

– due to high real estate prices – in favour of more affluent home buyers in rural areas. Although with some adjustments the programme could be made more equitable across regions, this could substantially raise its cost. Hence, in light of its limited usefulness, the programme should be reconsidered. A better approach would be to eliminate stamp duties on houses purchases and to support the development of the mortgage market by increasing the availability of funding alternatives for mortgage institutions, including by allowing them to use a broader range of long-term financial instruments, with appropriate supervision. In addition, the introduction of escrow accounts would help protect buyers' down payments in case the developer goes bankrupt.

Regulatory barriers are restricting the development of the rental market

More generally, housing policies should avoid creating too strong a bias in favour of home ownership, not least because transaction costs hamper labour mobility in the case of a move. In this regard, a number of regulatory barriers stifle the development of a dynamic rental market in Poland, with adverse effects on labour mobility. For instance, the combination of controls on rent increases and eviction procedures that allow non-paying tenants to remain makes the expected investment return on rental housing relatively unattractive and may contribute to the prevalence of informal arrangements between landlords and tenants. The result is an under-supply of new rental facilities, a lack of modernisation of the existing stock and, in cases of informal letting, tenants with little or no protection. Furthermore, given that rents can generally be fully adjusted to reflect market conditions only when tenants leave, controls tend to reduce turnover, as tenants prefer to remain locked in at what become below-market prices. In this context, the best course of action would be to work towards further easing of the controls on rent increases but to consider introducing means-tested allowances so as to help low-income households cushion the impact of possibly steep increases in rents. In addition, although tenants must remain adequately protected from exploitation on the part of unscrupulous landlords, eviction should be enforced in the case of non-paying tenants.

Improving transport infrastructure is another key challenge

In the coming years, Poland will implement a vast programme of building and renovating transport infrastructure, financed through substantial EU and public resources. Yet the use of EU funds is subject to a limited time frame, and the deadline for completing many investments has been further advanced by the organisation of the 2012 European soccer championships. Thus whatever obstacles exist – such as labour shortages – have to be sorted out rapidly. Maintaining a high vigilance over possible collusive behaviour among the suppliers of building materials and ensuring tendering procedures are as competitive as possible would be additional helpful steps. More generally, the legal framework needs to be streamlined in many areas, including public procurement (especially the ease with which multiple appeals can be launched), issuance of building permits, environmental impact assessments and archaeological research. Also, adopting a hedging strategy against euro/zloty exposure would allow the funding that is effectively available for projects to be safeguarded. Finally, the coordination among various Ministries and implementing bodies in channelling EU funds should be enhanced. The adoption of multi-year budgeting systems would help not only in this respect, but also in order to address the fiscal demands implied by co-financing.

Closing the transportation infrastructure gap should be guided by efficiency criteria. That is why it is crucial to design and publish a comprehensive top-down strategy based on careful cost-benefit analysis and that addresses long-term prospects and interrelations among the different modes. It must be recognised that, with predictable increases in income levels, several regions in Poland will probably lose their eligibility for EU funds beyond 2013. Therefore the authorities should already actively seek greater private-sector financial involvement in the process of building, maintaining and operating infrastructure, all the more so as the option of blending private and EU funds has not yet been explored. The use of public–private partnerships (PPPs) may in certain cases deliver better value for money and should be treated on an equal footing with public procurement schemes. Hence, the current PPP law should be streamlined. The creation of a central public unit responsible for the oversight and quality control of cost-benefit analyses could lead to the more widespread use of PPPs. In addition, it could help improve the business climate.

Market regulations and ownership structures should promote fair competition both between and within different transport sectors. Extending tolls to the entire motorway network but also charging passenger cars for using expressways would help to rebalance the modal split that is currently oriented toward roads, with all the implications for the environment and urban planning that follow. In accordance with EU guidelines, reforms in the rail sector require a clear ownership separation of infrastructure and operation in the public conglomerate (PKP Group), which should improve third-party network access. Coupled with a strengthening of the regulator's position, this would also make access-charging policies more transparent. In regional rail services, generalising competitive tendering procedures and creating independent system operators would reap efficiency gains. Finally, air transportation would benefit from the restructuring of the Polish Airports' State Enterprise and from further reducing airports' regional market power by introducing a fixed formula for calculating price caps on take-off and landing fees.

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Chapter 1

Raising labour supply to sustain strong potential growth

Poland's economy has performed well in the last two years. Real GDP has grown faster than in almost all other OECD countries. Unemployment has fallen sharply, as employment has surged while participation has declined. The benefits of this robust growth performance have been shared between capital and labour: wages have picked up sharply. The immediate challenge is to head off overheating by an appropriate policy mix consisting of judicious monetary tightening and a budgetary policy that holds the general government deficit below 3% of GDP. Looking further ahead the primary objective should be to reform labour-market, tax and other structural policies so as to boost effective labour supply in a way that will sustain the process of convergence of per capita incomes with those of the more affluent OECD members. That will mean: increasing labour-market flexibility, further reducing the tax wedge on labour income (especially for the least skilled), closing off the remaining routes to early retirement, and improving labour mobility by strengthening housing markets (particularly for rentals) and enhancing transport infrastructure.

Five straight years of rapid economic expansion, including GDP growth at above-6% rates during both 2006 and 2007, have helped Poland to narrow the gap in income per capita significantly *vis-à-vis* the most advanced OECD countries. And the two proximate sources of output growth – labour productivity and labour resource utilisation – have both contributed to the good overall economic performance. Labour productivity has been underpinned by strong investment growth, financed in large part by foreign capital inflows. Labour utilisation has also contributed, though only via the sharp decline in the unemployment rate, from nearly 19% in 2004 to 8.5% at the end of 2007. A key question, however, is how much of the pick-up in GDP growth in recent years reflects structural changes in the economy and therefore can be sustained in the medium term. Signs of an overheating economy have emerged, as inflation has moved up fairly sharply, suggesting that the growth rate of over 6% far exceeds a sustainable pace. One of the signs of excess demand is widespread labour shortages, which have manifested themselves in accelerating wages and unit labour costs. This indicates that unemployment may also have overshot its structural rate, even though it is still far higher than elsewhere. Furthermore, the favourable labour-market performance has had little impact so far on the overall participation rate, which remains one of the lowest in the OECD. Therefore, in order to maintain a strong sustainable rate of growth in the coming years, the key challenge for the Polish authorities will be to raise labour supply through structural reform while heading off an inflationary spiral by a tighter combination of fiscal and monetary policies (see Chapter 2).

Obviously, given Poland's still poor labour-market showing by international standards, this is not a new challenge. And the authorities have taken measures in recent years to improve the situation, for instance by cutting the tax wedge, thereby reducing the differential between the overall cost of labour borne by employers and the net take-home pay of employees (see Chapter 3). However, many features of the tax and benefit systems continue to bear on incentives to work in the formal economy, in particular for specific groups such as older workers and low skilled individuals more generally. Moreover, the impressive aggregate economic performance over the last few years masks widening imbalances not only across regions but also between major urban centres and the countryside within regions. The fact that unemployment has hardly fallen in many areas points to the lack of mobility as a major barrier to further gains in overall employment rates. Yet, the large number of Poles working in other EU countries indicates that with sufficient incentives and opportunities, many are willing to move. That they prefer London or Oslo to Warsaw suggests that internal mobility might be hindered by specific barriers. In this regard, two factors that may contribute to low internal mobility are directly examined in this *Survey*. One is the functioning of the housing market, and in particular the under-development of the rental market (see Chapter 4). The other is the glaring weakness in transport infrastructures, especially with respect to road and rail networks, but also as regards other means of transportation (see

Chapter 5). This first chapter examines specific aspects of the performance of the Polish economy and provides a brief overview of the main policy challenges that face forward-looking economic policymakers.

The favourable conjuncture is creating challenges for monetary and fiscal policies

Output grew by 6.6% in 2007, driven in particular by sharp increases in private investment (near 20%) and private consumption (over 5%). Consumer spending was stimulated by vigorous wage increases, rising employment, heavy remittances from abroad and, until very late in the year, wealth effects from house and equity price appreciation. Strong job creation translated into a very rapid and substantial fall in the unemployment rate. Real exports grew considerably, but still not sufficiently to match import growth, and hence the external sector has had a somewhat larger negative contribution to output growth than heretofore. The OECD's output-gap estimates suggest that excess-demand pressures emerged in 2006 and quickly built up through 2007 (Figure 1.1). Clearly, such estimates are surrounded by a non-negligible margin of error, but signs of excess demand are corroborated by a rise in unit labour cost growth since mid-2006 to some 7%, the widening external deficit and the sharp pick-up in inflation in recent months. Furthermore, many sectors such as construction, real estate and financial intermediation, as well as health and education services, already face acute labour shortages. Looking ahead, the near-term outlook is obviously clouded by uncertainties, not least with respect to external factors, such as the depth of and spill-over effects from the US economic slowdown, the unwinding of the international financial turmoil and the evolution of global food and oil prices. But home-grown risks are also important, as confidence could wane and interest rates could rise sharply, causing domestic demand – especially residential investment – to cool suddenly. In any case, inflationary pressures are unlikely to recede rapidly, considering that the pace of economic expansion is expected to remain above its potential pace in 2008.

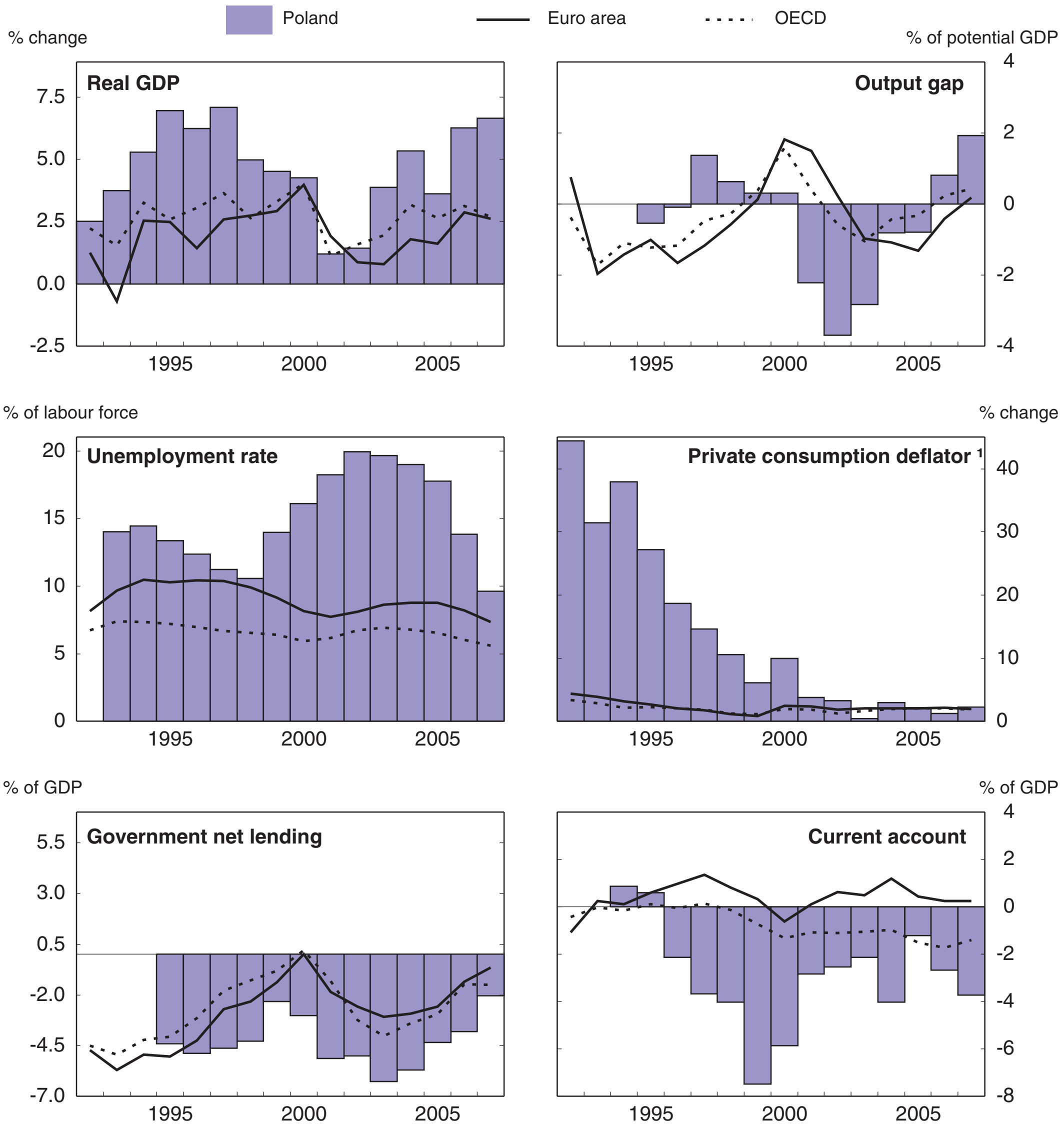
The cost of letting inflation expectations rise could be high

Against this background, the challenge for monetary policy is to find the proper balance between the risk of letting the recent jump in inflation outcomes translate into higher inflation expectations and that of a more rapid and abrupt deterioration of external conditions (see Chapter 2). Considering the lags in policy transmission, a significant tightening of monetary policy could have a maximum impact at a point where the economy has already weakened substantially. On the other hand, the consequences of allowing inflation expectations to adjust to the current rate could be even more damaging, given how costly it may prove to reverse such expectations and safeguard monetary policy credibility. The cost in terms of output loss could be particularly high if increased inflation expectations were to become entrenched.

A good budget outturn in 2007, but the stance of fiscal policy in 2008 is expansionary

In 2007, State tax revenues exceeded budgetary estimates by 11% for direct taxes and around 5.5% for indirect taxes. This, combined with lower spending on social security contributions, resulted in a better-than-expected general government deficit, closer to 2% than the 3% shortfall predicted in the 2007 budget. A key issue is how much of the improvement in the budgetary balance is structural and therefore can be relied upon to

Figure 1.1. **Key indicators in a long-term and international perspective**



1. OECD excludes Greece, Hungary, Mexico, Poland and Turkey.

Source: OECD, *Economic Outlook No. 83 database.*

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persist. Two factors indicate that the underlying budget situation has not improved by as much as the actual outcome suggests, especially looking ahead. One is the relatively high sensitivity of some revenue flows to the cycle. Based on a positive output gap of close to 2%, estimates of the cyclically adjusted balance suggest an underlying deficit of around 2.7% for 2007. The other factor is the fiscal stimulus introduced in 2008, equivalent to 0.8% of GDP, combined with the strong upward pressure on public-sector wages and the spending commitments linked to the co-financing of EU funds. And this is to be followed by another tax cut in 2009. So far, the measures taken or announced by the new government to reduce spending or raise revenues fall short of the size of the stimulus. As a result, both the actual and cyclically adjusted deficits are expected to widen in 2008 (see Chapter 2).

In this context, bringing the general government financial balance back on a clear and sustained deficit-reduction path will be the main challenge for the fiscal authorities. One reason why this is particularly challenging is that there are few obvious components of public expenditure where cuts can be easily and quickly realised. For instance, reform of social security may lead to important savings in the medium term but involve short-term costs. Clearly, achieving fiscal objectives will be facilitated if the tax base continues to expand at a rapid pace. One way to broaden the base is by bringing more people into the labour force.

Adverse demographics underscore the need to raise job prospects and work incentives

A look at the sources of potential growth in GDP per capita shows that the relatively good performance of the Polish economy over the past ten years is on average entirely attributable to strong productivity gains. In fact, the contribution from labour-resource utilisation has been negative on average, implying that Poland has fallen further behind the majority of OECD countries in this area (Table 1.1). In the past five years, however, the contribution from labour input has turned positive and was laudably strong in 2006 and 2007, contributing to the steep decline in the unemployment rate (Figure 1.2). This particularly favourable labour-market situation since 2005 has nevertheless failed to attract large numbers of non-active people into the labour force. And, this was exacerbated by the steep increase in the flow of Poles moving abroad for work following EU entry (see below). As a result, the steady rise in the working-age population over the period has been largely offset by a decline in labour-force participation. The failure, so far, to bring more people into official labour market activities implies that the contribution of labour resources to GDP growth could easily turn negative again in the years ahead. *First*, having already fallen substantially, future declines in the structural unemployment rate will most likely be more difficult to achieve, if only because the scope for future reductions is getting more limited. *Second*, and perhaps more important, the demographics will soon turn highly unfavourable, as the large post-war cohorts approach statutory retirement age.

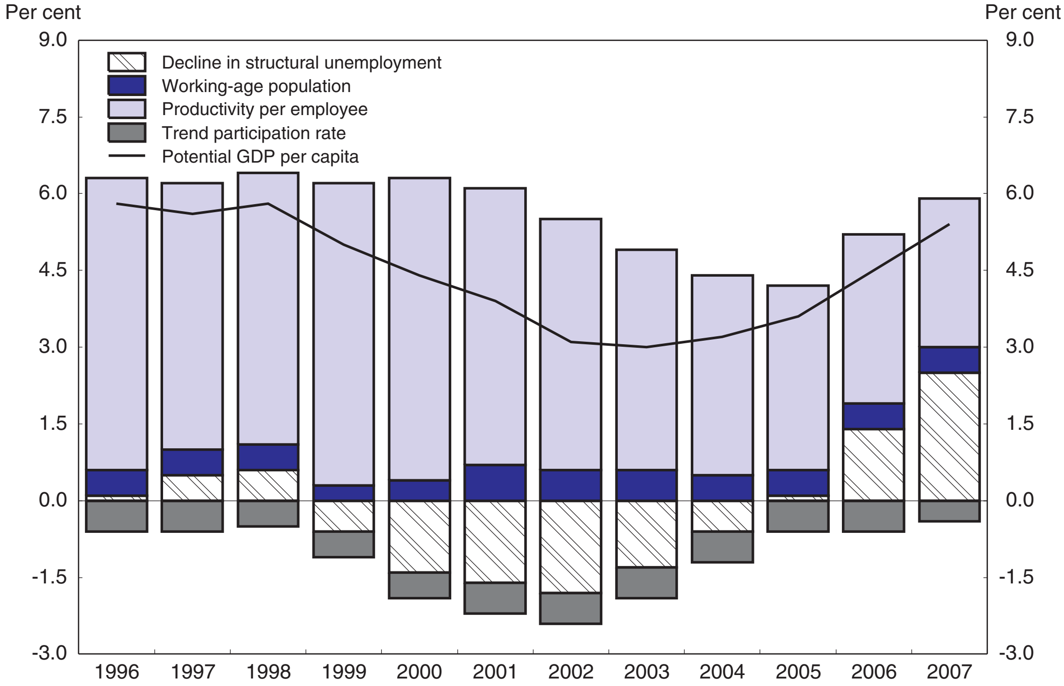
Table 1.1. **Sources of growth in trend GDP per capita**

	1998-2007	1998-2002	2003-07
GDP per capita	4.2	4.4	3.9
Contribution from:			
Labour productivity	4.5	5.5	3.4
of which:			
Capital intensity	1.3	1.8	0.8
Multi-factor productivity[1]	3.2	3.7	2.6
Labour utilisation	–0.3	–1.1	0.5
of which:			
Average hours worked	0.1	–0.1	0.2
Working age population	0.5	0.5	0.5
Labour force participation	–0.5	–0.5	–0.5
Employment ratio	–0.3	–1.0	0.4

1. Multi-factor productivity growth defined residually as labour productivity less capital intensity.
Source: OECD, *Economic Outlook No. 83 database*.

Figure 1.2. **Contributions to growth in trend GDP per capita**

1996 to 2007



Source: OECD, *Economic Outlook No. 83 database.*

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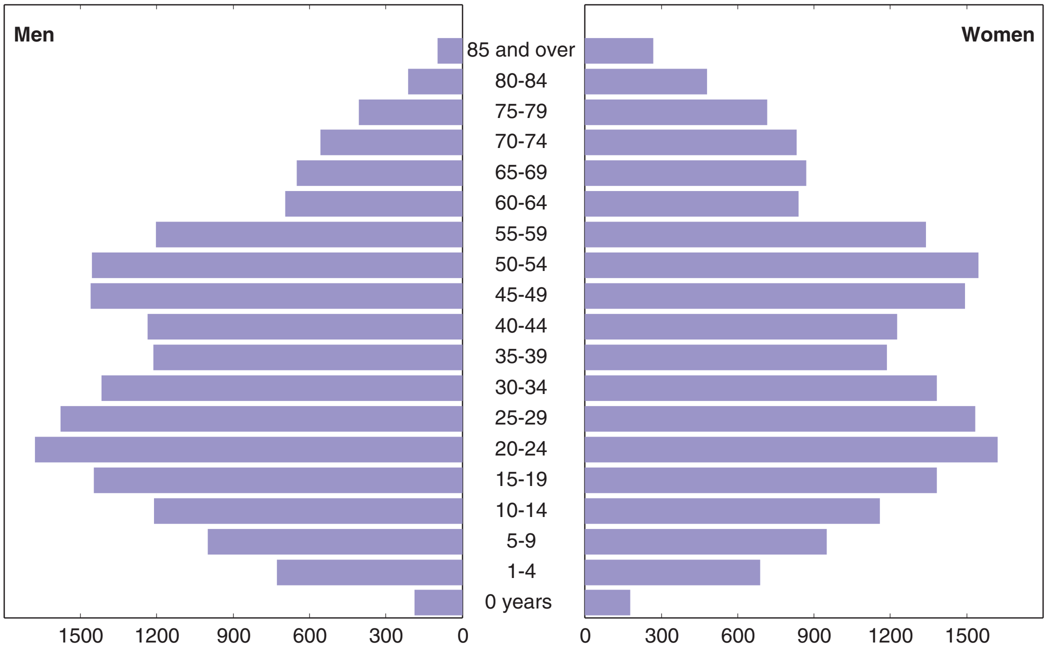
Since 1997, Poland's working-age population – defined as those aged between 15 and 64 – has risen at a pace of 0.5% per year, even as the total population fell slightly but steadily over the period. A closer look at the age structure shows two large cohorts in the age groups 45-54 and 20-24 years old (Figure 1.3). Both waves are followed by rather small cohorts, implying that as the first wave reaches the age of 65, it will not be fully replaced. Indeed, projections based on the age structure indicate that the contribution from demographics to growth in labour resources and output is likely to turn negative right after 2010 and have a large depressive impact between 2015 and 2020. More specifically, calculations based on United Nations population data suggest that the ratio of working-age to total population will decline at a pace of 0.4% per annum on average between 2011 and 2015 and the decline will accelerate to 0.8% per year over the following five-year period. As a result, the ratio of working-age to total population would decline from 72% in 2010 to 68% in 2020. Obviously, some margin of uncertainty surrounds these projections, not least considering that assumptions need to be made regarding migration flows. Even so, a swing from a sizeable positive contribution in the past ten years to a negative one in the next ten is almost inevitable, putting strong downward pressures on potential growth. Even keeping the ratio of total hours worked to population constant will in this context prove challenging, given the significant increase in the work intensity of the working-age population that this will require. One reason why this is nevertheless achievable is that by international standards, there is clear scope for raising the intensity of labour utilisation in Poland. With the average annual hours worked well above the OECD

Figure 1.3. **Population registered for permanent residence**

Thousands, as of 30 June 2006



Source: GUS.

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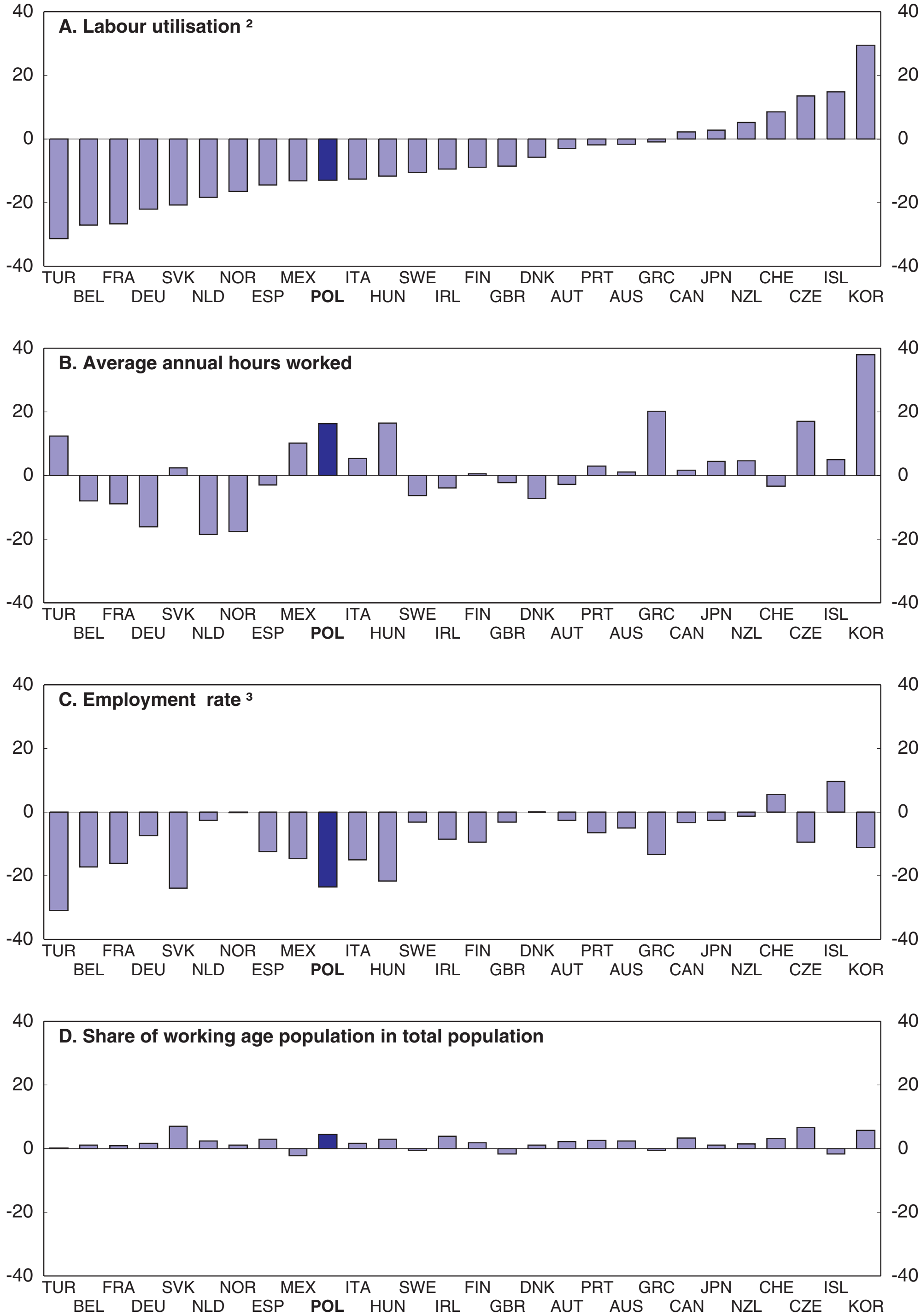
average, the main source of weakness in labour utilisation is very low employment rates (Figure 1.4).

Despite the pick-up in recent years, both labour-force participation and employment rates remain below their 1998 levels, and both are among the lowest in the OECD. Only slightly over half of the population is in registered employment. Older workers and youth make a particularly weak contribution to the overall employment rate. In the case of prime-age workers, employment rates are not especially high, but they are close to OECD averages (Figure 1.5). Another area where Poland fares comparatively badly concerns the employment of lower skilled individuals. The relative employment rate of those who have not completed secondary education is again well below OECD average (Figure 1.6). As in many countries facing similar situations, the weak employment outcomes result mainly from low participation in the case of older worker and high unemployment in the case of youth and the low skilled. For the latter two groups, the main challenge is therefore to increase their job prospects, while preserving, or even raising, work incentives. Two areas need particular attention in this regard: raising the skills level of early school-leavers and reforming taxation so as to lower the cost of employing low-skill workers. Although these policy areas may also be contributing to the low participation rates of older workers, the priority as far as this group is concerned is to close the remaining routes to early retirement so as to raise the effective retirement age.

Figure 1.4. **The sources of labour resource utilisation differences, 2006**[1]

Percentage gap *vis-à-vis* the United States



1. Countries are ranked on the basis of their labour utilisation.
2. Total hours worked during the year as a ratio to total population.
3. Total employment as a ratio to the working-age population.

Source: OECD, *Labour Force Statistics database* and OECD, *Productivity database*.

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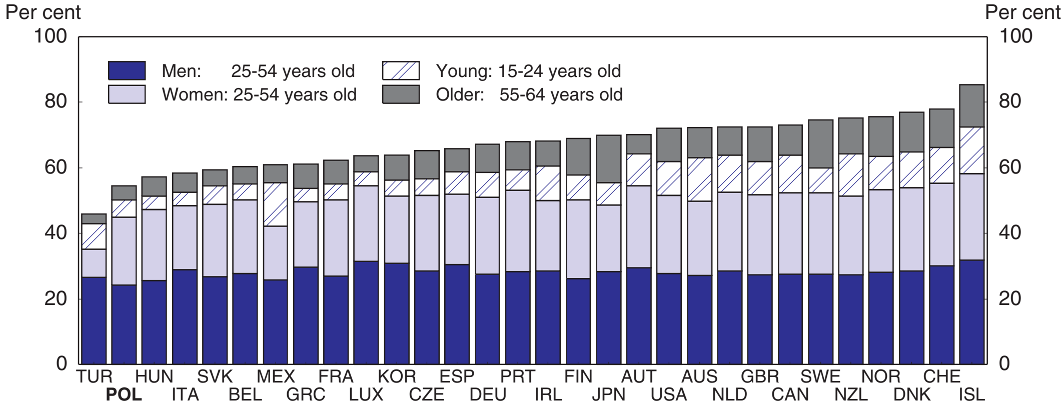
Figure 1.5. **Contribution to overall employment rates**

Specific age/gender groups in 2006[1]

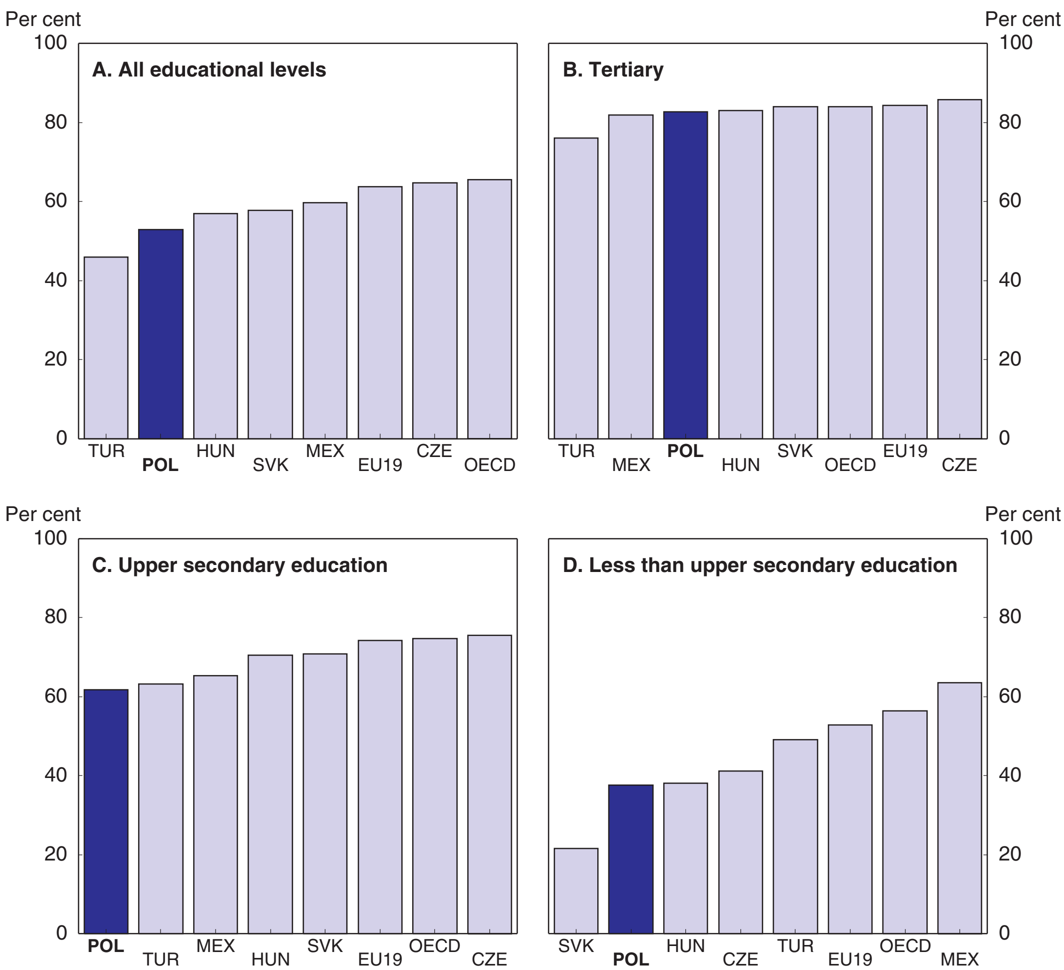


1. 2005 for Luxembourg.

Source: OECD, *Employment Outlook database*.

StatLink http://dx.doi.org/10.1787/345141208028

Figure 1.6. **Employment rates by education level in 2005**



Source: OECD (2007), *Education at a Glance* and OECD (2007), *Analytical Database*.

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Improving education and training will help raise effective labour supply

Enrolment in tertiary education is growing fast…

The education system was the object of a detailed review in the last *Survey*. One of the most encouraging developments in this area is the fast growing proportion of youths enrolled in tertiary education, which has helped Poland to narrow significantly the gap *vis-à-vis* the EU average in educational attainment of 25-34 year-olds. The main challenge is to ensure that financial resources expand accordingly to prevent a dilution of quality. However, there are a number of obstacles that make this difficult to address in the near term, not least the constraint on public finances that limits the capacity for substantial investment in both school infrastructure and teachers' salaries. In this context, the absence of tuition fees for full-time education in public higher-education institutions – ruled out by the Polish constitution – is unfortunate, especially given that students enrolled in private institutions pay the full cost, resulting in horizontal and vertical inequities. Furthermore, the absence of a well-functioning means-tested student-loan scheme penalises students from less privileged backgrounds whose access to the more prestigious universities is compromised as they cannot easily finance living expenses even when tuition is free.

… but the proportion of young adults lacking adequate skills remains high…

While the proportion of young adults with at least upper-secondary education is relatively high, those who have just completed secondary education are often ill prepared for the labour market, lacking the type of skills that employers seek in new recruits. One reason is that many students who in the past would have been in vocational schools are now in general secondary and although many of them do complete the programme, they are neither able to attend tertiary education nor well-equipped for the labour market. Fewer pupils opt for the vocational stream, in part because its attractiveness has declined due to the failure of most schools to modernise their programmes and equipment sufficiently rapidly to reflect industrial changes. In order to facilitate the modernisation of curricula in vocational programmes, the government adopted a number of measures in 2007, including the provision of clearer guidelines as to professional qualifications and a closer monitoring of labour surpluses and shortages by professions and regions. A nationwide network of examination centres is also being established to promote the certification of vocational qualifications acquired both inside and outside the school system.

… and providing adult training to the unemployed is difficult

For those who have already left the school system many years ago, some form of specialised training is basically the only option for improving skills. In this regard, Poland faces challenges that are common across OECD countries. One is that the returns to training investment are generally lowest for those who need it most, notably older unskilled people and the long-term unemployed. And this raises a dilemma as to where to concentrate scarce public resources. In fact, data from a few years back (2002) showed that in Poland even more than most other OECD countries, the largest group of participants in adult learning were employed individuals from 25 to 34 years old with above-average education. Clearly, channelling more resources to upgrading the skills of the unemployed is a difficult task, especially given that substantial resources are already absorbed by disability and early-retirement programmes. The chances of success are further compromised by the high proportion of job-seekers who have been unemployed for more than a year (50% in 2006), although some of them may be active in the informal sector.

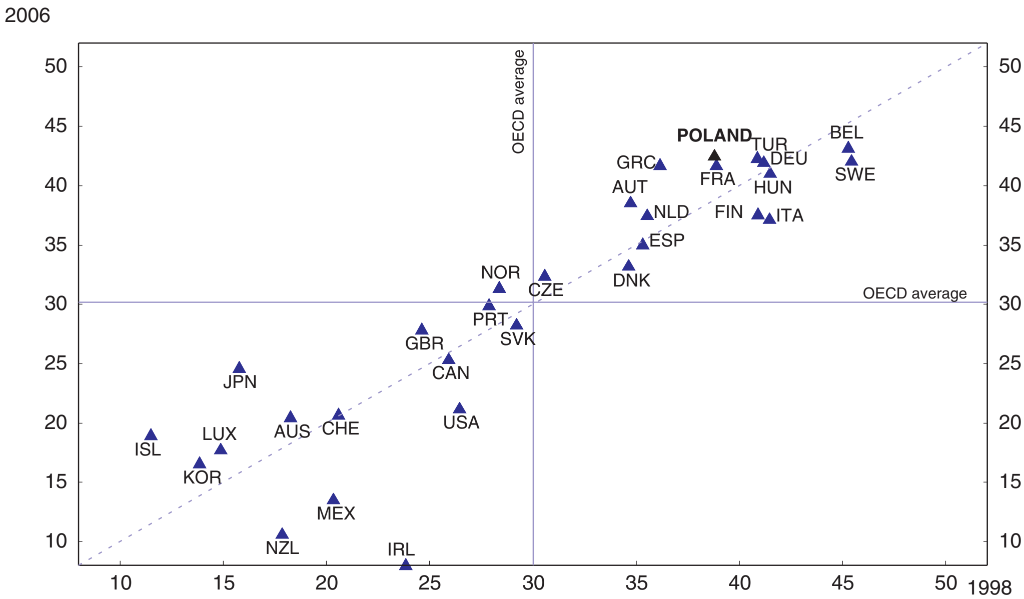
Nevertheless, in recent years the government has strengthened the role of active labour market policies in the overall support for unemployment, with a particular emphasis on training. As a result, the proportion of the registered unemployed enrolled in either apprenticeships or training has grown from less than 5% in 2002 to nearly 20% in 2007. In fact, the absolute number of enrolees has continued to rise since 2005, even as the number of registered unemployed has plummeted. So far, over half of the unemployed who have benefited from training programmes have successfully returned to paid employment, a very good outcome by international standards. However, given that labour-market conditions were highly favourable in 2006 and 2007, it may be premature to render a definitive judgment. It is therefore important to continue tracking the job experience of those who have left such programmes in recent years so as to develop cost-effective methods to reach out to older, less qualified adults, where chances of success are more limited.

High labour taxation reduces the employment prospects of workers with low earnings potential

One of the tax system's main characteristics is the high rate of social security contributions for both employers and employees. As a result, Poland has had one of the largest tax wedges in the OECD, despite relatively low personal income taxes (Figure 1.7). Even though the wedge was reduced in both 2007 and 2008 (see Chapter 3), it remains

Figure 1.7. **Average tax wedge on labour**[1]

Percentage of total labour compensation, at 100% of average worker earnings[2]



1. Measured as the difference between total labour compensation paid by the employer and the net take-home pay of employees, as a ratio of total labour compensation. It therefore includes both employer and employee social security contributions.
2. Couple with 2 children, average of three situations regarding the wage of the second earner.

Source: OECD, *Taxing Wages database*.

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relatively high and, in all likelihood, this is contributing to the low observed employment rates, in particular among workers with modest earnings potential.

Factors conditioning the influence of the tax wedge on employment

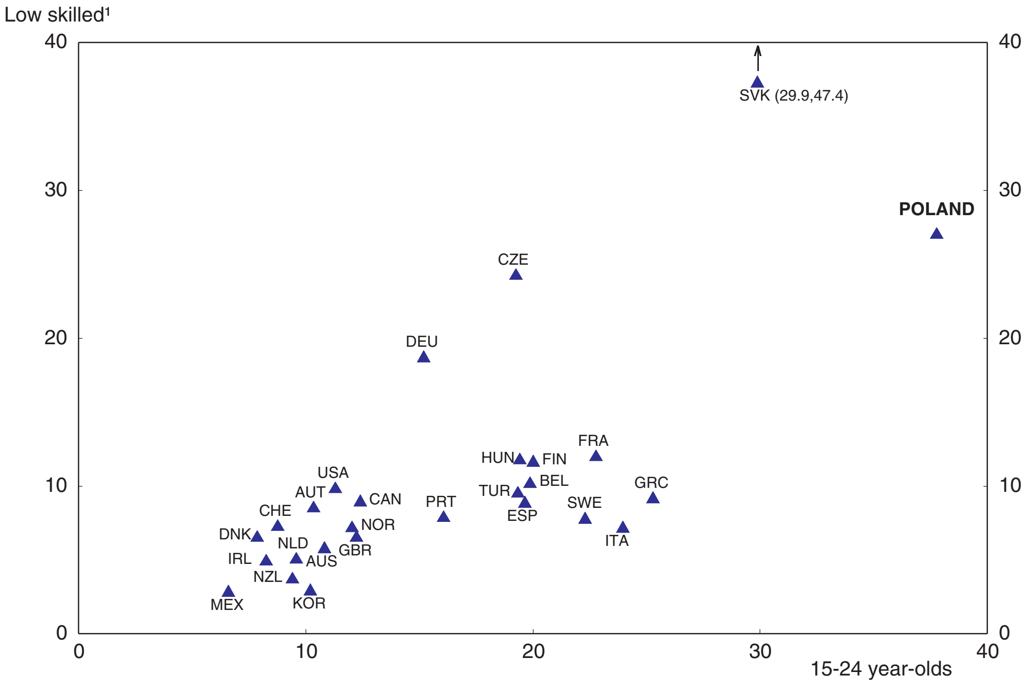
In general, the overall impact of the average tax wedge on employment depends to some extent on who ultimately bears its cost. Insofar as employers are able to shift the burden to employees through lower (pre-tax) wages the unemployment rate would be largely unaffected (at least in the medium term), and the magnitude of the effect on the employment rate would depend essentially on the responsiveness of labour-force participation to wage developments relative to "reservation wages". However, cross-country empirical studies often find evidence of a significant impact of the tax wedge on the unemployment rate, suggesting that pre-tax wages do not adjust sufficiently to prevent labour demand from falling relative to supply following a tax hike.[1] According to recent OECD estimates, a 10 percentage point increase in the tax wedge would raise unemployment by nearly 3 percentage points for the average OECD country (OECD, 2007). The negative impact on employment rates would be even larger, at between 3½ and 4 percentage points, indicating that participation rates would also fall.

As regards the effect on unemployment, the presence of a binding wage floor in the form of a statutory minimum wage is one factor contributing to this result, especially in countries where a uniform rate is set at a high level relative to the median wage (Bassanini and Duval, 2006). At an estimated 39% of the median wage in 2005, the minimum wage in Poland was not particularly high in international comparison. Its impact on employment is further mitigated by measures allowing enterprises to pay new entrants of any age only 80% of the minimum wage in the first year. Nevertheless, other evidence has shown that the proportion of workers paid at, or slightly above, the minimum wage varies substantially across Polish regions but can be particularly high for youth, especially those with low educational attainment (OECD, 2004).[2] This is corroborated by data on the aggregate wage distribution showing a truncation at around the minimum wage level (Góra *et al.*, 2006). A particularly binding minimum wage in some regions may have contributed to the high overall unemployment for youth and the low-skilled (Figure 1.8). Furthermore, informal employment is also pervasive among younger workers (OECD, 2008), which could yet be another indicator that the high minimum wage relative to productivity is having adverse labour market outcomes. And, this effect may be exacerbated by the 20% increase in the statutory minimum wage that took place in January 2008, which would bring its level close to 43% of the median wage.

Aside from the presence of such floors, tax wedges can be a source of unemployment if employees have enough bargaining power to set wages persistently at above market-clearing levels (*i.e.* labour markets are not perfectly competitive).[3] For instance, previous empirical analysis has found that the impact of tax wedges on unemployment can be particularly high in countries where strong union membership coincides with a low or intermediate degree of centralisation/co-ordination of wage bargaining (Daveri and Tabellini, 2000). Poland no longer fits these criteria. While trade-union activism may have partly contributed to the steep rise in structural unemployment during the 1990s (Zientara, 2007), its influence on wage determination appears to have weakened significantly since then. Between 1990 and 2000, the share of workers represented by unions had already fallen from 30 to 15% (the fourth smallest proportion in the OECD; it has since edged down to 14%), and even then union representation is largely concentrated

Figure 1.8. **Unemployment rates for youth and the low skilled**

2005



1. Defined as population with no more than lower secondary education.

Source: OECD (2007), *Education at a Glance* and OECD (2007), *Employment Outlook database*.

StatLink http://dx.doi.org/10.1787/345215204100

in specific sectors such as mining, shipbuilding and railways. Furthermore, a centralised form of social dialogue exists through the National Tripartite Commission, but the outcomes are more of a normative than of a binding nature and apply mainly to large state-owned companies or public-sector employees. Hence, private-sector wage determination is largely decentralised, with negotiations taking place at the company or plant level, without much higher-level co-ordination.

As for the effect on participation rates, their sensitivity to net wage changes depends not only on workers' capacity and willingness to substitute leisure inter-temporally but also on the extent to which a change in the tax wedge affects the reservation wage and the market wage in different proportions. As the determinants of the reservation wage of a person outside the labour force include factors such as social assistance, family benefits as well as disability or retirement pensions – exempted for the most part from income tax and social security contributions—the reservation wage is likely to be much less sensitive to tax-wedge changes than is the market wage (Blanchard, 1999). This is even more the case if one believes that income earned in the informal sector helps to determine the reservation wage, a factor particularly relevant in a country like Poland.[4] In such a case, the elasticity of labour-force participation to tax-wedge changes could be quite significant for workers with low earnings potential, given that their (pre-tax) market wage is often only marginally above their reservation wage and that they are the ones most likely to fall into inactivity traps.

Whether the impact of the tax wedge on Polish employment has come mainly through higher unemployment (*via* the interaction with the minimum wage) or lower participation is difficult to discern from empirical analysis. Even though, in principle, individual country estimates could be extrapolated from panel econometric analyses, such calculations are generally hazardous, especially since former centrally planned economies such as Poland are often left out from such estimations.[5] What the evidence confirms, however, is that the impact seems to be much greater for lower-income earners. For instance, estimates based on micro data from the labour force survey in Poland indicate that the impact of a tax-wedge change on employment rates is four to five times larger for workers with less-than-median earnings than it is for those above the median (Góra *et al.*, 2006). The same study uses cross-country regression analysis over a sample that includes Poland and other CEE countries to show that the tax wedge has a large and statistically significant negative effect on the employment rate of low skilled, prime-age males, but not on that of high skilled individuals.[6]

Another aspect of taxation which creates a challenge is its high compliance costs, in particular for small and medium-sized businesses. These costs result not only from the administrative burden associated with tax collection, but also from the significant amount of uncertainty surrounding the interpretation of many tax provisions, leaving firms vulnerable to arbitrary decisions by tax inspectors and setting the stage for bribery and corruption. The complexity of the tax code contributes to both sources of compliance costs. Options for reforming taxation so as to achieve higher economic efficiency, while raising the effectiveness of tax collection in a way that is not excessively burdensome for taxpayers, are explored in Chapter 3.

Keeping older workers in the labour force at least until statutory retirement age is proving difficult

In 2005, the effective retirement age remained, at around 58 for men and 56 for women, well below the corresponding statutory retirement ages (respectively 65 and 60). The new pension system, introduced in 1999, which combines a mandatory notional defined-contribution first pillar with a compulsory fully-funded second pillar based on individual accounts, is largely neutral from an actuarial perspective. Thus, it creates financial incentives to continue working beyond official retirement age. However, the new system will have its full effect only once the cohorts who were not yet 40 at the time of the reform approach retirement age (*i.e.* in the mid-2020s). Moreover, the reform was incomplete in that it did not solve the problem of early-retirement schemes, which benefit workers in many occupational categories. In principle, these temporary pensions are designed for people over 50 who are deemed unable to perform their tasks until official retirement age due to special working conditions. In practice, the list of occupational categories eligible is so vast that the number of beneficiaries exceeds one million (nearly 6% of labour force). The pension reform has replaced early-retirement schemes with "bridge" pensions, which should have been implemented in 2007 as a kind of temporary entitlement for a much more restricted number of employees. However, the introduction was postponed in the face of strong resistance by some workers (in particular coal miners, teachers and railway workers). Meanwhile, the labour force participation rates of workers aged 55-64 continued to decline in 2005 and 2006 despite favourable labour-market conditions (Figure 1.9), in contrast to developments elsewhere in the region. To some extent, this has been prompted by the premature withdrawal of many workers who feared losing entitlement to early-retirement benefits. This withdrawal has largely offset the positive impact on labour force participation of the 1999 reform of the

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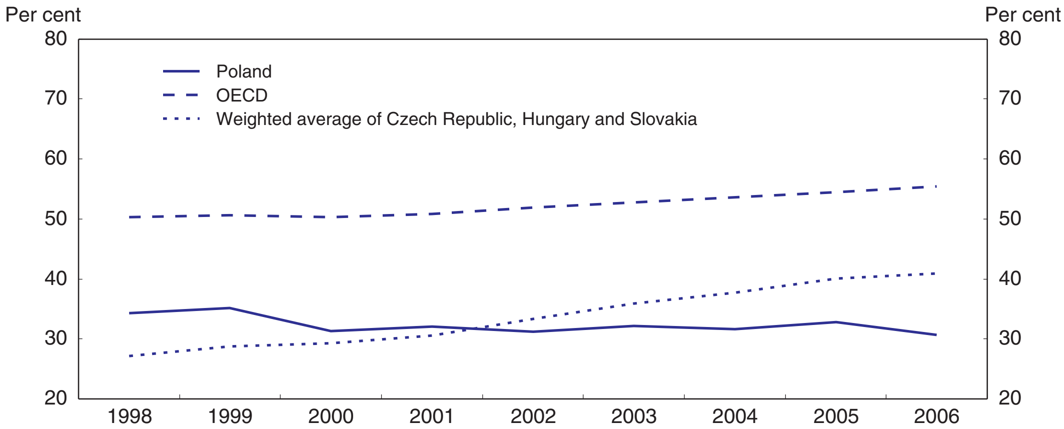
Figure 1.9. **Labour force participation rates for 55-64 year-olds**

As a percentage of age group



Source: OECD, *Employment Outlook database.*

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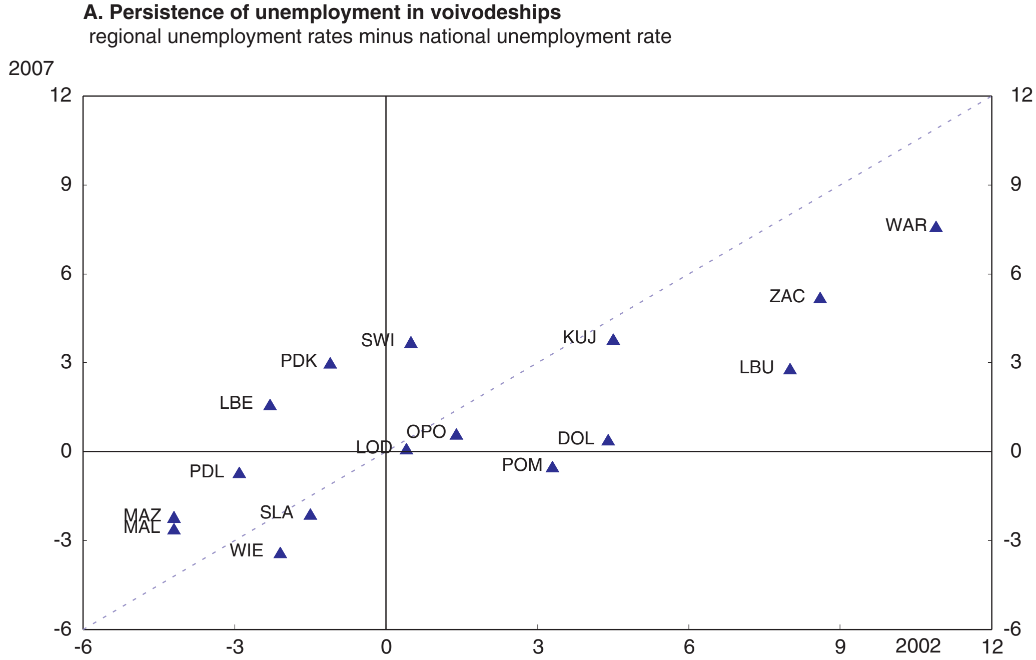
disability pension scheme, which has resulted in a reduction in the number of beneficiaries from 2.4 million in 2002 to around 1.5 million in 2007.[7]

Meagre participation is exacerbated by low internal labour mobility and heavy outward migration

Even though all regions have benefited from the improving labour-market conditions, there has not been a significant reduction in the substantial geographic dispersion of unemployment rates since 2002, a sign that labour mobility remains insufficient.[8] To a large extent, changes reflect the widening of income gaps between the western and eastern parts of the country. Four regions have managed to reduce their unemployment rates significantly relative to the national average, including the three located at the western edge of the country (Figure 1.10, Panel A). In contrast, the three eastern-border regions have experienced a substantial rise in their relative unemployment rates. In fact, the unemployment rate hardly fell at all in two of the three regions. Furthermore, the dispersion of unemployment rates within regions is also quite high, as indicated by the coefficients of variation (Figure 1.10, Panel B). For instance in the region of Mazowieckie, the unemployment rate varies from 3% in Warsaw to 20% in the sub-region of Radomsky, which is only about 80 kilometres south of the capital.

The persistence of the high dispersion of regional unemployment rates, even as the aggregate labour-market situation improves, points to a low degree of labour mobility within the country. Indeed, figures on internal migration rates from 2003 showed mobility in Poland to be lower than in the majority of other OECD countries, including most of those who share similar characteristics in terms of population density or number of territorial units (Table 1.2). To some extent, this is corroborated by recent data on vacancies showing strong disparities across regions within specific sectors (Figure 1.11).[9] For instance, in several important industries the country is divided between regions facing labour shortages and those with surpluses. In fact, the authorities have recently taken measures to facilitate the entry of foreign workers (in particular from Belarus, Russia and Ukraine) in order to ease the shortages in sectors such as construction.

Figure 1.10. **Regional disparities in unemployment rates**



Source: GUS.

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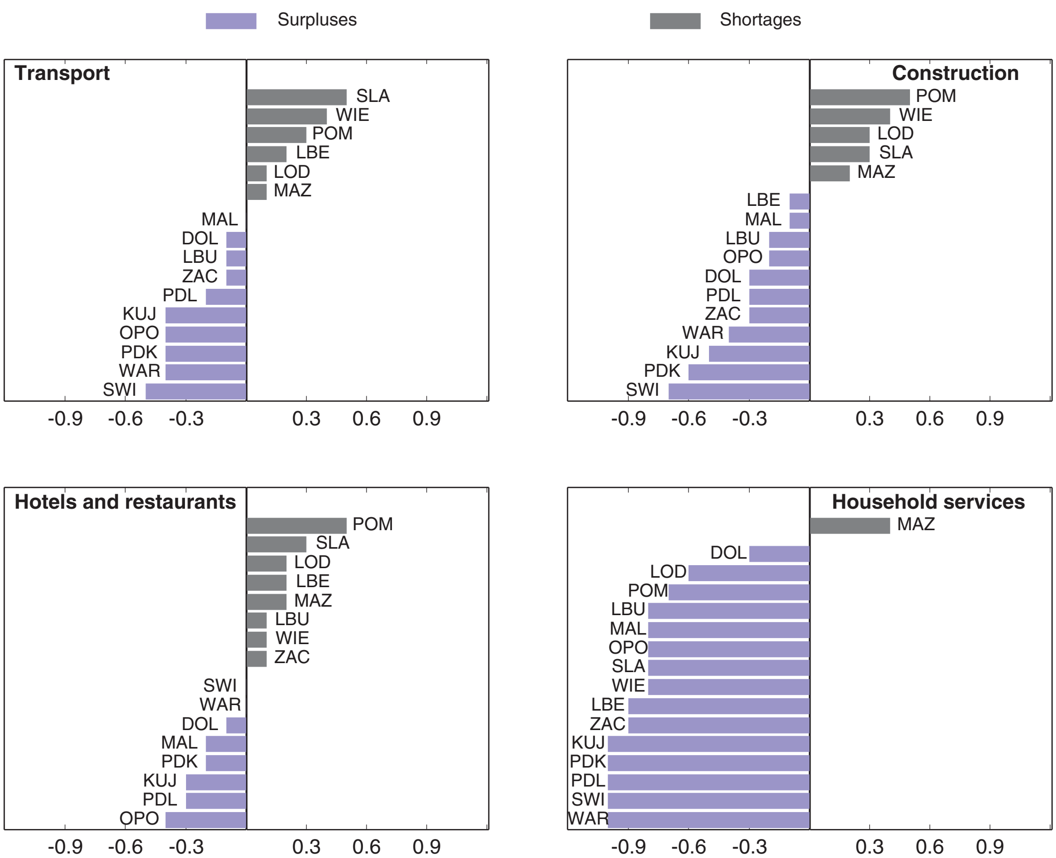
Table 1.2. **Internal migration rates, 2003**

	Number of regions	Regions		Migration intensity rate
		Area (km^2) average	Average population density (persons/km^2)	Annual flows (% of 15-64) LFS 2003
Poland	**16**	**19 543**	**88.3**	**0.30**
High degree of comparability with Poland				
Spain	16	31 095	93.6	0.20
France	22	24 726	88.3	2.11
Italy	20	14 756	119.7	0.58
Hungary	7	13 290	89.5	0.40
Lower degree of comparability with Poland				
Greece	13	10 125	83.4	0.21
Czech Republic	8	9 858	286.8	2.11
Austria	9	9 318	334.3	0.64
Germany	36	9 917	303.8	1.36
Great Britain	11	6 590	531.6	2.28

Source: Ministry of Labour and Social Policy (2007), and OECD (2005).

Figure 1.11. **Labour surpluses and shortages by regions**[1]

Deviation from the ratio of job offers to registered unemployment, 2006



1. DOL: Dolnoslaskie, KUJ: Kujawsko Pomorskie, LOD: Lodzkie, LBE: Lubelskie, LBU: Lubuskie, MAL: Malopolskie, MAZ: Mazowieckie, OPO: Opolskie, PDK: Podkarpackie, PDL: Podlaskie, POM: Pomorskie, SLA: Slaskie, SWI: Swietokrzyskie, WAR: Warminsko Mazurskie, WIE: Wielkopolskie, ZAC: Zachodniopomorskie.

Source: OECD calculations based on GUS series.

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The low degree of internal mobility contrasts with the apparent cross-border mobility of Polish citizens. Depending on the source of data, the annual flow of Poles going abroad for a period longer than that the typical length of a seasonal job is estimated to have increased by between 40 and 80% shortly after EU accession. In 2005, the outward flow would have been equivalent to around 0.75% of the working-age population, which is nearly three times the estimated rate of internal migration intensity reported above (albeit for 2003). Indeed, high emigration flows have contributed to both the rapid decline in unemployment and the recent emergence of widespread labour shortages in sectors such as health, financial services and construction. Yet, the Polish experience in this regard is by no means exceptional among transition economies that have recently joined the European Union. For instance, the outward migration rate reported above is comparable to those observed in Estonia and Slovakia, and still well below those in Latvia and Lithuania, even though the latter countries have grown faster and have lower unemployment rates (Ministry of Labour and Social Policy, 2007).

Taken at face value, this would suggest that the differential in wages and living standards between old and new EU member states plays a far larger role in driving emigration than domestic labour-market conditions. In this context, reducing the outward flow of Polish workers – let alone repatriating those already abroad – may prove challenging, at least in the near term. On the other hand, the rapid increase in emigration after 2004 shows that when given incentives and opportunities, Poles are quite prepared to move, even when that implies overcoming cultural, administrative and, to a lesser extent, language barriers in addition to basic moving costs. The fact that they appear more reluctant to move within their own country indicates the presence of specific barriers, even taking into account the fact that the incentives in terms of wage differentials across regions are not as high as in the case of an international move. In particular, internal mobility is likely to be hampered by substantial gaps in both housing and, to a lesser extent, transport infrastructure (which also renders commuting difficult). These two potential sources of barriers to mobility are examined in Chapters 4 and 5.

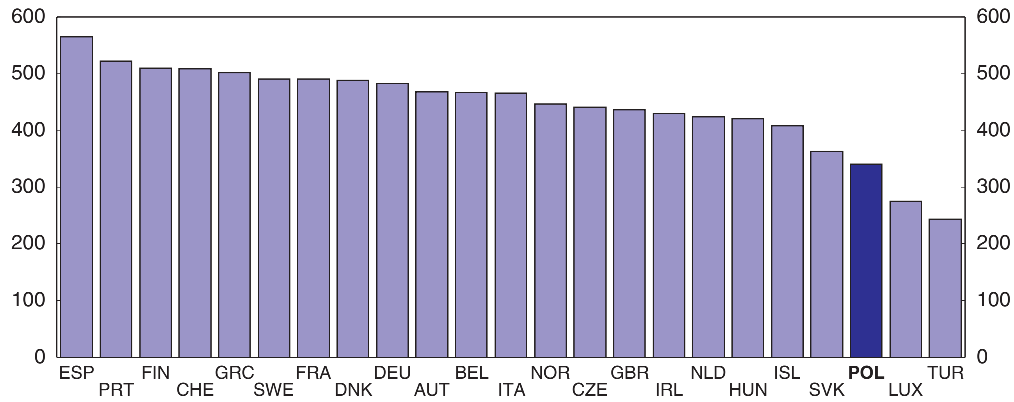
Bridging the housing gap

The main objective for the housing market is to increase the supply of available accommodation, not least in major cities where rapid economic growth has resulted in booming housing prices. By end-2006, the number of dwellings per 1000 inhabitants amounted to only 337, one of the lowest in the OECD (Figure 1.12). A simple calculation shows that in order to reach the average ratio of 470 units observed in the EU15, Poland would need approximately five million extra houses to add to the existing 12.8 millions. The under-provision of housing, at least by international standards, is corroborated by data showing that the average available living area in square metres per person, which amounted to 22.8 m^2 in cities (23.5 m^2 on average), is well below the floor space available in major urban centres in other developed economies.

The average age of the housing stock is not particularly old compared to other European countries (OECD, 2005). According to 2002 data, 50.1% of total occupied dwellings were built before 1970. However, 63.9% of houses were built in the former communist area, most of it under widespread standardisation with limited resources and having benefitted from little maintenance expenditure. Therefore, with quantity favoured over quality, repair problems are widespread in the pre-transition stock. All in all, regardless of the gap in terms of effective availability of housing, basic amenities and the scale of usable floor

Figure 1.12. **Density of the dwelling stock**

2006 or latest year available, units per 1 000 population



Source: European Mortgage Federation (2007), Hypostat 2006.

StatLink http://dx.doi.org/10.1787/345303741413

area, there is not only an excess demand for safe accommodation, but also a pent-up latent demand for enhanced units combining less standardisation and higher-quality building materials.

But even more damaging to the efficient functioning of the economy than the lack of sufficient housing space is the absence of a deep and effective rental market. This is doubtless a curb on labour mobility, resulting in a persistently high dispersion of unemployment rates not only among regions but even within them. Rental accommodation is available from public authorities and from housing co-operatives, but such supply is clearly insufficient. It is the private market that is stunted, largely because of misguided policies to protect tenants both from eviction and from rent increases (see Chapter 4).

The attempt to rapidly improve transport infrastructure

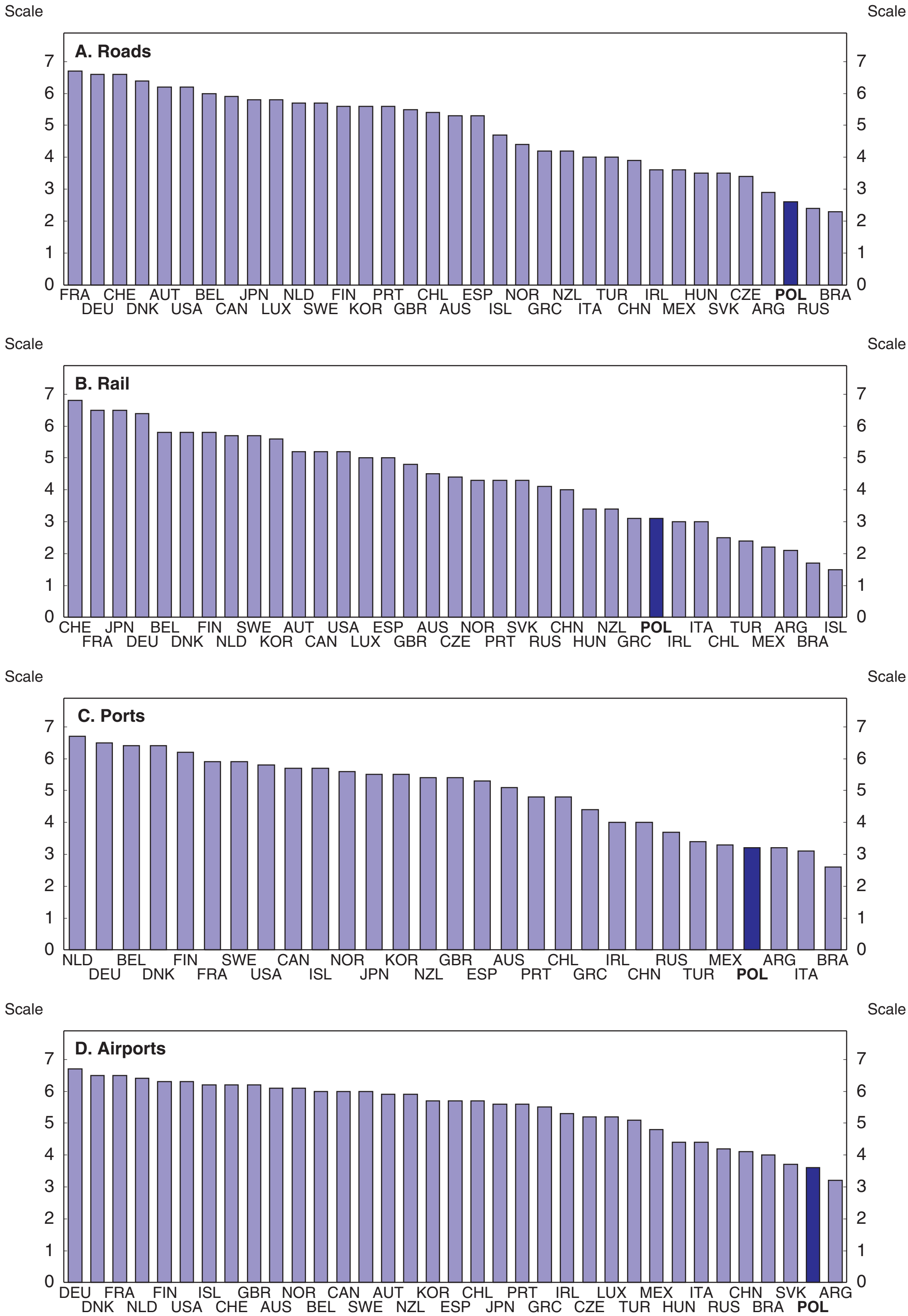
Following years of underinvestment, Poland also lags most OECD countries in terms of both quantity and quality of transport infrastructure. Yet, economic development and the increasing role the country plays as a transit route in international trade between Western and Eastern Europe has led to soaring demand for long-distance transportation since the mid-1990s. Massive infrastructure investments are therefore required in order for Poland to increase labour mobility, raise productivity and fully exploit its favourable geographic location, including its access to the Baltic Sea. In this context, the substantial grants made available from the EU structural and cohesion funds constitute both an opportunity and a challenge. An opportunity because the amount allocated over the period 2007-13, including co-financing, represents nearly 5% of GDP per year on average; also because Poland will never again have the chance to redesign its system with a view to doing anything different from what its western neighbours have done (with all the reliance on the private motor vehicle that entails and the attendant fallout on obesity and pollution). A challenge because the EU funds are allocated under a fairly strict timeframe, requiring the funded projects to be completed at the latest by 2015, following which the funds will no longer be available. After getting off to a slow start in the preparation and implementation of the broad investment plan, Poland now needs to catch up, with all the risks that this entails in terms of cost overruns, especially given the shortage of construction workers. In order to minimise such risks, a number of policy issues need to be addressed, notably in the areas of tendering procedures, the legal framework underpinning public-private partnerships and the establishment of efficient access-charging systems, in particular for roads and the rail network.

The experience of the past few years underscores the difficulty of absorbing EU funds in the transport sector. By end-2006, spending had amounted to merely 16% of the allocated budget for the period 2004-06, the lowest percentage among seven different operational areas benefiting from EU financial support. While it had been initially planned to spend 78% of the budget, many problems occurred during the project implementation stage linked to poor preparation and, more specifically, the lack of land, co-financing, technical matters, environmental concerns or tender documentation (Ministry of Regional Development, 2006). Other difficulties may have been related to: excessive centralisation of the funding system; its exaggerated prudence and formalism, often with too stringent requirements as compared with EU law; underestimated human-resource needs in public administrations; and, finally, the lack of relevant knowledge and experience with new regulations by the beneficiaries. More generally, other new EU member states have also experienced difficulties in absorbing EU funds but are making progress nevertheless; hence, in this respect, Poland is not an outlier. Indeed, by October 2007, a 53.6% spending ratio (all programmes taken together) ranked Poland fifth among the 10 such countries. The absorption capacity in the transport sector has also increased in comparison with 2006, as approximately half of the envelope was spent by end-2007, and it is likely to rise further in accordance with "learning by doing". But the obvious challenge for the near future is to speed up this learning process, not least because the amount that will have to be spent each year over the 2007-13 period is far more substantial.

Although the specific needs vary across major modes of transport, they all suffer from significant gaps (Figure 1.13). In the case of existing roads, the deficiencies include a low level of technical standards, insufficient maintenance and, above all, too few high-capacity routes. Since the mid-1990s, the share of roads in total goods transportation has tripled, mainly at the expense of maritime transport. This, combined with the under-provision of highways, has led to chronic road congestion and an accelerated depreciation of the actual network as well as a dramatic decrease in traffic safety when considering both the number of accidents and corresponding fatality rates.[10] As for railways, although the system is the third largest in Europe, the sector's key problem is the obsolescence of the capital stock. The infrastructure is in very poor technical condition and often fails to fulfil safety requirements (only 30% of the network is of good quality, thereby requiring only maintenance work), while the bulk of the rolling stock is out-dated and/or worn out. This leads to important speed limits: the maximum speed on 40% of the operating network is 80 km/h.

The main challenge for maritime transport consists of improving the competitiveness of the major ports on the Baltic Sea, in particular relative to Germany. *First*, port infrastructure is out-dated: the share of obsolete capital stock is very high, ranging from 40 to 70%. *Second*, port access from both land and sea is poor. The lack of adequate road and rail infrastructure leading to ports lengthens delivery times, raises freight costs and limits the range of available services. *Third*, modern port facilities are underdeveloped, in particular as to specialised terminals for packaged and container cargo transport. Also, the quality and speed of cargo and vessel services delivered in ports lag behind

Figure 1.13. **Transport infrastructure quality**[1]



1. Scale from 1 (underdeveloped) to 7 (extensive and efficient as the world's best).

Source: World Economic Forum (2007), *The Global Competitiveness Report 2007-08*.

StatLink http://dx.doi.org/10.1787/345326773183

international standards. The effectiveness of specialised control and supervision agencies (customs, border control, food-quality inspection) is low and the procedures cumbersome, reducing the cost competitiveness of port service provision. Finally, numerous challenges lie ahead in the case of air transport as well, with Poland being among the OECD countries with the poorest quality of airport infrastructure. There is a need to build new and expand existing passenger terminals, runways and other airport facilities. Another priority is related to the development of quick and efficient road and railway connections between airports and nearby urban centres and national road and railway networks, as most of them are in bad shape. There is growing congestion at the central airport at Warsaw; thus, the building of new infrastructure is vital. Finally, the expansion of regional airports requires major capital investments too.

Productivity growth may be losing steam, and competition remains weak

Even though Poland has continued to narrow its productivity gap *vis-à-vis* leading countries since the early part of this decade, the pace of catching up has slowed (see Table 1.1 above). Yet, the shortfall remains substantial, and the opportunities provided by EU membership should have helped maintain strong productivity growth in recent years. A number of factors may have contributed to the slowdown. One is the rapid decline in unemployment, which meant the integration of lower skilled workers in the labour force. In the same vein, strong profit growth over the period may have weakened firms' incentives to adopt state-of-the-art technology and managerial practices. These factors may be reinforced by the lack of adequate transport infrastructures insofar as they raise the cost of serving foreign markets and may limit the opportunities for firms to manage inventories and organise production in the most efficient way. Furthermore, strong productivity gains during the late 1990s and early 2000s were in part driven by the process of industrial re-structuring, underpinned by privatisation and sectoral reallocation. The latter developments have proceeded more slowly in the past few years. For instance, the share of the labour force employed in the low-productivity agricultural sector is hardly diminishing any more, despite the boom elsewhere. All in all, these various explanations suggest that incentives to seek efficiency gains as well as the capacity of businesses to exploit opportunities may need to be strengthened.

The last *Survey* examined the role of regulatory barriers to competition in hampering entrepreneurship and innovation. Although significant progress has been made since the late 1990s in easing competition-restraining regulation, overall product-market regulation remains relatively strict. The main areas contributing to this relative strictness are the preponderance of public ownership in various sectors and the administrative burden on both start-ups and established firms. For instance, according to the latest set of indicators from the World Bank's *Doing Business* report, the number of procedures, time required and cost involved in starting of a business is still substantially higher in Poland than in other OECD countries (Figure 1.14). Furthermore, for established firms, compliance costs, in particular in the area of taxation, are very high, as discussed in Chapter 3. In the case of public ownership, two concerns were underscored in the last *Survey* and remain valid. One is the slow pace of privatisation, even as the number of publicly owned or controlled companies remains relatively large. The other is the tendency to stifle potential buyers' ability to re-organise newly privatised entities by putting excessive weight on employment and social guarantees in the privatisation process, and by keeping residual state ownership (including through special shares giving effective controlling interest) in too

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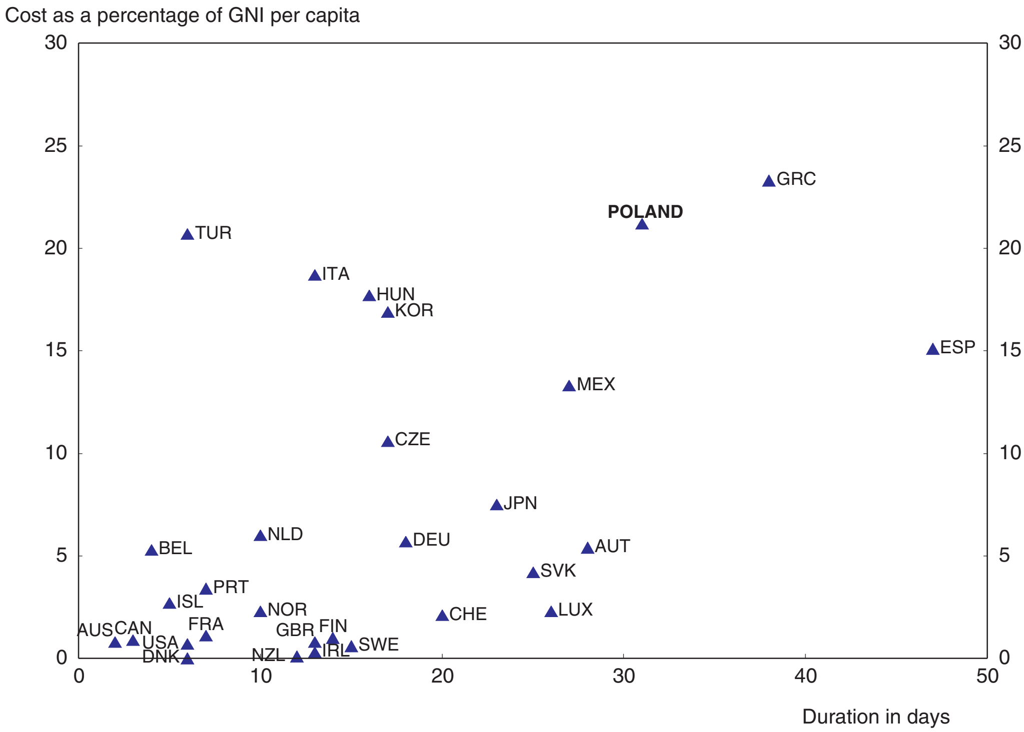
Figure 1.14. **Starting business indicators**



Source: World Bank (2007), *Doing Business Report*.

StatLink http://dx.doi.org/10.1787/345340360058

many companies. Nevertheless, Poland has at least held its own in terms of attracting inward investment in recent years.

The pace of privatisation remained slow in 2006 and 2007. In 2006, nine state-owned enterprises were privatised, while another six companies were partly opened to private ownership. During the first half of 2007, the number of state-owned firms sold off rose to 12, and shares in 60 others were made available to private investors.[11] To put these numbers into perspective, however, the number of partly or wholly state-owned companies in Poland is still well over a thousand. Meanwhile, major sell-offs in the power-supply industry were delayed, and the two largest entities in banking and insurance remain owned by the state. However, the new government has indicated a strong commitment to accelerate privatisation in the coming years, with plans to privatise 740 state-owned enterprises over the period 2008-11, including those in the financial sector. The programme is expected to generate revenues of around 30 billion zlotys (or around 2.6% of GDP). As regards the regulatory barriers to entrepreneurship, the previous government proposed a new law in 2007 that sought to simplify business registration, notably with a view to reducing the length of the process to three days, and that envisaged the creation of a unique office to handle all tax-related issues. A related objective was to eliminate the duplication of tax inspections and ensure harmonisation of the decisions taken by different tax authorities. However, the proposal was not adopted by Parliament before the election, and the new government has not made any clear announcement in this area so far.

As regards competition in energy network industries, progress has been made in electricity, with the creation of four competing energy groups, replacing the system based on long-term contracts, and the implementation of the third-party access principle in accordance with EU Directive 2003/55/EC. Hence, since July 2007 the applicability of third-party access has been extended to household customers, in addition to commercial customers who were covered since July 2004. And procedures for allowing customers to switch providers have been improved so as to facilitate the development of competition in the retail electricity market. However, there are still obstacles to a well-functioning market, both at the wholesale and retail levels. In particular, the main objective of the unbundling of the transmission system operator has not been to improve efficiency but rather to adapt its operations to the existing generation and transmission structure, even though the latter is rather inefficient. At the retail level, insufficient unbundling of distribution system operators (wholesalers) raises the risk of discrimination in favour of incumbents (who are partly integrated with supply companies) and against new entrants. But retail price regulation is to be ended at the end of the year.

Poland is even further away from the development of a competitive market in gas. The industry is still driven by a monopoly (PGNiG), and potential foreign entrants are blocked by a provision of the gas law forcing suppliers to have storage capacity on Polish territory equivalent to 3% of total annual import volumes.[12] More generally, the independence of the energy regulator remains weak and its power and/or authority insufficiently clear for it to fully play its role. Its independence has been even further weakened by a recent legislative change that allows the government to arbitrarily set the tenure of the President of the regulatory body as it sees fit. Overall, progress in reforms to boost product market competition and facilitate structural adjustments has generally been slow and piecemeal over the past two years (see Annex 1.A1 on progress in structural reform). To some extent, the pace of reforms was affected in 2007 by the election which led to the formation of a new government, as a number of legislative proposals were left pending before the dissolution of Parliament.

Notes

1. See Chapter 3 of OECD (2006) for a review of selected empirical analyses.
2. Calculations based on data for the year 2000 indicate that the share of employees paid at around the minimum wage was around 18% for all youth and 25% for those with less than secondary education. The latter proportion was 30% or more in four of the 16 voivodeships.
3. This condition is necessary but not sufficient. One other necessary condition is that workers must not perceive components of the tax wedge as deferred benefits (and accordingly must bargain purely for net rather than gross wages).
4. According to the methodology of the Central Statistical Office based on the commodity turnover statistics, the grey market in Poland is estimated to be approximately 13-14% of GDP, thus approximately PLN 150 billion. Measures based on social security coverage or tax returns suggest that informal employment represents between 5 and 10% of the workforce (OECD, 2008). This is comparable to what is observed in other Central European countries but much lower than in Korea, Mexico and Turkey.
5. For instance, the results reported above from OECD (2007) are based on a sample excluding Poland. One more reason to be cautious is that the estimated coefficient on the tax wedge from panel unemployment regressions can vary susbstantially across country sub-groupings. For instance, Daveri and Tabellini (2000) find the impact to be largest in continental Europe, but insignificant for Nordic countries.

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6. In this study, the low skilled are defined as those who have not completed upper-secondary education, while the high skilled have completed at least first-stage tertiary education. The authors find that a 10 percentage point increase in the tax wedge reduces the employment rate of low skilled prime-age males by around 5 percentage points, whereas the effect on high skilled prime age males is only one-third as large and not statistically significant.
7. The reduction in the number of disability pension beneficiaries partly results also from the shifting of the disabled above retirement age into the old-age pension scheme.
8. While the standard deviation of regional unemployment rates fell from 4.7% to 3.1% between 2002 and 2007, the coefficient of variation remained unchanged at 0.27 because of the sharp drop in the mean rate.
9. This is also consistent with a recent micro-data analysis on the labour-market status and characteristics of internal migrants in Poland. It concluded that after controlling for primary determinants of geographic mobility such as age and the level of education, no evidence of a link between individual unemployment and the probability of moving could be established (Ministry of Labour and Social Policy, 2007).
10. Road traffic accident-related mortality per 100 000 population amounted to 13.7 persons per 100 000 inhabitants in 2006, which is 2.3 times more than in the best performing EU countries; road traffic accident-related mortality per 100 accidents is also very high: 11.2 deaths for 100 accidents, while the EU average is 2.7 (Ministry of Transport, 2007).
11. The receipts from these privatisations reached 1 billion zlotys (or 0.1% of GDP).
12. PGNiG, which owns all existing storage facilities on the territory, claims to have no spare capacity to offer foreign operators. And building such capacity can take several years.

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ANNEX 1.A1

Progress in structural reform

This annex reviews action taken on recommendations from previous *Surveys*. Recommendations that are new in this *Survey* are listed in the relevant chapter.

Recommendations	Action taken since the previous *Survey* (June 2006)
PRODUCT MARKET COMPETITION	
Increase the pace of privatisation:	Privatisation has been very slow but government has announced plans to privatise over 740 enterprises over the period 2008-11.
• Eliminate remaining state controls exerted through residual shareholding (including special shares)	No action.
• Refrain from imposing side conditions on employment and investment in privatisation deals	No action.
Increase competition in specific sectors, and reconsider actions to restructure the sector before its opening to competition:	
• Mining	No action.
• Electricity	Some progress. Creation of four competing groups, improved third-party access to household customers and granting of the possibility to switch providers. Steps taken to liberalise the retail electricity market, expected to take place in 2009.
• Gas	No action.
• Telecommunication	Access to local loop is being more vigorously enforced by sector regulator.
Create a business-friendly environment:	
• Create a one-stop shop services for starting a business.	On-going discussions around the "Kluska" package.
• Improve land registry.	On-going: electronic registration has been created and should be fully operational in 2009.
• Improve the efficiency of capital markets.	Banking supervision was moved from the central bank to a new Financial Supervision Authority.
LABOUR MARKETS	
Shift emphasis from passive to active income support:	
• Restrict the disability schemes to those who are truly incapable of work, re-evaluate the stock of beneficiaries and introduce a time-limited pension.	No re-evaluation of stock but more financial assistance provided to firms who employ disabled persons.
• Improve efficiency of public employment services.	On-going progress: creation of instruments to keep best staff in labour offices. Improved on-line access to information on job opportunities.
• Progressively replace public-job and wage–subsidy policies by activation strategies to treat the non-employed. Develop job-search monitoring.	Progress achieved: with the use of EU funds, enhanced individualisation of support, and activation programmes for youth and long-term unemployed.
Increase labour demand:	
• Ensure that the new indexation rule of the minimum wage does not lead to an increase in labour cost.	No action. The minimum wage was increased by 20% in 2008, boosting it from 39 to 43% of the median wage.
• Expand programmes to pay specific groups with high unemployment risk at less than the minimum wage.	No action.

Recommendations	Action taken since the previous *Survey* (June 2006)
FISCAL SUSTAINABILITY	
Adopt a medium-term budgetary framework with an explicit expenditure rule.	Medium-term framework sets central-government deficit, but with no systematic expenditure targets. On-going process of introducing target-based budgeting.
Raise further the profile of the general government concept when establishing budgetary objectives.	No action. The rule for the 2008 budget was set at the level of the central budget.
Assess state aids as stringently as other public expenditure, and eliminate those that are not efficient. Reduce vertical state aids.	Vertical state aid (especially to coal mining and shipbuilding) has been reduced substantially
Reduce subsidies to the KRUS and work towards merging it with the general system.	No action
MONETARY POLICY MANAGEMENT	
Introduce overlapping terms in appointments of MPC members to ensure the continuity of monetary policy.	No action.
Disseminate more widely core inflation statistics and details of "headline" inflation.	Done. Inflation Reports of the central bank include comprehensive analysis of various indicators.
Continue dialogue and co-operation between the monetary authorities and the government on euro adoption.	Progress achieved. Regular meetings between the President of the NBP and the Minister of Finance.
SUSTAINABLE DEVELOPMENT	
Reduce emissions of greenhouse gases.	Insufficient action: the EU Commission requested a 26.7% cut in CO_2 emissions quotas as compared with what was requested by Poland for the period 2008-12, and the matter was referred to the European Court of Justice.
HEALTHCARE	
Continue reforms of the health-care system, and improve hospital financial management.	On-going discussions with the objective to improve the efficiency of hospital's management.
EDUCATION	
Expand provision of free pre-school education at ages 3 to 5, focusing particularly on poor and rural areas.	No action.
Focus public provision of adult education on improving labour-market outcomes.	Some action: elaboration of a Life-Long Learning Strategy aimed at creating a system of continuing upgrading of qualifications.
Use analysis of both educational and labour-market outcomes to help determine the balance of provision between general and vocational education. Develop closer coordination between labour-market and education policy, both at central and local levels.	Development of national standards for professional qualifications and of educational packages for modular programmes of teaching.
Reform the system of student loans to allow repayment along with income tax once graduates are employed.	No action.
Reinforce quality assessment of higher education institutions (HEIs) through the State Accreditation Commission. Ensure that career structures in tertiary education are based on open competition and transparent promotion criteria. Consider allowing public HEIs to introduce cost-related tuition fees for all students.	No action on specific points, but planned amendment of Act on higher education so as to reinforce science/industry linkages. No action.
Do not allow employment security aspects of the Teachers Charter to obstruct the restructuring required in response to demographic changes. Introduce additional headings under which teachers' salaries can be supplemented to include teaching performance and subjects where there is a shortage of teachers.	On-going discussions to reform the Teachers Charter.

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Chapter 2

Monetary and fiscal policies to head off overheating

The last two years saw a strong acceleration of economic activity in Poland. With the aim to safeguard the sustainability of economic growth both monetary and fiscal policies were tightened in 2007. Yet, despite an uncertain international outlook, it is clear that monetary and fiscal policies need to be further adjusted to head off overheating in the domestic economy. Although the surge in headline inflation to well above the central bank's target of 2.5% has been mostly driven by external shocks, as in other countries, a considerable build-up in wage pressures could darken the inflation outlook. Failing to contain inflationary pressures could harm the hard-won credibility of the monetary authorities and make it costlier to achieve their primary objective of price stability in the medium term. Delaying the policy response could increase future adjustment costs in terms of activity and employment and jeopardise the ultimate objective of adopting the euro. A tightening of monetary policy is therefore needed to steer the economy towards a sustainable low-inflation growth path, assisted by any further appreciation of the currency. But monetary policy should not bear the whole burden of stabilising the economy. A significant retrenchment in public spending could considerably improve the policy mix.

A strong pick-up in the pace of activity and in inflation

The last two years saw a strong acceleration of economic activity in Poland, driven mainly by booming domestic demand. GDP expanded at above 6% rates in both 2006 and 2007 (Table 2.1). These rates were well above those observed in the euro area countries and Hungary, comparable to those in the Czech Republic, but lower than in Slovakia. Economic growth was led by gross fixed capital formation. Investment rose around 20% in 2007, supported by robust economic prospects, strong foreign direct investment, increasing EU funds used for co-financing public infrastructure spending, lower interest rates and easier availability of bank loans. Although private consumption did not exceed GDP growth in 2006 and 2007, it also underpinned the expansion, stimulated by vigorous wage gains, growing employment and increased remittances from Poles working abroad. On the other hand, and as opposed to 2005, net exports made a rising negative contribution to growth of close to 1% of GDP in 2006 and 2% in 2007, though both exports and imports grew briskly. Their expansion reached a cyclical peak at rates above 20% in early 2006 and diminished steadily to near 8% in the last quarter of 2007. Despite a notable deceleration in March (to some extent driven by calendar effects), average increases of industrial production and retail sales for the first quarter of 2008 suggest that activity remains fairly robust.

Table 2.1. **Recent trends and outlook**

Year-on-year percentage change, volume

	Average 1998-2002	2003	2004	2005	2006	2007	2008[1]	2009[1]
Private consumption	3.6	1.9	4.3	2.0	4.8	5.2	6.1	5.7
Government consumption	2.2	4.9	3.1	5.2	5.8	5.8	6.1	3.0
Gross fixed investment	–1.9	–0.1	6.4	6.5	15.6	19.3	16.5	11.3
Final domestic demand	**2.2**	**2.1**	**4.4**	**3.4**	**7.0**	**8.1**	**8.4**	**6.5**
Total domestic demand	**2.0**	**2.7**	**6.0**	**2.4**	**7.3**	**8.3**	**8.5**	**6.4**
Exports of goods and services	6.7	14.2	14.0	8.0	14.6	8.5	9.6	8.0
Imports of goods and services	3.3	9.3	15.2	4.7	17.4	12.3	15.4	11.1
Foreign balance[2]	**0.2**	**1.1**	**–0.8**	**1.1**	**–1.1**	**–1.7**	**–2.7**	**–1.6**
GDP at market prices	**2.8**	**3.9**	**5.3**	**3.6**	**6.2**	**6.6**	**5.9**	**5.0**
Consumer price	7.3	0.7	3.5	2.1	1.0	2.5	4.5	5.5
Unemployment rate	15.8	19.6	19.0	17.7	13.8	9.6	7.8	6.9
Total employment	–2.7	–1.2	1.3	2.3	3.4	4.4	2.5	1.5
Labour productivity	5.7	5.1	4.0	1.3	2.8	2.1	3.4	3.5
Current account (% of GDP)	–4.5	–2.1	–4.0	–1.2	–2.7	–3.7	–4.5	–5.6
Net lending (% of GDP)	–3.9	–6.3	–5.7	–4.3	–3.8	–2.0	–2.6	–2.7

1. Economic Outlook database No. 83.
2. Contribution to GDP volume growth.

Source: OECD (2008).

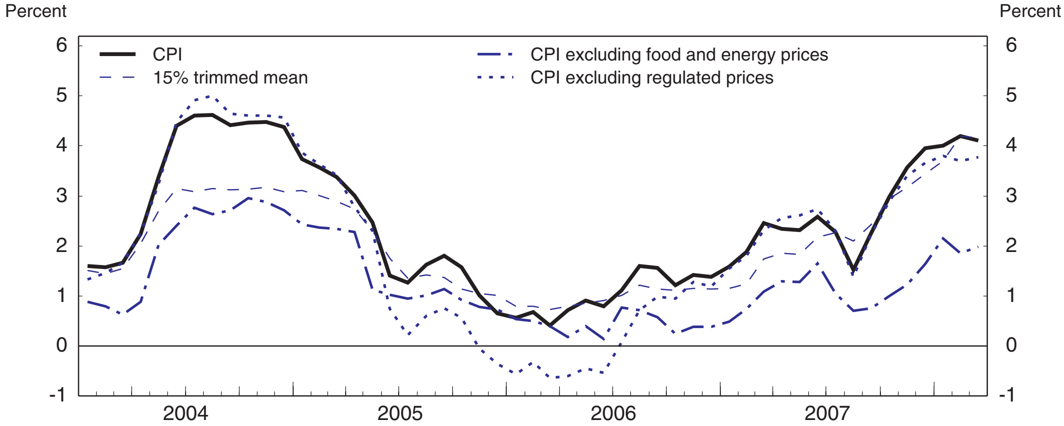
The pace of activity has been sufficient to bring about a further decline in the unemployment rate from the near-20% level that was seen some five years ago. Indeed, the downtrend accelerated, with the standardised unemployment rate plunging to around 8½ per cent in the fourth quarter of 2007.[1] Yet the reduction in the number of unemployed has been only partly matched by job creation as the labour force has been shrinking. Indeed, the labour force participation rate has continued to trend down, thereby contributing to the tightness of the labour market. Several structural factors account for this, including early-retirement schemes and the farmers' special pension system (see below). Sustained emigration that has occurred since Poland's EU membership is yet another essential element, though it is difficult to pinpoint the exact scale of the phenomenon due to measurement difficulties. By end–2006, the stock of Poles living abroad for more than two months was estimated by the Central Statistical Office at nearly 2 million; since May 2004, 80 to 90% of emigrants left Poland for employment reasons (GUS, 2007). The emigration trends have been directly related to the speed and extent of opening of EU15 labour markets for Polish emigrants. The highest inflows were recorded in countries that dropped all restrictions already in May 2004, among which the United Kingdom and Ireland. As a consequence, the Polish economy has been hit by pervasive labour shortages. Central bank opinion surveys confirm that the number of firms reporting hiring difficulties has been rising, with construction and manufacturing being the most affected sectors (NBP, 2008a). Importantly, labour shortages have spread from skilled to unskilled workers.

Given the excess labour demand that has been affecting many sectors and regions – due to low labour mobility (see Chapter 1) – the bargaining power of employees has been considerably strengthened, leading to a sizeable pick-up in nominal wage growth. Average compensation increases jumped from 5% in 2006 to more than 8% in 2007 and have been near 10% in the enterprise sector over the past few quarters. Nevertheless, wage developments have not been matched by comparable aggregate labour-productivity gains, which decelerated from 4-5% in 2002-04 to around 2% in 2007. As a result, following declines in 2002-03 and moderate increases in 2004-06, unit labour cost increases surged to close to 7% by end–2007.

Within the context of a buoyant macroeconomic environment, the inflation dynamics have been particularly interesting over the last two years. Following the decisive interest-rate reaction of the central bank in the wake of the inflationary fillip that occurred in the context of Poland's EU accession (OECD, 2006), CPI inflation bottomed out at 0.6% year-on-year in the first quarter of 2006 – below the tolerance range of the National Bank of Poland (NBP). However, price pressures have been gradually building since then. Even though 2007's average CPI inflation rate corresponded exactly to the official target of 2.5% (+/–1%), this result masks the underlying inflation uptrend (Figure 2.1). The CPI returned within the NBP's band in January 2007, reached the target rate in March and hovered around it until September, breached the upper limit of the band in November and jumped to 4.1% in the first quarter of 2008. The acceleration of headline inflation in late 2007 and early 2008 was mainly driven by large increases in food and energy prices that occurred on international markets. However, there was also a pick-up in the OECD measure of core inflation rate (CPI excluding food and energy prices), though at a slower pace, from a trough of 0.3% in the second quarter of 2006 to an average of 1.1% in 2007, followed by a jump to 2.0% in the first quarter of 2008. The discrepancy between the two measures of inflation is not only due to the shock to food and energy prices but also to the high share of these items in the consumption basket. At the

Figure 2.1. **Consumer price indices**

Year-on-year changes



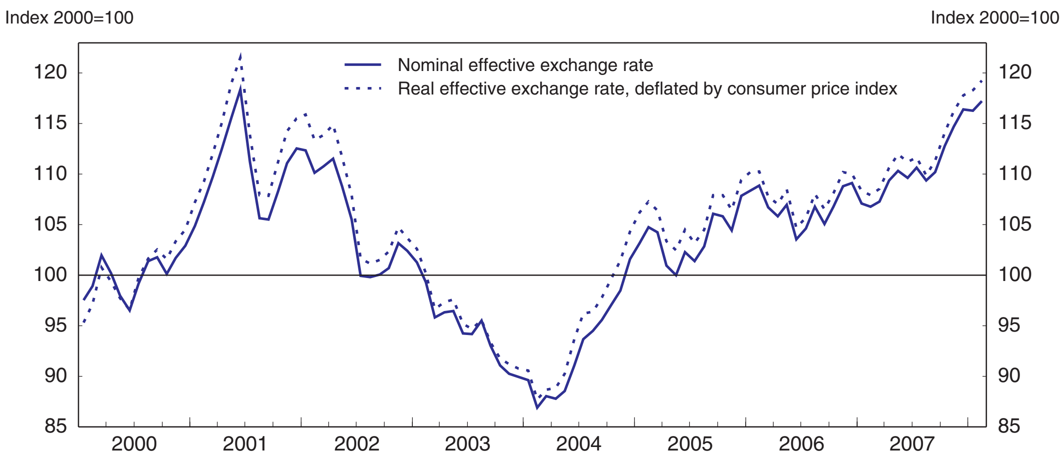
Source: OECD, Analytical database, National Bank of Poland and GUS.

StatLink http://dx.doi.org/10.1787/345351434225

same time, other statistical measures of underlying inflation published by the central bank reveal a much closer profile to the path of headline CPI than to that of core inflation. In early 2008, several price hikes in (quasi-) regulated prices (electricity, gas, tobacco, heating, rentals, refuse collection) also added to inflation dynamics and were coupled with intensifying price pressures in the service sector.

Both the nominal and real effective exchange rates have continued to trend upward over the past several years (Figure 2.2). However, spurred by robust economic-growth prospects as well as expectations of rising interest-rate differentials and more favourable official attitudes to euro adoption, the zloty has recently strengthened more rapidly, while the real effective exchange rate has appreciated at an even brisker pace due to the growing inflation differential with Poland's trading partners. With this as a background, the current account deficit has been rising, reaching 3.7% of GDP in 2007 (Figure 2.3). It was driven by

Figure 2.2. **Effective exchange rates**

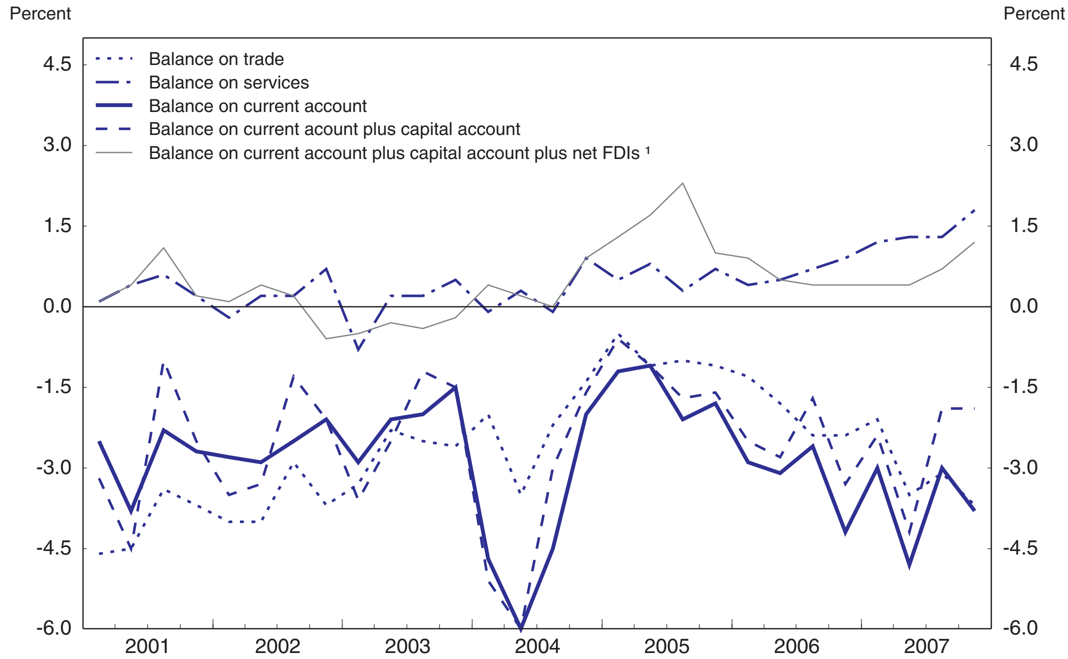


Source: OECD, Economic Outlook No. 83 database.

StatLink http://dx.doi.org/10.1787/345356418118

Figure 2.3. **Balance of payments**

As a percentage of GDP



1. Four-quarter moving average.

Source: Datastream database.

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the progressive slide in the merchandise trade and income balances, partly counteracted by services and transfers balances that continue to register surpluses, the latter thanks to both EU funds and migrants remittances. However, despite the decline in net exports of goods and services, Poland has broadly preserved its export market shares. Reinvested earnings of foreign investors led to the worsening of the income balance. Overall, according to market participants (for example, Bodys, 2008), Poland's external position remained well funded at end-2007, given the significant surplus generated by the sum of current and capital accounts augmented by net inflows of foreign direct investment (Figure 2.3).

The outlook is for strong growth and inflation remaining above the 2.5% target

The economy is projected to grow at a rapid, albeit slowing, pace in 2008 and 2009. For most of the period growth is likely to remain at above-potential rates estimated by the OECD at 5.3% in 2008 and 5.1% in 2009 (see Table 2.1). More importantly, both the output and unemployment gaps will remain substantial, similar to those foreseen by the NBP (NBP, 2008c). According to OECD estimates, the output gap is projected to be around 2.5% of potential GDP and the unemployment gap to stay above 4% in 2008 and 2009. Spending on private consumption and investment are expected to move up briskly before decelerating in 2009 under the weight of tighter monetary conditions. Household expenditure will continue to be fuelled by rising employment, sizeable wage gains, the indexation of old-age and disability pensions and lower personal income taxes in 2009. Higher transfers of EU funds, favourable domestic economic prospects, foreign direct investment inflows supported by significant privatisation and still healthy financial positions of firms will all contribute to investment growth at double-digit rates. The external deficit will continue to widen but should be safely financed by long-term capital inflows.

Even though substantial pay rises had not been provided for in the 2008 budget (except for teachers), public-sector wage pressure has intensified, notably among miners, health professionals and customs officers, and wage claims could spread to other categories in the coming quarters. This scenario is all the more likely as the wage differential between the public and business sectors continues to widen, possibly driving away the best qualified officials. Additionally, the 20% hike in the minimum wage in January 2008 could lead to spill-over effects on the whole spectrum of wages. More generally, according to the business survey of the NBP for the second quarter of 2008 (NBP, 2008b), significant wage pressures remain in the enterprise sector. At the same time, recent cuts in the disability pension contribution did not lead to any reduction in wage claims; the relationship between wages and productivity seems to have further deteriorated, though labour shortages have eased off slightly as measured by the percentage of enterprises listing this factor as a barrier to their activity (NBP, 2008b).

Price pressures are expected to intensify. Conditional on the assumptions of an unchanged exchange rate and oil prices at 120 dollars a barrel from the second quarter of 2008 onwards, consumer price inflation is projected to average 4.5% in 2008 and 5.5% in 2009. Important up-side risks to this projection include further hikes in (quasi–) regulated prices, the size of the 2008 and 2009 domestic harvest, and the likelihood of second-round effects from the food and energy shocks on wages and then prices. However, there are also sources of downside risks to the inflation projection, including a more significant global slowdown, and thus a more pronounced dampening effect on economic growth in Poland, as well as a further appreciation of the zloty.

Steady but insufficient monetary tightening thus far

Confronted with rising inflation, the NBP's Monetary Policy Council (MPC) started a tightening cycle in April 2007, after the official interest rate had been kept unchanged at 4% for slightly more than a year. Although the policy rate was hiked by 175 basis points in seven steps by the end of March 2008, there are indications that the monetary authorities have probably not addressed all inflation pressures in the economy[2] and that further policy adjustment is warranted. More specifically, although it appears that the MPC has delivered a timely and adequately monetary policy response to the increase in underlying inflationary pressures (as reflected in the OECD measure of core CPI inflation, which excludes food and all energy prices), it is less certain that excess demand in product and labour markets have been prudently confronted and the risk of second-round effects stemming from headline inflation exceeding the NBP's target headed off.

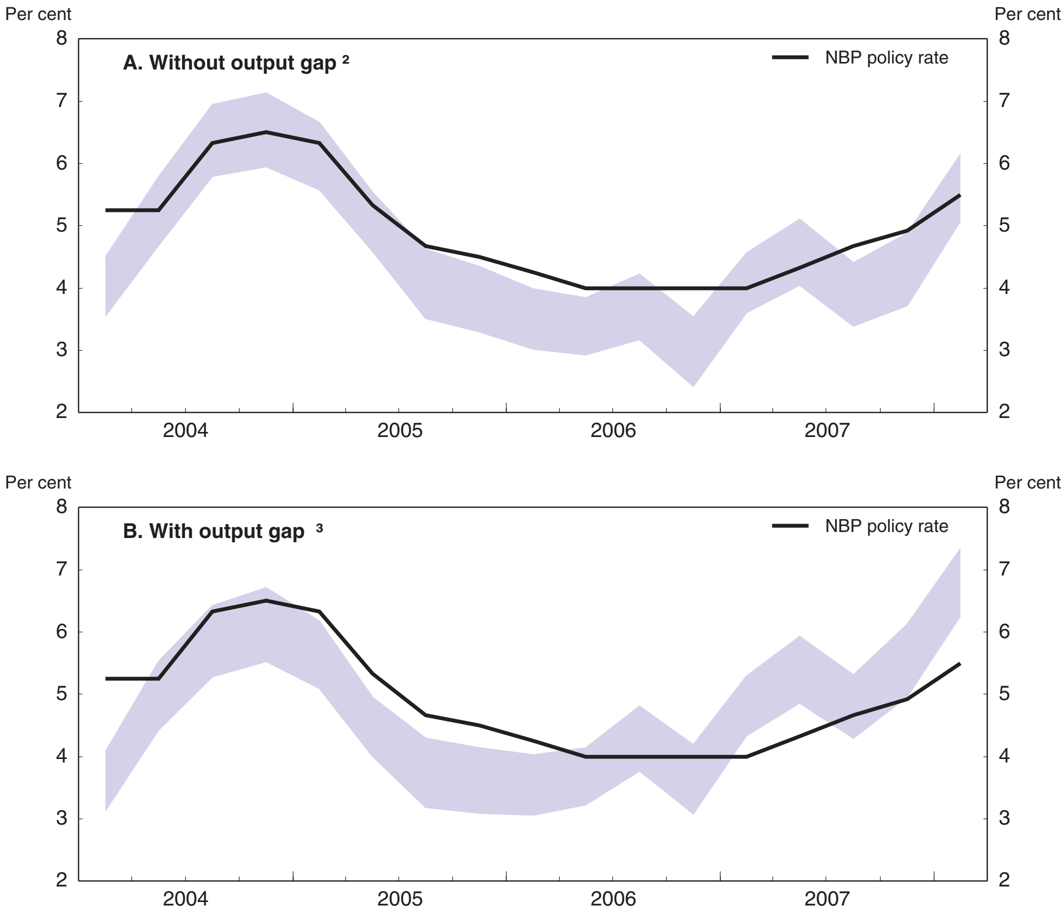
Various indicators tend to support the view that the restrictive stance of monetary policy could have been more pronounced. Recent work at the OECD investigating the supply-side of the Polish economy (Kierzenkowski *et al.*, 2008) indicates that GDP has been growing almost uninterruptedly well above potential rates since 2003. This is despite the fact that OECD estimates of potential growth have trended up from 3% in 2003 to 5.5% in 2007, driven mainly by a rapid decline in the structural unemployment rate. This analysis also reveals that both the output and unemployment gaps moved into excess demand territory in late 2005/early 2006 and were close to 1.8% for the former and 5.2% for the latter on average in 2007. Obviously, output gap estimates are surrounded by uncertainty all the more as they may differ depending on the robustness of the methodological framework in use (production function *vs.* Hodrick-Prescott filtering), thus leading to differences in terms of size and sign. However, it is noteworthy that independently of the reliability concerns, all available output gap estimates produced by international organisations and the Ministry of Finance pointed to a marked tightening of product market conditions in 2007 compared to 2006 and all but one showed output gaps clearly in positive territory in 2007.[3]

Simple Taylor rules that draw on empirical assumptions of the NBP for the equilibrium/neutral real interest rate at 4% (Fic *et al.*, 2005) and on research regarding the exchange-rate-to-inflation pass-through (Grabek *et al.*, 2008) provide further insight into the recent conduct of monetary policy. As is the case with the output gap, assumptions regarding equilibrium real interest rate (the rate that stabilises inflation) and the exchange rate pass-through (see below) are of critical importance. Brzoza-Brzezina (2006) evaluates the real neutral rate of interest rate at 4.6-5% over the period from 1998 to 2003. Various factors might have impacted the value of this rate since then both on the downside (for instance, a deceleration in technical progress, implying a lower marginal product of capital) and the upside (for instance, an increase in uncertainty associated with rising inflation expectations). More recent estimates evaluate this indicator in the range of 3.2-3.9% at end 2006 (BPH, 2007) and to 4.5-4.9% in 2007 (Bodys, 2007; Merrill Lynch, 2008). With this as a background, the assumed value of 4% reported in Fic *et al.* (2005) still seems reasonable insofar as it is close to the average of estimates considered by market participants.

Given the aforementioned assumptions and the fact that certain items of the CPI basket are beyond the control of the monetary authorities, the Taylor rule indicates that the policy rate was apparently set to stabilise *core* inflation at the level consistent with the NBP's target (see Figure 2.4, Panel A). At first sight, such a strategy seems to have been appropriate, given that headline inflation surpassing the target was to a large extent driven by food and energy shocks, *i.e.* global factors that monetary policy cannot affect. However, the good correspondence between the NBP policy rate and the rate implied by the rule is obtained only when a zero weight is assumed for the output gap. Put differently, if this is the case, either output stabilisation does not play a role in the reaction function of the MPC, or the latter does not seem to attach much credibility to the ECMOD-based measure (produced by staff) of this indicator of resource utilisation. When considering a standard parameter value for the output gap and the OECD estimate of this indicator, the Taylor rule suggests (see Panel B) that there was room to further reduce the policy rate in 2005 at a time when the economy was still grappling with residual slack, but also that the interest rate policy could have been tighter in 2007 and at the beginning of 2008 (given the high positive value of the output gap during this period).[4]

Even though different measures of economic slack (output and unemployment gaps) are difficult to estimate, they do provide important information about the cyclical position of the economy and thus future inflationary pressures. In this respect, they are widely used in the OECD analysis of leading economies (see, for instance, Cournède *et al.*, 2005 and van den Noord and André, 2007). The latter authors study the reaction of core inflation in the US and the Euro area following different worldwide oil shocks that hit since the 1970s. One of their conclusions is that the inflationary impact of an oil shock is magnified when it occurs at, or close to, cyclical peaks insofar as in such conjunctures it is easier for firms to pass through their rising costs to prices. Therefore, recent increases in oil prices could

Figure 2.4. **Taylor rules**[1]



1. The first quarter of 2008 is calculated by considering a projected value of the output gap at 2.4% of potential GDP. The value of the parameter associated with the nominal effective exchange rate in both Taylor rules is derived from Grabek *et al.* (2008) and reflects the pass-through of the exchange rate to CPI inflation over four quarters, stripped out from the impact on supply and demand of oil price shocks.
2. The Taylor rule in Panel A is defined as i = 4% + PCORE_TAR + 1.5 * (PCORE–0.13*NEER–PCORE_TAR) where PCORE is the year-on-year change of consumer price inflation excluding energy and food prices, PCORE_TAR is the annual inflation target set at 2.5% +/– 1% and NEER is the quarterly change in the nominal effective exchange rate.
3. The Taylor rule in Panel B is defined as i = 4% + PCORE_TAR + 1.5 * (PCORE–0.13*NEER–PCORE_TAR) + 0.5 * GAP where PCORE is the year-on-year change of consumer price inflation excluding energy and food prices, PCORE_TAR is the annual inflation target set at 2.5% +/– 1%, NEER is the quarterly change in the nominal effective exchange rate and GAP is the output gap.

Source: OECD calculations based on Economic Outlook database No. 83 database and Eurostat data.

StatLink http://dx.doi.org/10.1787/345432042880

potentially have larger effects on inflation outcomes in Poland than in similar countries at different cyclical positions.

There are various pros and cons of targeting core *versus* headline inflation (NBP, 2008c). Focusing on core inflation measures provides useful information as to underlying inflation pressures. In the context of recent supply shocks, a measure of CPI inflation that excludes food and all energy prices is of particular interest, and it would be advisable for the NBP also to start publishing such an index. Given that certain items of the CPI basket are beyond the control of the monetary authorities, core indicators provide valuable guidance as they can help avoid monetary policy mistakes linked to transitory fluctuations in headline inflation (Mishkin, 2007a). These temporary fluctuations may have various causes, but their first-round effects are out of reach of the central bank as they can stem from a short-run volatility of some components, one-off adjustments in relative prices or supply shocks related to energy or food price movements. However, should adverse shocks to non-core elements turn out to be more protracted, then higher costs are likely to put upward pressure on core prices as firms gradually pass on increased input prices to their customers. More generally, headline inflation can either revert to core inflation in the case of transitory shocks or core inflation can rather move toward the headline figure indicator if shocks become more persistent. But the direction of convergence between the two measures of inflation depends not only on the durability of supply shocks but is also critically linked to the behaviour of inflation expectations. If these are not firmly anchored at a level consistent with price stability, second-round effects stemming from higher energy and food prices on wage- and price-setting behaviour may occur.

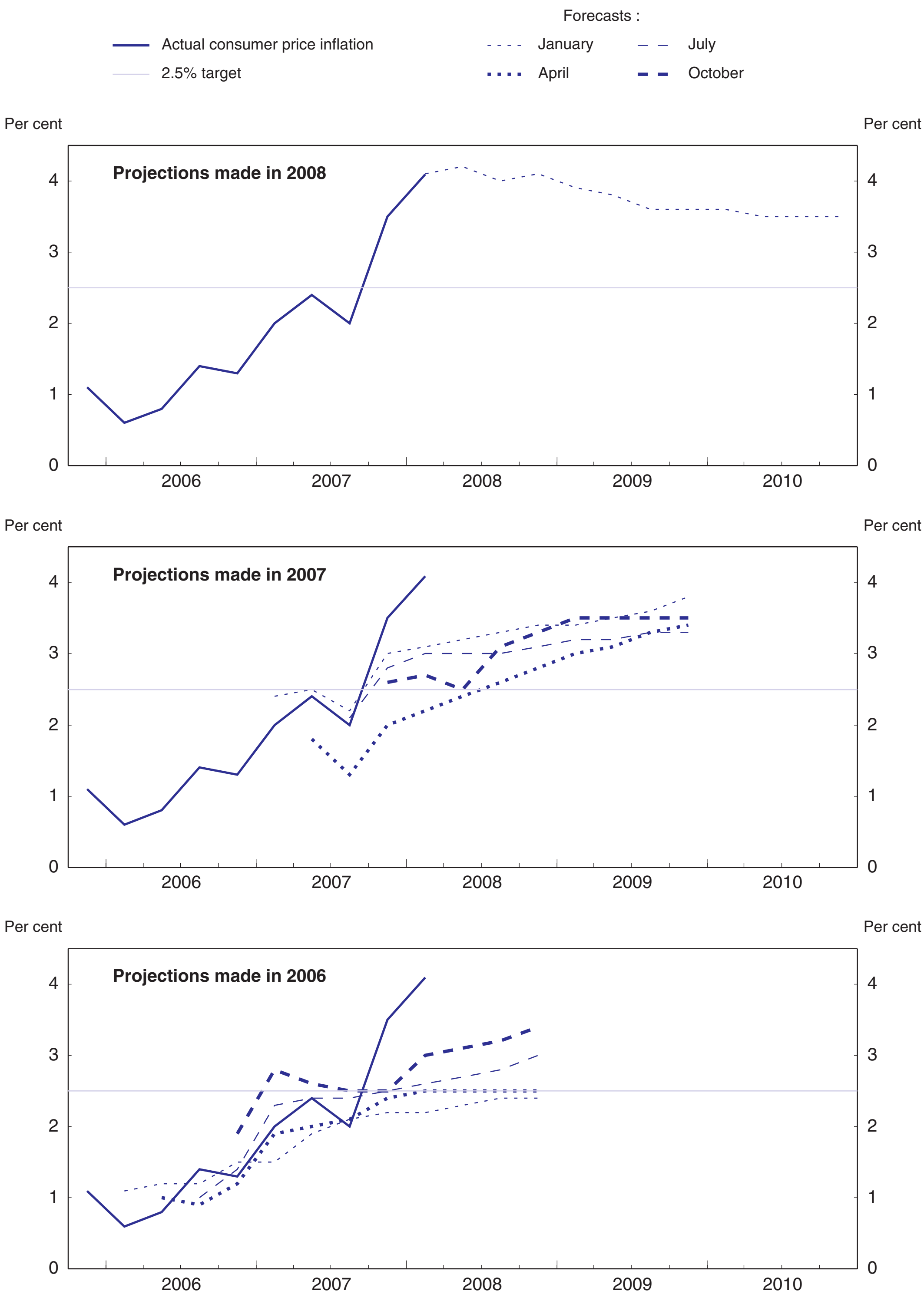
As indicated in the Monetary Policy Guidelines for the year 2008 of the NBP (NBP, 2007), the risk of second-round effects is substantial in countries with a short history of low inflation. In this respect, Poland does not appear to be an exception. Indeed, the inflation target of the NBP does not provide a nominal anchor to households' inflation expectations as these appear to be very closely linked to the current level of headline inflation (Łyziak *et al.*, 2007; Grabek *et al.*, 2008). In the context of strong energy and food price hikes, this could trigger second-round effects with higher wage demands so as to restore purchasing power possibly igniting a wage-price spiral. As a result, core inflation could converge to the headline indicator. And, if increased inflation expectations were to become entrenched, the cost of permanently bringing down the inflation rate would be higher. OECD estimates indicate that the sacrifice ratio for Poland is comparable to that observed in other affluent OECD economies. It takes an increase in the unemployment rate of around 1.7 percentage points above the structural rate of unemployment to achieve a fall in inflation of 1 percentage point in one year, against 1.9 percentage points on average in G7 countries according to recent OECD calculations. Based on these considerations, clear communication on the external nature of price shocks is necessary in order to avoid difficult trade-offs, along with a strong commitment of the authorities to bringing inflation back to the target in the medium term (see below). But words might prove to be insufficient and thus should be complemented by more active interest rate settings. Pre-emptive strikes by the US Federal Reserve both against inflationary and deflationary forces over the last two decades has yielded stable low inflation and a strong anchoring of long-run inflation expectations (Mishkin, 2007b). In the case of Poland, the interest-rate cycle that started in 2007 is characterised by households' expected inflation over the next 12 months computed by the NBP consistently outpacing current CPI inflation since August 2007. This indicates that with price expectations insufficiently anchored to the inflation target and exceeding actual inflation, monetary policy could have been tighter than what a simple Taylor rule based on core inflation would suggest.

While any policy rule should not be used mechanically, other indicators have also been suggesting that monetary policy needs further adjustment so as to head off overheating. *First*, although private consumption was growing more slowly than GDP, various industrial and consumer confidence indicators have improved sharply, reaching unprecedented levels in the second half of 2007. By the same token, capacity utilisation levels were rising persistently, reaching record levels by end-2007. Strong increases in investment lift the capital stock, thereby reinforcing potential output, which should reduce upward pressures on inflation in the medium term. However, the added capacity is available only with a lag. Thus, even if the structure of growth was very favourable, in the short term growing investment spending was adding to excess demand. *Second*, with pervasive labour shortages, unit labour costs accelerated substantially in 2007. In their statements the monetary authorities often referred to this measure as a leading indicator of future price pressures. However, once wage growth began to significantly outstrip labour productivity gains, the emphasis of their commentary shifted somewhat to the high profitability of the corporate sector that has limited so far cost pressures on inflation. Moreover, the recent acceleration of unit labour costs may to some extent reflect a catching-up in terms of income share lost earlier in the decade. However, this positive configuration may come to an end once the cumulated unit labour cost growth surpasses a threshold at which firms will trigger further price adjustments. *Third*, yearly increases in private credit skyrocketed to above 30% in the second half of 2007 and early 2008 from an average of 6% as recently as 2005. This surge applied not only to mortgage loans (see Chapter 4), but also most other forms of lending. However, this should partly be attributable to the still relatively low financial intermediation in the Polish economy, which implies that strong credit growth is part of the convergence process. In this context, some MPC members expressed fears that an increase in the interest-rate differential *vis-à-vis* other countries would encourage foreign-currency lending at the expense of zloty loans and hence undermine the effectiveness of monetary tightening. Yet this view is not supported by the data. While the share of domestic loans in the stock of total private non-financial sector borrowing had been fluctuating between 70 and 75% since 2002, it has risen significantly since mid-2006 to above 75% in the last quarter of 2007. This happened probably as a joint consequence of the introduction of "Recommendation S" that requested banks to curb their lending policies on mortgage loans in general, and those granted in foreign currencies (mainly Swiss francs) more specifically, but also because of the tighter stance of the Swiss central bank (see Chapter 4). *Fourth*, the spread between Polish and ECB policy rates has spent much of the last couple of years at a very low level. It is only recently that it has rebounded to 1.75 percentage points. *Fifth*, fiscal policy has added a stimulus to the economy (see below), which should fully materialise in 2008, thus worsening the policy mix. *Finally*, with an embedded constant interest-rate assumption the Inflation Reports of the NBP have been showing that since July 2006, the central projection for inflation at the end of the forecast horizon was systematically above the official target of 2.5% and (since October 2006) close to the upper limit of the band (3.5%) (Figure 2.5).

Monetary policy in 2007 and early 2008 has been conducted amidst the growing risk of a global slowdown prompted by financial-market turmoil. Thus far, the Polish economy has not been directly affected by the crisis, as the banking sector was not involved in lending activities related to the US sub-prime market. Moreover, investors have not shown any signs of shunning emerging-market assets. Indeed, the zloty has appreciated further, fuelled by additional inflows of foreign capital and signs of increased willingness by the Polish authorities to move towards adopting the euro. More importantly, given the relatively low trade openness of the Polish economy, the effects of any eventual slowdown in its main trading partners (in particular in Germany) should be limited. This is all the more true as domestic demand was the main engine of growth in 2006 and 2007, and considerable infrastructure investment related to the absorption of EU funds and the organisation of the European soccer championships in 2012 should support strong investment dynamics in the coming years (see Chapter 5). While possible negative

Figure 2.5. **Inflation projections of the NBP**

Year-on-year changes



Source: OECD estimates based on National Bank of Poland data.

consequences of the US slowdown could be indirect and come from weaker households' and firms' confidence, there has been no evidence of such weakness thus far. The only sizeable impact has been on the stock market, with the flagship WIG20 index falling by some 20%, though considerable gains since mid-2003 remain. Moreover, the wealth effect on private consumption in Poland has not been strong so far.

An important argument against further significant policy rate hikes is that once the unfavourable food-price dynamics subside, headline inflation will decrease (after the statistical effect fades out). Although it is too early to assess the sustainability of higher food price inflation, it is largely the result of global conditions linked to growing world demand for food, the switch in crops to the production of bio-fuels and drought in some regions, and there is a non-negligible risk that the first two factors will not be quickly reversed. As a result, should the shift in food inflation be long lasting – as energy price pressures have been –, core inflation could correspondingly be a less relevant indicator of long-term price developments (see above).

The MPC has also pointed out that inflation pressure could be contained by globalisation and the ensuing increased competition in the markets for internationally traded goods and services. Despite the fact that Poland's imports mostly originate from high-price Europe rather than low-price China and India, rising trade openness has put firms' mark-ups under pressure.[5] Allard (2007) finds that between 1996 and 2003 these effects might have subtracted between 0.5 and 1.0 percentage point per year from consumer price inflation, much more than in the OECD's more advanced economies. However, such benefits might have been smaller more recently than in the run-up to EU membership in 2004. Indeed, after having increased substantially between 2002 and 2004, the growth of the ratio of goods imports to GDP – which captures the intensification of competition – was increasing only at a decelerating rate in 2007. Finally, even though the zloty has appreciated in nominal terms and thus put downward pressure on inflation, the relatively low trade openness of the Polish economy (imports of goods and services represent only about 40% of GDP, against for instance 94% in Slovakia and 76% in Hungary) does not allow the exchange-rate-to-CPI pass-through to be as strong as in other small countries of the region. It is estimated to 19% over four quarters and 21% over eight quarters according to Grabek *et al.* (2008) over the period from 1998-99 to 2007. Yet this study also suggests that the pass-through has probably diminished by half when compared to estimates between 1997 and 2002.

The appreciation of the zloty has resulted in a tightening of monetary conditions. As this appreciation accelerated in the second half of 2007 and in early 2008, some MPC members viewed this fact as limiting the scope for interest rate increases. The balance of goods and services deteriorated from a low of –0.4% of GDP in 2005 to –2.4% of GDP in 2007. However, this was probably more the consequence of income growth differences than relative price shifts given that exports continued to develop at close to 8% (see Table 2.1). To some extent, the real strengthening of the zloty can be attributable to equilibrium appreciation, driven by improving fundamentals. According to NBP estimates over the period from the first quarter of 1997 to the third quarter of 2007, the exchange rate has not deviated significantly from its fundamental equilibrium value.[6] While the Balassa-Samuelson effect accounts for some of the long-run appreciation,[7] the major part of the real appreciation concerns the real exchange rate of the tradable sector.[8] While conventional wisdom views the real appreciation of the tradable sector's exchange rate as a loss in competitiveness, such an appreciation may in some cases be viewed as an

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equilibrium phenomenon. For instance, a higher inflation differential of tradables may come from quality improvements as Poland moves up the value added-chain; this would induce an upward bias in official price statistics, implying that monetary policy should not be tightened if such effect is predominant.[9] Moreover, as indicated earlier, a nominal appreciation need not necessarily result in short-term losses of shares on export markets if large mark-ups act as a buffer for price decreases (in domestic currency terms) and/or if the price elasticity of demand for the exported goods is low. Also, foreign currency-denominated liabilities can compensate exporters for a stronger exchange rate (balance sheet effects through reduced debt service in domestic currencies).

Further improvements to the communication strategy of the monetary authorities

The reliability of inflation projections under an inflation-targeting regime is an important vehicle for guiding price expectations and, ultimately, for maintaining the credibility of the central bank. Therefore, it is necessary that central bank officials duly support the published inflation scenarios, especially when their release is well publicised and attracts media attention.[10] Another issue is related to the communication strategy accompanying the publication of the Inflation Reports. The NBP has recently improved the value of its reports by providing information about the content of projections, not only for the inflation rate but also other key macroeconomic variables. Further improvements in this respect could include the publication of projections including the latest policy rate decisions, even though the downside would be to delay the date of release of the Reports. The Bank could also consider the publication of inflation scenarios at variable interest rates. In particular, of great interest for anchoring inflation expectations would be one whose policy rate path brings the inflation rate back to the NBP's inflation target of 2.5% by the end of the projection period, as has recently been done by several other OECD countries' central banks. Such a solution would also have the advantage of reaffirming the symmetric nature of the inflation target range and strengthen the forward-looking orientation of the monetary policy stance. It does not necessarily mean that the MPC would have to stick tightly and mechanically to the published trajectory of interest rates with no room for discretion, but at least it could objectively discuss subsequent unexpected factors leading its majority to depart from it.

The NBP has achieved a great deal of progress with the publication of the minutes of the MPC rate-setting meetings as from April 2007, thereby providing useful information for market participants on the views and indicators considered in its analysis. Moreover, changes introduced to Inflation Reports – in particular the comprehensive analysis of various inflation indicators – are additional steps in the right direction that complement the interest rate policy. However, visible backward steps have occurred too. In May 2007, the NBP set up a new advisory body linked to the Board of the Bank – the Scientific Council – composed of seven academic professors. The aim was to take advantage of Polish economic research, by giving to the Council the task of enriching the research agenda of the NBP. Unfortunately, even if not involved in the conduct of monetary policy and the decision-making process, the Council was also tempted to present its own views on interest-rate settings (for instance, expressed by its President in mid-October 2007) and even publish its own statements about the economic outlook. Fortunately, both seem to have stopped more recently. At any rate, such practices are far from international best practice, as they blur central bank communication and undermine the unquestionable authority that the MPC should have in the conduct of monetary policy.

Other monetary policy challenges

The adoption of the euro was not a priority for the government in power until the late-2007 legislative elections. Officially, it did not seem to be also for the newly elected government, with the Finance Minister declaring in his opening statement that this objective is to be achieved beyond the current parliamentary term and that the fiscal deficit criterion must be met beforehand. In 2007, the President of the NBP voiced a similar position, viewing Poland's membership in the EMU as not likely before 2012-13. At the same time, the NBP has established a Bureau for the integration with the euro area; it is expected to assess the costs and benefits of adopting the single currency and deliver a firm basis and support for policy decisions. The intention is that the report that should be prepared by the Bureau by December 2008 will be more extensive than the 2004 NBP report that concluded that the balance of costs and benefits of joining the euro area would be positive (NBP, 2004). Moreover, the projected report will be jointly prepared with social partners, foreign experts, leading research institutes and public entities. With this aim in view, the NBP has recently tried to broaden the discussion by publishing assessment documents (for and against Poland's EMU membership) prepared by academic researchers and other institutions.

In February 2008 the debate intensified. A Deputy Finance Minister publicly expressed worries that in two to three years' time inflation could be too high and urged the monetary authorities to create the conditions for achieving the nominal convergence criteria (PAP, 2008a). The Finance Minister recalled that fulfilling the inflation criterion is the duty of the central bank, fiscal criteria are for the government to meet, while the long-term interest rate objective is a joint responsibility of the two. He also warned that inflation in Poland may temporarily remain above the inflation target (PAP, 2008b). Even if joining the ERMII is not conditional upon meeting the Maastricht criteria, Poland still faces the challenge to permanently lower the general government deficit and the authorities do not consider that fixing the exchange rate within ±15% fluctuation bands is a desirable policy in the near future due to still unstable worldwide financial-market perspectives. However, the authorities in general and the Ministry of Finance in particular, have recently expressed a much warmer attitude towards adopting the euro. Since creating the conditions for satisfying the Maastricht criteria requires close co-operation between the fiscal and monetary authorities, it appears desirable that the NBP report on the expected costs/benefits of the euro adoption be prepared jointly with the Ministry of Finance. In this respect, it is worth noting that the working relationships between the NBP and the Ministry of Finance have already been established. However, the current situation seems to suggest that the Polish economy is not ready to adopt the single currency for the moment, as in order to achieve a balanced and sustainable growth path it requires significantly higher interest rates than the euro area. This should however not be viewed as an argument against euro adoption in the medium term, should the cyclical convergence and thus sustainability of the European Central Bank's single monetary policy for Poland increase over time.

The previous government decided to transfer banking supervision from the central bank to the Financial Supervision Authority (KNF). Since January 2008, KNF is the sole supervisor, responsible for the surveillance and control of the banking sector, insurance institutions and securities markets. The context of this change is the growing integration of the banking, insurance and securities markets worldwide, as well as their respective instruments and products. However, arguments have been developed in the literature for and against an integrated supervisory model (Wymeersch, 2007). Pros and cons of keeping banking supervision within the central bank also exist (Ioannidou, 2005), but, empirically, there does not seem to be a clearly predominant model (Masciandaro, 2007). However, given the current global context of financial turmoil and the looming challenges lying ahead for the Polish banking sector with the future possible downturn in the domestic credit cycle and in particular its mortgage-loan component (see Chapter 4), it was probably not the best time to organise this institutional transfer. Also, banks and supervisory officials have to take up the challenge of the new capital requirements linked to the Basel II regulations. Overall, it is important that strong co-operation and efficient and transparent flows of information are organised between the central bank and the KNF through appropriate arrangements. They need to prevail in both directions, not only in crisis times but also on a regular basis. In this respect, having opted for a similar model of supervision to the United Kingdom, the Polish authorities should draw all the lessons from the recent Northern Rock episode.

Budgetary outlook and fiscal policy

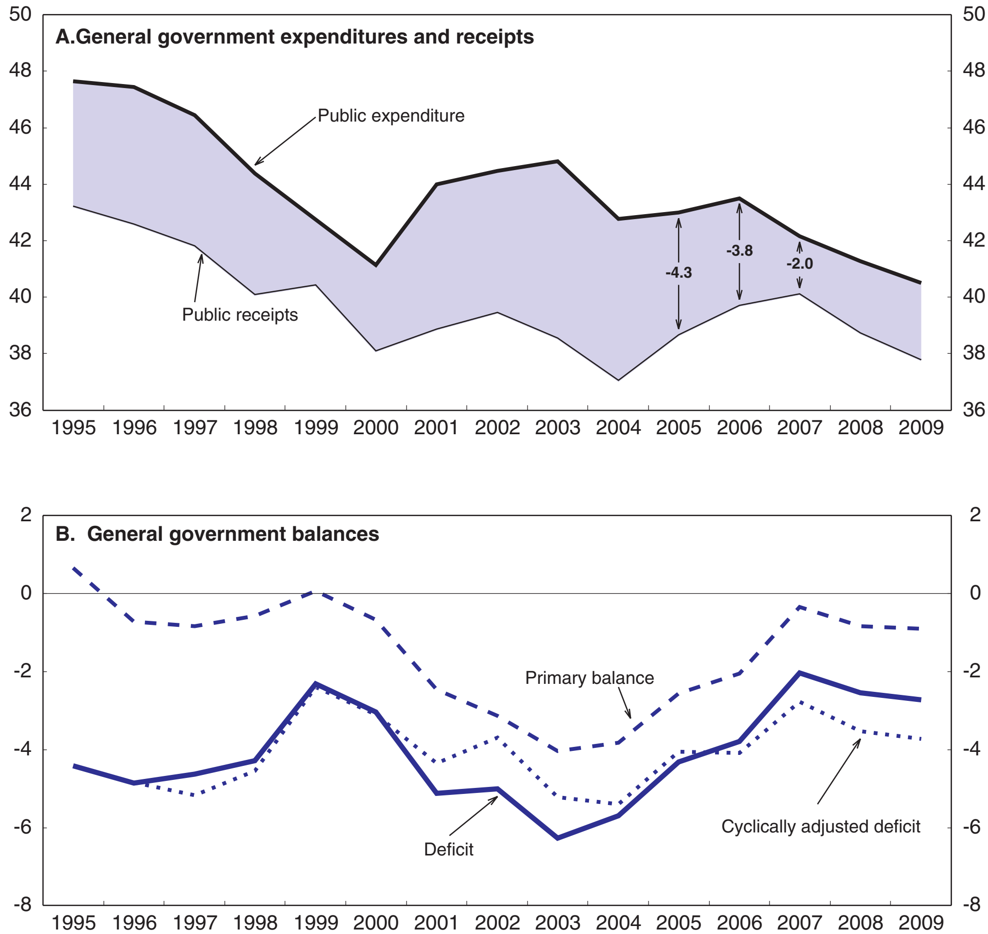
The outturn in 2007 was better than expected…

Poland's budget balance continued to improve in 2007, with the general government budget shortfall narrowing to 2.0% of GDP, down from 3.8% in 2006. The deficit has steadily declined in relation to GDP since the peak of 6.3% in 2003 (Figure 2.6, Panel A). Combined with modest revenues from privatisation and positive revaluation effects, this has resulted in an unchanged gross debt-to-GDP ratio, at around 56.0% of GDP (45.4% on the Maastricht definition). The contribution of interest payments to the deficit has remained largely unchanged at around 2 percentage points of GDP since 2004. Hence, the primary deficit has narrowed to less than 1% of GDP (Figure 2.6, Panel B). The improvement in the fiscal balance in 2007 results from a rise in revenues and a decline in expenditures (both in relation to GDP) in more or less equal proportions. Since the 2003 turnaround, the steady increase in revenues has accounted for nearly two-thirds of the 4.3 percentage point decline in the general government deficit.

All the major sources of revenues have contributed to the increase in the ratio of total receipts to GDP, except the important component of social security contributions (Figure 2.7, Panel A). Revenues from these contributions have declined steadily relative to GDP since 2003, with the more substantial drop in 2007 attributable to a reduction in employee contribution rates for disability pensions. In contrast, revenues from both direct and, in particular, indirect taxes have risen significantly relative to GDP, even though the statutory rates have been unchanged over the period (see Chapter 3). On the expenditure side, the largest source of decline relative to GDP has been social security outlays (Figure 2.7, Panel B). Government consumption has also fallen relative to GDP (by around 1 percentage point) since 2003, but this has been mostly offset by an increase in net investment, a development that can be regarded as desirable from a longer-term growth perspective, especially considering the state of public infrastructure in Poland (see Chapter 5). As for the relative decline in social transfers, it can be attributed to a large extent to the earlier reform of disability pensions, which reduced the flow of new beneficiaries into the system.

Figure 2.6. **General government deficit**

Per cent of GDP



Source: OECD, Economic Outlook No. 83 database.

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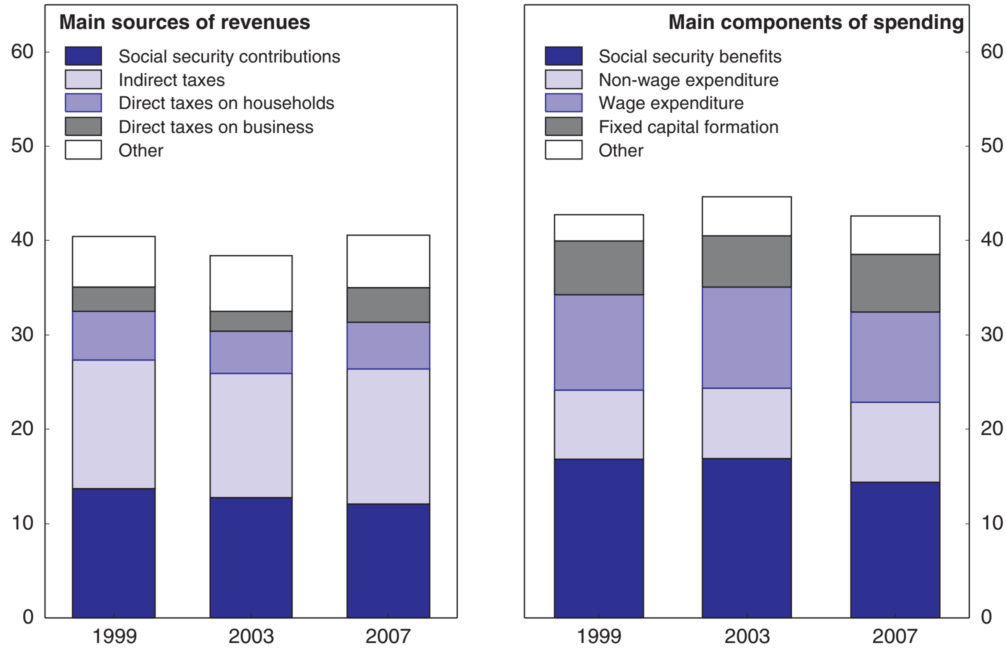
... but the budget deficit is likely to widen in 2008

Looking forward, it is highly unlikely that the budget deficit will continue to narrow, at least in the near term. Based on current policies, it is more likely to rise to slightly above 2.5% of GDP in 2008 and 2009. *First*, the reductions in 2006 and 2007 may well have been mostly due to cyclical rather than structural factors. Indeed, OECD estimates of the general government's cyclically adjusted net lending position suggest that the underlying deficit for 2007 could be as much as 0.7 percentage point of GDP higher than the actual deficit.[11] Even allowing for confidence margins around output-gap estimates, this suggests that as the economy cools towards a more sustainable pace of expansion in 2008 and 2009, the contribution of the business cycle to further deficit reduction will be weaker. The slowdown in revenues could be particularly marked, given the cyclical sensitivity of some components. For instance, the 2007 Budget plan, prepared in autumn 2006, underestimated State revenues from indirect and direct taxes by 5.7 and 11.4%, respectively,

Figure 2.7. **Evolution of general government revenues and expenditures**

Per cent of GDP



Source: OECD, Economic Outlook No. 83 database.

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mainly because GDP growth turned out to be 2 percentage points stronger than projected at the time.[12]

Second, the stance of fiscal policy is expansionary in 2008.[13] The main source of the fiscal stimulus is the reduction in the contribution for disability pensions, introduced in 2007 and 2008 (Table 2.2). At an estimated cost of 1.3% of GDP in 2008, this is the measure having by far the largest budgetary impact. Other measures on the revenue side include the newly introduced child tax credit and the income tax cut planned for 2009, which are together only partly offset by a rise in excise tax on tobacco and VAT on some services (see Chapter 3 for more details on tax changes). Further stimulus is added from the expenditure side, mainly through the re-introduction of annual indexation of the old-age and disability pensions, combined with the increase in the reference value for some old-age pensions. Altogether, these measures amount to a stimulus of nearly 2 percentage points of GDP. The net fiscal stimulus, as measured by the change in the cyclically-adjusted primary deficit in the general government balance is expected to be smaller (0.8% of GDP) given that the measures reported in Table 2.2 are partly offset by other factors whose impact is difficult to evaluate with precision. This is the case, for instance, for the gradual phasing-out of the deductibility of interest payments on mortgage loans, which concerns new loans taken out as of 2007. On the other hand, some components of expenditures that are subject to substantial upward risks, such as public-sector wages (though the risk is stronger for 2009), and the postponement of the withdrawal of pre-retirement schemes, are also not taken into account in the official estimates of the fiscal stimulus.[14]

Table 2.2. **Budgetary cost and size of stimulus from measures introduced or adopted in 2007**

Per cent of GDP

	2007	2008	2009	2008	2009
		Level		Change from previous year	
Measures taken:					
Reduction in contribution rate for disability pension	0.3	1.3	1.3	1.0	0.0
Tax allowance for children	–	0.5	0.5	0.5	0.0
Reduction in income tax rate	–	–	0.7	–	0.7
Rise in tobacco excise duty and VAT items	–	–0.2	–0.2	–0.2	0.0
Re-introduction of annual indexation of old-age and disability pensions	–	0.5	0.3	0.5	–0.2
Increase in the reference value for some pensions	–	0.1	0.1	0.1	0.0
Total budgetary cost	0.3	2.2	2.7	–	–
Net fiscal stimulus (annual change in net cost)	–	–	–	1.9	0.5

Source: Ministry of Finance, Convergence Programme 2007 update.

Despite the estimated magnitude of the expansionary measures, the draft Budget for 2008, prepared by the previous government, was elaborated on the basis of an unchanged deficit from 2007 (expected at the time to be at 3% of GDP). With the October 2007 election, the new government had little choice but to adopt the proposed Budget Act for 2008 without significant amendments, given that the budget had to be approved by Parliament before the end of the year. In the March 2008 up-date of the Convergence Programme, the new governing coalition foresees a widening of the general government deficit-to-GDP ratio from 2% in 2007 to 2.5% in 2008, which can be viewed as moderately optimistic. Such optimism is based on the view that the strong pick-up in revenues in 2007 was at least partly explained by structural factors that are likely to continue in 2008, including an improvement in tax collection, a shrinkage of the shadow economy and a gradual shift in factor income from capital towards more heavily taxed labour. While these forces may still be acting in 2008 and 2009, they are unlikely to be sufficient to completely offset the impact on revenues from the discretionary cuts in payroll contributions and income taxes. Hence, assuming a modest economic slowdown, a widening of the shortfall of over half a percentage point of GDP is a possible outcome.

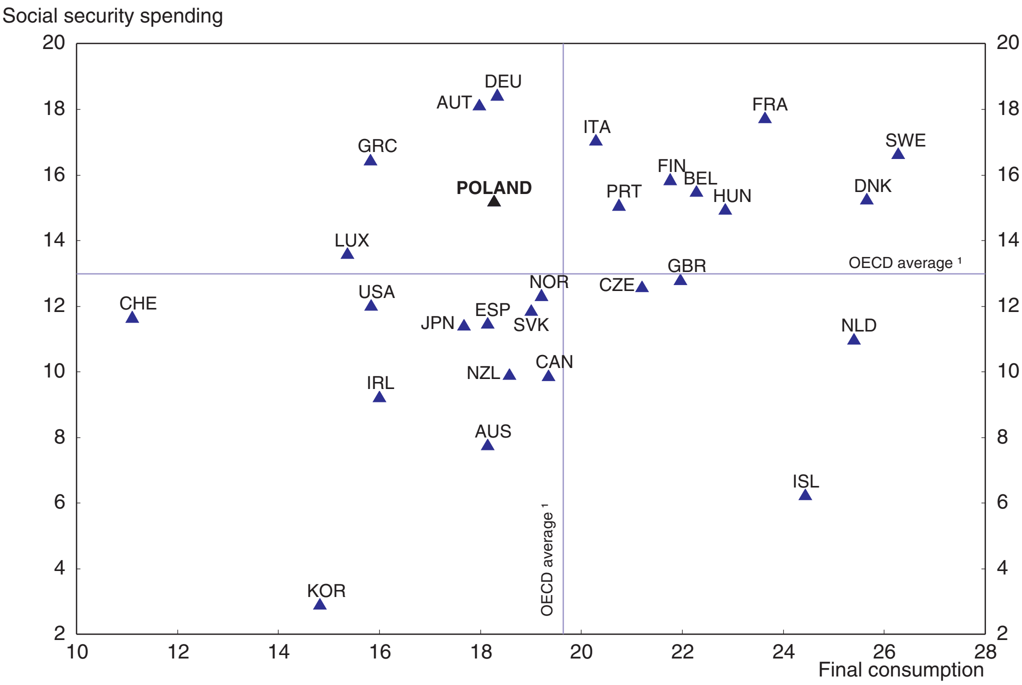
In any case, the budgetary developments in 2007 were sufficient for the European Commission to recommend to the EU Council that the Excessive Deficit Procedure (EDP) adopted in July 2004 be lifted. The recommendation was motivated the fact that Poland has fulfilled the two main conditions in 2007, namely to bring the general government deficit within the margin of 3% of GDP and to achieve an annual reduction in the cyclically-adjusted balance of at least half a percentage point of GDP. Furthermore, despite the expected widening of the general government deficit in 2008, the government has re-affirmed its commitment to reducing the deficit by around half a percentage point per year from 2009 so as to bring it down to 1% of GDP in 2011. In practice, the concrete measures the authorities intend to take to ensure that the deficit-reduction plan can be credibly achieved remain to be identified.

Completion of the reform of social security is needed to limit expenditure increases

Given the government's intention to pursue efforts to lower the overall burden of taxation, the main difficulty is to identify areas where substantial savings can be achieved in the short term on the expenditure side. One area where spending remains high by international standards is social transfers (Figure 2.8). Altogether, spending on social security represented 15% of GDP in 2007, or one-third of general government expenditures. Around two-thirds of benefits are managed and delivered through the Social Insurance Funds (FUS), the main social security institution in Poland. Although the Funds are largely financed by earmarked payroll contributions, close to 20% of their funding comes from the central budget and another 10% from other sources.[15] The main components of social security are old-age and survivors' pensions and disability benefits (Table 2.3).

Figure 2.8. **Government spending on social security** *versus* **final consumption**

As a percentage of GDP, 2006



1. Unweighted average.

Source: OECD Economic Outlook No. 83 database.

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Table 2.3. **Main benefit items paid by the Social Insurance Funds**

Per cent of GDP

	2003	2005	2007	Change since 2003
Pensions	10.9	10.1	9.4	–1.5
of which:				
Old-age pension	5.5	5.5	6.3	0.8
Disability pension	3.5	2.8	1.5	–2.0
Survivors' pension	1.9	1.8	1.6	–0.4
Sickness and accident	1.1	0.9	0.9	–0.2
of which:				
Sickness	0.6	0.5	0.5	–0.1
Work accident	0.5	0.4	0.4	–0.1
Total	**12.0**	**11.0**	**10.3**	**–1.7**

Source: Ministry of Labour and Social Affairs and Central Statistical Office.

Expenditures on disability benefits are already falling in relative terms

Even though the amount paid for disability pensions remains substantial by international standards, it has continued to decline since 2003 and now represents less than 2% of GDP. This development essentially reflects the steady reduction in the number of beneficiaries observed since the reform of 1999, which tightened eligibility conditions, thereby reducing drastically the inflows of disabled pensioners. The savings generated have allowed for a reduction in employer and employee contribution rates by 7 percentage points of gross earnings in 2006 and 2007 (or around 2.5 percentage points of GDP). Given the high number of beneficiaries at the time of the reform, including among relatively young people, further declines in the stock can be expected before it stabilises, allowing for further gradual reductions in benefit payments relative to GDP. Faster gains could be achieved if more vigorous efforts were made to integrate those with only partial or moderate disabilities in the labour market. For example, additional categories of partial pensions could be created, rather than limiting the choice to just a full or a half pension. However, specific measures in this direction are not being currently considered. Another non-negligible source of savings is the disability scheme run separately by the special farmers' social security system (KRUS), which was left out of the 1999 reform. But, this separate disability scheme can probably be best addressed as part of a broad reform of the KRUS (see below).

The scope for savings is significantly higher in the case of early-retirement schemes…

Public expenditure on early-retirement schemes amounted to 2.5% of GDP in 2005 and, in contrast to disability benefit, the cost is unlikely to diminish until the long overdue reform of these programmes is finally implemented (Table 2.4). Under the pension system, the statutory retirement age is 60 for women and 65 for men. The major pension reform in 1999 not only limited opportunities to retire early but also raised incentives to remain active past the official retirement age by closely aligning pension benefits and lifetime contributions (OECD, 2004). To ensure a smooth transition, however, full participation in the new system was made compulsory only for individuals who were less than 30 years-old in 1999. People aged over 50 stayed in the old system, while those aged between 30 and 50 migrated to the new system but could retain some features of the old system, including entitlement to early retirement. Hence, if rights to early withdrawal have been dealt with for people born after 1968, they remain an issue for many workers who were born beforehand.

Table 2.4. **Public expenditure on early-retirement schemes as a share of GDP**

	EU25	**Poland**
2000	0.6	**2.0**
2001	0.6	**2.2**
2002	0.6	**2.4**
2003	0.6	**2.5**
2004	0.5	**2.6**
2005	0.5	**2.5**

Source: Eurostat database.

There are two main routes to pre-retirement. One is available to unemployed men and women aged 61 and 56 years-old and above, respectively, who have at least 25 years (men) and 20 years (women) of experience and who were laid off due to the employer closing off or going bankrupt. It is also available to unemployed men and women (60 and 55 years-old or more) as long as they have worked for at least 35 and 30 years, respectively, and provided that they were laid off for reasons on the employer side (though not necessarily closure or bankruptcy).[16] Given that the entitlement is conditional on being unemployed, it is covered under the unemployment insurance scheme, which is paid out by the central budget since 2004. The benefits paid under such arrangements remain relatively marginal at between 0.1 and 0.2% of GDP. Much more significant are the benefits paid under the early-retirement pensions. The latter are available *via* the Social Insurance Funds, as part of the old-age pension programme (see Table 2.3). In principle, this is to allow individuals employed in a "difficult" work environment – and whose life expectancy may be shortened as a result – to withdraw before official retirement age. In practice, eligibility is largely based on occupational grounds, as the benefit has been available to workers in specific professions, including teachers, doctors, nurses, miners, as well as steel and railway workers. Although eligibility conditions can vary across professions, they are in most cases fairly generous, allowing workers to withdraw between 50 and 55, sometimes after only 15 years of contributions. As a result, the early-retirement pension scheme now covers 10 times more workers than should be the case if correctly targeted, at a cost of over 2% of GDP.[17]

Measures to restrict access to the early-retirement pensions were proposed several years ago, in particular in the context of the *Plan for the Rationalisation of Social Expenditures* prepared in 2004 (also known as the *Hausner* plan). Although the plan was eventually adopted, the measures concerning the early-retirement schemes, which were supposed to be in place by the end of 2006, were subsequently twice postponed. This reflects the difficulties in reaching agreement with several of the professions concerned who, unsurprisingly, are loathe to giving up such privileges. Yet, the closing of most routes to early retirement is fundamental not only from a short-term budgetary perspective, but also because they undermine all other measures taken or envisaged to retain older workers in the labour market. And, the presence of labour shortages in many sectors makes the timing of the reform both more pressing and more favourable. The government has thus launched a new round of consultations with trade unions over a plan aimed at raising participation rates of people aged over 55, from 28% currently to around 40% by 2015. Key elements of the plan are to tighten access to bridge pensions (which are set to replace current possibilities to early-retirement as of 2009) by excluding some of the professions and to reduce the payout for those who would remain eligible. The objective is to have a new regime implemented at the beginning of 2009.

... and the special farmers' pension system

The special farmers' pension scheme (KRUS) is a social security system run in parallel to the main regime in that it offers similar types of benefits, though for people who either: *i*) own a farm of at least one hectare; or *ii*) are involved in farming activities that do not require owning land of that size; or *iii*) are a member of a farmer's household (OECD, 2004 and 2006). The range and level of benefits offered through the KRUS are generally lower than in the general regime, but much higher relative to contributions. In fact, over 90% of the benefits paid by KRUS, which amount to 1.6% of GDP, are financed by subsidies from the general budget. One consequence of the huge gap between benefits and contributions is that it lowers incentives to leave farming activities, contributing to this sector's low productivity and to a poor record of structural adjustment.[18] Furthermore, conditions for eligibility for disability pensions in KRUS have remained much looser than in the main regime. As a result, 25% of all disability pensions are accounted for by KRUS, even though the scheme covers only 19% of the workforce. In this context, a closer alignment of contribution rates and benefits between the KRUS and the general regime could generate savings of close to 1% of GDP for the State budget. Ideally, this alignment would be best achieved by integrating the KRUS into the general regime, as this would also reduce administrative costs. However, a previous attempt at reforming the KRUS was derailed in part because it was motivated by the need for fiscal consolidation. Hence, insofar as the long-term objective is the integration of the KRUS in the general system, steps in that direction may in fact involve short-term costs, as some form of transitional compensation may be necessary to garner enough support for the reform.

Strong wage pressures make savings in the public administration difficult to achieve

The scope for containing public expenditures is probably even more limited in the case of major government programmes such as health and education. This is particularly the case for health, given that public spending is well below the OECD average and that rapid population ageing, combined with rising income levels, will make for strong upward pressures already in the very near term. In the case of education, spending is closer to the OECD average and the demographics are in principle more favourable to consolidation, in particular at the compulsory school level. However, difficulties in reallocating resources and in closing under-utilised schools in smaller villages limit the scope for savings in practice. More generally, the shortage of labour in almost all segments of public administration (and in most regions, not just large cities), is putting strong pressures on public-sector wages in the short term. To some extent, the authorities can limit the overall impact of strong wage increases by raising public-sector efficiency, although a careful reform of public administration would take time to implement.

Box 2.1. **Main recommendations on macroeconomic policies**

Monetary and exchange-rate policies to achieve durably lower inflation

- Further tighten monetary policy by raising interest rates.
- Consider the publication of official inflation projections at variable interest rates, in particular by focusing on a scenario consistent with the NBP inflation target of 2.5%.
- Improve communication by dedicating exclusively to the MPC the role of communicating with the public.
- Foster the debate on euro adoption by preparing a joint report on the expected costs/benefits with the Ministry of Finance.
- Ensure adequate co-ordination and exchange of information between the central bank and the banking regulator recently moved to the Financial Supervision Authority.

Box 2.1. **Main recommendations on macroeconomic policies** *(cont.)*

Fiscal policies to achieve a sustainable reduction of general government deficit

- Lay out a credible deficit-reduction plan by spelling out the concrete measures proposed to achieve the required decline in spending and/or increase in revenues.
- Proceed with the plan to significantly reduce access to early-retirement pensions so that only those whose work conditions result in substantially lower life expectancy remain eligible. Also cut the benefit for those who remain eligible.
- Take steps towards merging the farmers' pension scheme with the general pension system by aligning more closely contribution rates and benefits between the two regimes.
- Consider reducing employment in public administration in return for pay increases and, wherever possible, re-deploy resources to areas of public services where labour shortages are most acute.

Notes

1. This figure is derived from the Quarterly Household Labour Force Survey and is standardised according to ILO definitions. Based on claimant counts (from administrative registers), however, the rate of unemployment has been hovering around 11%.
2. This view is also shared by some independent market analysts (Winiecki *et al.*, 2007; Bodys, 2007 and 2008).
3. Output gap estimates for 2007 vary from -0.6% (IMF, 2008), to 0.6% (Ministry of Finance, 2008), 1.0-1.2% (European Commission, 2008), and to 3.3% (NBP, 2008c). Taking a simple average of these estimates leads to an output gap of 1.1% as compared to 1.8% for the OECD in 2007. For 2008, the average is 1.4% against 2.5% for the OECD.
4. The view that the output gap does not appear to be given much weight in the monetary policy decision–making process in Poland is corroborated by a recent study, on the basis of estimated Taylor rules over the last decade (Bodys, 2007).
5. According to GUS, in 2006 the share of imports from EU25 (OECD-area) countries amounted to 63% (72%), as against 6.1% from China and 0.4% from India.
6. Following Williamson (1983), the fundamental equilibrium exchange rate is the real exchange rate which delivers a sustainable current account balance (financed through long-term capital flows) when the economy is growing at its potential rate.
7. Égert (2007) estimates the potency of the Balassa-Samuelson effect in Poland to 1.7 percentage point per year on average over the period from 1995 to 2005 derived under the assumption that productivity gains in the tradable sector as compared to those in the non-tradable sector are fully incorporated in the relative price of non-tradable goods.
8. Recall that one of the standard assumptions of the Balassa-Samuelson model is that PPP holds for tradables, *i.e.* the real exchange rate of the tradable sector is stable over time. In this logic, a real exchange rate appreciation of the tradable goods should entail losses in competitiveness.
9. See, for instance, Bruha and Podpiera (2007) and Égert *et al.* (2006).
10. The release of the latest February 2008 projection clearly showed that CPI inflation would remain above the upper limit of the target band until 2010. However, several members of the MPC (including the NBP President himself) were quoted in the press around the date of release of the Report, indicating that inflation will come back to 2.5% in late 2009/early 2010. Thus, it looked like the NBP representatives were trying to distance themselves from the official document so as to keep inflation expectations anchored at 2.5%. They might have also been referring to the results of other models, but for which no results are disclosed. The MPC statements often underline that inflation projections derived from the ECMOD model are only one of the inputs to the decision-making process.

11. See Kierzenkowski *et al.* (2008). The estimates are based on the OECD methodology as described in Girouard and André (2005).
12. As a result, the State budget deficit came out at around 17 billion zlotys, substantially below the 23 billion and 30 billion projected in the budget acts of 2008 (September 2007) and 2007 (September 2006), respectively.
13. In the case of 2009, no significant change in the stance of fiscal policy is expected on the basis of known policies. The draft Budget plan that will be tabled in the second half of 2008 may well contain measures that will alter the stance.
14. Furthermore, uncertainties remain as regards the budgetary costs and timing of disbursement of the settlements reached in the context of the restitution claims by families of residents who were expropriated during the Second World War.
15. These include *inter alia* the recovery of unduly paid benefits and interest on dues.
16. Similarly, such benefits are available to unemployed men and women without age restriction, as long as they have worked at least 39 years (men) and 34 years (women) in the case of a lay-off due to closing of business, or 40 years (men) and 35 years (women) in the case of a lay-off motivated by the employer (other than closing of business or bankruptcy). Finally, self-employed facing bankruptcy are also entitled to pre-retirement benefits if they have worked for at least 25 years (men) and 20 years (women) and have run their last business for at least two years and have reached 61 (men) and 56 (women) years-old.
17. The number of workers eligible for early retirement under the current regime is around 1.3 million whereas not much more than 130 thousand would be covered if the proposed bridge pension system was adopted. The early-retirement pensions help explain why old-age pension is the only category of benefit in Table 2.4 that has not declined relative to GDP since 2003.
18. It also encourages fraudulent enrolment in the scheme by individuals who otherwise should be in the main social insurance regime.

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Chapter 3

Reforming the tax system to improve its efficiency

The Polish tax system is characterised by high social security contributions for both employers and employees. As a result, Poland has one of the highest tax wedges in the OECD, despite relatively low personal income tax rates. This, combined with a relatively high minimum wage and generous early-retirement and disability benefit programmes, contributes to low employment rates, in particular among low-skilled workers. The system also relies heavily on consumption taxes, whereas relatively little revenue is collected from such bases as environment externalities, inheritances and, in particular, property. One of the key implications of the tax structure is that the system as a whole is one of the least redistributive among OECD countries. This Chapter reviews the main features of the tax system and explores options to improve its efficiency, including possibilities to broaden existing tax bases as well as to shift the tax burden from labour towards less mobile and distorting sources such as property.

The tax system put in place fairly rapidly at the start of the transition period in 1989 was initially successful in delivering revenues sufficient to cover the costs associated with the deep restructuring of the economy during the 1990s, allowing Poland to avoid the type of fiscal crisis seen in some neighbouring countries. However, excessive concentration of tax bases and their gradual erosion because of a proliferation of tax breaks or preferential treatments led the authorities to reform the system in the late 1990s. Following the trend observed in many countries, the changes went in the direction of lowering rates and broadening bases, not least as a means to cope with their increasing international mobility. This was particularly the case for corporate income tax, where the tax rate was cut in half to 19% between 1999 and 2004. In the case of personal income tax, a similar proposal for reform was vetoed by the President – and therefore never enacted – but a number of credits and allowances were eliminated, leading to some broadening of the base. Even though the reform was viewed at the time as a good step towards the modernisation of the tax system, improving both efficiency and equity, it was clearly not sufficient to fully address the main challenge identified at the time, and which is still relevant, namely to ensure that taxes do not excessively diminish the incentives to work so that labour supply decisions are not too distorted.

The key challenge is thus to reduce the heavy taxation of labour income. Tax wedges on labour are both among the highest and least progressive in OECD, penalising in particular the job prospects of low-wage earners. With personal income tax representing a relatively small proportion of overall direct tax revenues, this is mainly due to comparatively high social security contributions. Another broad challenge is to gradually shift the tax mix so as to rely on sources that are considered as less distortive owing to their low mobility. In this regard, a strong case can be made for raising property taxes, which yield comparatively little revenue in Poland. Although consumption taxes are also generally considered as less distortive than levies on productive factors,[1] VAT rates are already high, and revenues from various excise taxes account for a share of total revenues that is similar to the OECD average. There is thus limited room to shift more of the burden towards these tax areas. However, environmental taxes remain under-developed in Poland and could provide one useful avenue for further diversifying the tax base. Finally, despite the steps taken in recent years to strengthen tax administration and reduce compliance costs, further simplification of the tax code remains a challenge, in particular in the area of the VAT where businesses have voiced numerous complaints about unnecessarily high compliance costs.

This chapter provides an overview of the tax system in Poland and, based on international comparisons, reviews its main areas of strength and weakness. It begins with a review of the main forces that have shaped the current system. It then follows with an overview of the main features of the tax code and how they impact on economic performance. The taxation of productive factors (labour and capital) is first examined, followed by indirect taxation, with some emphasis on property taxes.

Factors that have contributed to shape the current tax system

Like most other Central and Eastern European countries that have moved from a centrally-planned to a market economy since the late 1980s, Poland entered the transition phase with a relatively high level of public spending, owing in large part to substantial transfers to provide income support to workers who were made redundant by the enormous industrial restructuring. The ratio of public spending on social benefits to GDP rose sharply in the early 1990s to peak at 25% in 1992, well above the OECD average of 18% and similar to the ratio observed in a number of high-income countries such as Belgium, Denmark and the Netherlands (OECD, 2007*a*). Even though the ratio fell somewhat thereafter, it remains above the OECD average. The major contributing factors are relatively generous disability and early retirement benefits (Chapter 2), though spending on the former fell as a ratio of GDP following a tightening of eligibility conditions in 2003-04. The required funding of these social expenditures, traditionally based on a form of earmarked payroll contribution, has had a significant influence on the current design of the tax structure.

In parallel, the traditional sources of revenues – essentially taxes on profits, turnover and payroll of captive state enterprises – quickly eroded following the price liberalisation that marked the transition to a market economy, and which rendered many of these enterprises uncompetitive. Hence, the authorities faced the challenging task of quickly setting up a market-oriented system that would shift revenue collection towards new tax bases. Already in 1989, a major step was taken with the introduction of a uniform profits tax of 40% for both state-owned enterprises and private firms.[2] A formal corporate income tax (CIT) was introduced in 1992, along with the personal income tax (PIT). Then a year later, the turnover tax was replaced by VAT and excise taxes. Hence, within a few years, the Polish tax code had acquired all the basic features of systems found in advanced OECD countries. On at least one important account, the rapid transformation of the tax system early in the transition phase was a success. Throughout the 1990s, the stream of revenues generated was sufficiently strong and continuous to help finance the adjustment costs induced by the deep restructuring of the productive sector, while preserving the State from the kind of fiscal crisis witnessed in other transition economies (Lenain and Bartoszuk, 2000).

Nevertheless, the system suffered from major limitations, and these became more visible as the drive towards a full-blown market economy developed. For instance, the large number of exemptions, allowances and other special tax treatments that crept into the tax code created economic distortions and high compliance costs, raising incentives for tax evasion. Furthermore, the disproportionately high taxation of labour income contributed to the persistently high unemployment rate (see Chapter 1). Changes to the tax code were made regularly during the following years, but the first major reform to the new system took place in the late 1990s. Some of its objectives were to address the aforementioned limitations, but a number of factors had major influences on their design. Most important in this regard were the preparation for EU membership, the process of fiscal decentralisation, and a change of strategy in the race with other CEE countries to offer attractive tax regimes for corporate and individual investors.

The proposed reform of the late 1990s focused essentially on lowering tax rates while broadening the tax base. This was particularly the case for the CIT, where proposals followed a relatively new trend which saw the authorities in emerging market economies opting for aggressive tax rate cuts rather than special exemptions in order to lure new businesses within their borders. The reform included phased reductions in the corporate tax rate from 34% in 1999 to 22% by 2004. In return, the authorities began to roll back some of the numerous *ad hoc* investment allowances introduced in previous years, and which most often lacked transparency. In addition, the number of depreciation rates was drastically reduced (from over 60 to 10). Similar objectives were pursued with the proposal to reform the PIT: moving to lower tax rates, simplifying the rate structure, and broadening the base through the elimination of a host of allowances. However, the draft law amending the PIT was vetoed by the president and therefore never enacted, leaving intact the three-rate structure (19%, 30% and 40%) which still prevails in 2008. On the other hand, the major reform of the pension and health insurance schemes in 1999 was accompanied by the introduction of employee social security contributions and by a corresponding reduction in employer contributions.[3] This important change to the funding of the social security system had nevertheless only a minor impact on the overall labour tax wedge, which remained one of the highest in OECD (see Chapter 1).

In order to facilitate EU accession, another key element of the reform concerned amendments to VAT and excise-tax provisions so as to comply better with EU rules. In the case of the VAT, this implied mainly changes in the types of goods or services that could qualify for reduced rates or exemption, while the rate structure was kept largely unchanged.[4] This process of harmonisation with EU provisions, which involved intensive discussions with the Commission and transition periods, culminated in 2004 with the adoption of a new VAT Act. Finally, the late 1990s marked the introduction of a new tri-level system of sub-national governments involving new arrangements for revenue sharing as part of a parallel reform of the structure of government. Even though the change implied a significant step towards fiscal decentralisation in terms of revenue allocation, the central government kept direct control of most tax instruments. In fact, only the lowest level of public administration (*Gminas*) exerts control over any tax instrument at all, namely the property tax.

Since the early 2000s, the most important changes to the tax system have concerned indirect taxes. Aside from the introduction of the new VAT Act in 2004, the excise system has been modified so as to divide goods subject to such tax into harmonised and non-harmonised excise goods, in line with EU regulations. As part of this process, new institutions were put in place, including tax warehouses, registered and non-registered traders, and the guarantee of excise payment. In another area, local tax administrations have been given more autonomy over real estate, agricultural and forest tax, notably in the determination of rates and exemptions, as well as over the management of stamp duties. As regards direct taxation, further measures were taken to broaden the base for CIT, whose rate was reduced to 19% in 2004, instead of 22% as originally planned. More recently, a number of changes have been made affecting labour taxation: social security contribution rates have been cut and, in 2009, personal income tax rates will be reduced and simplified. In parallel, a new allowance for children has been introduced while the deductibility of interest payment on mortgage loans is phased out.[5]

To summarise, few fundamental changes to the tax system have taken place since the major, albeit incomplete, reform of the late 1990s. And the changes made since have often taken place in a piecemeal manner, without a clear logic and/or well-defined objectives, thereby contributing to increasing the overall complexity of the tax code. To some extent, this illustrates the difficulties in carrying out comprehensive and coherent reform in this area. As a result, many of the shortcomings identified several years ago have remained unaddressed. The main characteristics of the tax system are reviewed in the next sections.

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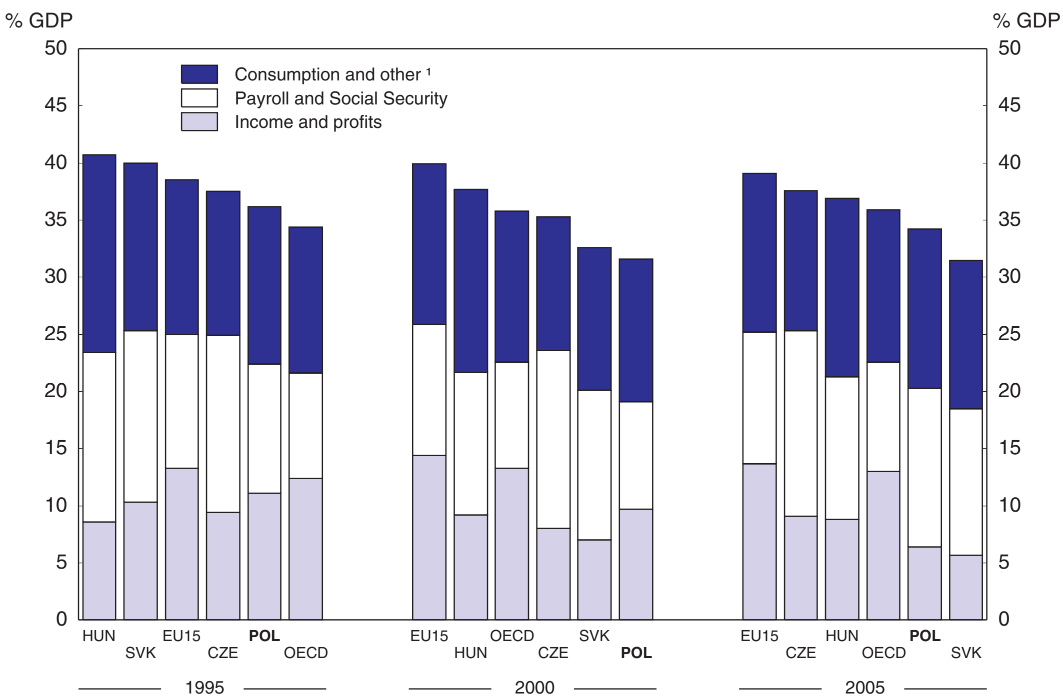
An international perspective on the size and structure of Polish tax revenues

With total revenues amounting to around 34% of GDP in 2005, the overall tax burden is not particularly high (Figure 3.1). It is somewhat below the OECD average and well under the average of the pre-enlargement EU countries (EU15). Furthermore, the overall tax burden has fallen since the mid-1990s, whereas in most other OECD countries it has either remained broadly constant or risen. However, when compared with a narrower group of middle-income countries from Central and Eastern Europe, the overall tax burden appears not particularly low, either. Although a higher overall tax burden is found in Hungary and the Czech Republic, the tax revenue share of GDP is below 30% in the Slovak Republic, where it has fallen sharply since the mid-1990s, as well as in the three Baltic States (not shown). Indeed, considering that transition countries typically have narrower tax bases, owing in part to lower labour force participation rates (in the official sector), it has been argued by some that they should not aim for a tax revenue-to-GDP ratio of much more than 30% of GDP, otherwise too high tax rates would be needed (Mitra and Stern, 2004).

The structure of taxation, as measured by the share of total revenues raised by each specific tax category, has not changed fundamentally over the past ten years. In particular, there has been no tendency to move towards a more diversified tax base. Social security contributions and indirect taxes (VAT and excise taxes on goods and services) remain by far the largest sources of tax revenues, and their relative importance is not only well above that observed in the average OECD country, but they have even risen over time (Figure 3.2 and Table 3.1). In contrast, the share of total revenues raised from personal and corporate income tax has declined to below 20%, one of the smallest shares among OECD countries.

Figure 3.1. **Overall tax revenues as a percentage of GDP**



1. Including taxes on goods and services and property.

Source: OECD (2007), *Revenue Statistics*, 1965-2006, Eurostat, *New Chronos database.*

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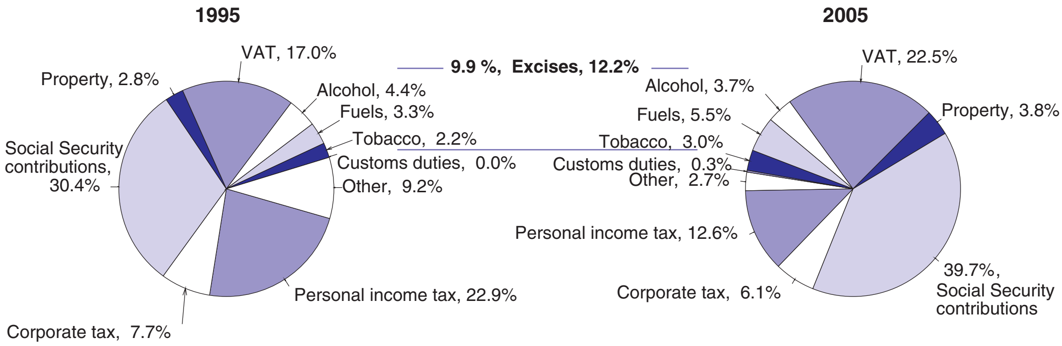
Figure 3.2. **Structure of tax revenues**

Per cent of total tax revenues



Source: OECD (2007), *Revenue Statistics 1965-2006*.

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Table 3.1. **General government revenues by type of tax**

Tax structure in selected OECD countries (Per cent of GDP, 2005)

	Poland	CE-3[1]	EU15	OECD
Income and social security	20.0	21.4	24.8	22.2
Personal income	4.3	4.6	10.2	8.9
Corporate income	2.1	3.1	3.4	3.6
Social security	13.6	13.5	11.1	9.3
Consumption	12.6	13.0	11.9	11.4
VAT	7.7	7.9	7.0	6.5
Excise and consumption	4.9	5.2	4.9	4.9
Property	1.3	0.6	2.1	1.9
Others	0.3	0.4	0.8	0.6
Total tax revenues	34.2	35.5	39.7	36.2

1. CE-3 refers to the simple average of Czech Republic, Hungary and Slovak Republic.

Source: OECD (2007), *Revenue Statistics database*.

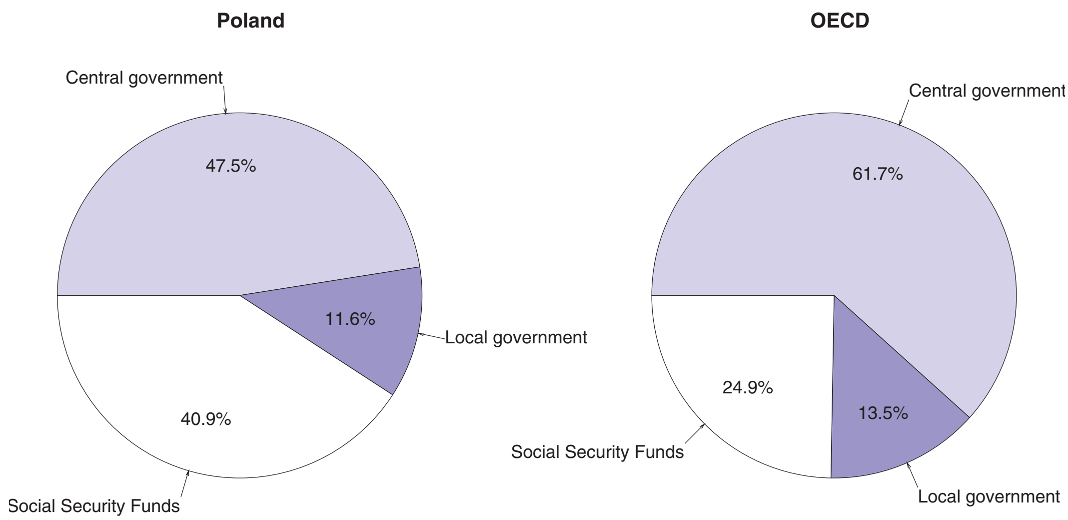
Revenues from property tax have risen but remain modest in international comparison, and other "small" tax bases such as or environmental externalities (see below) still generate little in the way of revenue.

In terms of revenue sharing between the different jurisdictions within the country, Poland is similar to the OECD average as regards the share of tax revenues that goes to local authorities (Figure 3.3). In 2004, they received 11.5% of total revenues, somewhat below the corresponding average figure across OECD unitary countries. In Poland, their main sources of revenues are transfers from central government and their share in centrally-imposed income taxes. Not surprisingly, the share of total revenues dedicated to social security funds is much higher than the OECD average, leaving a smaller share in the hands of the central government.

Although instructive about the main sources of revenues, the structure of taxation as presented above does not reveal much about the incidence of the tax system on economic behaviour and performance. An assessment of the latter requires a closer look at two dimensions of taxation: the influence of effective tax rates on economic agents' incentives

Figure 3.3. **Taxes by level of government**[1]

Per cent of total tax revenues



1. Estimates for 2004. Central government includes supranational taxes (attribution less than 0.5%) collected on behalf of the European Union by its member states. The OECD figures are unweighted averages of unitary countries. The figures do not take into account the transfer of revenue from central to local government.

Source: OECD (2006), *Revenues Statistics 1965-2005*.

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and choices as well as the cost effectiveness of tax administration and collection. These are examined in more detail in the next section.

Taxes on labour and their negative impact on economic performance

For the purpose of this analysis, taxes on labour comprise all those that are levied on the employment of, and/or income from, labour resources. It thus covers social security contributions and the provisions of the PIT that apply to labour income.

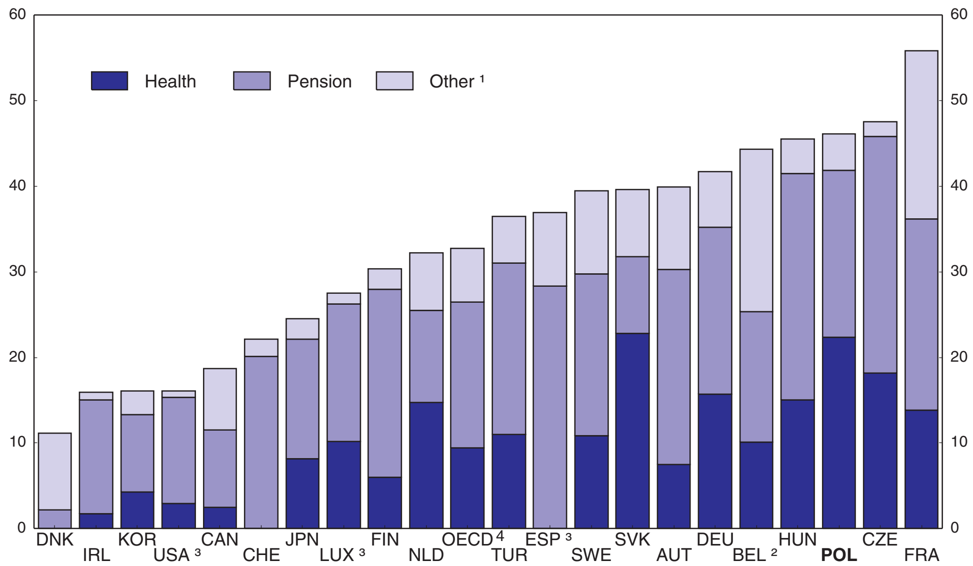
Social security contributions

As mentioned earlier, Poland has a fairly costly system of social expenditures, in particular for disability and old-age pensions (including pre-retirement schemes). Despite previous efforts at reforming such programmes (OECD, 2004), their cost remains substantial, and they are mostly funded by social security contributions levied on gross wage earnings (Figure 3.4). The contributions, which are all earmarked for specific programmes, added up to 46% of gross wage earnings in 2006, slightly more than half of which were paid by employees. Given that the contributions are deductible from taxable income, the majority of workers recover close to 20% of the amount contributed through income tax savings.

For many years, the rate structure has remained largely unchanged. In 2007 and 2008, contributions for disability pensions were reduced by 3 and 4 percentage points, respectively, in an effort to lower the tax wedge on labour income (see below). As a result, overall contributions have been lowered to slightly below 40% of average earnings, with

Figure 3.4. **Structure of social security contributions, 2005**

Social security contributions for a single worker without children at 100% average worker wage, percentage of gross wage



1. The 'other' category mainly includes unemployment insurance and work-related illness and accident insurance.
2. The 'other' category includes family allowances (6%) and wage restraint (6.6%).
3. Pension includes disability. For Spain, it also includes health.
4. Average for countries shown except Luxembourg, Spain and the United States.

Source: OECD (2007), *OECDEmployment Outlook*.

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the corresponding rate structure shown in Table 3.2. The cut in contributions has been partly offset by reductions in the costs of the disability programme (see Chapter 2). However, the shortfall in revenues is larger than the savings made, implying that a greater part of the funding for disability benefits will have to be covered by the general budget.

The extent to which employees perceive social security contributions as deferred benefits is difficult to assess. Since the 1999 reform of the pension system, benefits are much more closely aligned with lifetime contributions, reducing thereby the degree of

Table 3.2. **Employer and employee social security contribution rates in 2008**

By type of benefit (per cent of gross wage earnings)

	Total	Employers	Employees
Old-age pension and disability	25.52	14.26	11.26
Old-age pension	19.52	9.76	9.76
Disability/survivor pension	6.00	4.50	1.50
Insurance for sickness and maternity	2.45	–	2.45
Unemployment benefit (labour fund)	2.45	2.45	–
Guaranteed Employee Benefits	0.10	0.10	–
Insurance for accident at work and occupational diseases	1.57	1.57	–
Health insurance contribution[1]	7.11	–	7.11
Total	39.25	18.43	20.82

1. The rate of health insurance contribution is 9.0% but because it applies to earnings net of employee contributions, it is equivalent to 7.11% of gross wage earnings.

Source: OECD Taxing Wages (2007).

redistribution embedded in the system. Indeed, a comparison of gross and net replacement rates from public pension regimes across OECD countries shows that Poland has one of the least redistributive systems (OECD, 2005a). Accordingly, contributions that are earmarked for pensions are likely to be perceived by workers as "forced" saving rather than taxes, at least to a larger extent than in other countries. On the other hand, this is much less likely to be the case for the other important components, such as disability pensions, or health insurance, where the link between contributions and lifetime benefits is much less clear.

The treatment of labour income under the personal income tax

Poland has a so-called *semi-dual income tax* system whereby different nominal tax rates apply to different sources of income (in this case mainly labour and capital).[6] Capital income is taxed at one flat rate, whereas wage income is subject to progressive taxation, under a three-bracket structure (19%, 30% and 40%). Couples living together are free to choose between separate or joint declarations. In principle, Polish citizens living abroad are still subject to income tax in Poland, although the government has negotiated bilateral treaties with a number of countries in order to reduce the incidence of double taxation and encourage the return of expatriated workers (see Box 3.1). The issue has gained in importance in recent years due to the large number of Polish expatriates and the emergence of labour shortages in many sectors (see Chapter 1). Finally, earnings from farming activities are exempt from income taxation.

Box 3.1. **The tax treatment of Polish citizens working in the United Kingdom**

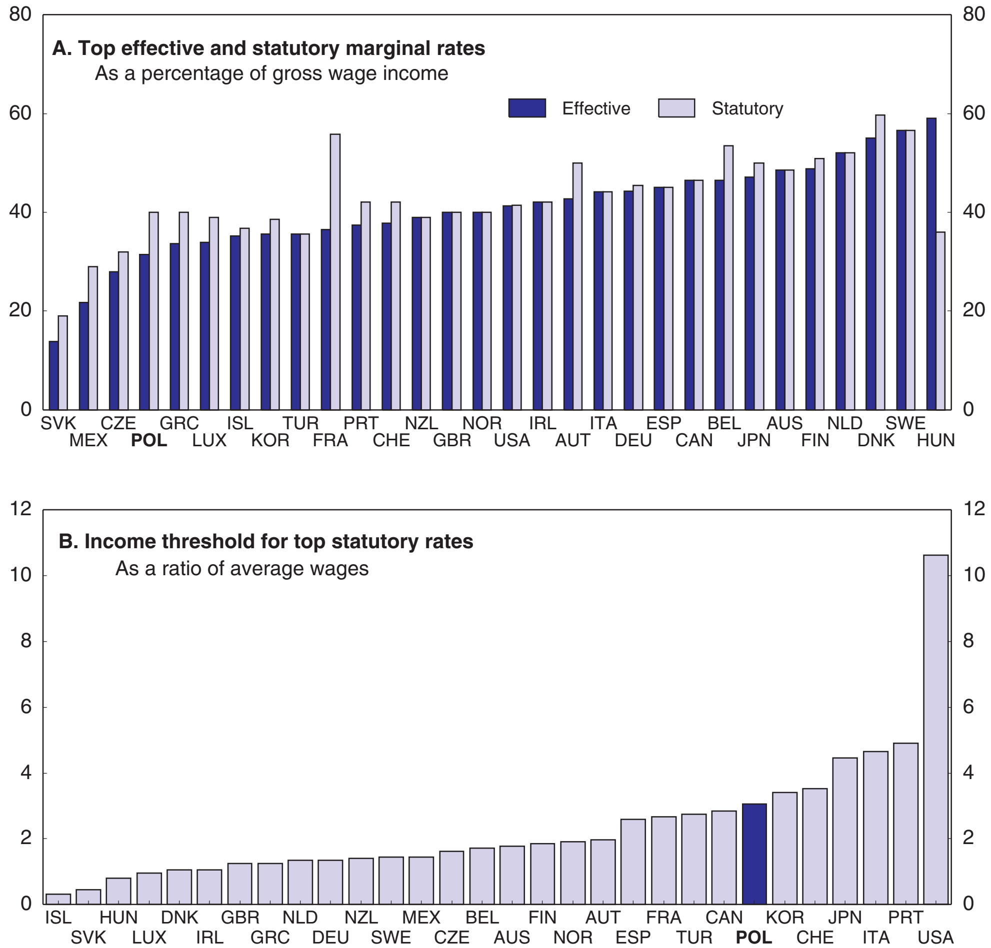
Poland's entry into the European Union has led to a sharp increase in the flow of Polish workers migrating to other member states (see Chapter 1). The United Kingdom has become a particularly favoured destination. Until 2007, the tax treatment of Poles working in this country was based on the so-called *proportional deduction method* (or credit method). According to this method, non-resident citizens – who spend at least half of the year abroad – would pay labour income taxes in their host countries, according to the personal income tax rules applied in this country. In addition, they would also remain liable to income tax in Poland. Income tax liability would therefore be calculated under the Polish PIT, on the basis of the income earned at home and abroad. However, to minimise double taxation, the amount of taxes paid in the host country would be credited against their tax liabilities.

Despite the credit, many expatriates still faced a substantial Polish tax bill, simply because the income earned abroad, in combination with lower tax-free income threshold, would place them in much higher tax bracket in Poland than in the United Kingdom. In order to ease the burden of double taxation, Poland entered in 2006 into a new double-tax agreement with the United Kingdom, according to which the *exemption method* applies to labour income earned by Polish tax residents in the United Kingdom. For income earned during the period 2002-07, the Polish authorities have indicated that a tax amnesty would be granted for taxes overdue in Poland and that those who have honoured their tax obligations over that period will be reimbursed.

In international comparison, the income threshold for the top bracket is not particularly low at over three times (gross) average earnings, and the marginal effective tax rate at that income level is substantially lower than the statutory rate (Figure 3.5). Even the second bracket rate (30%) only kicks in at an income level of around 1.5 times the average

Figure 3.5. **Top marginal rates and corresponding income threshold**

2006



Source: OECD Tax Database.

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wage. And, if one considers in addition the deductions and credit for payment of social security contributions, the amount of gross wage earnings that would yield taxable income high enough to reach the 30% and 40% brackets are closer to 1.8 and 3.5 times average gross earnings. Partly as a result, a relatively small fraction (between 6% and 7%) of taxpayers who declare labour income are subject to those brackets. Nonetheless, these taxpayers provide 44% of total personal income tax revenues.

As in most OECD countries, the minimum earning threshold for paying income tax is also higher than zero, due to the presence of a deduction for work-related expenses and a basic tax credit which are both set as fixed amounts. In 2006, these two allowances combined were equivalent to a deduction worth about PLN 350 per month or 14% of (gross) average earnings.[7] Considering the average cost for housing and basic food, this is clearly below poverty levels, even for single individuals. However, given the presence of a minimum wage, few earners would in practice face such a low income, and those who might (for example part-time workers or those living on old-age pensions), are most likely to receive additional income support from various social programmes. Furthermore, the marginal effective tax rate at that income level is quite low (9%).

Given that the PIT was excluded from the major reform in the late 1990s, the current rate structure and basic allowances have been in place for a decade. However, a substantial change is planned for 2009, with a reduction in the number of brackets from three to two. Under the plan, the first bracket rate will be lowered from 19% to 18% and the two higher rates will be replaced by a single rate of 32%. The income threshold for the second rate will be set at a level equivalent to around 2.6 times average earnings, which is only slightly below the income threshold for the third bracket under the current structure. Hence, the change is clearly set to benefit all income taxpayers and is therefore far from being revenue neutral. In fact, the size of the tax cut is estimated at 0.7% of GDP. Combined with the aforementioned reductions in social security contributions, the shortfall in revenues from these measures amounts to around 2% of GDP. The taxpayers who will benefit the most are those in the two highest brackets, further reducing the overall progressivity of labour income taxation.[8] Given the substantial loss of revenues that the coming change in the rate structure represents, and considering the need for further reductions in social security contributions, especially at the low end of the income distribution, moving to a flat tax should not be seen as a priority (see Box 3.2).

Box 3.2. **The flat tax debate in Poland**

Since the introduction of a flat tax in Russia in 2001, followed by Ukraine and the Slovak Republic in 2004, Georgia and Romania in 2005, and Bulgaria and the Czech Republic more recently, the authorities in Poland have been considering adopting such a tax. In most of these countries, the uniform tax rate has been set at a level close to the lowest-bracket rate of the tax structure in place before the reform. As a result, marginal tax rates for high-income earners have clearly fallen. Nevertheless, the impact of such reforms on overall progressivity is not clear cut as it depends on the tax-free allowance and the extent to which the reform is revenue-neutral *ex ante*.

There are several arguments in favour of the flat tax. *First*, its introduction is usually marked by a significant broadening of the tax base, which reduces distortions and improves efficiency. *Second*, reductions in marginal rates at higher income levels improve incentives to work and pursue entrepreneurial activities. *Third*, where a similar rate is set for personal and corporate income tax, the choice of a legal form to conduct business (corporation or unincorporated entity) is less distorted by tax considerations. Likewise, there is also less incentive for employees to turn themselves into own-account workers. *Fourth*, the simplification of the tax system and the greater transparency reduce compliance costs and, thereby, tax evasion. Indeed, following the success in Russia where revenues increased after the introduction of the flat tax (Gorodnichenko *et al.*, 2008), many countries in the region see such reform as an effective way to reduce tax evasion.

However, outside Russia the experience from the flat tax is more mixed. In all other cases where the flat tax rate was set at a level close to what was the lowest bracket in the previous tax structure, the reform has led to a reduction in PIT revenues (Keen *et al.*, 2006). Again with the exception of Russia, there is little evidence thus far that the flat tax has had a significant impact on work incentives, though it may be too early to judge in some of the more recent cases. While the simplification of the tax structure has clearly helped to increase tax compliance, the major source of complexity – numerous exemptions and allowances – could also be addressed in the context of a simple, multiple rate structure.

Box 3.2. **The flat tax debate in Poland** *(cont.)*

Before making a decision on the PIT reform to be introduced in 2009, the previous Polish government examined the potential impact of adopting a single tax rate for PIT. Two scenarios were compared at the time: a 15.4% rate with no basic allowance and a 20.5% rate with a basic allowance (OECD, 2006a). In both cases, the simulation showed that the change would have had only a small impact on the tax wedge, mainly because personal income tax accounts for a small portion of the wedge. Another reason is that, depending on the size of the tax-free allowance, only a modest proportion of taxpayers would have benefited from a significant reduction in PIT. Furthermore, the expected benefits would be limited insofar as Poland already taxes capital income at a lower rate under its semi-dual income tax system. Instead of a flat tax, the government opted for a reduction in the number of tax brackets, in the context of an overall reduction in PIT. While the rate structure is thus simplified, there has been no reduction in the complexities arising from the multitude of exemptions and allowances and thus any benefits in the form of reduced compliance costs and evasion have been foregone.

Efforts have been made to broaden the base by eliminating a number of tax reliefs in recent years.[9] One of the most important concerns the deductibility of interest payments on mortgage loans. This is no longer allowed, though, with the change applying only to loans taken-out after the end of 2006, the positive effect on revenues will be only very gradual. Another substantial allowance eliminated in recent years was the deduction for the renovation of houses and apartments. Despite these efforts, several important exemptions and reliefs have remained in place at a non-negligible cost in terms of foregone revenues (Table 3.3). Allowances are often questionable from an equity perspective, since, with the exception of non-wastable tax credits,[10] they generally benefit higher-income group disproportionately. But even aside from equity considerations, the mere justification of some of the allowances is certainly questionable, not least those for Internet subscriptions. Eliminating such allowances would be all the more relevant to help funding the new tax credit for children that was introduced in 2007, at an estimated cost of 0.5% of GDP. In 2008, the deduction from tax liabilities is a flat amount of PLN 1 173 for each child (or 3.7% of average earnings).

Providing allowances for dependent children is fairly common practice across OECD countries and is usually justified on the ground that raising children brings unavoidable expenses to the parents while creating benefits for the society as a whole, especially in countries facing adverse demographics. Furthermore, this is a case where the target is sufficiently general and easy to identify that it does not add much to the complexity of the system. However, considering that the tax rate cuts expected in 2009 will already offer substantial relief for high-income households, the case could be made for making the child tax credit more beneficial to those who most need them. To do so, the allowance should be turned into a non-wastable tax credit and its size diminished in order to prevent the overall budgetary cost from rising further or even to lower the cost.[11] In such a case, however, the child benefit administered through the tax system may overlap with the family allowance delivered through the social assistance system.

Table 3.3. **Budget revenue losses from PIT allowances and deductions in 2006**

PLN million (unless indicated)

Total PIT deductions	
***of which*: From income**	**4 305**
From tax	**883**
Total budget revenue loss (result of allowances and deductions)	**1 719**
In per cent of PIT	6.11
Housing allowances	
Revenue loss	**724**
In per cent of PIT	2.57
Total average allowance per taxpayer (in PLN thousand)	0.52
In lowest bracket	0.45
In middle bracket	1.69
In highest bracket	2.77
Rehabilitation expenditures	**351**
Revenue loss	
In per cent of PIT	1.25
Total average allowance per taxpayer (in PLN thousand)	0.37
In lowest bracket	0.36
In middle bracket	0.64
In highest bracket	0.94
Internet expenditures	**205**
Revenue loss	
In per cent of PIT	0.73
Total average allowance per taxpayer (in PLN thousand)	0.10
In lowest bracket	0.09
In middle bracket	0.15
In highest bracket	0.22
Donations	**71**
Revenue loss	
In per cent of PIT	0.25
Total average allowance per taxpayer (in PLN thousand)	0.37
In lowest bracket	0.07
In middle bracket	0.19
In highest bracket	2.70
Other	**368**
Revenue loss	
In per cent of PIT	1.31
PIT revenue (state budget) in PLN million	28 125

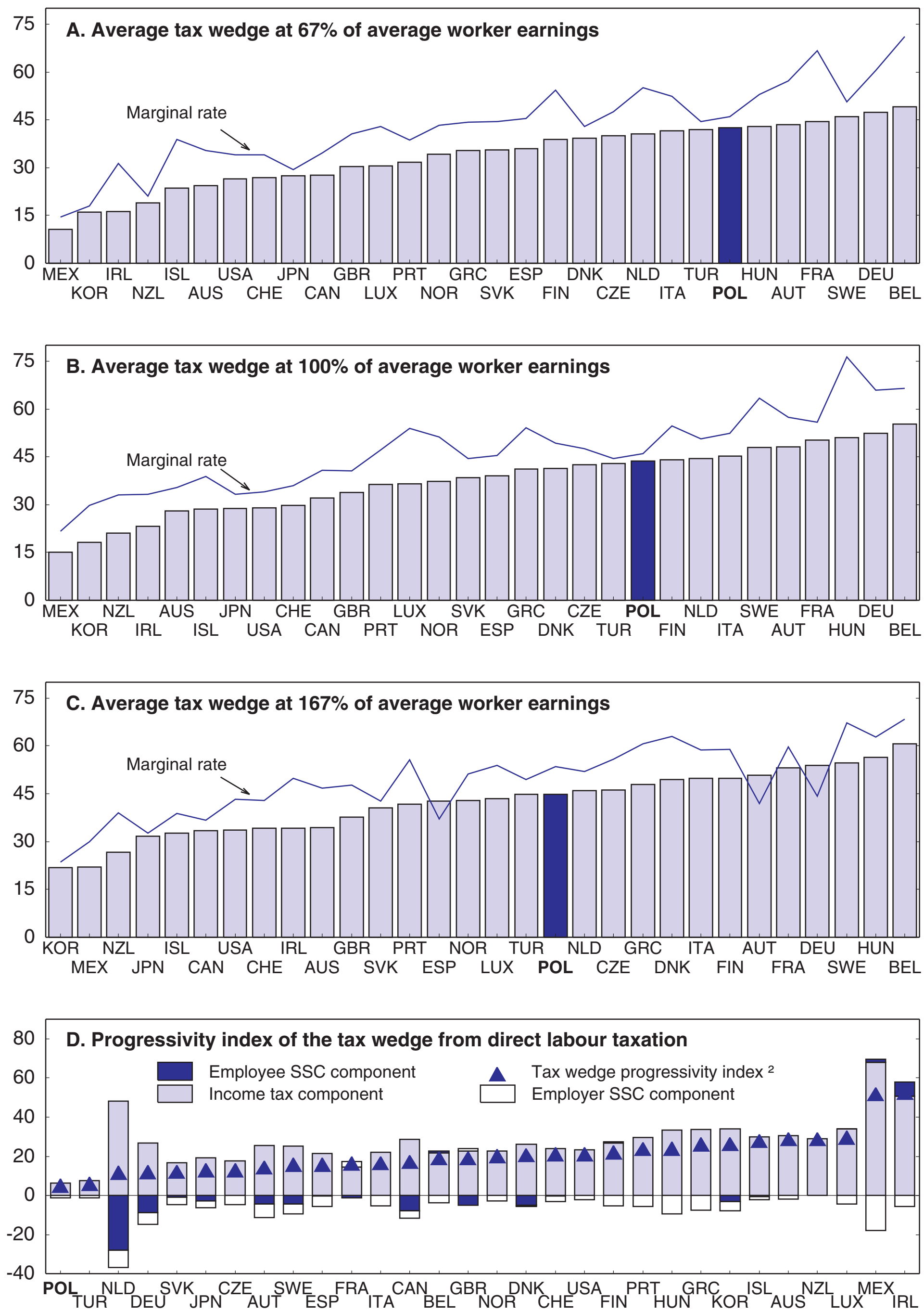
Source: Ministry of Finance.

The size and shape of the labour tax wedge

One of the key implications of the combined social security contribution and PIT structure is the substantial gap between the overall labour cost borne by employers and the net take-home pay received by employees. The average tax wedge on labour income is still well above OECD and EU averages across a whole range of family situations and income levels. Comparing the labour tax wedges for single earners, Poland was near the average in the case of higher-income workers but not for lower-income earners, where again it was relatively high (Figure 3.6). This reflects another singularity of the Polish tax wedge; that it is largely invariant across income levels. Indeed, when measured on the basis of a simple index that compares tax rates at high and low income levels, the Polish wedge schedule stands out as being the least progressive of all OECD countries' schedules.

Figure 3.6. **Tax wedge across countries in 2006**[1]

As a per cent of average earnings, for a single person with no child



1. The average tax wedge is defined as the share of income tax and all social security contributions minus benefits in gross labour costs, marginal rates are defined as the increase in tax and all social security contributions minus benefits as a share of the related increase in gross labour costs.
2. The progressivity index of the tax wedge is calculated as (TW167 – TW67)/ TW167, where TW167 and TW67 is the tax wedge for workers at 167% and 67% of average wage, respectively.

Source: OECD (2008), *Tax database*.

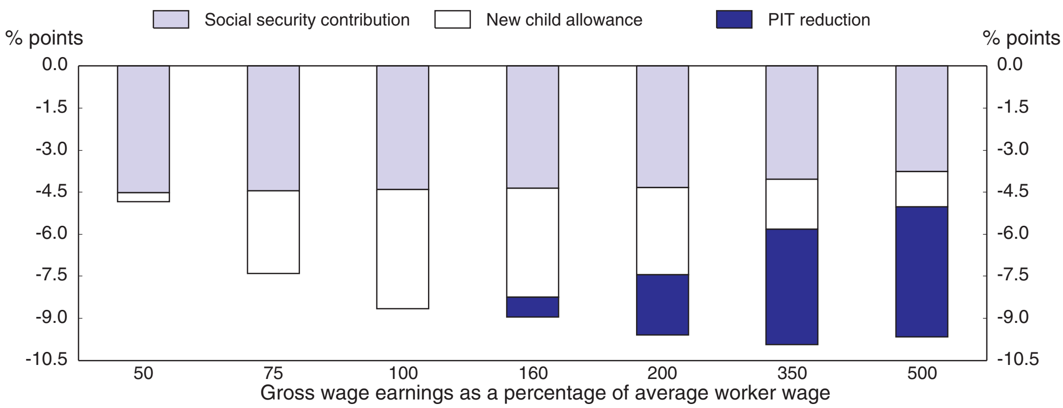
StatLink http://dx.doi.org/10.1787/345647123280

And to a large extent, this is because the PIT structure itself has relatively little progressivity.

Taking into account the reductions in social security contributions in 2007 and 2008, the new child allowance and the planned cuts in PIT rates in 2009, the combined reductions in the tax wedge will vary from around 4 percentage points, for those who only benefit from the reductions in social security contributions, to over 10 percentage points for those who fully benefit from the child allowance and/or the PIT reductions (Figure 3.7). This is a considerable effort that will leave the tax wedge on average close to the current EU mean, albeit still significantly above the OECD mean. Whether or not this will be sufficient to give the much needed permanent boost to labour market participation and employment in the official sector depends on a number of factors, in particular on the responsiveness of labour demand and supply to the change in incentives.

Figure 3.7. **Magnitude and sources of reduction in the tax wedges by income level**[1]

Percentage points, single earner, married couple with 2 children



1. Each bar shows, for difference earning levels, the total reduction in the tax wedge resulting from three measures: *i)* the reduction in rates of social security contributions (2007-08), *ii)* the introduction of a child allowance (2008) and *iii)* the forthcoming simplification and cut in PIT rates (2009).

Source: OECD (2007), *Taxing Wages*.

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Options for further reductions in the labour tax wedge

The empirical evidence reviewed in Chapter 1 suggests that insofar as further reductions in the labour tax wedge would be deemed desirable to boost employment rates, they should be well targeted so as to lower the cost of labour and/or raise work incentives at the low end of the income distribution. Aside from the Poland-specific evidence cited above, previous experience and analysis have shown that targeted cuts in the labour tax wedge are generally more cost-effective in raising employment rates of specific groups than a broadly-based tax cut (OECD, 2007c). The budgetary cost would also be more limited and therefore easier to finance by expenditure cuts or increases in other tax bases. Targeted cuts can also be justified on equity grounds, given the low degree of progressivity in the Polish tax structure.

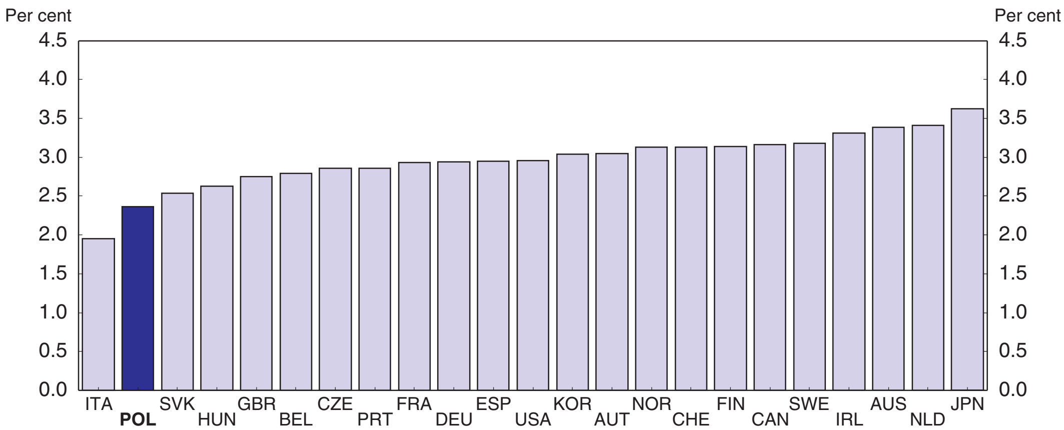
Two types of measures have generally been taken by OECD countries to raise the net take-home pay of low-income workers: in-work benefits and targeted cuts in payroll contributions. Many countries provide employment-conditional benefits in the form of means-tested cash transfers that top up the wages of low-income workers (OECD, 2005b). The most common type is the earned income tax credit (EITC), which is delivered directly through the PIT system. The EITC has been used since 1975 in the United States where it has become the largest anti-poverty programme for non-elderly individuals. Since then, similar schemes have been introduced, first in the United Kingdom (1999), and then in at least seven other OECD countries.[12] The main goal of EITCs is to boost labour supply by raising work incentives for low-skilled people, whose labour-market attachment is often tenuous, in part because their family situation further reduces the financial rewards of working relative to remaining inactive.[13] In parallel, a number of the countries (Belgium, France, the Netherlands and the United Kingdom) who provide an EITC also apply targeted reductions in employer social security contributions in order to reduce the minimum cost of labour and foster low-skilled job creation, in particular in the services sector. These countries thus act simultaneously on both sides of the labour market to boost employment.

According to earlier studies, both types of targeted incentives can be effective in raising employment rates among marginal groups, though this is generally under fairly specific conditions and not without some perverse effects on other groups or types of incentives.[14] For instance, results from cross-country empirical analysis suggest that a 20% reduction in the financial disincentive to enter the labour market – through an EITC, for example – raises the probability of moving from unemployment to employment by 10% (from 45% to 49%).[15] When the initial situation is one of inactivity instead of unemployment, the effect is somewhat stronger, but only statistically significant in the case of single women. Likewise, on the basis of country-specific monitoring, targeted reductions in employer social security contributions are generally seen as having significant effects on low-skilled employment, though the impact is difficult to quantify with any sort of precision and the associated deadweight losses can be substantial (OECD, 2007c, 2003; Rémy, 2005). However, previous analysis also suggests that in order to be successful in raising employment – and not just in redistributing income – both types of measures should be sufficiently well targeted so as to have a large enough impact on labour demand and/or supply, while limiting the cost to public finances.

As far as Poland is concerned, the effectiveness of either type of measure would be enhanced by the completion of the reforms of the disability and early retirement pension schemes, so that these programmes can no longer serve as an attractive alternative to participation in the official labour market. Integration of the special farmers' social security scheme (KRUS) within the general system (ZUS) should in this regard be seen as a priority.[16] It is also important to ensure that adequate resources are in place in the public administration in order to handle the added complexity that such measures entail. Beyond that, even though both should be considered, as they can be complementary, the case for reducing social security contributions seems to be more appealing. *First*, the combination of very high payroll contributions and a relatively high minimum wage creates the conditions for such a measure to have a significant impact on low-skilled job creation. *Second*, this measure may not be too demanding on additional administrative resources if it is introduced in the simple form of an exempted lower band as in the United Kingdom or Ireland. *Third*, EITCs have been found to work better in countries where tax rates and benefits for the non-employed are relatively low (United Kingdom and the United States, for example), which is not really the case in Poland (Bassanini *et al.*, 1999).

More generally an advantage of payroll tax cuts is that a revenue-neutral reduction in the tax wedge for low-income earners can be more easily achieved by shifting some of the earmarked social security contributions towards income tax. This is because low-income earners (*e.g.* minimum wage earners) pay income tax only on a small portion of their earnings, if at all, and also because the base of personal income tax is generally broader (covering active and inactive residents as well as income from labour and capital). In fact, recent estimates indicate that a 5% reduction in social security contributions could be compensated in a revenue-neutral manner by an increase of less than 2½ per cent in personal income tax (Figure 3.8). In this regard, more ambitious reductions in the tax wedge at the low end of income distribution could also be envisaged if the planned reduction in the income tax rate were to be reconsidered or if some of the more costly allowances, in particular the child tax allowance, were to be rolled back. Alternatively, other tax bases could be considered as funding sources for offsetting genuine cuts in tax wedges. The scope for doing so is examined in the next sections.

Figure 3.8. **Required increase in PIT rate to compensate for a 5% cut in employer social security contributions**



Source: OECD (2007), Employment Outlook.

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The tax treatment of capital income

This section covers the tax treatment of capital income, in particular regarding corporations, but also concerning small unincorporated businesses and the self-employed. The interaction between the corporate and personal income tax systems is also discussed.

Corporate income tax

As mentioned above, the Polish corporate tax system was the object of a much deeper reform than PIT, nearly a decade ago. The nature of the system has not changed fundamentally, but corporate tax rates were cut significantly and the base broadened to some extent, in line with observed international trends. The tax rate on corporate income was lowered from 40% in 1995 to 19% in 2004, where it still currently stands. All incomes earned by legal entities from activities carried out in Poland are liable for taxation regardless of residency. In principle, profits earned abroad by corporations headquartered in Poland are also subject to Polish taxation, but are in practice exempted for activity conducted in many foreign countries by virtue of international agreements. The income from a number of specific domestic activities is also exempted, including that from agriculture, forestry and sea ports. Another major type of exemption concerns business activities in 14 Special Economic Zones, a measure adopted in the mid-1990s to stimulate (foreign) investment in less developed regions. Even though both domestic and foreign firms qualify for the exemption, it was still viewed as violating EU rules on state aid. Therefore, following negotiations on EU accession, no new exemptions have been granted since 2000. Also, these granted before 2000 are scheduled to be entirely revoked by 2017.

The tax base is fairly standard in that it covers any income, irrespective of the source of revenues (non-financial or non-equity financial) and where income is defined as the surplus of total revenues over the costs incurred in generating those revenues. The base thus includes the proceeds from sales of products and services, but as well the value of in-kind benefits or services received free of charge and various forms of capital gains upon realisation. Interests (upon receipt) on loans are included but not the proceeds from new share issuance. In return, expenses incurred to cover the cost of labour as well as for the purchase of materials and fixed assets, including interest payments on debt, are deductible from taxable income.[17] Losses can be carried forward and used as a deduction in the five subsequent years, although the deduction cannot exceed 50% of the loss in any year. Finally, spending on R&D can be fully expensed; but, in contrast with practice in many OECD countries, there is no significant additional tax relief provided for such expenditure.

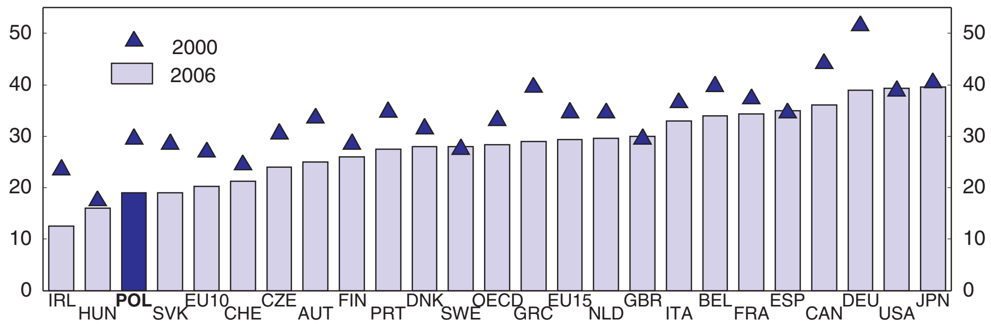
As mentioned earlier, the interaction between the PIT and CIT systems combines the features of a *semi-dual income* tax with that of a *classical* corporate tax: profits are taxed at the corporate level and once again at the personal level when distributed in the form of dividends. To reduce the impact of double-taxation, dividends are subject to a final withholding tax at the personal level at a single rate of 19%. The same rate applies for interest income and capital gains.

Substantial cuts in statutory corporate income tax rates have left Poland with one of the lowest rate among OECD countries (Figure 3.9). In 2006 it was well below OECD average but comparable to those observed in the other EU member states that joined in 2004. However, statutory rates can mask differences across countries in tax bases and, given also that in parallel to cutting rates many countries (including Poland) have broadened the base, a more relevant comparison is provided by average effective tax rates (AETRs). In general, the Polish corporate tax code is more generous than that of most EU new member states but less so in comparison with the majority of older member states (Schratzenstaller, 2005). AETRs have been calculated for most OECD countries on the basis of a common methodology.[18] Based on this measure, Poland is also one of the countries with the lowest rates of corporate taxation (Figure 3.10). The AETR has come down from 27 to 17% since 2000, a decline that is only slightly smaller than that found in statutory rates over the same period.

Taken at face value, this would indicate that the few measures taken to broaden the base have been too limited in scope to have a measureable impact on effective rates. Indeed, the small differential between the statutory and the effective tax rate suggests that allowances may not have been so generous in the first place. However, because they are based on a hypothetical investment situation involving a representative firm, theoretical constructs such as AETRs may not fully capture certain changes in the tax base, for instance those that would lead a number of corporations previously exempted to be

Figure 3.9. **Statutory corporate tax rates in international comparison**

Combined rate, per cent[1]



1. Basic combined central and sub-central (statutory) corporate income tax rate. Aggregates are unweighted averages and EU10 covers the new EU member states.

Source: OECD (2007), *Tax Database.*, *www.oecd.org/ctp/taxdatabase* and European Commission (2006), *Structures of the Taxation Systems in the European Union.*

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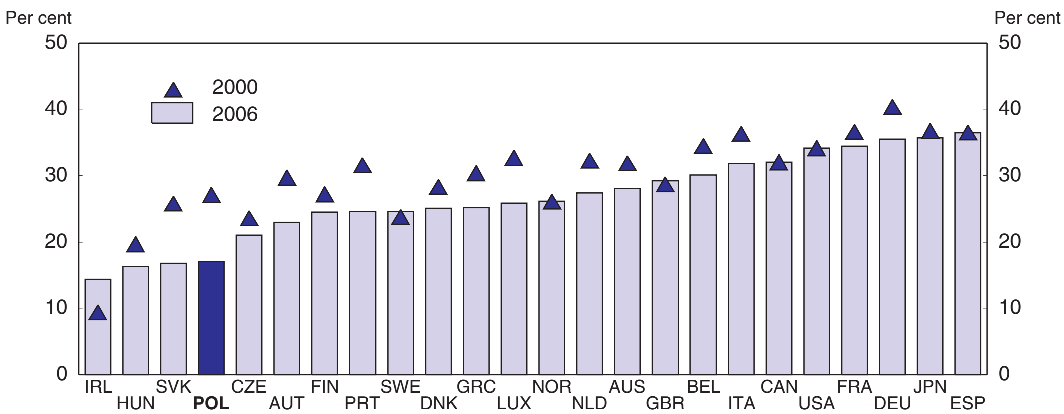
Figure 3.10. **Average effective tax rates on corporations**

2006[1]



1. Data refer to 2005 for Australia, Canada, Japan, Norway and United States.

Source: International Financial Statistics.

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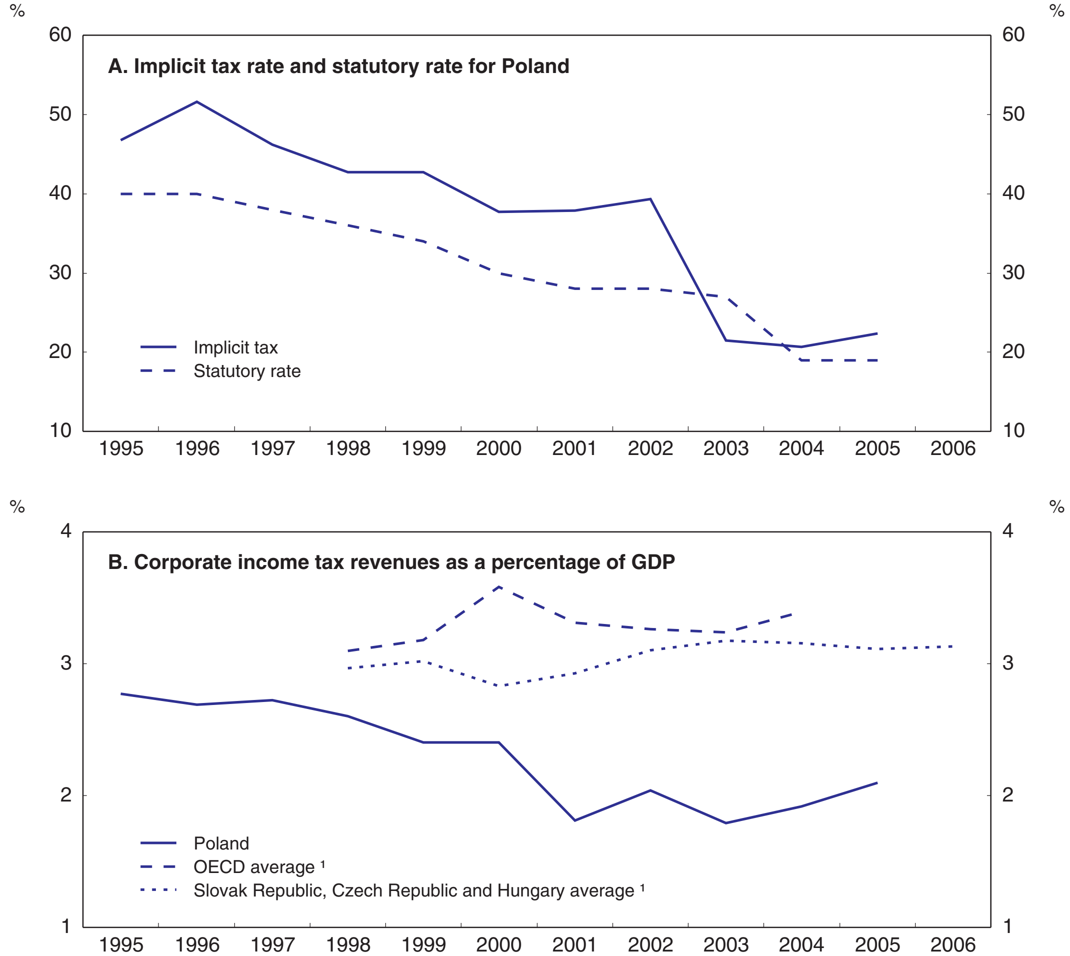
henceforth liable. An alternative consists of looking at broad tax ratios and implicit tax rates, which are based on the overall amount of corporate tax revenues collected in the economy as a whole. The two concepts are similar except that one normalises on GDP, whereas the other is based on a measure of taxable capital and business income from national accounts data on profits in the enterprise sector. One key difference is that the tax ratio will tend to increase automatically if the profit share of total income rises, whereas the implicit tax rate will not.[19] A look at implicit tax rates indicates a steep decline in corporate taxation since the mid-1990s. In fact, since 2000, the drop is largely in line with the decline in statutory rates, indicating again that, at least until 2005, there have been few significant measures to broaden the base (Figure 3.11, Panel A).

In contrast, after falling steadily between 1995 and 2001, corporate tax revenues as a share of GDP picked up and by 2005 had moved closer to their 2000 level (Figure 3.11, Panel B). Not surprisingly, corporate tax revenues are particularly sensitive to cyclical

Figure 3.11. **Implicit corporate tax rate and broad tax ratio**



1. Unweighted averages. OECD average does not include Mexico.

Source: Taxation trends in the European Union and OECD (2007), *Tax database*.

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developments, but in 2005 the economy was viewed as having returned to potential (according to OECD estimates of the output gap). This apparent paradox between falling tax rates (be they statutory or effective) and a steady share of corporate tax revenues in GDP has been noted before in a broader set of countries (Devereux and Sorensen, 2006) and is also consistent with the conclusion from a recent review of the impact of tax competition, suggesting that there is little evidence of a collapse in corporate tax revenues following the steep declines in rates (Nicodème, 2006). Furthermore, there are indications that reductions in corporate tax rates have been successful in attracting businesses to Poland and fostering investment. Inflows of foreign direct investment have risen sharply since the early 2000s. To some extent this is corroborated by the rise in the share of fixed capital formation in GDP (see Chapter 1).

Overall, while there is no consensus as to what the optimal corporate tax rate should be, there are reasons to believe that the current rate in Poland may be broadly appropriate. Put differently, it is difficult to make a strong case for significant changes in either direction. As shown above, corporate taxation has fallen substantially on most measures and is comparable to what is observed in many other transition economies from Central and Eastern Europe. Moreover, corporate taxation already accounts for a small share of overall tax revenues and, insofar as there are legitimate reasons for taxing business income, it is not clear that the benefits from further cuts might be worth the costs in foregone budgetary revenues. Hence, further reductions in the statutory corporate tax rate should be contemplated only as a compensation for broadening the base. At the same time, with capital being significantly more mobile than labour, taxation of capital income should probably not be considered as a potential source to finance the needed reduction in labour taxation. This is especially so since a rise in corporate taxation would send the wrong signal in the current international context of significant tax competition. For these reasons, future changes in corporate taxation should focus on addressing some of the distortions that characterise a classical system, not least the bias in favour of debt as a source of finance. Indeed, a number of options exist for removing this bias (OECD, 2007d). However, it could be risky for Poland to adopt a tax regime that deviates significantly from those in other countries given the potential implications for inward investment flows.

The tax treatment of small unincorporated businesses and the self-employed

Like many OECD countries, Poland offers a special tax regime for small unincorporated businesses and the self-employed, mainly in order to simplify their fiscal obligations.[20] Under the tax code, very small businesses earning income from non-agricultural activities are in principle liable to taxation on general terms, but they may choose (in agreement with the tax authorities) either to be taxed at the uniform 19% tax rate (general regime) or to pay a lump-sum tax under conditions laid down in the Lump-Sum Income Tax Act. The latter corresponds to the so-called presumptive tax regime that is common in developing countries but features of which are also applied in several OECD countries. The tax is based on turnover (registered revenues), which must be at least €150 000, but not exceed € 250 000, for a small business to qualify. The tax rate paid varies according to the nature of the business and in most cases, is below the CIT and PIT rates on capital income of 19%, but allowances are also much more limited. In comparison to the general regime, the main advantage for small businesses is the possibility to maintain a simplified register of revenues and expenditures.

The proportion of small firms adopting such regimes has fallen steadily to the point of becoming fairly marginal. In such a case, the authorities should perhaps reconsider the relevance of maintaining the lump-sum tax regime in place, or at least consider reducing the number of tax rates applied across types of activities in that regime so as to narrow the scope for tax avoidance or evasion. One advantage of the general regime is that, by allowing for the deductibility of wage costs, it raises incentives to declare employees, reducing thereby the incidence of informality. Insofar as the lump-sum regime is still viewed as needed, the possibility of allowing for deductibility of wages from turnover, while adjusting tax rates accordingly, should be explored.

As for self-employed individuals (also referred to as own-account workers or sole traders), they benefit from a favourable tax treatment relative to regular employees. Under the Personal Income Tax Act, their earnings are treated in the same way as capital income. Hence, they are entitled to a flat-rate tax of 19% on their declared income, as compared to the progressive rate structure applicable to labour income. More importantly, given the difficulties for the tax authorities in assessing their actual earnings, such entrepreneurs can basically choose to pay social security contributions on the minimum income level they are required to declare, which corresponds to 60% of the average wage. As a result, a majority of the self-employed in reality pay social security contributions effectively at a much reduced rate relative to regular employees. This favourable tax treatment may have contributed to the rise in self-employment since the early 2002 in many sectors such as manufacturing, construction, transport and trade.[21] This is also manifested in the ratio of tax revenues accounted for by the self-employed to GDP, which has risen steadily (from 3% in 2000 to 3½ per cent in 2005).

Strong growth in self-employment may be consistent with rapid changes in the industrial organisation of firms and the development of a business sector specialised in the provision of consultancy services to enterprises. Moreover, for many individuals self-employment may be the only real possibility to find work. A rising trend can therefore be generally regarded as a positive development, except when tax-induced distortions lead to an excessive use of the status. Anecdotal evidence suggests that this may have been the case in Poland (European Industrial Relations Observatory, 2006). For instance, reports indicate that firms have encouraged their employees to turn themselves into self-employed as there are also many advantages for employers. In addition to avoiding payment of social security contributions, firms also enjoy greater flexibility in the contracting relationship, in particular with respect to job-protection obligations in case of layoff. The benefit on the self-employed side in terms of higher net earnings is also substantial but comes at the expense of lower coverage of social benefits, in particular with respect to future pension rights. This could create problems further down the road if the trend were to persist.

In order to stem the development of fictitious self-employment, the government tightened the relevant eligibility criteria in 2007.[22] It is too early to tell how effective these changes will be. However, their impact may be magnified by the strong increases in nominal wages and the recent decline in the tax wedge. In this regard, further tax wedge reductions, even if concentrated on low-income individuals, would help to reduce the differential in the tax treatment of dependent employees and the self-employed, thereby reducing the incentive to choose the latter status solely for tax reasons. In the longer run, the government should nevertheless consider developing assessment tools that would allow the calculation of social security contributions to be based on a close estimate of actual earnings rather than on a notional income set at a low level.

Indirect taxes

This section will treat three broad areas of indirect taxation: *i*) consumption taxes, which encompass both general taxes under VAT and taxes on specific goods *via* excise duties; *ii*) environmental tax; and *iii*) immovable property tax.

Value-added and excise taxes

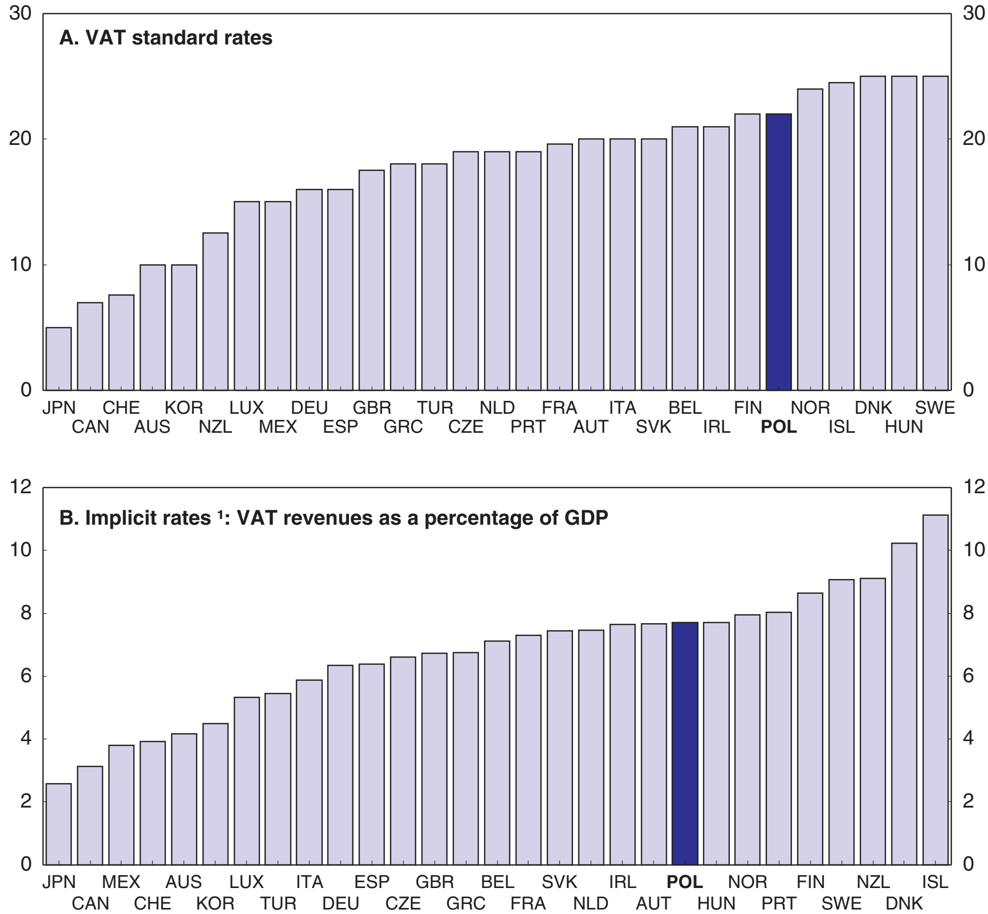
Compliance of the Polish VAT system with EU provisions, in particular those related to the Sixth Directive, was largely completed by the time of membership in 2004. Since then, several changes have been made to the relevant legislation, in part to further improve compliance with EU rules, but the rate structure and broad set of exemptions has remained largely intact. The main VAT rate is set at 22%, well above the minimum 15% required under EU rules, and there is one reduced rate of 7%, which applies to a broad range of products and services.[23] The main exemptions from VAT are for the most part fairly common and include financial, educational, health and other social or cultural services, the rental of apartments and the sale of a company (in whole or part).[24] Also, small businesses whose turnover does not exceed PLN 50 000 are exempt from VAT registration, implying that they are not entitled to recover the VAT paid on their inputs. This threshold is relatively low by international standards.

The main VAT rate is among the highest in OECD, with only the Nordic countries applying equal or higher rates (Figure 3.12, Panel A).[25] As a result, the amount of revenues collected through VAT as a percentage of GDP is also above the OECD average, albeit by a narrower margin. In fact, some countries such as Austria, the Netherlands and New Zealand manage to collect as much or even more VAT revenues as a percentage of GDP, despite having lower VAT rates, indicating that the base for the application of the standard rate is narrower in Poland (Figure 3.12, Panel B). The latter reflects the wider set of products exempted or subject to the reduced rate, but probably also a higher incidence of tax evasion. One summary indicator of the revenue performance of VAT can be obtained by taking the ratio of VAT revenues to national consumption, which is then divided by the standard VAT rate, and expressed as a percentage (OECD, 2006c). A high value indicates that the standard VAT rate is applied on a broad base, with few goods or services exempted, and that the incidence of tax avoidance is low. Calculations for OECD countries show that Poland has one of the lowest efficiency ratios, with a value well below 50% (Figure 3.13, Panel A). The cross-country comparison also points to a negative correlation between the standard VAT rate and the efficiency ratio, suggesting that countries with high VAT rates tend to narrow the base by moving many products to a reduced rate and/or are confronted with higher tax evasion (Figure 3.13, Panel B).[26]

One aspect of the efficiency of the VAT revenue performance that is not captured by this type of indicator is the compliance cost that firms have to bear in order to fulfil all the procedures associated with their duty as tax remitters to the government. Polish firms have complained that the administrative burden associated with VAT procedures is not only generally higher than in other EU countries but that it is also unnecessarily cumbersome (see Box 3.3 below). Polish business representatives consider the simplification of VAT procedures as an even more pressing issue than a reduction in corporate taxation. To some extent, the claim is substantiated by data comparing the costs borne by businesses in various countries to comply with different types of taxes (Figure 3.14). The comparison shows Poland ranking particularly poorly in terms of the time required to comply with the VAT. The purpose of some of the criticised procedures is to prevent businesses from exploiting loopholes. However, with a VAT regime that is quite similar to those of other EU countries, it is not clear that concerns about potential tax evasion would justify the need for significantly more complex administrative procedures. A better approach in this regard, might be to simplify procedures and strengthen controls via random on-site inspection by the fiscal authorities. In this regard, the burden associated with controls would be greatly reduced if the fiscal control office were to be merged with the tax office. The duplication of such controls by two distinct authorities is not only raising administrative costs but also leaves businesses vulnerable to the possibility of facing different interpretations or judgments regarding specific tax compliance issues. One way to achieve simplification would be for the Polish government to exploit unused possibilities offered by EU legislation, which would allow domestic firms to adopt common EU practices (Box 3.3). Furthermore, it should be made much easier for firms to obtain legal certainty on specific provisions of the tax code whenever this is

Figure 3.12. **VAT rates in OECD countries: Statutory and implicit**

In per cent, 2006[1]



1. 2005 for Australia, Belgium, Greece,Iceland,Ireland, Mexico and Poland. 2004 for Portugal and Italy.

Source: OECD(2008), Revenue Statistics database, March 2008, and OECD Consumption Tax Trends.

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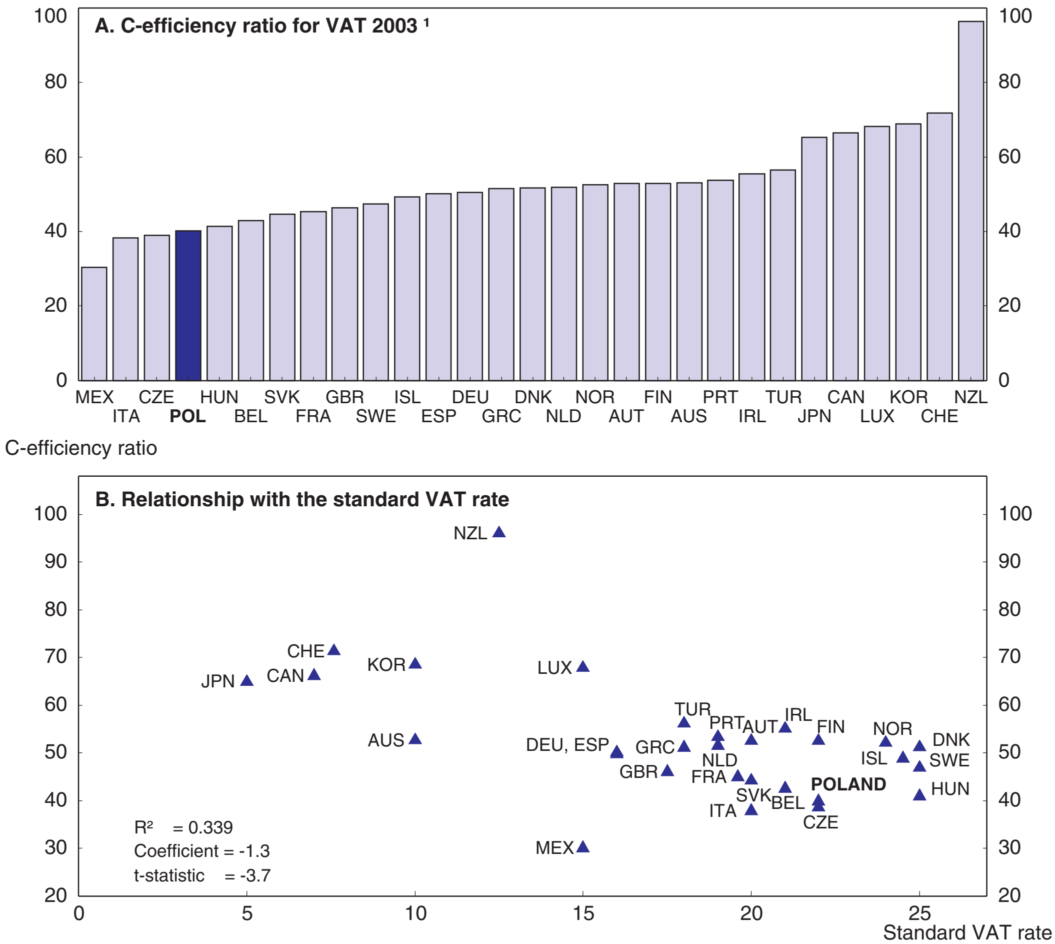
sought. Obviously, all this would be made easier with a simplification of the tax code, in particular with a view to reducing the need for seeking legal certainty.

In addition to a general VAT, Poland levies excise duties on the consumption of specific goods, including tobacco products, alcoholic beverages (including wine and beer), liquid gas and mineral oil products (liquid gas and oil used as motor fuel as well as heating oil), electricity and passenger cars. Most OECD countries impose excise duties on many of these goods, which are already subject to VAT, for Pigouvian reasons ranging from prevention of health hazards to encouraging energy conservation and preserving the environment. The fact that excise duties are typically charged on the basis of a volume, weight or even density in a particular component, makes cross-country comparisons somewhat delicate, especially as they can be influenced by market exchange-rate variations. These caveats notwithstanding, existing comparisons show that excise duties in Poland expressed in US dollars are generally below OECD average (OECD, 2006c). Furthermore, differentials in excise rates *vis-à-vis* neighbouring countries are generally not

Figure 3.13. **Revenue performance of VAT in OECD countries**



1. Measured as the ratio of VAT revenues to national consumption, which is then divided by the standard rate and multiplied by 100.

Source: OECD (2006), *Consumption Tax Trends*.

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large enough to generate important cross-border trade flows (legitimate or illicit), except perhaps in the case of beer where the Polish duty is relatively high. Nevertheless, the amount of revenues from excise duties as a share of GDP is the same in Poland as in the OECD and EU15 average (around 5%, see Table 3.1). With the exception of tobacco, it is therefore not clear that higher revenues can be tapped from these sources. Policy should focus on simplifying procedures and eliminating the tax discrepancy between diesel used in vehicle engines and that used as heating oil.

From an economic efficiency point of view, consumption taxes are considered as being preferable to the taxation of production factors. This is mainly because relative to the taxation of capital and labour income, they are more favourable to saving and labour supply, and hence on investment, work effort and growth.[27] And this view has received some empirical support.[28] Based on these arguments, a number of countries are considering raising VAT rates to finance cuts in social security contributions, following the recent German example. In Poland, however, revenues from VAT and excise duties already

Box 3.3. **Simplification of VAT procedures**

From the perspective of Polish business representatives, the cost of complying with tax regulation and collection procedures is currently a far bigger drag on business development and entrepreneurship than the overall amount of tax collected. Compliance costs are particularly burdensome in the case of VAT. Firms' complaints are centred on three aspects: administrative burden, tax non-neutrality and unexploited possibilities offered by EU legislation for simplified procedures.

i) Transaction costs: Compliance with tax obligations necessarily involves administrative costs to businesses as a minimum of documentation and accounting requirements need to be fulfilled. However, in the case of Poland, the administrative burden is unduly increased by the complex application of specific provisions. For instance, in a given year, firms are allowed to claim VAT refunds only on the purchase of inputs on the basis of receipts produced (or received) during that same year. In the case of a delay in receiving receipts, firms can still claim the refund but must do so on the basis of a corrective form, which is burdensome. A simple adjustment would be to extend the period over which receipts are valid for refund claims.

ii) Tax neutrality: Even though in principle VAT payments should be proportional to the value-added at each level of production, significant lags between taxes paid and refunds lead to an additional "tax" being borne by businesses. A number of amendments would help to reduce this extra burden. For instance, firms should be allowed to apply the *postponed accounting* principle according to which the VAT payable in the case of imports from another EU country (intra-community acquisition) can be fully deducted in the same period thus cancelling the liability. In addition, efforts should be made to reduce the maximum delay for refunds, which currently can take up to 180 days.

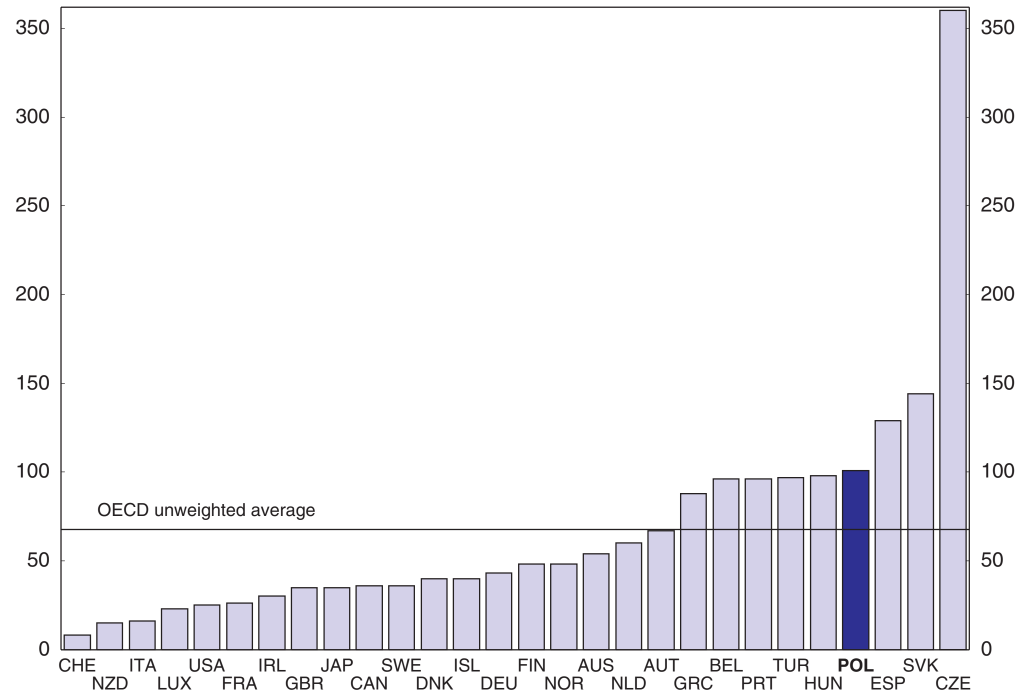
iii) Scope for simplification under EU legislation: One way to simplify procedures would be for the Polish authorities to allow domestic firms to follow practices commonly used in other member states (and therefore that conform to EU legislation). For instance, the principle of *postponed accounting* has been adopted by several EU member states.

More generally, firms have also complained about the difficulty of obtaining legal certainty with respect to unclear provisions of the tax code. This concerns not only VAT legislation but corporate income tax as well. The government has taken action in this area in 2007 by centralising the issuing of tax rulings (four Bureaus of National Tax Information were established for that purpose in different parts of the country) so as to avoid the occurrence of conflicting rulings issued by different tax authorities, and they have also made rulings binding. Nevertheless, the quest for legal certainty imposes an extra burden, which could be diminished with a simplification of tax code.

account for a relatively high share of overall tax revenues. In addition, with the VAT rate being one of the highest, the pros and cons of a new hike would have to be weighed very carefully, especially considering the inconvenience of consumption taxes from a re-distribution or equity perspective. It could be argued that considering the relatively low efficiency of the standard VAT rate as shown above, more revenues could be collected *via* a broadening of the base or a strengthening of tax collection efforts. Indeed, the case for applying a reduced VAT rate is not entirely persuasive for all the products or services concerned; indeed, in some cases severe distortions result.[29] However, a move towards a more uniform VAT rate might be feasible only in the context of a reduction in the standard rate so that the change would be largely revenue-neutral. Likewise, insofar as tax evasion

Figure 3.14. **Time required to comply with VAT obligations**

Hours per year, 2006



Source: World Bank (2008), *Paying Taxes: The Global Picture*.

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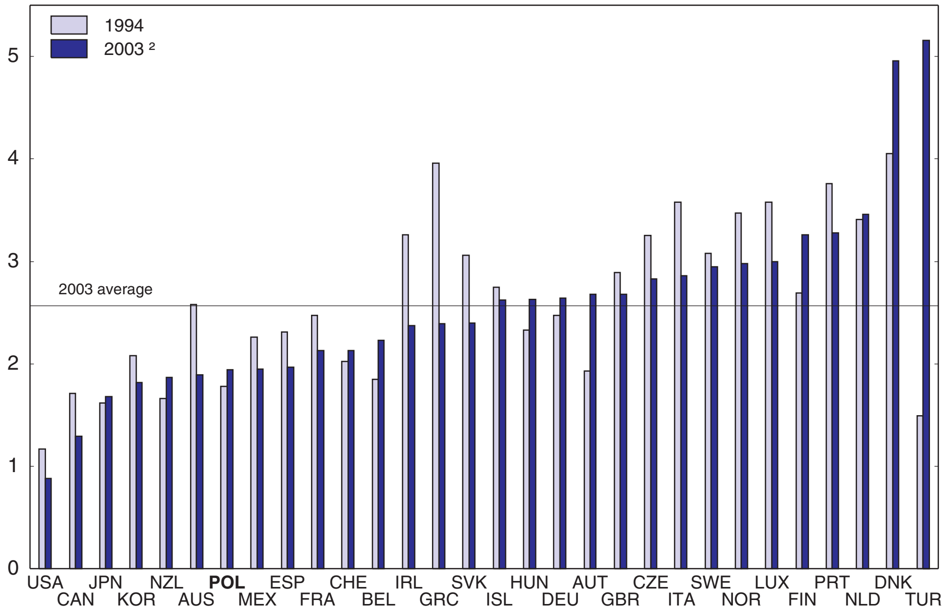
is significant – precise estimates are difficult to obtain – a strengthening of tax collection might be facilitated if the VAT rate were lowered somewhat. All in all, the scope for using consumption taxes to fund reductions in labour taxation appears limited. Better candidates in this regard would be environmental and property taxes, which are reviewed next.

Environmental taxation

In Poland, as in the majority of OECD countries, the bulk of revenues collected from what is considered as environmental tax comes from excises on the purchase or use of motor vehicles, fuels and electricity. Together, these amount to nearly 2% of GDP, somewhat below the OECD average of 2.5%. An alternative measure, calculated as the ratio of energy tax revenues on final energy consumption also shows Poland lagging most other European countries with respect to the burden of environmental taxation (Figure 3.15). Furthermore, while it has risen in the majority of EU countries since the mid-1990s, it has remained constant in Poland. These comparisons suggest that there is some scope in Poland for making greater use of taxation as a mean to reduce greenhouse gas emissions and air pollution, where little progress has been achieved in recent years. It should be said that, thanks to the re-structuring of the economy away from heavy industries, Poland is easily on track to meet its EU Kyoto burden-sharing commitments. However, it is still one of the OECD countries that release most greenhouse gases per unit of output, due largely to the prevalence of carbon-rich coal in power generation, and therefore it has more

Figure 3.15. **Revenues from environmentally-related taxes**[1]

Per cent of GDP



1. Data refer to revenues from environmentally related taxes for pollution control.
2. 2002 for Australia and the Slovak Republic.

Source: OECD (2006), *Consumption Tax Trends*, 2006 Edition, OECD, Paris.

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difficulties in meeting EU emissions criteria. Indeed, coal combustion represents by far the largest source of CO_2 and SO_2 emissions (Kiuila and Sleszynski, 2003).

In this context, the authorities should consider introducing elements of a carbon tax, whereby the combustion of fossil fuels would be taxed according to their carbon content. A number of OECD countries have introduced some instrument that comes close to a carbon tax, including Denmark, the Netherlands, Norway, Sweden and the United Kingdom.[30] In all cases, the carbon tax was introduced as part of a revenue-neutral reform that included offsetting cuts in social security contributions or personal income tax. The shift in taxation was particularly large in Sweden and Denmark (well over 2% of GDP).[31] In the case of Poland, the main impact would be on the cost of coal combustion, implying a rise in electricity prices, which would then feed into the production cost of a whole range of (energy-intensive) industries, as well as into households' real disposable incomes. The negative impact on the latter and aggregate employment could be mitigated (or even more than offset) by simultaneous cuts in social security contributions. Obviously, insofar as the primary objective of a carbon tax would be environmental, the authorities need to examine the opportunity to use such an instrument against the main alternative based on an emission-trading system in the context of broader discussions on climate change at the EU level. In any case, the two instruments need not necessarily be mutually exclusive and in the case of Poland, an advantage of the tax would be to provide revenues that could be used to fund further reductions in the tax wedge, even though auctioning permits can also yield revenues.

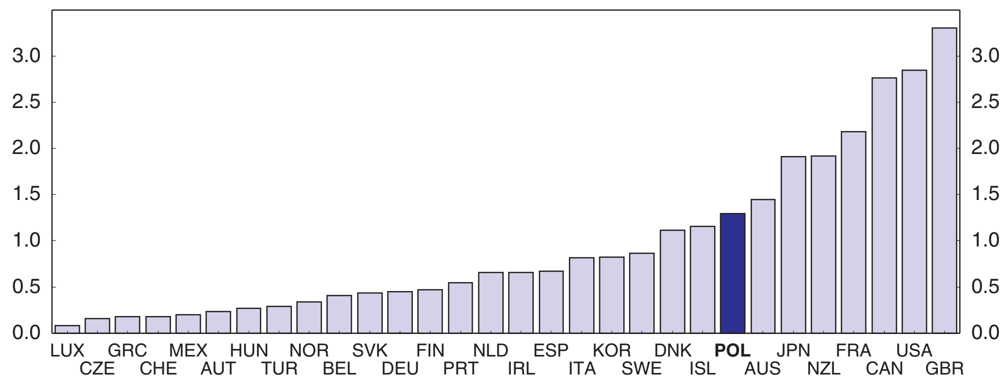
Taxes on immovable property

There are essentially three property taxes in Poland, which are all levied at the local level: on agriculture, forestry and real estate. Although the first two may represent an important source of revenues for some small rural municipalities, only real estate generates a significant amount of revenues at the aggregate level.[32] In the latter case, the tax applies to land (except those classified as forest or for agricultural use), buildings and building structures (related to an economic activity). The rates are set by local authorities, though with ceilings imposed by the central government. The ceilings as well as the actual rates are differentiated by categories and are several orders of magnitude higher on commercial buildings than on residential properties.[33] The system thus discriminates in favour of residential over business and industrial use. The amount of tax paid is based on the area of land and useable space. Hence, there is no value-based or cadastral tax.

As mentioned above, revenues collected from property taxes account for a relatively small share of total tax revenues in Poland. It is somewhat higher than in the majority of OECD countries (though below the average), but the fact is that in most countries property taxes represent an under-exploited source of revenues, except in Canada, the United Kingdom and the United States (Figure 3.16). Indeed, taxes on immovable property are largely considered as having the least distortive effect on the allocation of resources and therefore on economic efficiency. This is mainly due to the fixed nature of the base, which limits the scope for tax avoidance and evasion. In addition, because in the case of land it represents a tax on an economic rent, the impact on efficiency is much more limited than in the case of a tax on the normal return to labour or capital. In the case of Poland, as in many other OECD countries, another motivation for reviewing property taxation is the widespread bias in favour of owner-occupied housing.

Figure 3.16. **Immovable property taxes**

Per cent of GDP, 2006[1]



1. 2005 for Australia, Belgium, Greece, Iceland, Mexico and Poland. 2004 for Portugal.

Source: OECD (2008), *Revenue Statistics database*, January 2008.

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There are generally two main sources of this non-neutrality: *i*) there is no tax on the overall return to owner-occupied housing, *i.e.* neither imputed rent nor capital gains on principal residences are usually taxed; and *ii*) in many countries, interest payments on mortgage loans and, in some cases, renovation costs are deductible from income tax. The favourable tax treatment is often defended as a mean to facilitate home ownership, which in many countries is perceived by governments as a desirable objective. However, a strong bias in favour of home ownership may limit the development of a rental market and reduce labour mobility.[34] Hence, moving towards neutrality *vis-à-vis* rental housing would involve either the introduction of a tax on imputed rent for owner-occupied housing along with taxation of capital gains, or the elimination of all related allowances from PIT. Given that rent imputation is difficult to implement in practice, the second option might be best, at least as a way to ensure some consistency. Poland has already made an important step in that direction with the phasing-out of the deductibility of mortgage-interest payments. As mentioned above the measure applies to new loans contracted since early 2007 and will thus be gradually phased-out until 2027.

As regards rental housing ownership, the deductibility of mortgage-interest payments and renovation costs can be justified insofar as the return on the housing investment is in this case fully taxable. However, the return is only partly taxed, given that rents are subject to PIT but capital gains are currently exempted, provided the property is held for at least 12 months.[35] The result is a fiscal bias in favour of investment in real estate as opposed to financial assets. In order to remove the bias, realised capital gains on rented properties should be made taxable under PIT similarly to capital gains realised on the holding of financial assets. More generally, the adjustments to the structure of property tax should be made in the context of a broader reform centred on the introduction of a land-value or cadastral tax. Aside from the advantages in terms of economic efficiency arising from taxing rents trapped in land value, a cadastral tax would be beneficial from an equity point of view in widening the tax differential between low-value and high-value properties. Likewise, basing taxation on property values would make explicit the huge differentials in effective real estate tax rates between business and residential uses, which would then facilitate a move to a more balanced structure.[36]

The introduction of a cadastral tax has been on the agenda for many years. Most of the technical barriers related to such a tax – in particular the establishment of a cadastre – have been lifted, although putting in place a system for valuation of immovable property can be a challenging task. The main barrier is political. In order to ease its introduction, the tax should be initially set at a sufficiently low rate so as to be revenue-neutral. It could then be gradually raised so as to provide more revenues for municipalities, thereby allowing the central government to reduce transfers to local authorities. Furthermore, in order to avoid penalising house-rich/income-poor individuals or households, it should be accompanied by a mechanism that would allow people confronted with high tax payments relative to their income to be able to honour those payments without having to leave their property.[37]

Box 3.4. **Main recommendations on tax policies**

General

- Do not consider a further reduction in the overall tax burden until public finances have been put on a clearly sustainable path.
- Shift the overall tax mix away from labour taxation and rely more heavily on less distorting tax bases, in particular immovable property tax, but also environmental tax.

Box 3.4. **Main recommendations on tax policies** *(cont.)*

Labour taxation

- Further reduce the tax wedge on labour income by lowering social security contributions. The reductions should be both significant and targeted at the low end of the distribution.
- Consider introducing an earned-income tax credit to encourage labour market participation of marginal groups.
- Take the opportunity provided by the planned reductions in PIT rates to eliminate a number of tax allowances and to broaden the tax base. For instance, eliminate the deductions for Internet subscriptions and turn the recently introduced child relief into a non-wastable tax credit while lowering its value.
- Eliminate the special tax treatment of agriculture. Income from farming should be treated in the same way as that from other types of activities.

Capital taxation

- Consider further reductions in the corporate tax rate only in the context of a broadening of the base to make the change revenue-neutral *ex ante*.
- Reduce the tax bias in favour of the self-employed by basing their social security contributions on actual earnings rather than on a notional income set at a low level, while developing assessment tools that allow for such earnings to be better estimated.

VAT, excise and environmental taxes

- Simplify VAT procedures for businesses by letting domestic firms adopt practices commonly used in other EU countries. Concerns about potential VAT evasion can be better addressed through stronger controls, including random on-site inspections by fiscal authorities.
- Eliminate the tax discrepancy between diesel used as motor vehicle fuel and that used as heating oil.
- Consider introducing a carbon tax to achieve climate-change objectives at a minimum cost.

Property tax

- Replace the current residential property tax with an *ad valorem* system, and gradually raise rates so as to increase revenues collected and reduce central-government transfers to municipalities.
- Remove the personal income tax bias in favour of investment in real estate (as opposed to financial assets), by taxing realised capital gains on rented properties.

Notes

1. This lies behind the preference of many experts for consumption rather than income as a tax base: it would provide stronger incentives to save and higher incomes in the long run.
2. The profits tax introduced in 1989 was similar – even if not identical – to a corporate income tax (Schratzenstaller, 2005).
3. Before 1999, employers paid social security contributions equivalent to 48% of gross wage earnings. After the reform of the pension system and the health insurance scheme, contributions were split between employees (18.7%) and employers (20.4%). These rates remained basically unchanged until 2007.

4. At the time of the introduction of the VAT in 1993, the standard rate was 22%, and there was a reduced rate of 7%. A second reduced rate of 3% was introduced in 2000 for agriculture products. Under the EU sixth Council Directive, the basic rate must be at least 15% and, aside from the few categories eligible for complete exemptions, only two reduced rates of at least 5% are allowed on specific goods and services. The 3% rate was allowed only over a (lengthy) transition period.
5. It should be noted that the tax allowance being phased-out was only applicable on purchases of newly constructed properties (*i.e.* bought directly from property developers).
6. By comparison, in a pure *dual incometax* system, all net income (capital, wages and pension net of deductions) are taxed at a proportional rate but gross labour and pension incomes are also taxed at separate, progressive rates (OECD, 2006a).
7. This minimum threshold rises to about 30% of average earnings once allowances for social security contributions are taken into account.
8. Note that the degree of progressivity associated with the top bracket is less than the 10 percentage point difference in rates (40% per cent as opposed to 30%). This is because the income threshold for the top bracket also corresponds to the income limit for payments of social security contributions. Hence, progressivity is in this case closer to 2 percentage points.
9. Throughout this chapter, "relief" and "allowance" are used as generic terms that can refer to either a deduction from taxable income or from the amount of taxes (tax credit).
10. With a non-wastable tax credit, individuals whose tax liability falls to zero before full exhaustion of the credit can still get the full value via a reimbursement from the government.
11. If the tax credit were to be made fully refundable (non-wastable), it would generate a much larger reduction in the tax wedge for low-wage earners. For instance, the reduction for single-earner household (with two children) earning 75% of the average wage would be around 8 percentage points as compared to 3 percentage points under the current arrangement.
12. These are Belgium, Canada, France, the Netherlands, New Zealand and Sweden. Denmark also introduced an EITC in 2004, but it is not income-tested, and Finland has a similar scheme based on a deduction rather than a credit.
13. This is generally the case for lone parents whose return to the labour market often implies the loss of benefits as well as the need to pay for child care services.
14. Obviously, a narrow targeting in terms of income level implies a fairly rapid withdrawal of the measure as the wage level rises, reducing thereby incentives to work more hours or to invest in skill up-grading.
15. See Chapter 3 of OECD (2005b). The impact is strongest in the case of the unemployed partner of a person who already works, where the probability rises from 51% to 58%. The financial disincentive to return to work is measured in the form of a marginal effective tax rate that takes into account the resulting increase in income tax payments and social security contributions as well as the loss of social benefits resulting from the change in status.
16. Due to the loose eligibility conditions many participants who are not strictly farmers do benefit from the programme.
17. Capital depreciation is allowed under the straight-line methodology, and the rates of depreciation are 2.5% and 20% per year, respectively, for buildings and machinery.
18. The methodology, initially developed by Devereux and Griffith (2003) has been extended to all EU countries (except Bulgaria and Romania) by the European Commission.
19. For this reason, the implicit tax rate is considered a more appropriate way of measuring the effective tax rate, despite its own shortcomings.
20. The term self-employed generally refers to individuals owning and operating their own businesses and is commonly used to encompass both employers with employees (in small unincorporated businesses) and own-account workers. In Poland, self-employment accounts for around 20% of total employment, and nearly 80% of the persons considered to be self-employed consist of own-account workers.
21. Total self-employment has fallen somewhat since the early 2000s, but mainly due to the gradual shrinking of the over-sized agricultural sector.

22. The effectiveness is reinforced by the fact that reclassifications of self-employment contracts may now lead to heavy potential costs to the employer, since, in addition to liability to unpaid tax and social security contributions plus interest, a fine can also imposed.
23. A 3% rate is also applied on most agricultural products. In December 2007, Poland was granted an extension of the possibility to maintain the 3% rate until end-2010, after which it should be abolished in compliance with EU rules stipulating that reduced rates (other than 0%) must be at least 5%.
24. Note that in conformity with EU rules a 0% rate is applicable to exports and intra-Community supply of goods as well as intangibles and international transport services. In contrast to the case of exemptions, the 0% rate allows for the VAT paid on inputs to be recovered.
25. Hungary has cut its VAT rate in 2007 and it is now lower than in Poland.
26. In the case of Poland, another factor possibly contributing to the low efficiency is the structure of household spending: Polish households spend a proportionally higher share of their income on food, which is taxed at a reduced rate.
27. In the case of labour supply, the adverse effect from taxation comes primarily from the high marginal tax rates associated with progressivity, which discourages work intensity, investment in human capital and entrepreneurship.
28. In an international context, these effects are potentially reinforced by the fact that consumption taxes are levied on imports, but not exports (whereas the reverse is true for social security contributions), implying a favourable effect on competitiveness. However, in the longer run, this advantage will be offset by real exchange-rate adjustments. Nevertheless, real incomes would be higher.
29. A case in point is the dual-rate structure applied to the sale of new housing, with a reduced rate being applied to flats or houses no bigger than a certain floor area. Aside from technical complexities as to what the measured area is supposed to cover exactly, the dual rate is shrinking the market for larger premises. Fortunately, the measure will be abandoned in 2009 in accordance with EU rules, and all new houses will be taxed at the standard rate.
30. Strictly speaking, no OECD country has a pure carbon tax in that they all have exemptions and non-uniformities.
31. However, no *ex post* evaluation of the impact of the reform in these two countries is available.
32. Revenues from the agricultural and forest taxes represent only 0.3% and 0.04% of total tax revenues, respectively, as compared with 3.45% for real estate. However, 3.2 million taxpayers are subject to agricultural or forest tax, while 5.5 million pay the real estate tax.
33. For example, the ceiling rates were PLN 18.43 and PLN 0.56 per square meter in 2006 for commercial and residential buildings in comparable land areas.
34. The adverse effect of a high incidence of homeownership on labour mobility can be partly mitigated if transactions costs on buying and selling houses are kept very low. In this regard, the stamp duty on property transactions has been reduced from 5% to 2.5% in recent years.
35. Until 2007, the property had to be held for at least five years for the capital gains tax exemption to apply.
36. For instance, stated in *ad valorem* equivalent, the effective real estate tax rates for business properties are 7.8% and 1.4% on buildings and land, respectively. For residential properties, the corresponding figures are 0.062% and 0.046%.
37. One possibility in this regard would be a reverse-mortgage system, but a simpler mechanism such as deferring the payment of tax liabilities until the sale of the property could also be envisaged.

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Chapter 4

Bridging the housing gap

Despite a high level of homeownership, the housing market in Poland is suffering from an important shortage. The difference between the number of households and available dwellings, the number of dwellings per thousand inhabitants, and the availability of basic amenities (especially in rural areas) all indicate that significant improvements are needed to catch up to the most affluent OECD and EU countries. The formal rental segment of the market is also underdeveloped, contributing to low labour mobility and persistent disparities in regional unemployment. Given the social, economic and political dimensions of the problem, various housing policies implemented since the beginning of the transition process have aimed to fill the housing gap, though they have been either narrow in scope or have led to unclear results. However, the housing market has been buoyant in recent years, spurred by rising levels of GDP per capita, lower interest rates and the emergence of a competitive mortgage market. Yet a brisk price appreciation has also occurred at the same time, while households' exposure to interest- and exchange-rate risks has significantly increased and banks' funding capabilities have shrunk. Although the market has not been directly affected by the recent global financial turmoil, recent information shows that a turn-around is underway, with prices declining in several major cities as sentiment has plunged. This raises concerns about the capacity of the market to achieve a smooth adjustment in the face of a possible downturn.

The challenge linked to the housing market is to increase the supply of available accommodation and improve living conditions for Polish residents. Market reforms got underway in 1990 from a position of significant excess demand in the housing market, both due to an insufficient supply under the centrally planned economy (resulting in protracted queuing) and a low quality of the existing stock. However, the problem of the housing deficit was not solved during the transition process of the 1990s. In fact, the increase in the number of permanently inhabited dwellings was lower between 1989 and 2002 (8.5%) than in the period from 1979 to 1988 (14.9%), even though the quality of delivered units was higher in the former period due to improved standards and availability of building materials. Several policy responses have aimed at addressing these issues, based on preferential measures for homeownership, rental housing, urban development and social policies. Although the national budget has not been called upon to raise government spending, the general feature of the various housing measures is that they have tended to be unfocused due to poor targeting of beneficiaries. Indeed, they might have led to some unintended adverse effects in some cases.

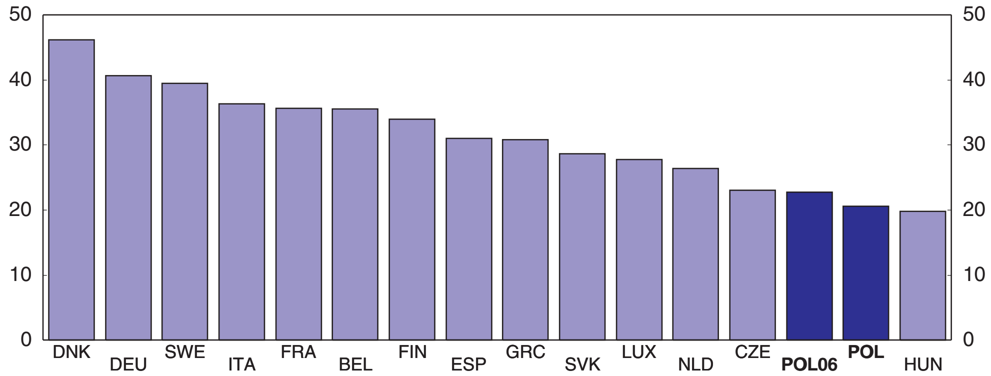
Nonetheless, the housing market has experienced robust growth in recent years, supported by strong income gains linked to booming wages, remittances of Poles working abroad, increased banks' appetite for mortgage loans and historically low interest rates. Yet along with buoyant housing demand a strong real estate price appreciation has also occurred, partly reflecting obstacles preventing a larger response from the supply side. The regime change in the mortgage market in the 2000s implies the need to focus on the financial aspects of the housing market too. It calls for a close monitoring of the quality and soundness of banks' and households' balance sheets, given not only the jump in households' indebtedness but also its underlying type of currency and interest-rate structure. It also puts banks' and developers' funding practices in the spotlight. These aspects are all the more relevant as there are indications that a possible turning point might have been reached in the market around end-2007.

Assessing the magnitude of the housing gap

According to the latest available (2002) census data, there were 12.4 million dwellings with two-thirds of them located in cities. At the end of 2006, the overall stock is estimated to have risen to nearly 12.9 million. In 2002, the housing shortage, defined as the difference between the number of households and the number of available dwellings (both occupied and non occupied), amounted to nearly a million units. In fact, a comparison with the previous 1988 census data reveals that the housing deficit increased by over 300 thousand dwellings. This is partly linked to the rising number of households (a consequence of the baby boom in the second half of the 1970s), the migration of population from rural areas to large urban centres and also higher divorce rates. Indicators of density of the dwelling stock and average living area also tend to confirm the insufficiency of the housing stock (Figures 1.13 and 4.1). Although a more detailed analysis reveals that these indicators are positively related to income levels to some extent, a gap remains nevertheless with the

Figure 4.1. **Average living area**[1]

m^2 per person in 2001



1. Average area in large cities.

Source: Eurostat, New chronos database, and GUS.

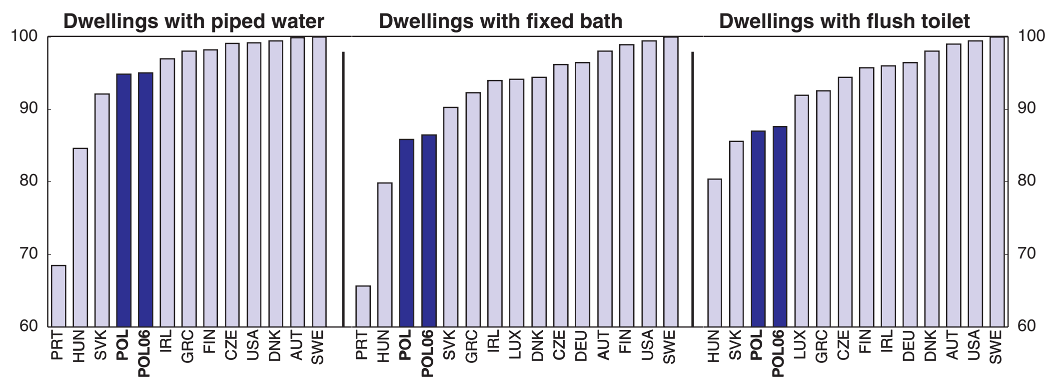
StatLink http://dx.doi.org/10.1787/345844120352

number of dwellings per thousand inhabitants that one could expect given the GDP per capita reached in Poland. By international standards, the very low level of residential investment as a percentage of GDP has not contributed to reduce this shortage so far (see below Figure 4.5).

In terms of basic amenities, the quality of the housing stock also lags behind international standards (Figure 4.2). In 2006, nearly 95% of dwellings were equipped with piped water and between 86-87% with lavatories and a fixed bath. Even if these ratios appear to be high at first sight, a gap remained with most other more developed OECD countries. These ratios are mostly driven by a poor equipment level of the housing stock in rural areas. However, the worst technical and sanitary installations are in the rental segment of the market: in 2002, almost only 80% of renting households located in cities had access to these three basic amenities, while this ratio was as low as 69% in rural areas. More generally, the 2002 census data revealed that for the country as a whole only one

Figure 4.2. **Indicators of housing quality**

2002[1]



1. 1997 for Hungary, 1993 for Denmark and Germany when available.

Source: Égert, B. and D. Mihaljek (2007), 'Determinants of house prices in Central and Eastern Europe', BIS Working Paper 236, and GUS data for Poland.

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third of inhabitants were living in "very good" and "good" conditions (dwellings with no more than one person per room and equipped with piped water, flush toilet, bathroom and/or central heating as well as being connected to the gas-distribution system), while 23.3% were exposed to "bad" home standards (between 2 and 3 inhabitants per room and/or with an installed piped water system only) and near 12% to "very bad" conditions (three or more persons per room and/or without piped water).

Improving policies for closing the housing gap

Various policies have been implemented in order to improve the situation in the housing market and thus contribute to closing the housing gap, not only in the 1990s and at the beginning of the current decade (OECD, 2004 and 2005), but also more recently. Yet some of them have been narrowed in scope, and, due to tight budget constraints, they have involved rather little expenditure as a share of GDP: annual averages of 1.4% in 1991-95, 0.6% in 1996-2000 and 0.2% in 2001-07. A consistent strategy for dealing with the problem (rental, promotion of first-time homeownership, etc.) has yet to be developed.

Housing policies to promote homeownership and upgrade the housing stock

The transformation of the structure of housing tenures has proceeded rapidly throughout the transition process, as mass privatisation has been an important hallmark of housing policies for homeownership. At the end of the 1980s, around 44% of the existing stock of dwellings was fully owned by private individuals. Since then, a growing share of co-operative, municipal- and employer-provided houses have been privatised and sold to tenants, often with a discount of 80% or more from the estimated market price. Privately owned dwellings (including co-operative privately owned stock) amounted to some 78% of all accommodations in 2006 (Table 4.1). This share has probably increased even further, as in 2007 the former government offered preferential terms for tenants in co-operatives to become owners.

Table 4.1. **Dwellings by type of ownership, 2006**

	Total	Privately-owned outright by natural persons	Housing co-operatives		Municipal	Companies (inc. State Treasury)	TBS[1]	Other entities
			Privately-owned	Tenant				
Number (thousands)	12 877	7 582	2 450	988	1 252	373	68	164
Share (%)	100	58.9	19.0	7.7	9.7	2.9	0.5	1.3

1. TBS – Towarzystwa budownictwa spolecznego (Social Building Associations).
Source: GUS, Central Statistical Office (2007).

Another mechanism designed for facilitating homeownership was the introduction in 2002 of income tax deductibility of mortgage interest payments. However, this measure no longer applies for new loans contracted since 2007 but will prevail for the old loan portfolio until 2027 (see Chapter 2). Yet, following the former government's 2005 electoral promise to build 3 million dwellings in the coming years, it introduced a new programme of interest-rate-buy-down in October 2006. The programme is targeted at low-income households, though it is not limited only to first-time home-owners and pertains to both new and existing housing. It applies to commercial zloty-denominated loans at variable interest rates indexed to the three-month money-market rate and, as such, promotes the use of national – instead of foreign-currency – loans. During the first eight years of the loan the government pays half of the interest cost. The subsidies are conditioned by limits on size and maximum price per square metre of the dwelling (the ceiling is the average local construction cost calculated for each voivodeship and the main urban centres). However, the programme's performance has been poor, mainly because real estate prices have largely outpaced such costs, in particular in large urban areas, squeezing out many potential beneficiaries. A subsequent decision in August 2007 to add a 30% mark-up over building costs alleviated this problem. Nevertheless, market prices have continued to exceed the new price limits (especially in major cities), and, as a consequence, the stock of extended loans barely reached 4 000 by end-2007. Although it is difficult to identify to what extent the programme has or has not led to higher house prices, it is obvious that in a market characterised by excess demand, such policies may fuel further price increases, with developers siphoning off the benefits of the measure. Therefore, even though the programme might yield positive results in some areas, it would be preferable to consider phasing it out: it is geographically inequitable in its scope (easy to implement mainly in distant suburbs or rural areas but not necessarily in urban centres) and could possibly lead to higher prices in the lower-standard segment of the market or block their downward adjustment in the declining stage of the real-estate cycle. Moreover, should it expand substantially further, the programme could also lead to significant increases in public expenditure. Instead, to facilitate home-ownership without harming labour mobility, the authorities could consider eliminating stamp duties on house purchases.

Taxation aspects, in particular those governing VAT, are also viewed as an important hallmark of policies promoting homeownership. Poland's membership in the European Union has modified the treatment of VAT with regard to housing, and one of the aspects relates to the purchase of new dwellings. A reduced 7% rate on the value of new apartments and houses was to prevail until the end of 2007, and consideration was given to removing the existing special dispensation as compared with the EU legislation by introducing the standard 22% rate as of January 2008. However, given the strong political reluctance for such a measure, the Polish authorities decided to use the possibility offered by EU legislation. In particular, EU authorities do not have responsibility for social housing policies, a prerogative belonging exclusively to each member state. Therefore, it was planned that all dwellings, up to a predetermined number of square meters, should be considered as having a social purpose, thereby making them subject to the 7% rate. There were nevertheless lengthy discussions as to the exact definition, with a clear tendency to extend the maximum surface subject to the preferential tax treatment. The lower rate was in the end set for 150 sq. m. apartments and 300 sq. m. houses. But, in December 2007, the Polish authorities were ultimately allowed by the ECOFIN Council to keep the preferential rate for three additional years, independent of any criterion about the usable floor area. In any case, should such limits be viable and fulfil genuine social housing objectives, then it would appear warranted to establish some income-related criteria for benefitting from the measure. This would also have the advantage of reducing the negative impact on VAT revenues collected.

Along with the policy to maintain the reduced rate on new dwellings, it has also been decided that a lower 7% VAT rate will be applied to construction services, repairs and conservation works related to housing, though a 22% rate will be kept for servicing land plots with basic amenities and infrastructure. Although renovation costs have not been tax deductible since 2002 (and were grandfathered only until 2004), in September 2007, the Polish authorities granted individuals an unlimited tax refund on building materials, equal to the difference between the 7% VAT rate that prevailed before Poland joined the European Union in 2004 and the 22% rate introduced thereafter.[1] More generally, the creation in 1999 of a Thermal Modernisation Fund has helped to prevent further dilapidation of the housing stock, particularly of units built in the communist era. According to this programme, the government pays a subsidy amounting to 25% of any bank loan used to improve insulation, provided that the resulting energy savings allow the reimbursement of the remaining 75%.

Rental and social housing policies

The protection of tenants is an important dimension of housing policies in Poland, since the rental market involves around 20% of all households. Tenant protection was reinforced at the beginning of the current decade, at a time when overall economic prospects were depressed. However, growth conditions have improved spectacularly since then, and, with the benefit of hindsight, many Polish experts admit that tenant protection is excessive and may yield adverse effects on economic activity (see, for instance, KNB (2007a)). One of the system's features is the Tenant Protection Act, adopted in 2001. Even though several amendments adding more flexibility have been made since then, some concerns remain. The current law continues to impose controls on rent increases that relate to both public and private rental sectors. Although the initial value of the rent can be set without any restriction for newly signed contracts, yearly increases are subject to control if the level of the rent exceeds 3% per year of the dwelling's replacement value (established by local authorities on the basis of construction and land-acquisition costs). In fact, rent increases beyond that threshold are authorised but cannot exceed 1.5% of the capital spent on the dwelling's building costs or its purchase or 10% of renovation costs spent for its upgrading, though it can also include a "fair profit" component.[2] Regardless of the economic logic behind such thresholds, one obvious difficulty is that the notion of "fair profit" has not been defined. This can lead to conflicts between the tenant and the landlord about the scale of rent increases, which can end up in court.[3] Indeed, in the case of disagreement about the level of rent hikes, the tenant is authorised to appeal, in which case the burden of proof rests with the landlord.

The courts are also opposed to enforcing eviction on non-paying tenants mainly due to an insufficient stock of social housing. Indeed, even if eviction is court approved, the bailiff needs to provide the debtor either with provisional shelter or a social premise designated by the relevant municipal authorities. Yet there is a genuine shortage of such facilities in virtually all cities in Poland, and thus many non-paying tenants are allowed to delay pending evictions from landlords' dwellings. In principle, if an alternative accommodation cannot be found, then the landlord can receive an offset payment from the local authorities, but this is conditioned by yet another judicial proceeding, and, in any case, municipalities are rather reluctant to pay (Kroner, 2008). In this respect, the promulgation of the December 2006 law on the creation of social premises, shelter dwellings, dormitories and houses for the homeless can be viewed as a first step in solving this deadlock. The objective of the programme is to deliver 100 000 social shelter dwellings and 20 000 dormitories and houses for the homeless over the years 2007-11, with the central government co-financing between 20 and 40% of the investment costs. However, the implementation of the programme has been slow so far and, according to the Ministry of Labour and Social Policy, this might be due to insufficient information provision to local authorities. Out of the 68 million zlotys earmarked in the central government budget, barely 42% were used by end-2007.

Overall, a rigid framework of tenant protection and controls on rent increases that is "fertile to conflicts" may contribute to the underdevelopment of the supply side of the rental market. Private landlords' new investments might be discouraged due to a high level of risk, thus impinging negatively on expected returns from housing investments made for rental purposes. As a result, the availability of potential supply as well as renovation and modernisation efforts for the existing housing stock may both be restricted. Imposing any barriers to the exit of tenants (as in the case of weak evictions and protracted judicial procedures) creates barriers to investor entry. The absence of a deep, efficient and transparent rental market also has the disadvantage of curbing labour mobility across regions and thus may contribute to the persistence of sizeable discrepancies in regional unemployment (see Chapter 1). It may also encourage informal letting, which in fact is widespread (see Chapter 1). In such circumstances, in order to improve the functioning of the labour market and increase the availability of the housing stock, the authorities should work towards further easing of controls on rent increases, a move which could be offset by the provision of means-tested allowances to households. Also, once the available housing stock for rental purposes is more developed, court-ordered evictions should be effectively implemented.

Inspired by the French *Habitation à Loyer Modéré* (HLM) model, another device aiming at increasing the supply of social housing for rental purposes was established in 1996. It is based on non-profit building associations (TBS, *Towarzystwa Budownictwa Spolecznego*) created by municipalities, some rental co-operatives and, occasionally, private developers. The system is subsidised through below-market interest rates, with loans granted to TBS companies from the public National Housing Fund. Thus, the number of houses constructed depends on the scale of allocated public resources. By the end of 2006, 68 000 dwellings had been built, which accounts for 0.5% of the existing housing stock (Table 4.1). However, some criticisms have been raised as to the targeting performance of the programme. According to the World Bank (2006) and Dübel *et al.* (2006), it is geared toward middle-income households, rather than the poorest, and a more recent official appraisal by policy officials confirms this concern (Ministry of Construction, 2007). This does not come as a surprise, given that controls on rent increases are subject to a threshold of 4% of the replacement value in this programme against 3% authorised elsewhere. The average effective rent hovers around 3.6% of that value (depending on the location of the dwelling), and 60% of rent payments go to capital repayment of the construction cost. Another element confirming that the programme is not well targeted on the poorest is that significant upfront payments are required on behalf of future tenants and these may cover up to 30% of building costs (11% on average in 2004-05), even though renters cannot benefit from ownership rights. Finally, payment arrears are rather lower than in the municipal or co-operative sectors, which confirms that the financial positions of tenants in TBS dwellings are relatively better than in other types of social housing. In such circumstances, the orientation of the programme should be appropriately redefined. On the one hand, it would be legitimate if existing tenants were granted a buy-back option of ownership rights, given the scale of their involvement in funding building costs. On the other hand, should the programme stay close to its social vocation, this would need to be reflected in the level of collected rents and therefore imply a higher contribution of municipalities in funding construction costs. Finally, there have been proposals to extend the programme through public-private partnership arrangements, with some financial involvement of the private sector and the municipalities in terms of providing serviced plots. Although this initiative is still at a preliminary stage, the overall concept appears appealing and thus deserves further investigation, as it could deliver results efficiently, provided that the relevant incentives are clearly defined.

Urban development policies

Another important obstacle preventing housing supply from emerging is linked to shortages of building land and a related lack of zoning plans. In 2003, the Parliament abrogated Poland's local development plans released before January 1995 (and not further modified after that date), but the design of new layouts for urban land use has been a lengthy process as it was not made compulsory. Insufficient financial means of local municipalities underlies the problem, but poor incentives are also an important weakness (at present around 20% of Poland's area is covered by such spatial plans). When development plans are absent, exemptions for specific projects are nevertheless possible through an administrative procedure, but steps for obtaining building permits are time consuming and often unclearly defined, causing delays. The procedure itself includes some degree of arbitrariness, thereby opening up possibilities for corrupt behaviour. Additional difficulties arise in rural areas for changing the zoning of land from agricultural use to building purposes.

In view of these problems, the government in power until late 2007 intended to amend both the Law on Spatial Planning and the Construction Law. The idea was to increase the availability of land and encourage the design of good urban plans by streamlining existing regulations and reducing the arbitrariness of decision-making by creating a complete list of all needed approvals. While these proposals appear to be steps in the right direction, the issue of co-ordination with transport-infrastructure investments (see Chapter 5) has not been fully dealt with in the draft legislation, and the consistency between the two acts has been brought into question (GKUA, 2007a and 2007b). Moreover, other plans of the authorities have proved to be even more controversial, notably the possibility of developing buildings of up to 5 000 m^2 in area and 25 m in height without any formal zoning plans. However, such proposals have not been under consideration of the current government. All in all, in order to relax constraints weighing heavily on the provision of land for building purposes, it appears urgent to make the establishment of municipal zoning plans compulsory. This would also have the benefit of putting an end to the possibility of local corruption. Meanwhile, the new government's approach consists in promoting the development of general local urban standards applicable to the whole territory of each commune (*e.g.* built surface and green areas per person) as well as local urban regulation for visual nuisances (*e.g.* restrictions on the establishment of billboards).

As to the needed resources for the development of related urban infrastructure, the authorities could consider the introduction of an explicit *ad valorem* property tax (see Chapter 2). In this respect, it should be underlined that municipalities are already allowed to collect a "planning tax", which is indexed on changes in the value of the land resulting from the introduction or modification of a local spatial development plan, but it cannot exceed 30% of the price appreciation.[4] For instance, such an increase is likely to occur when the land is turned from agriculture to residential purposes. However, the obvious difficulty is that taxpayers are not liable to the "planning tax" immediately as it is paid only if the property is transferred (understood as a paid transfer – *i.e.* excluding donation, life-annuity, exchange and heritage) during the five years following the introduction of the zoning plan. Thus, waiting longer than the five-year threshold allows the tax to be avoided. The result is that very little revenue is actually collected.

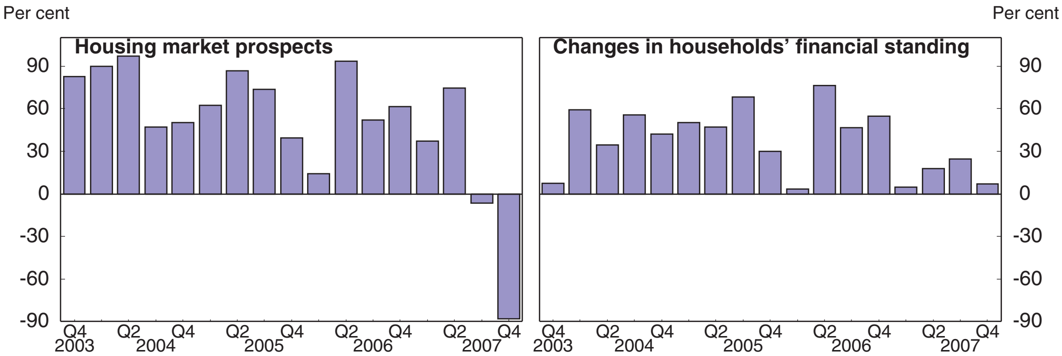
An additional issue that needs to be tackled is that property rights may still be unclear, uncertain or unenforced, mainly as a legacy of the state's expropriation policy of the 1940s (RICS, 2007). As a result, claims for compensation or restitution are still being made, but the legal process is slow, which restrains repairs and investment in the contested dwellings. Also, with property prices rising sharply (see below), restitution claims may become even more numerous. While dealing with these issues is time-consuming and often delicate, sorting them out should also help to improve the conditions for boosting housing supply. Finally, the process of legally registering housing and mortgage transactions is sometimes particularly protracted, lasting for many months. The introduction of an electronic system is expected to accelerate matters, but it is planned to be fully operational only in 2009.

The pick-up in the housing market

The expansion of housing demand...

A significant housing-market pick-up started in 2002, confirmed by business tendency and capacity utilisation indicators for the construction industry. A variety of factors explain the buoyancy of housing demand in recent years. Several indicators of the housing gap have a key role in the explanation (see above). Other structural factors are linked to enhanced price stability and growing levels of GDP per capita, along with a favourable trend in households' earnings stemming from rising wages as well as a rapid fall in unemployment (see Chapter 2). Surveys of senior loan officers by the National Bank of Poland confirm that changes in households' finances explain the briskness of demand (Figure 4.3). Yet, they also reveal that a sudden sharp reversal in market sentiment occurred in the last quarter of 2007.

Figure 4.3. **Factors influencing changes in housing loan demand**[1]



1. The difference between the percentage of responses "Contributed considerably to higher demand" plus "Contributed somewhat to higher demand" and the percentage of responses "Contributed considerably to lower demand" plus "Contributed somewhat to lower demand". A positive index means that a given factor contributed to an increase in demand, and a negative one – to a decrease in demand.

Source: National Bank of Poland (2008), Senior Loan Officer Opinion Survey.

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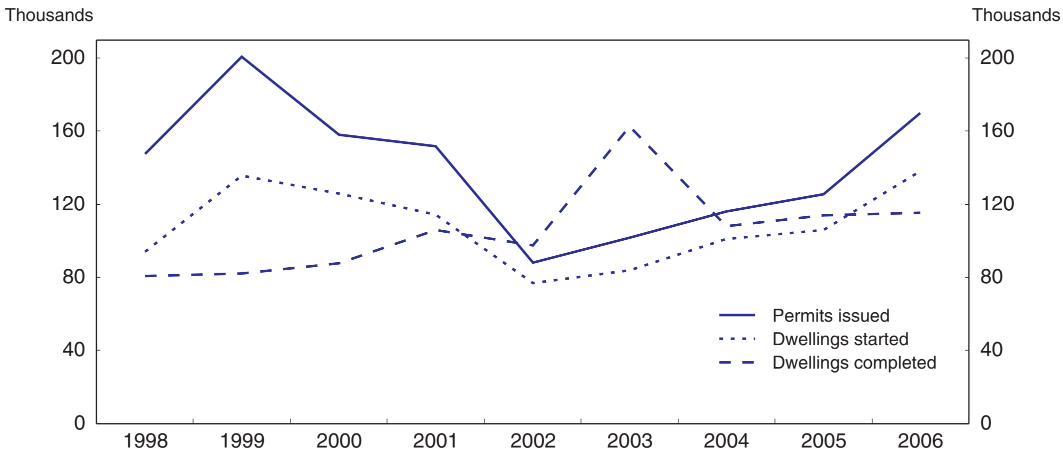
The robust effective demand on the property market also reflects cyclical and transitional influences. Medium-term elements are linked to Poland's 2004 accession to the European Union and, as a consequence, growing remittances of emigrant Poles as well as increased interest among foreign investors, notably for higher-standard flats in the most prestigious locations. At the same time, the expansion in the housing market would not have been possible if banks had not significantly relaxed their credit standards (particularly in 2004 and 2005, see Figure 4.8 below), going hand in hand with a wider use of foreign-currency loans and falling domestic interest rates (see below).

Short-term factors that lie behind buoyant demand in the market include taxation aspects as well as probably self-fulfilling expectations of further price increases. Indeed, Figure 4.3 shows that modifications in housing-market prospects were positively influencing the demand side of the loan market until mid-2007. Thus, some households might have brought forward their purchases because of an expected upward trend in property prices, while other buyers might have undertaken transactions only for speculative purposes. Finally, foreseen changes in the tax and regulatory systems have also had a short-term magnifying impact on the demand side of the market. The introduction of a 19% capital gains tax[5] on property sales as of January 2007, the simultaneous elimination of income tax deductions for mortgage interest and the uncertainty over the introduction of a 22% VAT rate on new dwellings as of January 2008 all sped up housing purchases. However, with rapid real estate inflation outpacing the growth of households' incomes, housing demand may have started to run out of steam around end-2007.

... coupled with a lengthy adjustment of housing supply...

In view of the until recently vigorous demand, the reaction of housing supply has been quite inelastic, though it has been slowly improving since 2002, as confirmed by the number of construction permits issued and housing starts (Figure 4.4). Nevertheless, even if the ratio of residential investment to GDP improved significantly in 2006, it remained at a low level compared to international standards and other countries of the region (Figure 4.5).

Figure 4.4. **Permits issued, started and completed dwellings**



Source: GUS, Statistical Office, Construction – Results of Activity in 2006.

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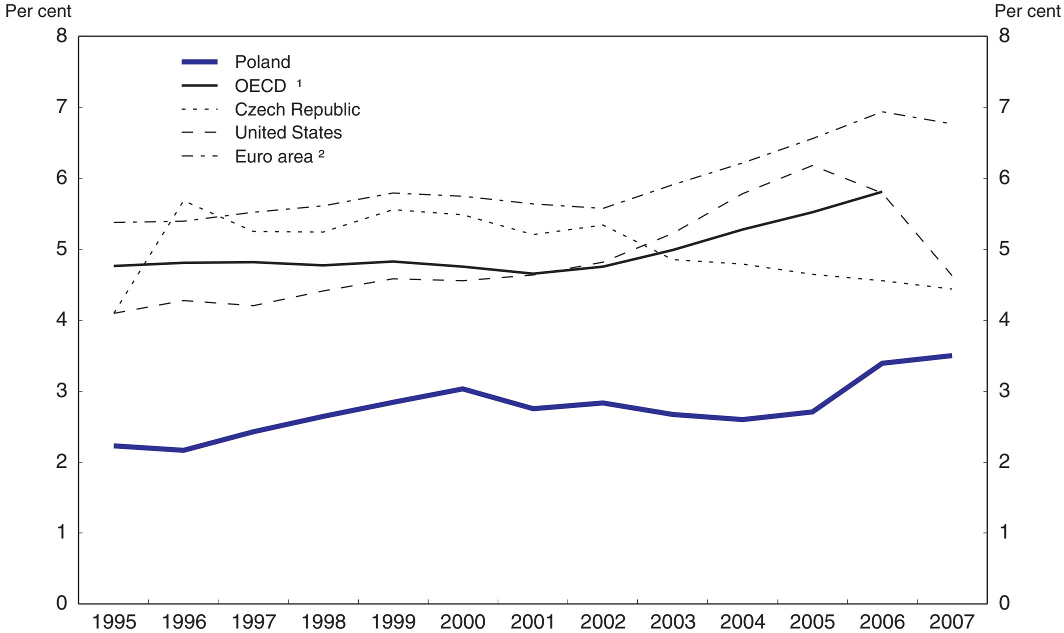
Besides various structural factors linked to the unsettled land-use planning framework, uncertain property rights and controls on rent increases (see above), other factors also help to explain the lack of an abundant housing supply and its slow

Figure 4.5. **Residential investment**

As percentage of GDP, current prices, public and private



1. Excluding Luxembourg, Hungary, Portugal and Slovak Republic.
2. Excluding Luxembourg and Portugal.

Source: OECD Economic Outlook 83 database.

StatLink http://dx.doi.org/10.1787/345870853675

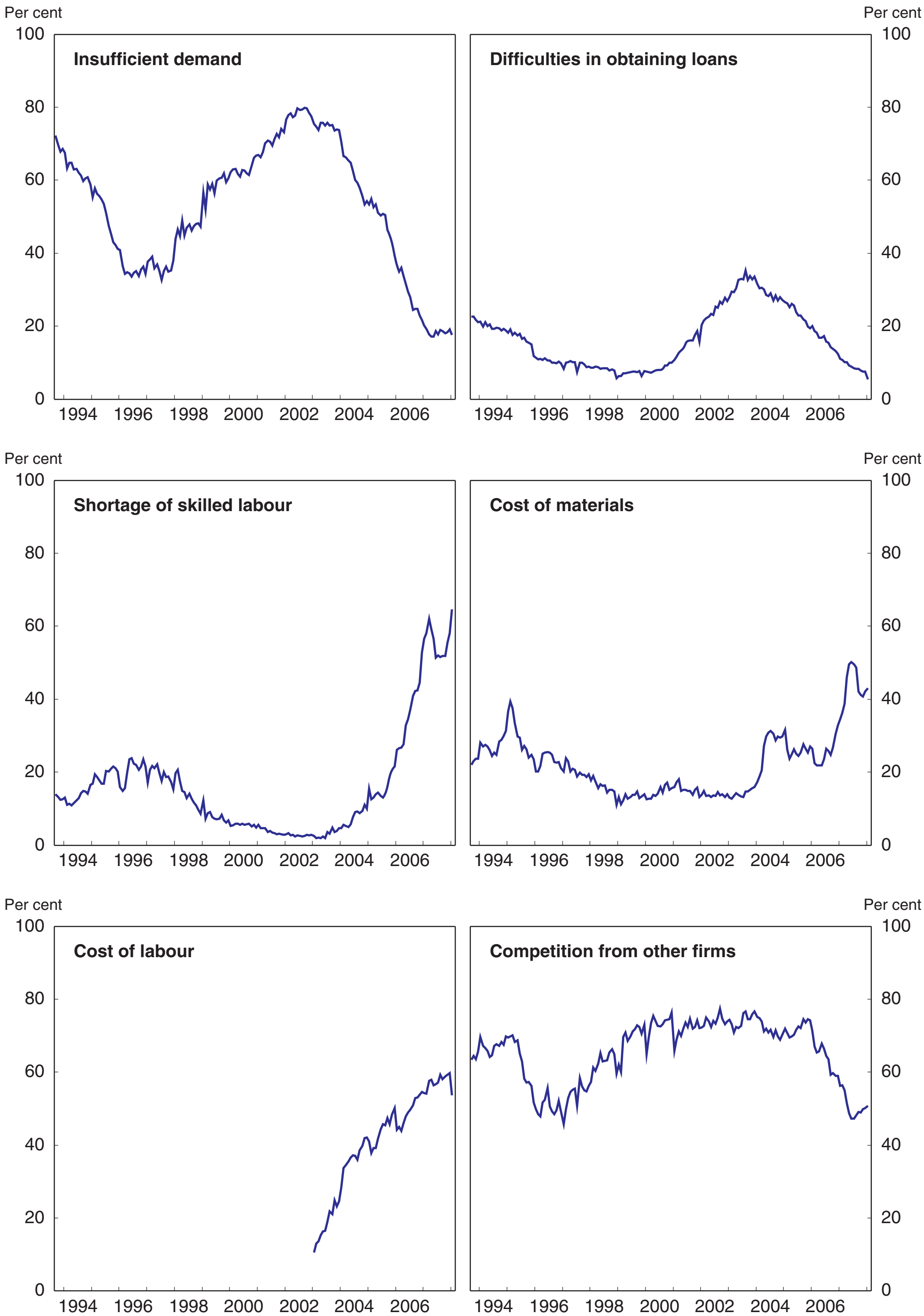
adjustment to expanding demand. Since 2006, and especially in the second half of 2007, construction costs have been subject to upward pressure due to growing shortages of building materials and qualified labour. In some cases the scale of shortages of relevant inputs has been so great that property developers have had to withdraw from certain tenders of land. According to the business tendency survey in the construction sector, in mid-2007 between 50 and 60% of firms considered the costs of materials and labour as important barriers to their activity and pointed to significant labour shortages, while the industry itself operated at record-high capacity levels with almost no obstacles from insufficient demand (Figure 4.6). In parallel, the implementation of important transport infrastructure projects (see Chapter 5) and a low labour mobility across regions in deficit and surplus (see Figure 1.12) have certainly rendered underlying shortages and price pressures all the more acute. In such circumstances, it is important that the authorities reduce bottlenecks in the construction sector by enhancing vocational training as deficiencies have been noted in this area in recent years (CLR, 2007). Other levers would include easing access to the labour market for foreign workers by tailoring work permits to meet specific project needs and maintaining a strong vigilance about possible collusive behaviour between the main suppliers of building materials (see also Chapter 5).

... have led to excess demand and upward price pressure

Several statistics indicate that demand has been significantly outstripping supply in recent years. Sales of new apartments and houses have been occurring even before the start of effective construction works. Moreover, instead of introducing the whole offer

Figure 4.6. **Barriers to construction firms' activity**

Business tendency survey



Source: OECD calculations based on GUS series.

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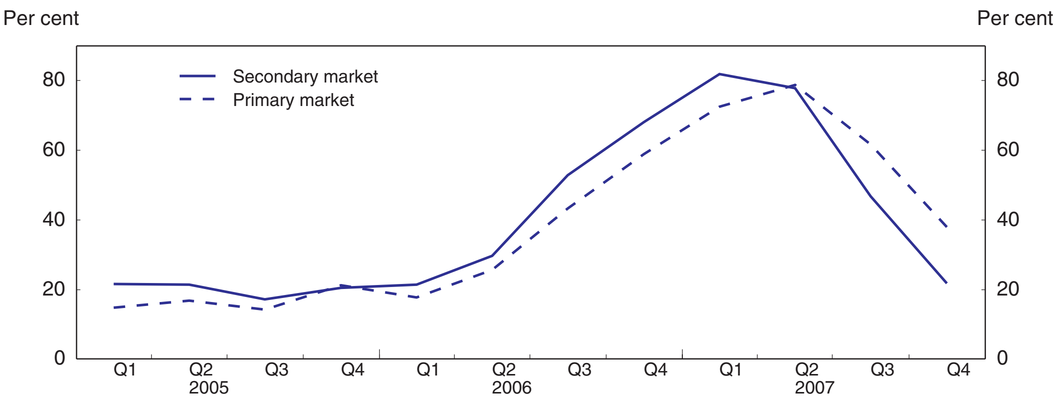
immediately on the market, property developers have been selling units only gradually, thus testing the strength of demand. As mentioned, since 2003 a steadily and rapidly declining share of construction enterprises pointed to insufficient demand as being an obstacle to their activity (Figure 4.6). As a result, the average time of waiting for an apartment in the primary market in major cities has been lengthening considerably, while the available stock has decreased sharply since 2004 and collapsed to almost zero in January 2007 (NBP, 2007).

Although residential property prices fell in 2001-02, they have been rising steadily since then at a yearly pace of 10-20%. In 2006, the annual growth rate picked up to 55-75% on both the primary and secondary market (Figure 4.7), and Poland probably led the property boom in Europe that year (NBP, 2007; RICS, 2007). Warsaw accounts for a third of the national market, and prices there are among the highest in Central and Eastern European countries and close to levels reached in some western European countries. In the first half of 2007, real estate inflation spiked at unprecedented levels (in year-on-year terms) in some cities (Figure 4.7) and decoupled with price developments in other regions of Poland. A catch-up process with 30% to 40% annual price increases began nevertheless in smaller towns during 2007 (NBP, 2007). Yet, even though Poland recorded the highest house-price inflation in Europe for the whole year (RICS, 2008), a correction in prices occurred in several major urban centres by year-end, bringing down year–on–year growth rates towards more sustainable developments (Figure 4.7) and close to 20% annual increases for the country as a whole.

Figure 4.7. **Residential property price inflation in the largest cities**[1]

In nominal terms, year-on-year changes



1. Average of prices in Warsaw, Poznan, Lodz, Cracow, Gdynia, Gdansk and Wroclaw.

Source: National Bank of Poland (2007), Financial Stability Report, and National Bank of Poland (2008), Inflation Report.

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It is difficult to say to what extent the market has been subject to a bubble insofar as this issue relates to the question of the scale of deviation of actual house prices from their fundamental values. Recent empirical evidence suggests that fundamental factors have been important drivers of house prices not only in Poland, but also in other countries of the region (Box 4.1). However, according to the National Bank of Poland the observed disconnection between the high level of house prices and their rental values would signal

Box 4.1. **What drives house prices in Central and Eastern Europe?**

The run-up in house prices in Poland has been part of a wider phenomenon, which affected not only many OECD countries (Girouard *et al.*, 2006), but also transition economies in Central and Eastern Europe (CEE), with double-digit real annual increases not uncommon. For instance, property prices in Croatia, the Czech Republic, Hungary and Slovenia rose by 9 to 13% annually on average between 2002 and 2006 and reached 20-35% per annum in Estonia, Lithuania and Bulgaria over the same period (Egert and Mihaljek, 2007).

Egert and Mihaljek (2007) find that the evolution of property prices in CEE countries can be explained quite well by various indicators such as per capita GDP levels, real interest rates, credit growth, demographic factors and labour-market developments. However, some differences with the most developed OECD countries remain. The sensitivity of house prices to real interest rates is twice as high in CEE as in other OECD countries, but only half as great as far as the credit growth determinant is concerned. But there are also specific factors that may account for price changes in transition economies. These are structural finance and institutional development aspects of housing markets* that can be captured by European Bank of Reconstruction and Development indicators of progress in banking reform and interest rate liberalisation on the one hand, and improvements in securities markets and non-bank financial institutions on the other. Other structural parameters with clear intuitional backing may also play an important role, but the econometric evidence is weak due to a lack of relevant data. These include a robust demand for better-quality housing due to important gaps in standards (average size of dwellings, floor space per occupant, access to basic amenities) relative to other western countries, a possible correction from initial undervaluation of house prices due to large distortions in relative prices at the beginning of the transition process, and a structural withdrawal of the public sector from housing construction and provision during the 1990s. Increased external demand of late (by residents in EU15 countries for second homes, CEE residents temporarily working abroad and global real estate companies for investment purposes) leading to higher land prices and spillover effects to property prices for local residents, a limited supply of new homes due to a lack of zoning plans, an easier access to foreign-currency loans with lower interest rates and possible wealth effects stemming from surging equity prices have all contributed as well.

* For a detailed characterisation of housing market institutions and finance in CEE countries, see OECD (2005).

a significant speculative short-term component in housing demand (NBP, 2007), though controls on rent increases have also accounted for the growing gap.

The precise identification of the scale and evolution of the house price appreciation is difficult nevertheless, as accurate price data do not exist for Poland. Available price statistics are made by private market participants (research institutions, real estate services providers), but they are fragmentary and refer mostly to some larger cities. The lack of relevant information about house prices blurs the assessment of the value of collateral in mortgage transactions and, more generally, hinders financial stability diagnoses regarding the quality of banks' and households' balance sheets. Therefore, even if it is a difficult challenge, it is crucial that composite house price indexes for the country as a whole as well as different market segments be computed by the statistical authorities. The Central Statistical Office (GUS) has undertaken methodological works in the field of compiling house price indices, in co-operation with institutions such as the Polish Bank

Association, the National Bank of Poland, the Institute of Urban Development and the Polish Federation of Values' Associations. These institutions have agreed to deliver data concerning the real estates' price levels as well as tools for analyses and construction of indices. This is in addition to the information that GUS collects via its own survey of real estates' purchase/sale transactions. These progress notwithstanding, there is still no clear timetable for the publication of nationwide index as well as regional indices of housing prices and, therefore, efforts should be renewed to accelerate the development of such valuable statistics.

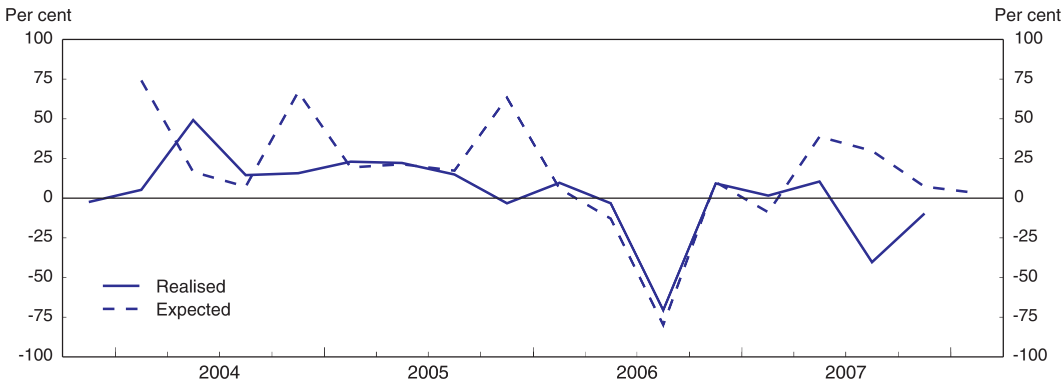
With booming real estate prices the profitability of construction companies has increased as manifested in high mark-ups by existing firms and the entry of new domestic and foreign firms. Average mark-ups over costs have reached 20–30%, and profitability has been very high in some cases, for instance reaching a 68% return on equity for one of the largest developers in Poland in 2006. At the same time, the stock-market index of construction companies has outperformed the overall index. However, this evidence should not mask the fact that the vast majority of private developers (who are the second most important provider of new housing supply after individuals) are rather under-capitalised (World Bank, 2006). Moreover, following a series of losses at the turn of the decade, developer finance is restricted by rather conservative bank lending policies, though the situation has improved over the last few years (see Figure 4.6). As a result, it has become common practice for buyers to make substantial upfront payments, which help with project working capital but exposes them to a significant risk of the developer's bankruptcy. Although the creation of a developers' self-insurance fund for construction risks is viewed as too difficult to implement in a transition country like Poland, a plan was developed to protect buyers' advances through the opening of escrow accounts. Banks were supposed to play a key role in the monitoring process, leading to early detection of solvency problems.[6] However, following lively discussions about a possible adverse upward impact on house prices and the scale of transaction costs that such regulation would entail as well as the strong opposition of the building industry, the adoption of the draft is still pending. Its introduction by the authorities is of primary importance, nevertheless, given record high real-estate prices, signs that demand is progressively running out of steam and the likelihood of growing problems of funding construction loans. The peak in business activity of the construction sector has probably already been reached, triggering the beginning of consolidation of the industry.

Financial aspects of the housing market

Mortgage loans had been virtually non-existent in Poland in the 1990s, but the market took off in 2000 and has been expanding very rapidly in recent years. Rising GDP per capita, along with declining interest rates have boosted affordability and spurred loan demand, while banks have lowered their credit standards and margins due to intense competition. Even in CPI-deflated terms, housing loans extended to the household sector have been growing at an exponential pace, rising 13.0-fold between mid-2000 and mid-2007 and 2.9-fold between mid-2004 and mid-2007. At the same time, the share of housing loans in overall banking assets has also increased considerably, from 1.8% at mid-2000 to 13.3% at mid-2007. Housing loans represented 25.8% of all bank loans by mid-2007 as compared to only 4.1% at mid-2000.

Surveys conducted by the NBP indicate that banks have significantly relaxed their lending policies, particularly in 2004 and 2005 (Figure 4.8). Various indicators of terms on

Figure 4.8. **Banks' lending policies pertaining to housing loans**[1]



1. The difference between the percentage of responses "Ease considerably" plus "Ease somewhat" and the percentage of responses "Tighten considerably" plus "Tighten somewhat". A positive index indicates a tendency towards easing of lending policies.

Source: National Bank of Poland (2008), Senior Loan Officer Opinion Survey.

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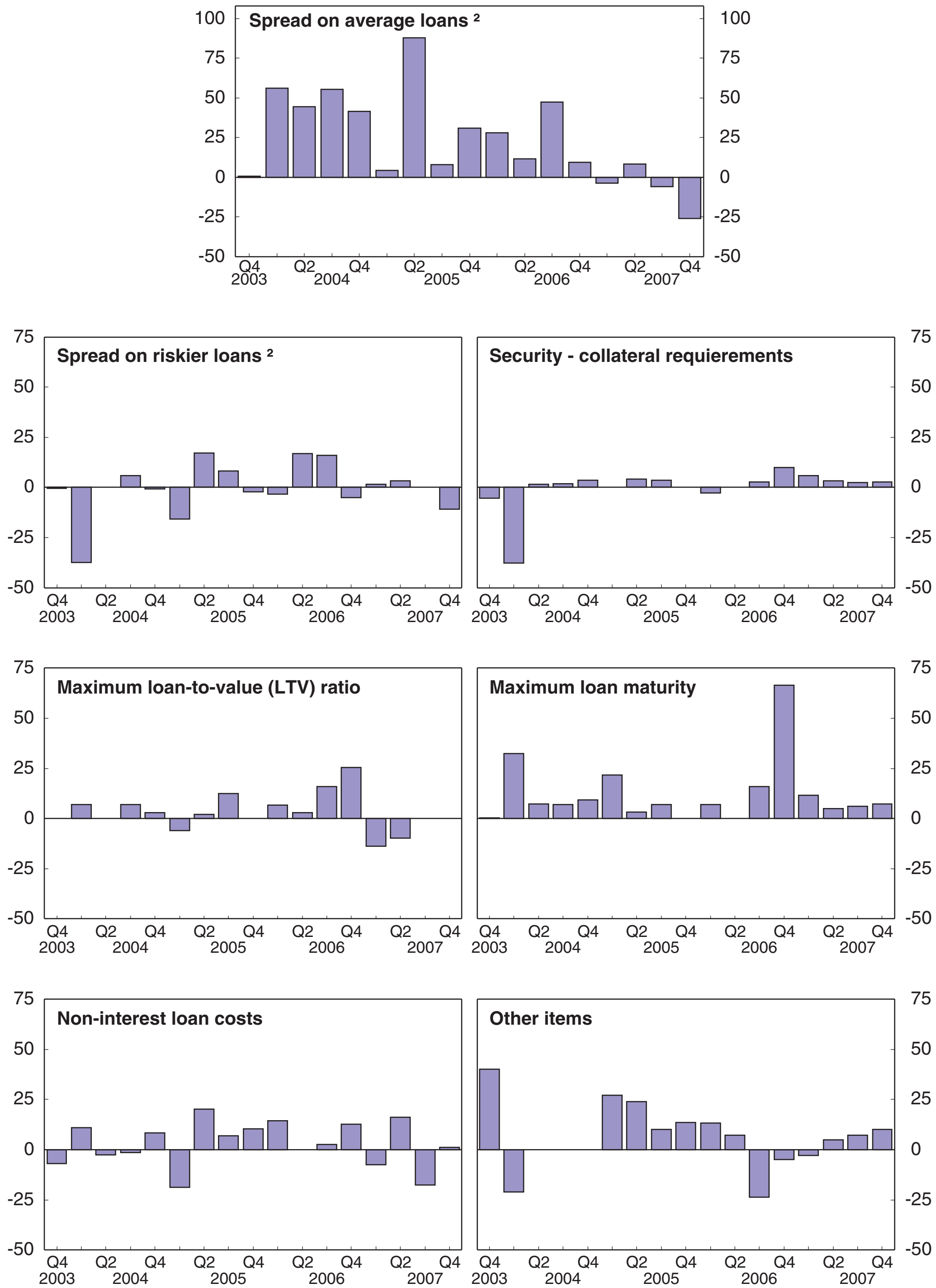
housing loans corroborate this view (Figure 4.9). The spreads between such loans and riskless assets were reduced, non-interest rate loan costs cut and maximum loan-to-value (LTV) ratios and loan maturity extended. Market information confirms that LTV ratios for zloty loans have been pushed to 100% or above in some cases (against 80% for foreign-currency loans) and their maturity extended to around 22.5 years for new loans (against almost 27 years for new foreign-currency loans) at the end of 2007, while the average maturity of the stock increased to 15 years (17.5 years for foreign loans). Banks' lending policies were driven mainly by vigorous loan demand, strong housing market prospects and robust market competition on the housing segment of the loan market. More recently, according to the latest version of the survey, banks' capital positions started to impact negatively on credit conditions (notably in the last quarter of 2007), which relates back to the wider question of the banking sector's accessibility to and the availability of needed financial resources.

Although there is no evidence of any direct impact on the banking sector of the credit crisis in the United States, Polish banks have nevertheless started to encounter rising funding and refinancing constraints, not only because of growing liquidity shortages in international markets. *First*, banks' capital adequacy ratios have diminished, even though they continue to exceed the 8% BIS threshold. As increases in commercial banks' capital were insufficient to match the expansion of lending activities, the solvency ratio (the relation of bank's capital to its risk-weighted assets) of the banking sector declined from 15.5% in 2004 to 13.2% in 2006 and reached only 12.4% in 2007. *Second*, Poland's universal banks have traditionally funded their lending with deposits, but the mortgage boom has considerably narrowed the gap between loans and deposits on their balance sheets. Indeed, this gap has vanished by end-2007 for households and has turned negative for the domestic non-financial sector as a whole (Figure 4.10). With surging equity prices and lower interest rates, households' portfolio holdings in mutual funds have increased to the detriment of bank deposits, and banks have had to face stronger competition for households' savings. *Third*, the credit expansion has reduced the scale of excess liquidity in the banking sector (with banks selling their liquid assets)[7] and increased the mismatch

Figure 4.9. **Terms on housing loans**[1]



1. The difference between the percentage of responses "Eased considerably" plus "Eased somewhat" and the percentage of responses "Tightened considerably" plus "Tightened somewhat". A positive index indicates a tendency towards easing of credit terms.
2. Spread is defined as the difference between the interest rate on the loan and the market interest rate.

Source: National Bank of Poland (2008), Senior Loan Officer Opinion Survey.

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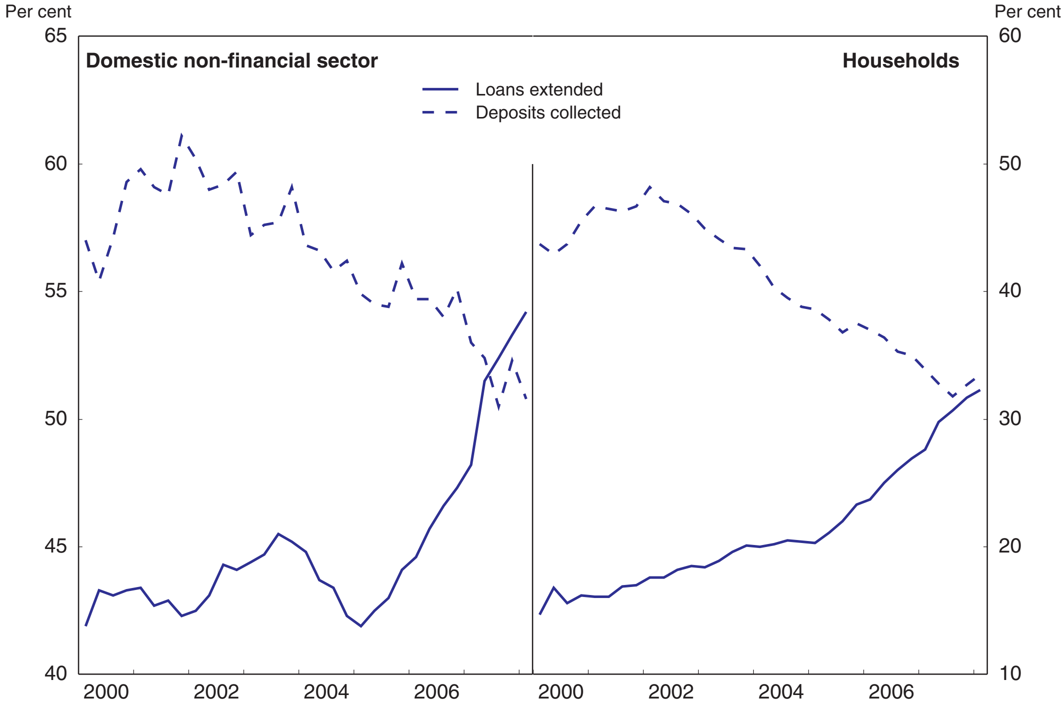
Figure 4.10. **Loans and deposits as a share of banking assets**



Source: Polish Financial Supervisory Authority, Banking Sector, key data.

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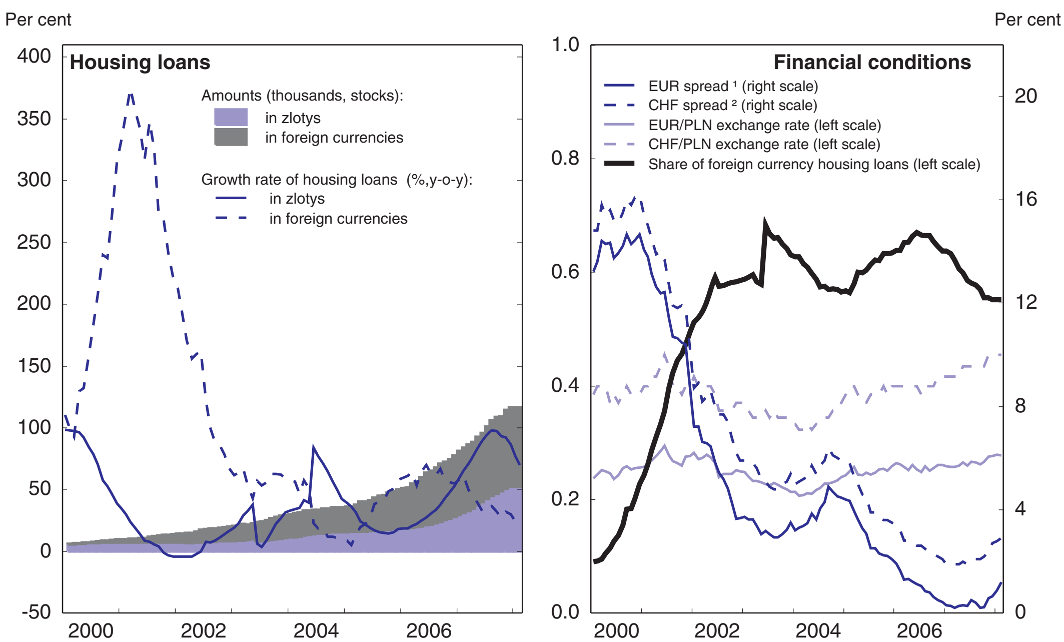
between long-term assets and short-term liabilities, given that deposits with maturity over one year barely exceed 1-2% of banks' assets. Although banks' main activity does consist in maturity transformation and the Polish banking sector should not encounter immediate liquidity threats (due to observed higher liquidity transfers from foreign parent companies and still sizeable holdings of liquid assets), nevertheless from the stability point of view a deterioration of banks' financing structure has occurred.[8] This raises the issue of the availability for banks of long-term instruments to fund their mortgage-loan portfolios.

In this area, several constraints remain in the current legal framework. Even if the lack of rating agencies is an issue, a recent survey undertaken by the banking supervision authority reveals that securitisation is underdeveloped due to several regulatory and fiscal obstacles that prevent banks from a widespread use of this mechanism (KNB, 2007b).[9] For the time being, securitisation is mainly used to get rid of sub-standard loans as tax deductibility is allowed for such actions. Another problem is that universal banks are prohibited from issuing covered mortgage bonds, as this option is reserved only for specialised mortgage banks, but their market share in the mortgage market is rather marginal (around 5%).[10] Should the authorities decide not to lift existing long-term funding barriers rapidly, it might be the case that in the short term banks' lending policies could be contained indirectly from the supply side. However, these constraints could also lead to a lower involvement of the banking sector in closing the housing gap in Poland over the longer term. Indeed, in the most affluent OECD countries, housing market growth is directly linked to housing finance (OECD, 2005). It could be argued nevertheless that securitisation is a complex mechanism that has played a prominent role in the world-wide sub-prime crisis whose introduction might thus not be advisable. However, it is probably preferable to let banks determine their own funding choices and, in return, to strengthen the regulatory supervision of securitisation, rather than to hinder its development.

Another challenge for keeping a robust and healthy mortgage market is related to the fact that a substantial amount of housing loans is contracted in foreign currencies. While the share of foreign-currency loans in real estate financing had been lower than 10% at the end of the 1990s, it sky-rocketed at the beginning of 2000s and has stabilised at nearly 60% since mid-2002 (Figure 4.11). Given the scale of the spread between Polish and foreign – and more specifically Swiss – interest rates, the share of loans denominated in Swiss francs among foreign-currency loans exceeded 90% at the end of 2006. Therefore, the household sector is directly exposed and the banking sector indirectly to both the exchange-rate risk (a potential depreciation of the Polish currency) and the interest-rate risk on the Swiss franc (as loans extended by banks are chiefly at variable rates). Although both risks have not materialised yet, the supervisory officials have decided to intervene in order to limit the expansion of foreign-currency loans. Notably, this was all the more necessary given that banks had been increasingly eager to grant this type of loan to less wealthy households. Furthermore, close currency substitution in banks' assets has also been constraining the effectiveness of the transmission mechanism, rendering trickier the conduct of monetary policy. Indeed, in such circumstances a tightening of the domestic policy rate increases the relative attractiveness of foreign-currency loans compared to zloty loans (Brzoza-Brzezina *et al.*, 2007).

Figure 4.11. **Evolution of housing and financial conditions**

In nominal terms



1. Spread between 3-month (PLN – EUR) interbank interest rates.
2. Spread between 3-month (PLN – CHF) interbank interest rates.

Source: National Bank of Poland and OECD calculations.

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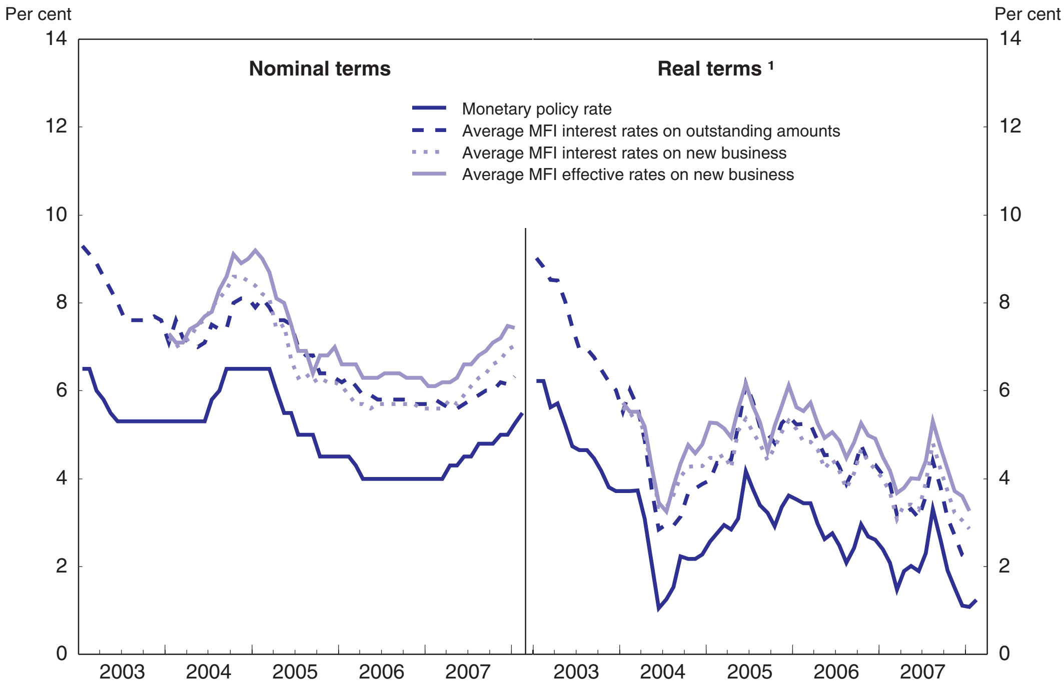
In July 2006, "Recommendation S" was introduced, aiming at strengthening credit risk management at banks with regard to housing loans and providing adequate information for customers about related risks (KNB, 2006). More specifically, among other recommendations, it requires that, when considering foreign-currency loans, banks evaluate households' creditworthiness by assuming a 20% depreciation of the zloty and an interest rate at least equal to those on loans in domestic currency. Banks have effectively tightened their lending standards with regard to foreign-currency loans since then: foreign-currency loans decelerated from year-on-year growth rates of around 60% in July 2006 to close to 31.5% in February 2008. A lower attractiveness of Swiss franc loans may also have resulted from a tighter interest rate stance of the Swiss National Bank. This may have demonstrated to potential borrowers the risks from taking on interest-rate exposure. Yet it appears that banks have simultaneously relaxed even further their lending policies in zlotys, especially given the low relative (Figure 4.11) and absolute (Figure 4.12) level of domestic interest rates. Growth in zloty-denominated loans growth sped up from 30% in July 2006 to almost 100% a year later, as average loan amounts were rising largely due to runaway property prices. However, latest data show a deceleration to near 70%. Should the housing boom continue, it would be advisable that the supervisory authorities maintain a reasonable frequency of on-site inspections, especially by targeting the most active banks in the mortgage market.

Figure 4.12. **Policy rate and banks' interest rates on PLN mortgage loans**



1. Deflated by the consumer price index.

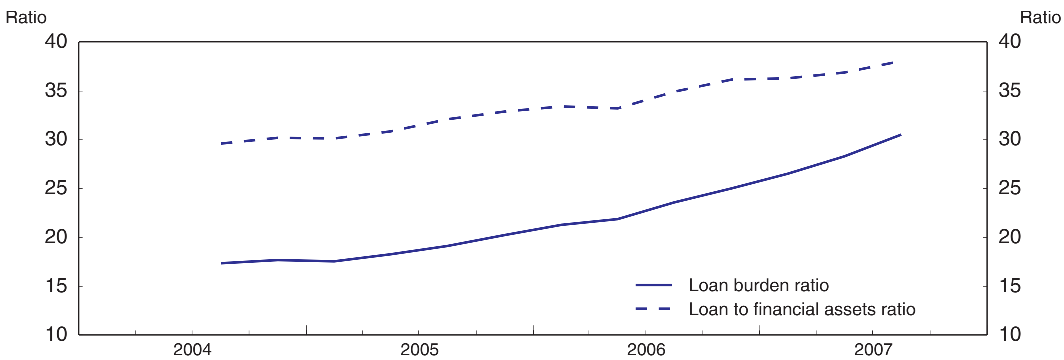
Source: National Bank of Poland and OECD (2007), Main Economic Indicators database.

StatLink http://dx.doi.org/10.1787/346184860167

Expansion in the real-estate market mainly financed through bank loans engenders a potential risk of over-borrowing by the household sector, leading to growing concerns about its long-term creditworthiness. Notwithstanding lower interest rates, as house price inflation has outstripped increases in earnings, banks have extended loan maturities significantly in order to support households' demands and make monthly instalment payments affordable (see Figure 4.9). However, in spite of this, a faster growth of loan amounts as compared to disposable income has pushed up households' debt burden (including all types of loans), which by mid-2007 reached 30% of gross disposable income (Figure 4.13). As a consequence, with mortgage loans contracted primarily at variable interest rates and a high share of foreign-currency loans in borrowers' liabilities, their exposure to both a monetary tightening and the exchange-rate risk is all the more obvious. With longer loan maturities, debtors' solvency has also been subject to a more protracted risk of economic slowdown and thus of unemployment. The NBP undertakes valuable stress tests that help to assess the scale of households' sensitivity to different types of possible financial shocks (NBP, 2006 and 2007). One of its simulations indicates that a 3.4 percentage point increase in the policy rate of the NBP in the next two years would push the ratio of monthly debt-service costs (principal and interest instalments) to net income of a typical household having contracted a mortgage from 25.2% in the second quarter of 2007 to 33.5% 24 months later. Also, a 35% depreciation of the zloty coupled with a 3.1 percentage point rise in Swiss interest rates would boost the foreign-currency debt-service ratio from 25.9% to 36% two years later. An activity shock might even have stronger consequences. Zajaczkowski and Zochowski (2007) show that an increase in the unemployment rate of 4.7 percentage points would move 43-47% of households with mortgage loans into a negative margin position.[11] It follows from these results that a combination of real and financial shocks could have dramatic effects and push a substantial number of debtors into serious financial distress. A detrimental impact on house prices and a subsequent negative feedback on activity could follow as a consequence.

Figure 4.13. **Households' loan burden**[1]

Ratios calculated on the basis of data for the whole household sector



1. Ratio between loans granted to households (residents) and their yearly gross disposable income. Data on loans come from the NBP monetary statistics; data on gross disposable income come from the national accounts.

Source: National Bank of Poland (2007), Financial Stability Report.

StatLink http://dx.doi.org/10.1787/346187383718

Indeed, as a result of expansionary lending policies, the exposure of banks' assets and financial results to potential risks has increased rapidly and considerably. Mortgage repayment could be hampered through the standard exchange-rate channel and/or the interest-rate channel of deteriorating inflationary prospects and rising interest rates. However, empirical research suggests that credit risk in the household sector might be negatively related to currency depreciation if the ensuing greater competitiveness and related household income growth overcompensates the increased instalments on foreign-currency loans (IMF, 2007). Another mechanism is linked to financial accelerator effects that might occur in the case of a sharp reversal in property prices. This would undermine the value of collateral and thus increase loan losses from potential defaults. These adverse effects could be even stronger in Poland than in other countries. *First*, although purchased houses or dwellings can be legally pledged as collateral, the registration of mortgage liens is not compulsory and is a lengthy process anyway: only 62% of housing loans had dwellings mortgaged to the bank by mid-2007 (KNB, 2007a). This raises banks' exposure to a downturn and/or possible fraudulent debtor behaviour. *Second*, the strength of foreclosure regulations has not yet been tested on a wide scale to a reversal in the credit cycle. For the time being, the share of non-performing loans is quite low, in part because most mortgages outstanding were extended in a period of strong income growth, but also due to a statistical base effect as three-quarters of them have been granted just over the last three years. Yet there are indications that foreclosure regulations might not be strong enough, as it can take several years for debtors to recover collateral. Eviction procedures are difficult to implement, a situation that is linked to an insufficient quantity of dwellings for social housing purposes (see above). However, even if the collateral is seized, tax claims of the Treasury have seniority, unless bank loan claims are secured by a mortgage lien (NBP, 2004). Issues are even trickier once the bankruptcy of the debtor is pronounced: pending applications for mortgage registration are declared invalid if they have not been made within six months prior to the failure, which is all the more problematic as the registration process of mortgage liens is time-consuming and queuing is necessary; even if loans are secured by a mortgage, the creditor cannot rent or lease the property but can only recover its debt through a sale. Overall, the acceleration of the registration process of mortgage liens, the suppression of legal barriers in collateral recovery through a strengthening of foreclosure laws and eviction procedures and the freedom to dispose of the property in the case of debtor's bankruptcy would all be helpful steps. Dealing rapidly with these rigidities and obstacles would allow a faster adjustment in the loan market to a possible downturn and avoid related real adverse effects of deteriorating bank solvency, with negative spillovers coming from tight lending policies.

At first sight, the macroeconomic consequences of any future defaults in the household sector do not appear likely to be too important: by end-2006, the ratio of residential mortgage debt to GDP in Poland was as low as 8.3%, one-fifth of the euro area average (41.2%) (European Mortgage Federation, 2007). Against this background, even if the level of the ratio is still low by international standards, it is nevertheless growing rapidly, having increased by 3.6 percentage points in 2005 and 2006 alone. And it goes without saying that an unexpected shock to households' creditworthiness (as described above) would put their consumption under pressure and thus impact on GDP growth. Falling property prices could also undermine the value of the collateral and induce adverse spillover effects on overall lending standards and thus reduce growth prospects. However, the macroeconomic consequences of changes in asset prices and, more generally, possible interactions between real and financial spheres (for instance, through wealth effects of housing and equity markets on consumption) are currently less certain and, in any case, not modelled by the central bank. In this perspective, in order to provide a relevant

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assessment of the scale of potential problems and underlying risks from the view of monetary policy conduct and financial stability diagnoses, it would be worthwhile to develop a fully fledged financial-sector module in the NBP's macroeconomic ECMOD model. While the length of relevant time series may be an important obstacle, some analysis could be undertaken nevertheless, in particular on the basis of stress tests already performed by the Bank.

Box 4.2. **Main recommendations on housing-market policies**

Structural aspects of housing policies

- Ease capacity constraints in the construction sector by strengthening vocational training and by facilitating labour-market access for foreign workers through the issuance of work permits tailored to meet specific project needs.
- Make compulsory the establishment of municipal zoning plans and introduce an *ad valorem* tax system for providing local authorities with additional financial resources.
- Work towards further easing of controls on rent increases, and consider the introduction of offsetting measures through means-tested allowances to households. Evictions of non-paying tenants need to be better enforced.
- Reform the TBS programme of social housing: grant a buy-back option to tenants, improve income-targeting rules and the correspondence with the level of collected rents; proposals to extend the programme through PPP arrangements linking private funding and the provision of serviced plots by municipalities are promising and deserve further investigation.
- Consider terminating the central-government programme of interest-rate buy-down. To facilitate home-ownership without harming labour mobility, the elimination of stamp duties on house purchases should be envisaged.

Financial aspects of the housing market

- Introduce escrow accounts to protect buyers' advances against the risk of developers' bankruptcy.
- Publish official composite house price indexes for the country as a whole as well as different market segments. The Central Statistical Office (GUS) needs to redouble its efforts in this area.
- Speed up the registration process of mortgage liens and remove legal barriers in effective mortgage collateral recovery.
- Lift long-term funding and refinancing barriers of banks' mortgage loan portfolios: allow universal banks to issue covered mortgage bonds, and remove existing regulatory and taxation obstacles that prevent securitisation from taking off.

Notes

1. The tax refund introduced in 2005 was initially scheduled to be in force only until December 2007.
2. The law also allows rent increases to be offset for yearly changes in the CPI in the previous calendar year.

3. In June 2007, a regional court decided that a "fair profit" could amount to 5% – the average yield on Treasury bonds (Krupa-D browska, 2007).
4. Local authorities can also levy a tax for servicing plots. The tax can reach up to 50% of the increase in the value of the land resulting from the installation of basic amenities.
5. Up to the end of 2006 private individuals were exempted from any taxes if they had held the property for over five years or if they had re-invested in another property within two years after sale. Otherwise, they were liable for a tax of 10% of the selling price (not just the capital gain).
6. Two types of escrow accounts can be defined. In the first, the developer would receive the payment at the end of the construction process (closed account); alternatively, payment could be made once a predefined stage has been reached (open account).
7. The excess liquidity of the banking sector is mainly the outcome of past sterilisation policies of the central bank conducted in the 1990s.
8. Some heterogeneities remain within the banking sector: for instance, some banks have a substantial deposit base, with others tapping the interbank market or using foreign-currency borrowing, notably through foreign exchange swaps.
9. Banks have pointed to several factors that are limiting their securitisation possibilities (KNB, 2007b):
   - Tax regulations on sub-participation where a one-off inflow of funds received by the initiator at the beginning of the transaction is entirely recognised as taxed income, while the costs for tax purposes are acknowledged only gradually over time.
   - The need to obtain a separate agreement of the debtor for a payment order when securitisation is carried out via the securitisation fund and relates to regular loans.
   - The lack of statutory regulations enabling the protection of special purpose vehicles' (SPVs) assets against the consequences of an enforcement proceeding.
   - An issuing entity that would purchase mortgage-secured credit exposures does not have priority in claiming its receivables when this coincides with a tacit mortgage lien held by the State Treasury.
   - The lack of an explicit interpretation relating to the treatment of securitisation transactions as financial intermediation services.
   - Too narrow a scope of agreements excluded from the clause on banking secrecy relating to securitisation transactions.
   - The sale of credit exposures at a discount in regular cases is unprofitable from the tax side – the discount is not considered as a cost for tax purposes.
   - The lack of clarity with respect to the tax treatment of capitalised interest on loans.
10. The main difference between covered mortgage bonds and genuine securitisation – of both asset-backed securities (ABS) and mortgage-backed securities (MBS) – is that the former type of assets remains on banks' balance sheets, while the latter is removed.
11. The margin is defined as the difference between disposable income and debt repayment costs as well as basic living expenses.

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Chapter 5

The challenge of rapidly improving transport infrastructure

Following many years of underinvestment, renovating and building new transport infrastructure is an important policy priority that would increase labour mobility and improve Poland's competitiveness. This goal is all the more feasible given that the country is going to benefit from substantial EU structural and cohesion funds over the programming period 2007-13. On top of the limited timeframe for the absorption of EU funds, the European soccer championship that Poland is going to co-host with Ukraine in 2012 imposes an additional time constraint on many investment projects. The country is heavily reliant on road transport but is lacking an efficient high-speed road network. It needs important renovation investments both in the rolling stock and infrastructure network of the railway sector. It also faces the challenges of revitalising maritime transport as well as extending and upgrading airport facilities to cope with the fastest growing air market in Europe. However, many obstacles remain and hinder the implementation of investment plans and thus need to be resolved rapidly. From the macroeconomic perspective, these are related to rising prices of scarce labour and intermediate inputs, while from the microeconomic standpoint the main difficulties lie in the area of the regulatory framework underlying the provision of physical infrastructure.

Improving transport infrastructure in Poland is a huge challenge for the coming years. It is a key requirement for keeping the economy on a high long-term growth path. All major types of such infrastructure (roads, railways, seaports and airports) are either underdeveloped or in a very poor condition and thus need rapid repair, upgrading and extension. While investment outlays in the transport sector typically amount to 1-2% of GDP in developed OECD countries, this ratio never exceeded 0.7% in Poland during the 1990s, thereby leading to a sharp deterioration of the capital stock. In view of this situation and given the prospect of substantial EU funding over the next few years, a National Development Strategy for the 2007-15 period and a National Strategic Reference Framework for the 2007-13 EU programming period in which public investment in infrastructure plays an important role have been adopted by the government (Ministry of Regional Development, 2006a and 2006b). Moreover, the challenge of improving infrastructure has become all the more urgent, given that Poland has been chosen to co-host the European soccer championships in 2012. As a result, the target dates for completion of many investment projects have been brought forward from the initial schedule. Therefore, the goal is not only to boost the quality and quantity of infrastructure but also to achieve these objectives on time.

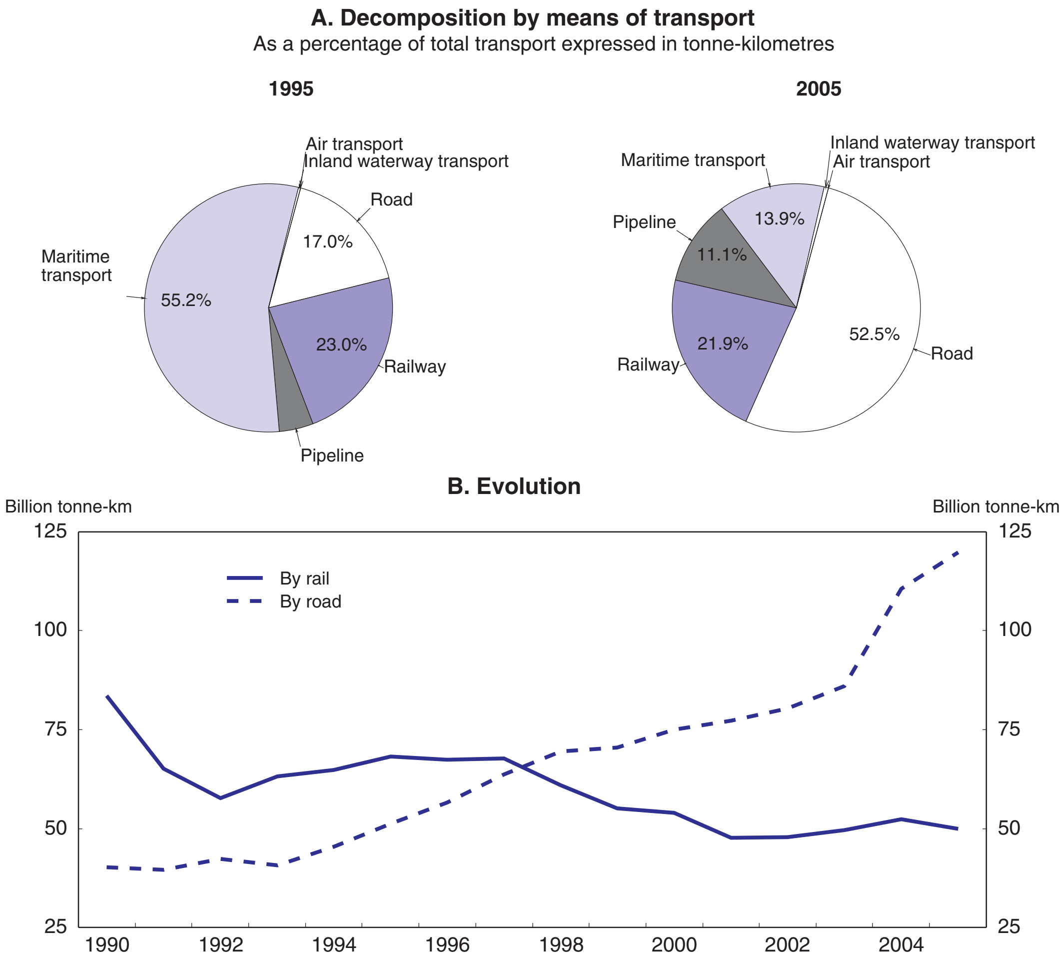
A number of obstacles hinder the realisation of investment projects on a fast track. From the macroeconomic perspective, these are related to shortages of skilled workers, rapidly rising prices of building materials, trend exchange-rate appreciation and binding constraints on public finances. From the microeconomic standpoint, the main barriers lie in the area of an inefficient public procurement law, burdensome environmental regulation procedures, the challenge of participating in the Natura 2000 ecological network and a fickle approach to public-private partnerships (PPPs). Yet other difficulties remain, too. It is unclear whether proper evaluations based on cost-benefit analysis of individual projects (which also explicitly consider the substitutability among different modes of transport) have been made in the planning process for needed investments and whether appropriate co-ordination between central and local governments in designing investment plans has taken place. Moreover, it is debatable whether the choice of gearing major spending efforts toward the road sector can be judged sustainable from the point of view of high and rising energy prices and climate change. Finally, it is essential that existing market regulations and ownership structures promote fair competition in the corresponding sectors.

The state of transport infrastructure: facts and deficiencies

Roads

Road transport demand has soared since the beginning of economic transition, as a share of transport of both people and merchandise (Figure 5.1, Panel A, and in absolute terms, Panel B). Poland has become an important transit country in international trade between Western and Eastern Europe, though the sector suffers from major deficiencies (see Chapter 1). There were 377 974 km of public roads in Poland in 2007. In 2004, their development and maintenance was decentralised, with regional and local governments

Figure 5.1. **Transport of goods**



Source: GUS (2006), *Concise Statistical Yearbook of Poland*; OECD (2006), *Trends in the Transport Sector database*.
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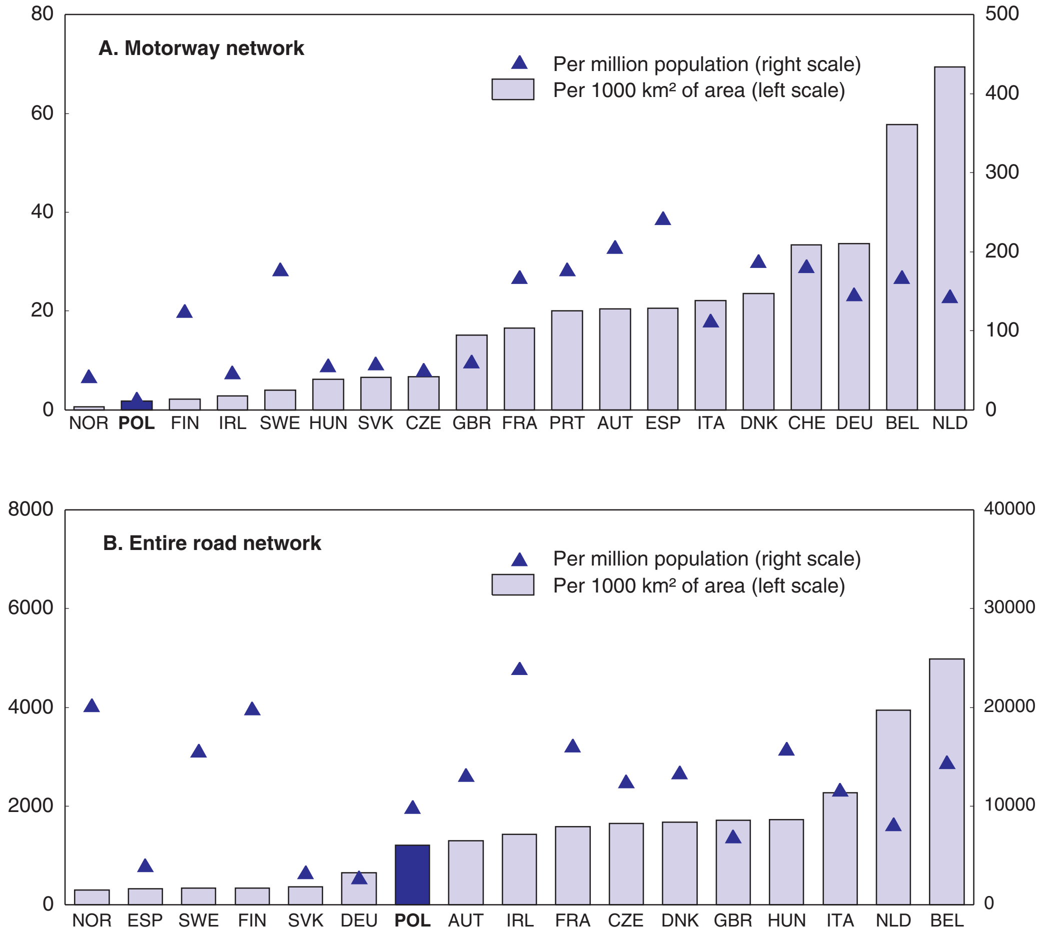
looking after all but national roads and overseeing 95% of the network.[1] National roads (including motorways and expressways), which are under the responsibility of the central government, account for only 5% of all routes and generate close to 40% of overall traffic, but a cohesive high-speed network is strikingly lacking (Figure 5.2). It is insufficient in length, does not allow traffic continuity throughout the country on any of the international transit routes, lacks major connections between the main urban centres (especially in eastern Poland) and is underdeveloped or nonexistent on their peripheries. In 2007, the length of the motorway and expressway roads amounted to 674 km and 294 km, respectively, and together represented as little as 5.7% of national roads and barely 0.3% of public roads. As a result, there is high traffic intensity, including lorry traffic, through built-up areas. The absence of ring roads around both smaller and bigger cities leads to negative externalities (in the form of noise, safety and pollution) for their residents.

While road maintenance is poor – more than half of all national roads need to be repaired immediately or in the near future according to the General Directorate for National Roads and Motorways (GDDKiA) – further deterioration has been stopped, and the

Figure 5.2. **The road network is fairly sparse**

Kilometres, 2004 or latest available year



Source: European Commission (2007), Panorama of transport and New Chronos database.

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situation started to improve gradually as from 2003, mainly because of inflows of EU funds and higher earmarking of public resources. An important obstacle to faster renovation is that most of the roads have a load capacity of only 8 or 10 tonnes per axle, whereas 11.5 tonnes per axle is the international standard that complies with EU regulations. Therefore, the free passage of international heavy lorries has been causing rapid deterioration of the main transit routes. The decentralisation of the management process of public roads has led to a concentration of central resources on the development of national roads, while local governments deal mainly with the maintenance of existing routes. More generally, in its medium-term investment strategy Poland appears to have made a choice in favour of national roads (with priority given to high-capacity roads) and a lower emphasis on local/regional roads. A limited time framework for spending EU grants to at most 2015[2] and the European soccer championships that Poland is going to co-host with Ukraine in 2012 together impose important time constraints on many investment projects and have spurred development of an ambitious building plan of national roads over the next few years (Box 5.1) (Ministry of Transport, 2007a).

Box 5.1. **Construction programme of national roads in 2008-12**

At the end of September 2007, the government adopted an ambitious Programme of construction of national roads for the period 2008-12. Priority investments include completion or further extension of three key motorways crossing the country:

- A1 motorway (from Gdansk in the North to Gorzyczki and the Czech border in the South);
- A2 motorway (from the German border and Świecko in the West to Warsaw);
- A4 motorway (from the German border and Jędrzychowice in the West to Korczowa and the eastern border with Ukraine);

and two North-South expressways, S3 and S19, along the western and eastern borders, respectively, as well as high-capacity roads connecting regional capitals that are going to host the European soccer championships in 2012 (Warsaw, Gdansk, Wroclaw, Poznan and Krakow). Altogether, 632 km of motorways, 1980 km of expressways and 58 ring roads of a total length of 428 km are to be built. Moreover, an additional 1 560 km of national roads are planned to be reinforced or modernised so as to achieve a ratio of 75% of national roads in good condition and a further 10% with a satisfactory standard. It has been decided that the Programme will be implemented by both the public regulator and investor (the GDDKiA) through traditional public undertakings and by state-owned special-purpose road companies established in January 2007 under the supervision of the Ministry of Transport (Infrastructure). The programme is estimated to cost PLN 121 billion (EUR 33.6 billion), that is slightly above PLN 24 billion a year (EUR 6.7 billion) as compared with PLN 10.1 billion (EUR 2.8 billion) spent in 2007 and PLN 6.8 billion (EUR 1.8 billion) spent on average over 2004-06. It will involve EU grants of a value of PLN 35 billion (EUR 9.7 billion) from the EU financial perspectives 2004-06 and 2007-13 and PLN 86 billion (EUR 23.9 billion) of national public funds, of which PLN 36 billion (EUR 10 billion) are for projects not related to EU funding. The Programme also allows for an involvement of the private sector, though to a smaller extent. 473 km of motorways are projected to be financed, built and operated through Public-Private Partnerships, including a concession of around 181 km of the A1 motorway (Stryków to Pyrzowice), and two stretches of the A2 motorway (95 km from Stryków to Konotopa and 104 km from Nowy Tomyśl to Świecko). Additionally, the construction of another section the A1 motorway (62 km from Nowe Marzy to Toruń), should result in a total of 535 km of motorways built under the PPP mechanism.

Source: Ministry of Transport (2007a) and Ministry of Infrastructure.

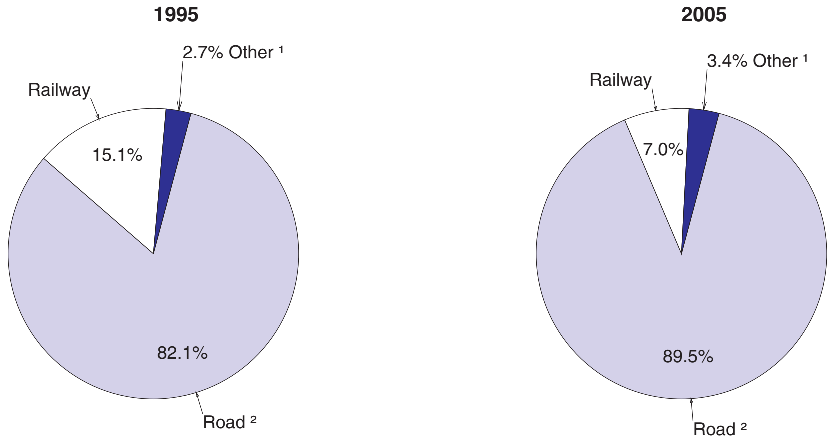
Railways

The lack of investment in the railway sector has led to an insufficient quality of service provision (see also Chapter 1), which when combined with the falling demand for coal and metallurgical products, has generated a constant decline in rail passenger and freight traffic since the beginning of the 1990s (Figures 5.1 and 5.3). The resulting low competitiveness of rail transport compared with road transport has led to a significant modification of respective modal shares in transportation. In absolute terms, rail passenger traffic decreased by two-thirds between 1990 and 2004. However, rail freight transport still plays an important role in Poland's economy, as almost half of it (by tonnage) is represented by coal.

Since 2000, several programmes have been implemented in order to increase the efficiency of the state railway company (PKP). The company was first transformed into a

Figure 5.3. **Passengers by means of transport**

As a percentage of total transport expressed in passenger-kilometres



1. Maritime, inland waterway and air transport.
2. Including individual cars.

Source: GUS (2006), *Concise Statistical Yearbook of Poland*; OECD (2006), *Trends in the Transport Sector database*.

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joint stock company (with the State as the sole shareholder) and then reorganised into a conglomerate of 42 companies (named the PKP Group), with the aim of restructuring those that were in bad financial condition and then of privatising some selected members of the Group. So far, these efforts have failed to deliver intended outcomes: to stem the decline of rail passenger and freight traffic, adequately prepare companies for privatisation, reduce the debt of and liquidate payment arrears within the PKP Group, regulate property issues and make a clear separation between the main infrastructure manager and the companies using the network (Ministry of Transport, 2007b).

In view of this situation, the government adopted a new strategic plan in April 2007 entitled "Strategy for railway transport until 2013". It allocates the role of co-ordinating the process of railway transformation to the State, with only limited involvement of the private sector. The infrastructure manager (PKP PLK) will remain a non-profit, publicly owned company financially backed by different sources (central and local governments' budgets, EU funds, bank loans). Two profitable companies of the PKP Group, that is, the freight (PKP Cargo) and the transnational passenger (PKP Intercity) rail companies, will be partially privatised by 2010, but the State will retain a controlling stake in each case.

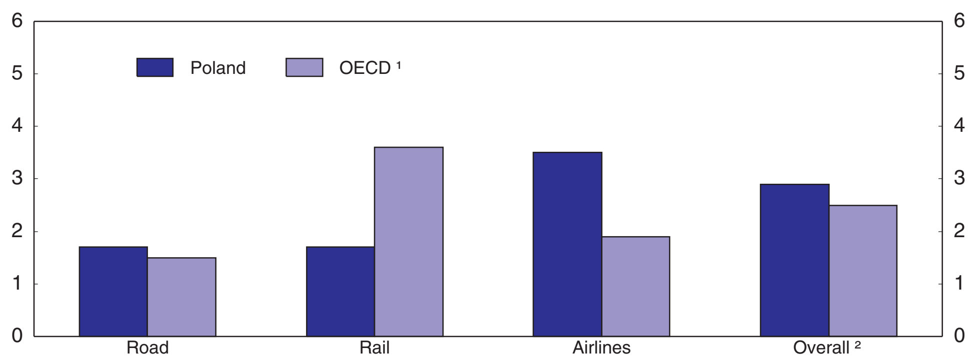
According to the plan, ownership of the company in charge of regional transport services (PKP PR) is to be transferred to regional governments. Nevertheless, local authorities are reluctant to take it over, notably due to their own insufficient financial means for upgrading the rolling stock. Moreover, a recent report of the Supreme Chamber of Control (NIK) revealed that their performance in organising regional rail transport is poor. Given the objectives of improving the quality of regional service provision, reducing costs and boosting productivity, two improvements could be made. It would be more efficient to create independent system operators in charge of planning the traffic and rail connections and to promote the organisation of competitive tendering procedures, instead of pushing regional authorities to take over PKP PR.[3] Moreover, with competing bidders, efficiency gains within PKP PR would be spurred. The example of the Kujawsko-Pomorskie region reveals that encouraging competition in this area can lead to significant cost reductions: in 2007 a private operator (Ariva PCC) won the tender with a 30% cheaper offer than that of PKP PR. However, when organising railway transport on a regional basis by different companies, it is important to ensure traffic continuity throughout the country by avoiding vertical integration and possible anti-competitive behaviour by concession holders as occurred in Mexico (OECD, 2007a). On that ground, the intention of the authorities to create a one-ticket system along with a full co-ordination of traffic schedules at interchanging stations appears appropriate. Also, it is important to ensure that once the liberalisation of rail passenger traffic occurs in 2010 (in accordance with EU legislation), competition in the market is not blocked and can effectively thrive.

The liberalisation of rail freight and passenger transportation occurred already in 2003, while it was enforced for freight at the European level only in 2007. By the end of July 2007, there were 87 railway operators having 152 licences[4] allocated by the regulator (the Office of Railway Transport: UTK) for different activities: 28 for passenger operations (including 13 licences for narrow-gauge railway operators), 75 licences for freight operations and 49 for leasing of the rolling stock. Finally, there were eight infrastructure managers on the market, the state-owned company PKP PLK being the biggest.

There has been a sharp decline in prices of rail freight transportation (some operators have referred to a "price war"), a wider supply of services (notably through the development of container cargo transport) and a reduction in the market share of the state-owned historical operator (PKP Cargo). Accordingly, Poland could be viewed at first sight as having the most liberal market in Europe and even in the OECD area, and this also seems to be confirmed by the OECD's Product Market Regulation Indicators for 2003 (Conway and Nicoletti, 2006) (Figure 5.4). Yet, the state-owned operator still had a very high 82% share of

Figure 5.4. **Extent of restrictive regulation in network industries, 2003**

The scale of indicators is 0 to 6, from least to most restrictive



1. Unweighted averages. The OECD coverage varies from 21 to 29 countries, depending on the sector.
2. Overall indicator covers airlines, telecom, electricity, gas, post, rail and road networks.

Source: OECD International Regulation Database and OECD estimates.

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the freight market at end-2006. This is no doubt in no small way attributable to the fact that the company belongs to the same group as the main infrastructure manager and therefore has privileged access to the network (Taylor and Ciechanski, 2006). Currently, PKP Cargo is in a privileged situation with regard to the allotment of routes by PKP PLK, while independent carriers encounter problems in accessing certain elements of the infrastructure (like marshalling yards, tracks to ports, container and trans-shipment terminals) that are owned by the public freight operator. Therefore, to reap all the benefits of the liberalisation process and in accordance with EU requirements, it is important to avoid vertical integration between activities and to ensure a level playing field between public and private cargo carriers in accessing key facilities.

Another impediment that undermines further development of the market is one of the highest nominal access charges to infrastructure in Europe with, as a consequence, much lower competitiveness of the rail sector as compared with its road counterpart. Although this situation reflects to some extent infrastructure under-investment with costly and poor traffic-management facilities and very low public subsidies received by the sector, the organisation of the market appears to be an additional explanatory factor. The fact that the main public infrastructure manager (PKP PLK) belongs to the same group as the main rail operating company, which has debt of PLN 5.6 billion, biases transparency as to the determination of access charges[5] and may encourage cross-subsidisation. The argument invoked by the authorities according to which high costs for infrastructure use do not preclude competition does not mean that the situation is satisfactory and cannot be improved.[6] In fact, clearly disentangling the infrastructure manager (PKP PLK) from the PKP Group would not only improve third party access to the network, but also allow more competitive and transparent pricing policies. In this respect, it is significant that in early drafts of the "Strategy for railway transport", there were plans to separate the main state-owned infrastructure manager (PKP PLK) from the PKP Group (Ministry of Transport and Construction, 2006), but this proposition was dropped from subsequent versions (Ministry of Transport, 2007b), officially because of unsettled property rights and a complex cross-holding structure within the state-owned conglomerate.[7] Yet, for the unbundling of infrastructure and operation to deliver expected results, it should be based on ownership separation, instead of only accounting and legal separation. Moreover, UTK does not seem to have a strong position with regard to the state conglomerate and often approves price increases requested by PKP PLK with little discussion. Therefore, strengthening the role of UTK as an independent market regulator would also help to improve the objectivity of pricing decisions. It should be noted that access pricing policies as such can vary in the railway sector as there is no internationally settled approach (ECMT, 2005). Policies can be based either on full-cost-recovery approaches or fixing prices no higher than marginal cost with subsidies covering the fixed costs. However, if the objective is to achieve a better balance among different transport modes by increasing the competitiveness of rail against road traffic, then fees set below full-cost-recovery levels can generate increased traffic volumes and by spreading fixed costs over higher traffic flows allow a reduction in average costs over the whole network.

Seaports

There are four main ports that are crucial for Poland's economy: Gdańsk, Gdynia, Szczecin and Świnoujście. Each is plagued with a number of problems (see Chapter 1). However, the situation has started to improve recently, as all ports are now expanding their handling and storage capabilities. *First*, with the worldwide recovery in sea transport, activity in and profitability of the sector have increased. *Second*, the privatisation process has gained momentum, and changes in ownership have led to higher investment outlays and renewal of the capital stock, with private investors acquiring specific companies created within existing port facilities and building new container terminals. Moreover, effective competition among Polish ports has increased, in particular between the ports of Gdańsk and Gdynia. *Third*, with the help of EU funds as well as budgetary financing, the central government has launched various upgrading projects mainly improving the access to seaports from land side. *Fourth*, corporate income and real-estate tax exemptions for all port management entities have been granted by the Polish government, but the beneficiaries need to reinvest their profits in return. This decision was approved by the European Commission in July 2007, as it was not viewed as falling within the ambit of the State-aid rules. However, a less favourable treatment in other fields of taxation than in the rest of the European Union harms the competitiveness of Polish ports. For instance, the time allowed for VAT payment after customs clearance is 10 days in Poland, whereas in Germany it is 45 days. Therefore, the authorities should consider phasing out existing tax exemptions for investment neutrality reasons and aligning on the most advantageous European tax practices on VAT payment delays in order to avoid hampering port competitiveness. Finally, the quality and speed of port cargo and vessel services undermine their competitiveness positions on the Baltic Sea (see Chapter 1). Streamlining customs, border control and food-quality inspection procedures appears advisable.

Aviation

Poland has one central airport located in Warsaw and 11 regional airports. Air transport has been growing very rapidly in recent years as a consequence of sustained demand spurred by the liberalisation of the market due to Poland's EU accession and the entry of low-cost companies. More vigorous competition among carriers as well as airports has led to a drop in ticket prices. Despite dynamic growth in the number of Polish air passengers since 2004, air-transport mobility indicator is still very low as compared with the EU15 countries or even regional comparators like Hungary or the Czech Republic. Moreover, the role of air cargo is marginal. There is therefore considerable scope for further development of the air transport industry in the future, as the number of travellers using Polish airports is expected to grow by three and a half times by the year 2020, while air traffic over Poland is supposed to increase nearly two and a half times by 2015 (Ministry of Regional Development, 2006b). Hence, the main challenges for the air-transport sector are related to new infrastructure investment programmes so as to put in place adequate supply capacity aimed at meeting strong and steady demand growth over the medium term (see Chapter 1).

The national airline company (LOT) has been confronted with the liberalisation of the European market in recent years, but its financial position improved in 2007, and a new market strategy has been developed for the coming years. The State is a majority shareholder, but there are plans to make a 45% Initial Public Offering in 2008, though existing law requires the State Treasury to retain at least 51% of the equity capital. However, the Ministry of the Treasury foresees the possibility of changing the law to allow selling the majority of shares. Privatisation of the company is all the more warranted, since corporate governance has been very poor heretofore (Rewiński, 2006). Thus, large efficiency gains could be made by restructuring the company through a strengthening of ownership rights.

A restructuring of the Polish Airports' State Enterprise (PPL) is yet another challenge. The company owns the Warsaw airport, two regional airports and from 18.9 to 76.0% of eight other regional airports, though it does not possess any shares of the Łódź airport. Therefore, it has strong market power with, as a consequence, limited competition among different regional airports and high prices for service provision. As a result, even though the penetration of low-cost companies is relatively high in comparison with other European countries, further improvements could be made nevertheless. One of the solutions would be to hand over the PPL company to local authorities, but splitting it into multiple entities in a first step followed by privatisation could also be considered as a viable option. More importantly, given the regional market power of airports, an introduction of price caps on take-off and landing fees appears necessary in order to increase the efficiency of service provision. For the time being, the Civil Aviation Office (ULC) determines the relevant cost-based price limits, that are calculated on the basis of costs with a certain rate of return. Yet genuine price-cap regulation would imply the use of a transparent formula based not only on modifications in input prices, but also wringing out efficiency gains and taking into account possible quality improvements.[8]

The challenge of efficiently allocating and absorbing EU funds

The planned allocation

The European dimension in building and upgrading transport infrastructure in Poland is an important issue. Poland is crossed by four out of ten Pan-European transport corridors, defined in 1994 and 1997 as routes in Central and Eastern Europe that required major investment over the following 10 to 15 years. Moreover, with the aim of spurring regional economic development by stimulating the exchange of goods and people across Europe, one of the pillars of the Commission's cohesion policy has been the promotion of transport infrastructure development in Europe as a whole. To this end, a set of existing Trans-European Transport Networks (TEN-T) crucial for providing high-speed and long-distance routes for the movement of people and freight throughout Europe has been defined.[9] Finally, 30 additional priority projects were identified in 2003 to be achieved by 2020, based on co-ordinated improvements to primary roads, railways, airports, seaports, inland waterways, inland ports and traffic-management systems. In this respect, Poland is involved in three TEN-T projects, with two related to railroads and one involving a motorway connection.

A sizeable amount of EU funds will be devoted to transport infrastructure in the coming years and thus pave the way for the largest investment programme in Poland's recent history (Box 5.2).[10] EUR 24.4 billion of EU structural and cohesion funds for the transport sector have been allocated through different programmes from which Poland is going to benefit over the 2007-13 programming period. EUR 14.9 billion (61%) will be devoted to the road sector, EUR 5.5 billion (nearly 23%) to railways and as little as EUR 0.7 billion (3%) to maritime and inland waterways transport and EUR 0.2 billion (0.8%) to intermodal facilities. Although EU transport policy based on TEN-T has played an influential role in designing the overall programme, it appears that the orientation of funds that has been decided is somewhat skewed toward road development. Indeed, out of the EUR 14.9 billion earmarked for road development, 50% of the envelope will not be related

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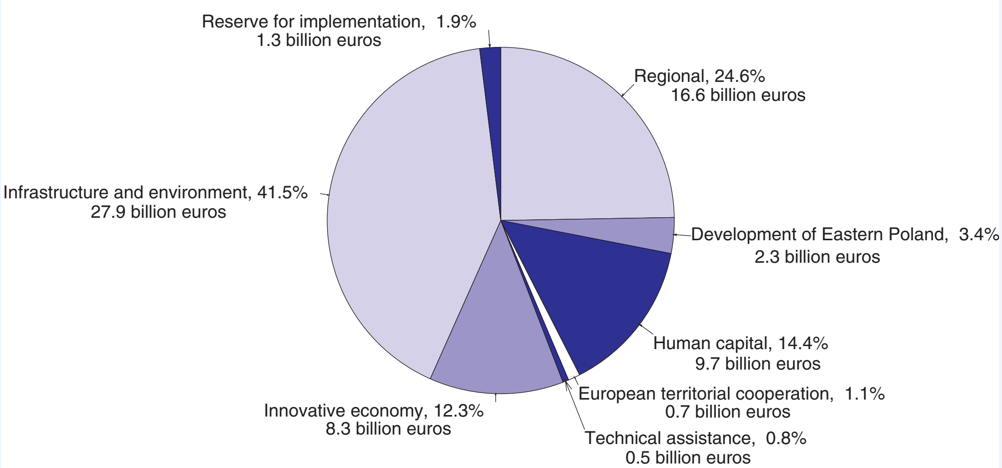
Box 5.2. EU grants and transport development in Poland over the programming period 2007-13

As part of EU regional policy over the period 2007-13, Poland has been allocated EUR 67.3 billion, two-thirds of which are structural funds (EUR 34.1 billion from the European Regional Development Fund, EUR 9.7 billion from the European Social Fund and EUR 1.3 billion from a performance reserve) and the rest (EUR 22.2 billion) from the Cohesion Fund. It is the largest beneficiary in the European Union of this type of financial support. These amounts should be added to EUR 18.3 billion that the country is going to receive as part of the Common Agricultural Policy as well as rural-development and fishery policies. However, the use of EU grants is subject to the co-financing principle, which requires that at least 15% of the value of a project is financed from national resources. Altogether, including co-financing from public and private funds, the overall envelope that Poland is going to spend will reach EUR 108 billion (approximately 5% of GDP per year on average), out of which EUR 85.6 billion (nearly 80%) will come from EU resources.

The broad priorities that require funding have been described in the *National Strategic Reference Framework 2007-2013* and subsequently translated into 21 operational programmes (OPs): 5 national programmes and 16 regional programmes (ROPs) for all 16 Polish regions. The largest and most important one is OP "Infrastructure and Environment", which includes investments to be financed from EU resources, with a value of EUR 27.9 billion (Figure 5.5); 71% of that amount or EUR 19.4 billion will be devoted to the transport sector (Figure 5.6). However, including the additional EUR 8.5 billion worth of

Figure 5.5. Distribution of EU resources among operational programmes, 2007-13[1]

As a percentage of total allocation



1. Total represents EUR 67.3 billion.

Source: Ministry of Regional Development.

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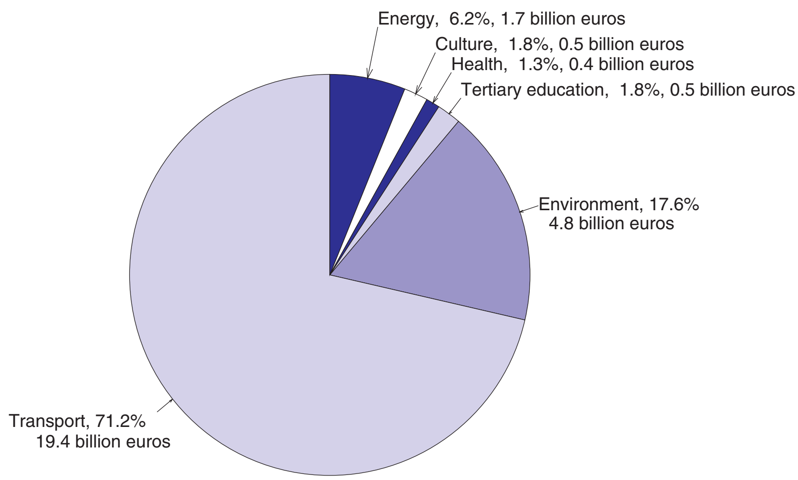
Box 5.2. **EU grants and transport development in Poland over the programming period 2007-13** *(cont.)*

Figure 5.6. **Allocation of EU resources to OP "Infrastructure and Environment", 2007-13**

As a percentage of total allocation



Source: Ministry of Regional Development.

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co-financing resources (public funds, private funds and EIB loans), some EUR 27.8 billion will be spent on different transport modes within the framework of this programme (Table 5.1). The most important amounts will be channelled to road infrastructure (51.8%), followed by railways (27.6%), urban transport (13.9%), seaports (2.6%), airports (2.4%), intermodal transport (0.8%), intelligent transport systems (0.6%) and finally inland waterways (0.3%).

However, the OP "Infrastructure and Environment" is not supposed to be the only source of funds allotted to the construction and modernisation of transport infrastructure. Out of the EUR 16.6 billion of EU grants supplying the 16 ROPs, EUR 4.4 billion will be earmarked for local/regional transport facilities, the biggest percentage going to roads (69.8%), followed by railways (13.3%), air (6.0%) and municipal (4.7%) transport, intelligent transport systems (2.5%), intermodal transport (1.5%), cycle tracks (1.3%) and an equal contribution for seaports and inland waterways (0.4% each). Finally, in addition to the OP "Infrastructure and Environment" and the ROPs, there are plans to allocate around EUR 0.6 billion of funds to regional roads within the framework of an operational programme aimed at the development of Eastern Poland.

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Box 5.2. **EU grants and transport development in Poland over the programming period 2007-13** *(cont.)*

Table 5.1. **Funding details of operational programme "Infrastructure and Environment", 2007-13**

EUR billions, per cent

	Overall		EU funds		Public funds		Private funds		EIB loans		Co-financing rate
	Amount	%	Amount	%	Amount	%	Amount	%	Amount	%	
Road transport	14.38	51.78	11.20	57.68	1.98	33.53	0.00	0.00	1.20	70.59	22.1
Rail transport	7.67	27.60	4.86	25.04	1.90	32.28	0.40	53.06	0.50	29.41	36.6
Sea transport	0.71	2.57	0.61	3.12	0.11	1.82	0.00	0.00	0.00	0.00	15.0
Air transport	0.67	2.40	0.40	2.08	0.02	0.36	0.24	32.19	0.00	0.00	39.5
Urban transport	3.86	13.91	2.01	10.37	1.85	31.36	0.00	0.00	0.00	0.00	47.9
Intermodal transport	0.22	0.80	0.11	0.57	0.00	0.00	0.11	14.76	0.00	0.00	50.0
Intelligent transport systems	0.16	0.59	0.14	0.72	0.02	0.42	0.00	0.00	0.00	0.00	15.0
Inland waterways	0.10	0.34	0.08	0.42	0.01	0.24	0.00	0.00	0.00	0.00	15.0
Total	**27.8**	**100.0**	**19.4**	**100.0**	**5.9**	**100.0**	**0.8**	**100.0**	**1.7**	**100.0**	**30.1**

Source: Ministry of Transport.

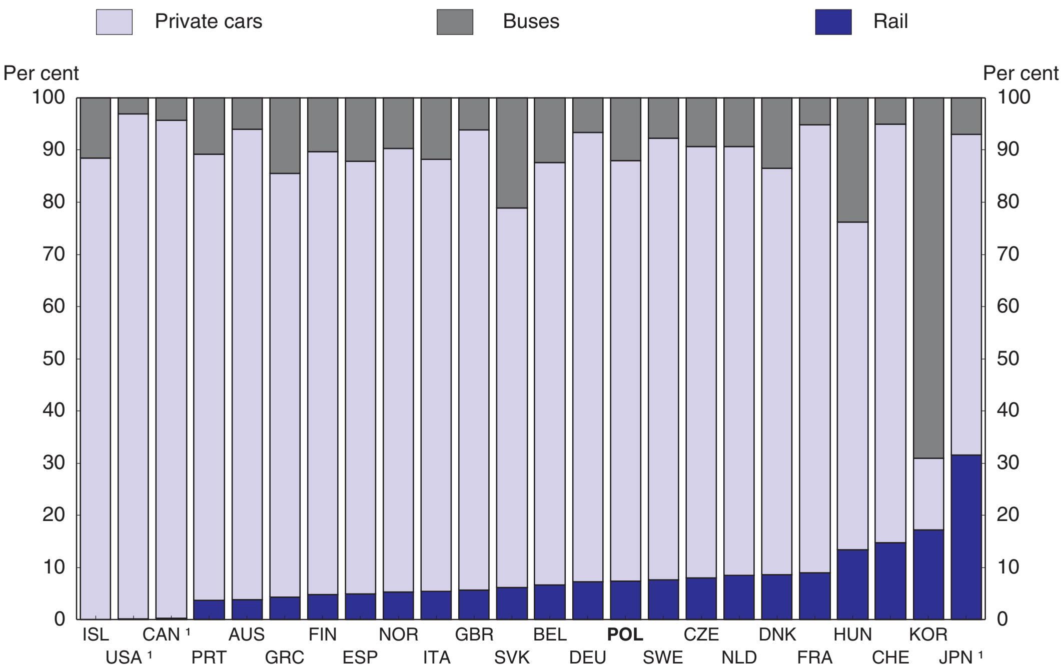
To put the scale of EU funds that are going to be spent into perspective, it should be recalled that over the previous programming period (2004-06), Poland was granted EUR 4 billion of EU cohesion and structural funds for the transport sector (EUR 1.3 billion per year), while in the next programming period it will have to absorb EUR 24.4 billion, which corresponds to nearly EUR 3.5 billion per year.

to the TEN-T network. Moreover, on top of public funds linked to co-financing, the road sector will also benefit from an additional EUR 10 billion support from the budget linked to the construction programme of national roads in 2008-12 (see Box 5.1). This might raise concerns from the sustainability and environmental points of view. At any rate, the allocation is at variance with the document "State transport policy 2006-25", which stresses the need to achieve a balanced development of transport infrastructure in Poland, notably by promoting and enhancing the competitiveness of other transport modes as compared to the road network (Ministry of Infrastructure, 2005). As a result, it appears that the improvement of the road network has been assigned a high priority, while efforts to upgrade other means of transport are being delayed.

The 2001 EU White Paper on Transport stressed the importance of shifting economic activity from roads to rail in building a sustainable transportation system. This recommendation appears all the more relevant, given the very high current price of oil. Relative to other OECD countries, the use of public transportation in Poland remains well above levels reached in Western European countries. Moreover, that of rail is also not marginal, in particular in the area of freight transport (Figures 5.7 and 5.8). Yet there is nevertheless scope for further improvements, in view of the importance of coal. Although railways might sometimes exhibit lower price competitiveness as compared with road transport, short sea shipping can be viewed as an efficient alternative to land transportation, allowing for both higher fuel economy and lower emissions of harmful pollutants (Mulligan and Lombardo, 2006).[11] The development of inland waterways could

Figure 5.7. **Passenger transport in 2005**

As a percentage of total expressed in billion passenger-kilometres



1. 2003 for Canada, 2004 for United States and Japan.

Source: OECD (2007), *OECD in Figures*.

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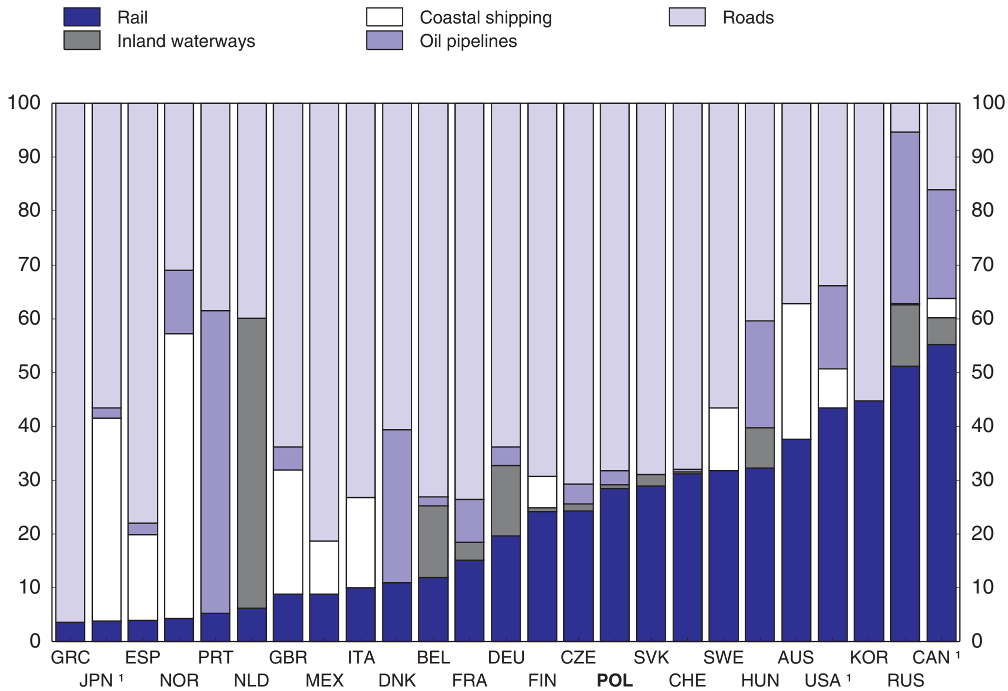
yield similar gains, provided that certain conditions about the structure and organisation of the sector are met (ECMT, 2002). Poland is the EU's third-largest carbon dioxide producer, as it relies on coal to generate almost all of its electricity, while at the same time it has to meet the challenge of complying with EU environmental laws related to air quality and the reduction of greenhouse gas emissions (GHGs). In 2007, the EU Commission requested a 26.7% cut in CO_2 emissions quotas as compared with what was requested by Poland for the period 2008-12, thus spurring concern over possible negative consequence on GDP growth and the development of the construction sector. In such a context, a heavily overbuilt road sector would only reinforce environmental constraints. For instance, 12% of EU GHGs emissions are due to fuel consumed by passenger cars and, even if the EU as a whole diminished its GHG production by 5% between 1990 and 2004, there was a 26% jump in CO_2 from road transport linked to traffic and car-size increases over the same period (European Commission, 2007). However, it cannot be ruled out that a significant improvement in vehicle technology will occur in the years to come. Overall, there is a need to strike the right balance between closing the infrastructure gap and promoting sustainable transport modes. Therefore, to the extent that there is still scope for a more flexible modal allocation of public and EU funds until 2015, a somewhat higher share could be attributed to railways, short sea shipping, inland waterways and intermodal facilities.

When designing the distribution of EU funds in the transport sector, the authorities have based their decisions on conclusions derived from large-scale consultations involving local authorities and various economic agents, but also on specific considerations such as the need to provide efficient connections between cities hosting the European soccer

Figure 5.8. **Freight transport in 2005**

As a percentage of the total freight expressed in billion tonne-kilometres



1. 2003 for Canada, 2004 for United States and Japan.

Source: OECD (2007), *OECD in Figures*.

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championships in 2012 or, more generally, the willingness to improve accessibility and reduce travel time between all 16 regional capitals. Cost-benefit analysis for public investment is performed by many OECD countries (see, for instance, Atkinson and van den Noord, 2001). So far, in the main operational programme "Infrastructure and Environment", projected investments have not been subject to cost-benefit analysis. However, it is planned that such analysis should be part of the feasibility study in the process of application. Within the programme, a baseline list of 82 infrastructure projects has been established, followed by an additional 45 infrastructure projects from a "reserve list", the main decision-making criterion for effective implementation being the availability of relevant documentation on time. This might indicate that the foreseen objective is quantitative rather than qualitative or, put differently, that the principal goal is to spend all available funds, rather than allocate them efficiently. This is confirmed by the lack of performance indicators to monitor the progress made in the implementation of different projects and the fact that the only measure established on a regular basis is the degree of absorption of funds.

There is also little evidence that, when elaborating the EU- and non-EU-related investment projects, inter-relationships among different transport modes have been properly taken into account. Although separated development strategies have been prepared for the main transport modes in 2007, a comprehensive plan taking into account, among others, substitutabilities and complementarities in the transport sector has not been released. The preparation of consistent medium- and long-term frameworks was undertaken but has been recently interrupted (only getting an approval of the board of the

Ministry of Infrastructure), as in the cases of documents "Strategy for transport development 2007–13" and the "National transport policy 2007-20". A detailed and publicly available strategy should address long-term prospects in the transport sector, provide an in-depth analysis of interdependencies among different transport modes depending on underlying cost and revenue scenarios, and, finally, include on that basis cost-benefit analysis of each project. That would provide an efficient base for investment selection and the allocation of scarce resources. Last but not least, it would also have the advantage of providing an across-the-board plan that would be free of political considerations.

Insufficient co-ordination between different levels of government in formulating investment plans may also lead to excessive airport infrastructure. In view of the growing tendency to decentralise air traffic, the central authorities have decided to concentrate EU resources from the OP "Infrastructure and Environment" on the seven regional airports and the central airport in Warsaw, all belonging to the TEN-T network. However, many other local authorities are eager to expand their own airport facilities and, as for instance in the case of Obice (Gawrychowski, 2007), bargain for public and/or EU money from regional operating programmes, even though such infrastructure would not have national importance and are not warranted by distance and/or population density indicators. Furthermore, given the strong demand prospects and limited supply capacities of extending the Warsaw airport, there are plans to build a second central airport in Poland. Recently, a Spanish consulting firm (INECO-SENER) found that the most profitable location for the new facility would be at some point between Warsaw and Łódź, but it also warned that such a project would threaten the activity of several regional airports (Kozińska, 2007). Overall, in order to avoid resource misallocation, it is important to improve co-ordination between different levels of government in designing airport infrastructure investment plans.

Absorbing the EU funds efficiently

The evidence for the EU programming period 2004-06 reveals difficulties in absorbing EU funds in the transport sector, even though the absorption capacity has increased more recently (see Chapter 1). But the obvious challenge for the near future is to speed up this process. *First* of all, in accordance with the N+2 rule, there is a deadline in spending EU grants, which is the end of 2008 for the programming period 2004-06. *Second*, the amounts that will have to be spent over the new 2007-13 programming period will be much more substantial (see Box 5.2). Therefore, remaining difficulties need to be resolved rapidly.

In order to improve absorption performance, there are plans to strengthen the administrative capacity and human-resource base of relevant government agencies. A new institution – the Centre for European Transport Projects – is going to manage the projects, while the main managers of the funds (*i.e. GDDKiA* for roads and *PKP* for railways) will devote approximately 1 000 and 800 new staff, respectively, to the programme implementation phase. However, regardless of the needed quantitative reinforcement, some public institutions essential for the implementation of different projects suffer from important staff turnover, an issue all the more acute that the labour market is very tight. Therefore, it appears necessary to provide competitive base salaries as well as link promotion to performance.

With the strong economic upturn and the boom in the housing market the cost of many building materials has soared over the past year, partly due also to global increases in the prices of many raw materials. Growing labour shortages notably due to sustained

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emigration (for instance, because of job opportunities related to 2012 London Olympic Games) have also led to a jump in payroll costs. As a consequence of the tightening of the construction and labour markets, bids have often outstripped the allocated budgets for the public-works contracts, thus requiring the cancellation of many public tenders. One possibility to circumvent the problem would be to have recourse to cheaper foreign contractors and their workforce (for instance, Chinese firms). The entry of foreign workers from Russia, Ukraine and Belarus into Poland was authorised in July 2007 and further extended in January 2008. Even if administrative charges for obtaining work permits were significantly lowered, existing barriers were lifted only partially, as current labour legislation does not allow the employment period for temporary migrants to exceed six months once a year. Additional steps for further easing access to the labour market would include its wider opening to foreign workers from other than neighbouring countries in order to reduce wage and price pressures and thus the growth of construction costs. The other condition is to keep a high vigilance over possible collusive behaviour among the main suppliers of building materials. Indeed, recently the Office of Competition and Consumer Protection (UOKiK) has expressed concern and started preliminary investigations of possible illegal price arrangements among several market participants. Finally, accelerating the investment programme because of the European soccer championships in 2012 reduces the bargaining position of the authorities in contracting with the private sector and may have adverse consequences for their ability to contain cost escalation in large infrastructure projects.[12] Because of this, it is of critical importance that the organisation of tenders be as competitive as possible.

The fact that transfers of EU funds are made in euros must also not be overlooked. However, no extra funds have been provisioned for the risks of exchange-rate appreciation, which would imply less EU structural cohesion funds in domestic currency, even though appreciation leads to lower import prices. Investment costs of many projects have been calculated with an assumed nominal exchange rate of 3.9 PLN/EUR, while the zloty has soared beyond 3.5 PLN/EUR. For the agreed allocation of EUR 67.3 billion, this amounts to a loss of zloty worth EUR 7.7 billion. Given the expected and known amounts to be transferred in the future, adopting a hedging strategy against currency exposure would help to safeguard the investment plans and preserve the funding effectively available for projects.

A number of additional obstacles also threaten the realisation of investments that the Ministry of Infrastructure is aware of and is working to overcome. A serious impediment to infrastructure development is the burdensome legal environment, which makes for the investment preparation process being longer than actual construction. The public procurement law – in the formulation of which the Public Procurement Office (*Urząd Zamówień Publicznych*: UZP) plays a leading role – is an overriding concern both for bidders, as it is overly bureaucratic, and for public entities, as it has to be used at each single stage of the investment process, thus leading to many fragmented tasks (environmental impact assessments, design, construction, maintenance works, etc.). The law also allows for an over-developed system of tender appeals, many of which are groundless and create an additional source of delay, while there are no penalties for an excessive use of this mechanism. However, recently the Council of Ministers has approved a draft bill on several amendments to public procurement regulations. The reform is focused on streamlining certain procedures, notably those that often led to cancelling tenders and rejecting bids that included minor mistakes. The issuance of building permits is subject to many authorisations at the level of voivodeships and central government (Ministries of Finance, Infrastructure, Environment and Regional Development) and would thus benefit from simplification. Tender appeals as well as failures to get relevant permits also postpone maintenance work. Co-ordination problems between different Ministries (Finance, Infrastructure, Regional Development) and implementing authorities in the process of channelling EU funds is yet another issue that calls for improvement (see, for instance, Mirończuk and Stefańska, 2007). Finally, other regulations, pertaining to environmental impact assessments and archaeological research stall the investment process and should be streamlined.

Many investment plans that have been prepared well before EU accession now have to be supplemented by additional requirements, such as consultations with environmental protection organisations, which may lead to a reconsideration of earlier decisions. Environmental aspects related to EU policies appear to be a huge challenge, in particular with regard to the Natura 2000 ecological network aimed at protecting the best wildlife areas. When it joined the European Union in 2004, Poland committed itself to comply with EU environmental legislation regarding the protection of rare species of birds and habitats for unique animals and plants. The network has been extended over 19% of Polish territory, but it conflicts with many old investment plans that the national authorities would wish to implement nevertheless. As a result, there may be as many as 100 potential conflict zones, affecting investment activity for all transport modes. Construction work in the protected areas raises the strong opposition of the EU authorities and may end up in the European Court of Justice, as illustrated by the case of a ring-road project through the Rospuda river valley in the country's northeast (European Parliament, 2007).[13] Therefore, as thorny as it might be in some cases, it appears critical not to infringe on EU legislation and define alternative layouts that will bypass protected areas. Risking heavy penalties and, possibly, losing access to EU grants is not a viable option.

Finally, there are growing concerns among Polish policy-makers and civil society whether tight budget constraints will allow an adequate provision of public funds for co-financing all EU-related projects and meeting other infrastructure needs. In this respect, the introduction of multi-year budgeting systems would provide a useful framework for addressing these issues and make clear the relevant trade-offs. A second complementary option, would be to opt for a higher financial involvement of the private sector in the process of building and upgrading infrastructure in Poland, a role that is rather limited in the present design of the OP "Infrastructure and Environment" (Box 4.2 and Table 5.2).

Financing of infrastructure building and/or operation through PPPs

There has been a dynamic development of public-private partnerships (PPPs) over the last 20 years in Europe (Table 5.2 and Figure 5.9), as the phenomenon has gathered steam in the United Kingdom and has attracted interest in other countries (Blanc-Brude *et al.*, 2007). However, Poland's share has been minimal. Elsewhere, PPPs are used in many activities that have public-good features, such as transportation infrastructure (roads, tunnels, bridges, rail, air and sea ports), utilities (electricity supply, sewage and waste disposal), not to mention schools, hospitals and prisons. Although PPPs are an evolving concept, they can be broadly defined as contractual agreements between the public and private sectors aiming at supplying infrastructure or a service derived from it that has traditionally been provided by the public sector (European Commission, 2003). The underlying idea is that individual interests and objectives of both parties can be brought

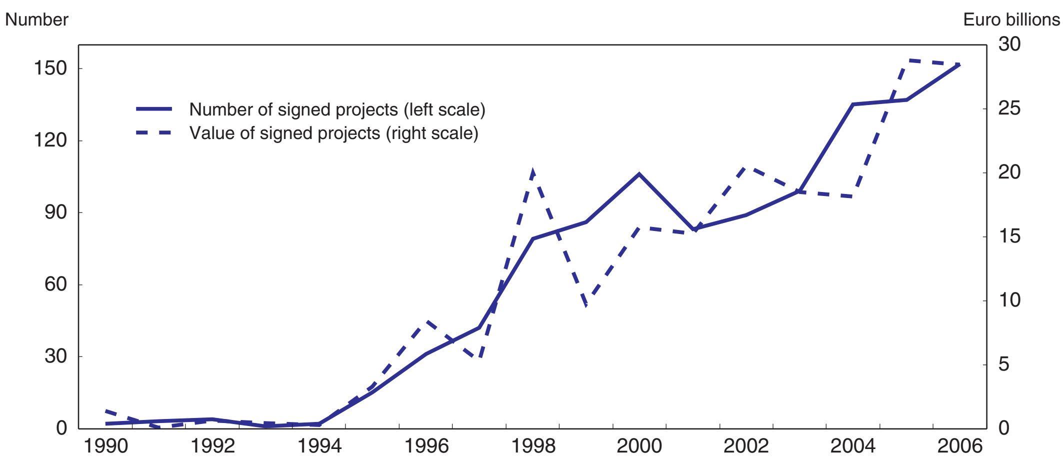
Table 5.2. **Countries' percentage shares of European PPPs, 1990-2006**

	% of value of signed projects	% of number of signed projects
United Kingdom	57.7	76.2
Spain	12.8	8.6
Portugal	5.8	2.3
France	3.9	2.8
Greece	3.9	0.6
Italy	3.7	2.1
Germany	2.9	2.4
Hungary	2.7	0.8
Netherlands	1.7	1.0
Belgium	1.1	0.7
Poland	**0.9**	**0.4**
Ireland	0.7	0.7
Austria	0.6	0.2
Cyprus[1, 2]	0.4	0.3
Czech Republic	0.4	0.2
Finland	0.2	0.2
Sweden	0.2	0.1
Malta	0.1	0.1
Romania	0.1	0.3
Latvia	0.0	0.1
Slovak Republic	0.0	0.1
Slovenia	0.0	0.1
Total	**100.0**	**100.0**

1. By Turkey: The information in this document with reference to Cyprus relates to the southern part of the Island. There is no single authority representing both Turkish and Greek Cypriot people on the Island. Turkey recognizes the Turkish Republic of Northern Cyprus (TRNC). Until a lasting and equitable solution is found within the context of United Nations, Turkey shall preserve its position concerning the Cyprus issue.
2. By all the European Union Member States of the OECD and the European Commission: The Republic of Cyprus is recognised by all members of the United Nations with the exception of Turkey. The information in this document relates to the area under the effective control of the Government of the Republic of Cyprus.

Source: European Investment Bank (2007), *Economic and Financial Report 2007/03*, "Public-private partnerships in Europe: An update".

Figure 5.9. **New flows of European public-private partnerships**



Source: European Investment Bank (2007), *Economic and Financial Report 2007/03*, "Public-private partnerships in Europe: An update".

StatLink http://dx.doi.org/10.1787/346385585505

together as both may have certain advantages relative to each other in carrying out specific tasks. The European Commission (2003) has put forward four principal roles for the private sector in PPP schemes, based on the provision of: *i*) additional capital, *ii*) alternative management and implementation skills, *iii*) value added to the consumer and the public at large and *iv*) better identification of needs and optimal use of resources. The OECD has also recently established a set of 24 principles for private-sector participation in infrastructure projects (OECD, 2007b).

PPPs can yield sizeable advantages by allowing an efficient supply of services that were previously supplied solely by the public sector. If properly designed, such partnerships between private and public entities may play a useful role in enhancing a proper cost-benefit analysis of projects, bringing innovation in design and financing structures, reducing the risk of cost overruns and delays in delivery of assets (that tend to be less frequent than under traditional procurement, see Grimsey and Lewis (2007), providing good quality infrastructures with optimised life-cycle maintenance costs (due to the bundling of construction and operation phases) and improving operational and commercial performance. However, the key element for obtaining better value for money as compared with traditional procurement is the risk-sharing scheme between private and public partners. Although each project is different and needs individual risk assessment and allocation, several general principles can be drawn from international experience of PPP projects related to road transport (Box 5.3).

Box 5.3. **The allocation of risks in PPP transport projects: lessons from international experience**

In order for PPPs to yield additional value compared with traditional public procurement and thus provide good value for money, the key element is an optimal sharing of different types of risks between the public and private sectors. The general rule is that each risk should be allocated to the party best able to manage it. However, the whole spectrum of risks may be complex and difficult both to identify *ex ante*, given the project's lifetime (often up to 30 years or more), and to distribute appropriately (Ng and Loosemore, 2007). As a result, disputes over risk allocation may emerge, with, on the one hand, the private sector seeking to minimise uncertainty and sensitivity of its returns by bargaining with the public sector for more guarantees and, on the other hand, the public sector trying to reduce the guarantees in order to shelter taxpayers from excessive costs (Medda, 2007). Risks can be broadly classified in several categories: planning, design, construction, changes in demand, regulatory, financial and macroeconomic. Although each project is different and needs individual risk allocation, international experience yields useful broad empirical insights as regards the best risk-sharing practices between private and public entities (Sadka, 2006; Irwin, 2007).

- Design and construction risks should be borne by the private sector. Bundling construction and operation offers an incentive to the private partner to make appropriate upfront payments in order to achieve lower life-cycle maintenance costs, and thus to internalise externalities between the two phases of the project (Blanc-Brude *et al.*, 2006). However, in doing so the firm may have a tendency to under-invest in quality-related characteristics of the facility. Therefore, the public partner should specify the quality standards of the service to be provided during the concession and at the terminal date. Finally, including the building period in the length of overall concession provides an incentive for the private partner to minimise construction delays in order to benefit from collected revenues as soon as practical.

Box 5.3. **The allocation of risks in PPP transport projects: lessons from international experience** *(cont.)*

- Risk-sharing with respect to future demand between private and public entities is a key element of the partnership as it determines the financial viability of the investment project. Some risks are exogenous to both partners, such as fuel costs or the rate of growth of GDP per capita. Others are endogenous to and should fall within the responsibility of the government. The scale of traffic on a toll motorway is linked to available substitutes provided and/or subsidised by the public sector (for instance, through a fast rail service), development of access (complementary) and competing (substitute) roads in a government-planned network or the scale of a price subsidy determined for socio-economic or political considerations. But there are also risks that are endogenous to the private partner, such as advertising and marketing expenditures, the provision of efficient breakdown services, the availability and quality of rest areas along the road or the level of tolls fixed within agreed boundaries in the contract. However, if the government guarantees fixed revenues to the concessionaire through shadow tolls according to a predefined traffic volume, then it removes any incentive to the operator to incur demand-enhancing spending. Opportunistic behaviour can even occur, because by lowering a high volume of traffic the concessionaire can save on maintenance costs that otherwise would have to be incurred. Therefore, a revenue-sharing mechanism should imply that part of the risk in demand is transferred to the private partner. This can be achieved by fixing a certain level of demand as a benchmark with the public partner paying (receiving) a fraction $\alpha(\beta)$ of the deficit (surplus) if actual demand is lower (higher) relative to the benchmark.* Yet, in the case of a toll road it is more efficient if the government provides a guarantee of demand in terms of quantity, rather than revenue, as in the former case the private partner has a clear incentive to improve the collection of tolls. An alternative way of guaranteeing revenue that does not imply any fiscal commitment for the public partner is to endogenise the terminal date of the concession by ending it once the present value of revenues reaches a certain threshold. However, in such an arrangement the incentive for the private partner to boost demand seems lower, since it accelerates the terminal date of the contract, even though it allows him to save on future maintenance costs.
- Another aspect of risk sharing relates to macroeconomic risks. Governments should not be inclined to bear them, even though they can influence some of them to a certain extent as in the case of the level of interest rates, inflation or exchange-rate fluctuations. Economy-wide policy cannot be shaped by considerations linked to a particular project, though the public partner can authorise the concessionaire to shift inflation, interest-rate and exchange-rate risks to road users, by agreeing on an indexation of the toll. If a guarantee against exchange-rate risk is nevertheless provided for a foreign-currency debt issue, the public partner should control the scale of borrowing and hence of the exposure, otherwise the firm could overly increase the sensitivity of the project's value to that risk factor. By the same token, because of moral-hazard problems public authorities should not bear the risk of the firm's insolvency by providing unconditional guarantees to the concessionaire on its debt.
- Risks related to planning and changes in the legal environment should be borne by the public sector, as they are exogenous to the private partner. Thus, the government should compensate the concessionaire (or alternatively allow it to levy higher user charges) for any modifications in design, environmental or safety regulations that are made subsequent to the signature of the contract.

* Parameters α and β are not necessarily equal.

With tight public budget constraints, PPPs can be viewed as an appealing way to mobilise additional private funds and as a way to speed up the investment process, especially in countries lacking external sources of income as thus more open to foreign private capital (Hammami *et al.*, 2006). However, the literature also emphasises that the attractiveness of PPPs should be analysed in terms of efficiency in delivery of projects, rather than as a tool to circumvent national and international budget rules. Indeed, PPPs provide a temptation to disguise fiscal problems and realise projects with poor value for money (as compared with conventional contractual undertakings), because of the possibility of an off-balance-sheet recording of the investment.[14] Overall, PPPs should be seen as a possibility to create fiscal space through efficiency gains and not by being moved off budget.

Since the start of the transition process, it has been widely believed in Poland that PPP schemes would be an important means of bridging the gap in transport investments. Indeed, the lack of an efficient transportation infrastructure and its adverse impact on Poland's economic development had been recognised already at the beginning of the transition. In particular, it was expected that PPPs would bring an important contribution in the extension and operation of the motorway network. However, the feeling that private financial means were lacking delayed real action for several years. The adoption by the government of the Motorway Construction Programme in 1993 and by the Parliament of the Act on Toll Motorways in October 1994 allowed the use of licensing arrangements for the construction of motorways. At the same time, the Agency for the Construction and Exploitation of Motorways (ABiEA) was created, with the primary purpose of preparing the early stages of investments (environmental studies, land acquisition, etc.), organising tenders and granting concessions. In the mid-1990s, it was expected that private investors would build the lion's share of the 2 600 km of motorways planned for 2010, with financing, construction and maintenance costs recovered exclusively from toll charges. However, in early 2008, out of the 699 km of existing motorways in Poland as little as 174 km were built and operated under such arrangements and another 61 km upgraded and operated alone. More recently, two other stretches of 276 km have been tendered (181 km of A1 motorway and 95 km of A2 motorway) and are expected to be built by 2011 (see Box 5.1).

Many mistakes, omissions and other hindrances have contributed to a weak performance of the PPP regime in Poland in the 1990s, among them (American Chamber of Commerce in Poland, 2007):

- Delay in clarifying the status of the ABiEA agency and the lack of experience among administrative officials;
- Low traffic-level forecasts and insufficient government guarantees for companies financing motorway projects, which have deterred many investors and have led to a dramatic reduction in the scope of some projects;
- Because of the long-term nature of PPP contracts, a related tendency by successive governments to review legal and financial details of past arrangements.

In mid-2003, it was decided to render the legislative system more favourable by preparing a special PPP law. The aim was to stimulate public-sector investments with the participation of private entities in sectors other than roads and to allow for a reduction in the risk of PPP undertakings that prevailed under the previous legal framework. The new PPP Law was passed in July 2005, complemented by secondary legislation (decrees) released one year later. However, it resulted in a very complicated and rigid framework,

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including extensive steps to be followed by public entities to gauge whether value for money is being provided. Virtually no contracts have been signed under the present PPP act, and there is a wide consensus among public officials and private-sector participants that the current regulations are inefficient. As a result, the existing PPP Law needs to be streamlined quickly so as to promote efficient PPP schemes in the transport sector. It is also necessary to ensure a strong competition at the bidding stage and keep flexible tender rules at the same time. In the latter case, one option would be to specify the output to be achieved, while leaving to the private sector the opportunity to come up with its own solutions regarding the technology to be used and design of the infrastructure. Such a solution could not only stimulate more private operators to submit a bid, but also contribute in setting up a framework for innovative and possibly efficient offers to be proposed.

Notwithstanding the lack of a clear legal framework, a strong political commitment is a critical factor for PPPs. Although, according to the Ministry of Transport's plan released in July 2007, 443 km out of 1 213 km of new motorways could be built under PPP schemes in the period 2007-15, there were nevertheless signs that PPP projects were not a major priority of the government ruling between 2005-07, with some officials expressing scepticism as to the successful participation of the private sector in motorway development in Poland (INECO, 2006). More generally, creating a business-friendly climate for private entrepreneurship, encouraging regional governments and local authorities to develop business relationships with the private sector and breaking with the sentiment that they offer opportunities for corruption appear to be vital conditions for successful PPP development in Poland.

Long-duration PPPs pre-commit future generations and governments. Therefore, the lack of political consensus across the political spectrum and consistency is yet another issue that might deter private national and international investors from participating in PPP projects in Poland and possibly lead to important fiscal costs as revealed by the dispute over the construction of a section of the planned A1 motorway.

Because EU funds are not sufficient to bridge the entire gap in the transportation infrastructure capital stock, many investments are already planned to be financed with an exclusive recourse to public resources. Beyond the EU budgetary planning period 2007-13, there will remain significant projects that will have to be implemented in subsequent years. The investment effort is already projected to be pursued beyond 2013, with plans to build a second major airport, develop high-speed rail connections and extend high-capacity roads to more than 6 000 km by 2020. Moreover, as the infrastructure gap narrows, substantial amounts will be necessary to finance growing maintenance costs. However, beyond 2015, it is likely that per capita GDP will exceed 75% of the EU average, and several regions in Poland may lose their eligibility for EU funds. Furthermore, poorer regions – located in Romania and Bulgaria, which have recently joined the European Union – will probably be considered as having priority over the next programming period. In such circumstances, Polish authorities will have to find the needed resources to pursue efforts in infrastructure provision. More generally, international trends suggest that expanding access to private-sector capital and expertise should play a critical role in bridging the infrastructure gap in many OECD countries in the coming decades (OECD, 2007c). In this respect, PPPs facilitate private-sector involvement in the supply of public infrastructure-related services. Recent findings suggest that factors such as macroeconomic stability and market conditions (including size of the market and customers' purchasing power) are crucial determinants for promoting PPPs (Hammami *et al.*, 2006). From this angle, Poland's past problematic experience with PPPs (in particular, the lack of interest on behalf of the private sector) in the early stages of transition should be put into perspective. Factors such as the end of disinflation, robust growth prospects, rapid catching-up in per capita GDP levels, membership in the European Union and prospects for integration into the EMU create a much more favourable framework for the development of PPPs. Therefore, it appears advisable that Poland continues to expand its expertise in this area by considering the possibility of pursuing the development of PPP projects for the profitable stretches of high-capacity roads in the most developed regions of the country, but also by envisaging this option for other transport modes (railroads, airports and sea ports).

It is true that PPPs are often a complex and sophisticated mechanisms and involve higher transactions costs. Yet, as the example of the United Kingdom reveals, economies of scale in the learning-by-doing process of both public and private partners are possible (Table 5.2). Such arrangements have to be considered as an additional policy option, with no bias in favour of any particular procurement method. Achieving better value for money should be a key criterion and the main driving force to be considered in the decision process. In this respect, the creation of a central unit as in Ireland or the United Kingdom with a focused and dedicated team responsible for the oversight and quality control of cost-benefit analyses, could deliver important value added in a successful implementation of PPP projects and development of best practices. It would also have the advantage of regrouping PPP knowledge that is now spread out among different ministries and units. Because PPPs are not immediately recorded in deficits and debt levels but may create future certain or contingent liabilities for governments (depending on the type of risk-sharing arrangements), such a unit could enhance the transparency of public finances by quantifying and publishing the scale of expected future budget commitments and, for this reason, could be located within the Ministry of Finance. Finally, public funding of such a unit would not only follow international standards in this area, but also provide a more appealing framework for a more active involvement of public administration in PPP projects by breaking with the legacy of suspicion of corrupt behaviour at the meeting point between the private and public sectors. In this respect, given the local authorities' general mistrust of private partners, the creation of such a unit within the private sector only would probably fail to fulfil this objective efficiently.

Although the latest available national plans do not foresee this possibility, the authorities could nevertheless consider the opportunity of combining EU grants and private funds within PPPs for major infrastructural projects. Such an option has been successfully exploited by several EU countries, for instance in Portugal (Vasco de Gama Bridge) or Greece (Athens airport) and can constitute an important means to increase the absorption of EU funds. Several different PPP-grant blending models have been designed, with the advantage of increasing affordability by keeping user charges or unitary payments from the public authority at a low level (Goldsmith, 2008). However, enhanced public-sector capacity is needed for the implementation of such projects, all the more because under the latest EU legal framework, which recognises and encourages the potential role of PPPs, certain regulations are complex to interpret. In this respect, the Polish authorities could receive assistance through several joint initiatives related to PPPs (JASPERS and JESSICA[15]) recently launched by several international institutions, including the European Commission (DG REGIO) and the EIB and/or the EBRD.

Charging for infrastructure access

Poland faces an important challenge in establishing an efficient toll system. The Motorway Construction Programme adopted in 1993 and the Act on Toll Motorways voted by the Parliament in 1994 launched the possibility of direct charging for road infrastructure access. Currently, there are only three stretches of motorways (A2 with 135.5 km, A4 with 61 km and A1 with 25 km) with individual charging systems. Tariffs are related to the costs of construction and maintenance and increase with the size of vehicle. Although there seems to be a quite coherent basis for a tolling system in Poland, several issues remain.

Toll roads have a low acceptability among motorway users. Polish users are probably more acquainted with toll-free, high-quality motorways in Germany and the United Kingdom than their tolled counterparts in France, Italy and Spain. Moreover, the fact that before transition the State provided and funded many public services and utilities with no direct charges is certainly an additional factor explaining this unpopularity. This sentiment is reinforced when considering that out of a total of 699 km of motorways, tolls are charged on only around 220 km (only 32% of the network). Past difficulties in finding concessionaires for operation and collection of charges on other stretches account for this, but eroding political consensus over toll roads has probably exacerbated underlying problems. For instance, in 2001 the newly elected government decided on a strategy based on the construction of toll-free motorways, financed from annual license fees, but the bill was never passed by the Parliament. Following the 2005 elections, the new government was rather reluctant to extend the road network through toll motorways linked to licensing schemes, considering the level of collected user charges to be a sensitive social issue.

Another important impediment to a wider extension of toll roads in Poland is the general perception of high tax pressure, especially as a number of existing taxes are supposed to finance road development. This is the stated purpose of the "excise fuel tax" and the "fuel surcharge" (apart from VAT). The former tax generates a great deal of revenue (about EUR 3.75 billion in 2005 or 8.3% of total budget revenues and 1.5% of GDP), though only 30% of that is earmarked for roads and as little as 12% for national roads. These percentages, established in 1997, were supposed to be only the minimum allocations devoted to the road sector, but, in fact, the invested amounts have never been at significantly higher levels. According to the Act on Financing of Land Transport Infrastructure of 16 December 2005, 18% of the annual overall income from the excise duty on fuel is to be used to finance road and railway national infrastructure investments, with about 65% of income allocated to road infrastructure projects and the remaining 35% spent on railways.

Users' willingness to avoid toll routes by choosing toll-free alternatives causes an accelerated deterioration of their surface as well as noise, safety and pollution externalities for inhabitants in neighbouring areas. This issue was particularly thorny for the heavy goods vehicles that were also subject to a license fee, thus subjecting them to a type of double taxation when using a toll motorway. This led to an exemption from tolls to heavy goods vehicles as from September 2005, with the concessionaires being compensated for the lost income by shadow payments from the government. Although this decision solved the problem, it has brought into question the determination of the government to generalise toll motorways. However, due to rapidly growing transfers to concessionaires (representing 73.8% of revenues from license fees in 2006 and estimated to outpace them in 2009[16]) as well as to the necessity to comply with EU legislation, the authorities plan to cancel this lump-sum tax as from mid-2008. Instead, the objective is to introduce tolls for trucks over 3.5 tonnes on the motorway and expressway network in accordance with the "user pays" principle and possibly an additional externality-corrective component to internalise the cost of congestion.

Indeed, despite difficulties in introducing toll roads in Poland, there is a growing encouragement from the European Conference of Ministers of Transport (ECMT, 2003 and 2006) and the European Commission that a sustainable transport policy should be based on a fair infrastructure charging system, with users gradually assuming the cost of their activities on the basis of "user pays" and "polluter pays" principles. Charging for use is also important from the point of view of rebalancing the modal split. As a result, since the 2006 amendment of the EU Directive on commercial freight traffic on motorways, user charges can be applied on roads, including the trans-European network and roads in mountainous regions, with possible differentiation of levied tolls depending on the vehicle's emission category, the level of damage caused to roads as well as the place, time and amount of congestion. This EU regulation, which should be transposed into law by Member States by June 2008, applies to trucks weighing over 12 tonnes and is going to be extended to vehicles over 3.5 tonnes by 2012. However, as mentioned above, Poland will apply it to vehicles over 3.5 tonnes already by mid-2008. Even though it does not concern passenger car traffic, it clearly underlies the necessity to link the wear and tear on roads and environmental pollution to the corresponding charges. An additional EU requirement is the creation of an integrated electronic toll road system in Europe for the collection of all types of road fees on the European road network. Therefore, the collection of user charges in Poland for vehicles weighing over 3.5 tonnes is projected to be made through an electronic system. However, given these elements, the Polish authorities could go one step further and consider the introduction of tolls for passenger cars, not only on all existing and future motorways, which has been allowed since 2002, but also on expressways. This would also have the benefit of achieving a better balance between road transport and other transport modes. Moreover, efficiency gains could stem from the implementation of an electronic toll system also for light vehicles, with the benefit of speeding up traffic as compared with traditional toll booths.

Several factors should contribute to a wider acceptance of toll roads in the future in Poland. The continuation of the catching-up process along with rising GDP per capita levels should render the prices more affordable, but also increase the willingness to pay due to a higher marginal value of time. Further extension of the motorway and expressway network, allowing for safe and high-speed connections between main economic centres will probably iron out the heterogeneity of the current road system composed of stretches of tolled and non-tolled routes and thus increase the demand for the former. Moreover, growing congestion on other roads should boost demand for tolled alternatives, but the users need to perceive the improved quality compared to untolled roads. The remaining question is what the optimal level of tolls should be. According to the Ministry of Transport estimates, the maximum "socially acceptable" thresholds are thought to be PLN/km 0.2 (EUR 0.056) for passenger cars and PLN/km 0.46 (EUR 0.128) for trucks. The maximum projected authorised level by the Ministry for the heaviest vehicles is PLN/km 2.5 (EUR 0.694) on motorways and should amount to 80% of that price on expressways. Whatever the final level of user charges ultimately implemented, it is important that it reflects several elements, among which the scale of involvement of EU funds in network extension, a small earmarking of collected taxes on road development and the necessity to continue infrastructure investment efforts beyond 2015. Because of that, it appears essential that the effective level of collected tolls reflects at least maintenance, operation and environmental costs along with an element of Pigouvian taxation for congestion as an effective transport demand-management instrument. As to the stretches built by private partners under PPPs, if the objective of the government is to keep levied tolls at a low level without jeopardising the profitability of the projects, available options include a lengthening of the licensing period or a buyback of the facility by the public partner at the end of the concession.

Box 5.4. **Main recommendations on transport infrastructure policies**

Investment decisions

- Elaborate and publish a precise and comprehensive top-down strategy for the transport sector, addressing long-term prospects and interrelations among projects, based on cost-benefit analysis.
- To the extent that there remains scope for any re-allocation of total available funds, try to achieve a better balance between the need to develop the road network and other more environmentally friendly modes (railways, short sea shipping, inland waterways and intermodal facilities).
- Streamline the law on PPPs, pursue efforts to develop PPPs by creating a central public unit responsible for the oversight and quality control of cost-benefit analyses and quantifying future budget commitments; consider the option of combining EU grants and private funds within PPPs and receiving assistance through the JASPERS and JESSICA programmes.
- Improve co-ordination between central and local government in designing investment plans for airports.

Absorption of EU funds

- Provide easier access to foreign workers from a broader range of countries than those on the eastern border.
- Maintain vigilance over possible collusive behaviour among the main suppliers of construction materials.
- Hedge PLN/EUR currency exposure in connection with future transfers of EU funds.
- Streamline the legal framework related to public procurement, issuance of building permits, environmental impact assessments and archaeological research.
- Adopt multi-year budgeting systems for addressing growing fiscal spending needs linked to co-financing.

Transport infrastructure

Roads

- Charge passenger cars for using expressways; consider extending electronic collection to light vehicles.
- Determine in a transparent way the level of tolls on EU- and state-funded high-capacity roads, and consider the introduction of an explicit congestion tax.

Box 5.4. **Main recommendations on transport infrastructure policies** *(cont.)*

Railways

- For providing regional rail services, promote the organisation of competitive tendering procedures and consider creating independent system operators to plan the traffic and rail connections.
- Strengthen the position of UTK as an independent market regulator, and separate the main state-owned infrastructure manager (PKP PLK) from the PKP Group.

Ports

- Consider phasing out tax exemptions granted to ports, and extend the deadline for VAT payment.

Aviation

- Strengthen ownership rights by privatising the national airline company LOT.
- Split the Polish Airports' State Enterprise (PPL) into different entities, consider their privatisation, and introduce a formula for the transparent calculation of price caps on take-off and landing fees.

Notes

1. In 2007, 8%, 34% and 53% of public roads were under the responsibility of voivodeships, counties and communes, respectively.
2. EU structural and cohesion funds must be used by the end of the second year following the year in which they are allocated (N+2 rule). This means that over the programming period 2007-13, EU grants have to be disbursed by the end of 2015 at the latest. Otherwise, the remaining money must be returned.
3. Nevertheless, should regional governments not be able or willing to operate the part of the company going to them, there are additional plans to allow them to sell shares to other local authorities.
4. According to Polish regulations, an operator can hold different types of licences at the same time.
5. International experience suggests that operators prefer transparent and predictable tariffs (Australian Bureau of Transport and Regional Economics, 2003).
6. There is evidence that in spite of higher fees in the freight than in passenger segment of the rail market, the penetration of and the competition from private operators is more intense in the former than in the latter.
7. It has been decided nevertheless that PKP PLK should eventually be owned directly by the State only.
8. Only the Warsaw airport will have to comply with the draft EU regulation on harmonised airport fees, though EU authorities do not plan to introduce any form of price caps on airport charges in Europe.
9. The TEN-T road network covers 4 816 km of roads, which represents 28.5% of national roads and 1.3% of the overall network in Poland. The TEN-T rail network has 5 106 km, handles 60% of all rail transport and amounts to 30% of the main connections and 21.8% of the overall network. Finally, among the central and 11 regional airports, eight of them belong to the TEN-T.
10. The focus on road investment is also the main priority for the use of EU funds in other CEE countries.
11. Moreover, EU authorities have recently adopted a "logistics package" according to which seaports should become the main logistics points and centres of intermodal operations within the European transport network.

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12. The Portuguese experience with the organisation of the European soccer championships in 2004 reveals that cost-overruns occurred in the provision of the seven stadiums (230% worth) and related infrastructure (13.3%). Moreover, town halls of participating cities strongly increased their indebtedness, seriously compromising future investment capacity in other areas. Finally, stadiums that have been constructed have been utilised at a rate of only 20-35%, rendering problematic the long-term profitability of such investments.
13. In April 2006 the EU Commission started an "infringement procedure" against Poland. However, since the construction work has continued, in March 2007 the EU authorities initiated legal action before the European Court of Justice, which could result in conviction and penalties.
14. Eurostat recommends that assets and liabilities involved in public-private partnerships should be classified as non-government aggregates and therefore recorded off the balance sheet for the government if both of the following conditions are met:
    - the private party bears the construction risk, and
    - the private party bears at least one of either availability or demand risk.
15. JASPERS – "Joint Assistance to Support Projects in European Regions"; JESSICA – "Joint European Support for Sustainable Investment in City Areas".
16. For instance, a license fee with one-day validity brings only PLN 27 of revenue to the National Road Fund, but costs PLN 190 in terms of compensation that the Fund has to pay to the concessionaire of the A2 motorway stretch for a crossing by the heaviest type of truck.

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