

© OECD, 2002.

© Software: 1987-1996, Acrobat is a trademark of ADOBE.

All rights reserved. OECD grants you the right to use one copy of this Program for your personal use only. Unauthorised reproduction, lending, hiring, transmission or distribution of any data or software is prohibited. You must treat the Program and associated materials and any elements thereof like any other copyrighted material.

All requests should be made to:

Head of Publications Service,
OECD Publications Service,
2, rue André-Pascal,
75775 Paris Cedex 16, France.

© OCDE, 2002.

© Logiciel, 1987-1996, Acrobat, marque déposée d'ADOBE.

Tous droits du producteur et du propriétaire de ce produit sont réservés. L'OCDE autorise la reproduction d'un seul exemplaire de ce programme pour usage personnel et non commercial uniquement. Sauf autorisation, la duplication, la location, le prêt, l'utilisation de ce produit pour exécution publique sont interdits. Ce programme, les données y afférentes et d'autres éléments doivent donc être traités comme toute autre documentation sur laquelle s'exerce la protection par le droit d'auteur.

Les demandes sont à adresser au :

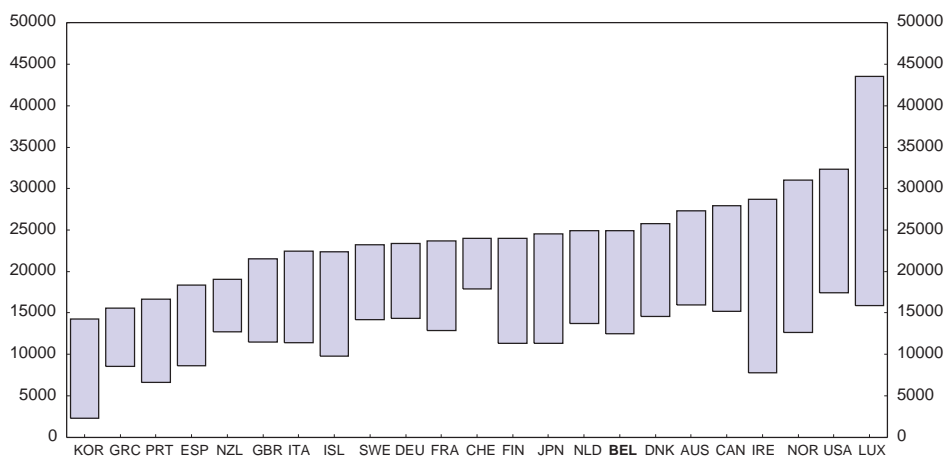
Chef du Service des Publications,
Service des Publications de l'OCDE,
2, rue André-Pascal,
75775 Paris Cedex 16, France.

IV. Progress in structural reform

Over the last three decades, GDP per capita in Belgium has increased substantially, by around 2½ per cent per year on average. Per capita growth was higher than in the United States, which is often taken as a reference point in this respect, but the gap relative to the United States, with a relatively high GDP per capita, has not yet been closed. In Belgium, GDP per capita (in 1995 PPP dollars) increased from around \$12 500 in 1970 to \$25 000 in 2000, but remained some \$8 000 below the level in the United States (Figure 25).

To some extent, the gap in GDP per capita is due to demographic differences, as it was in the past, since in Belgium the working-age population represents

Figure 25. **Level of GDP per capita, 1970-2001¹**
1995 US\$ using PPP



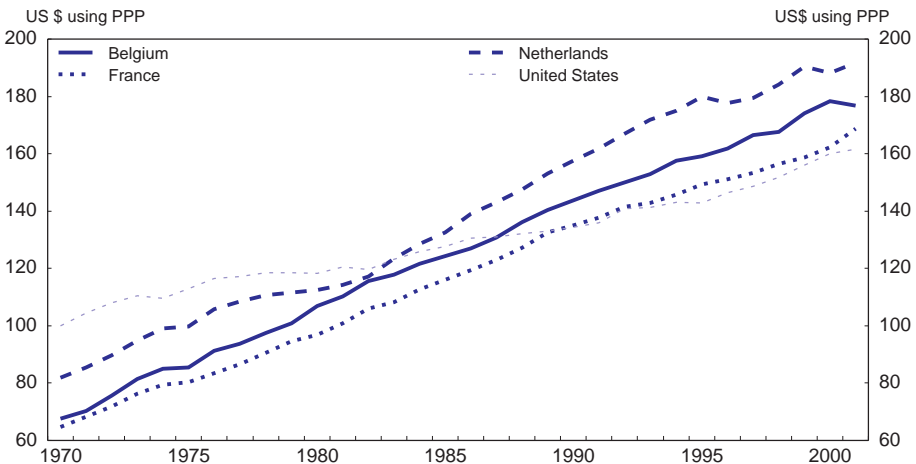
1. 1970: lower level; 2001: upper level.
Source: OECD, *National Accounts*.

a substantially lower share of the total population than in the United States (67 per cent as opposed to 74 per cent in 2001). While in the early 1970s lower GDP per capita in Belgium reflected mainly lower labour productivity, it is now the relatively low number of hours worked which explains the lag in GDP per capita in Belgium relative to the United States.

Indeed, Belgian hourly labour productivity increased rapidly in the 1970s and 1980s. As a result, in the mid-1980s the productivity gap relative to the United States, which in 1970 was still about 30 per cent, was closed (Figure 26). However, the increase in productivity was partly due to labour shedding, which led to a relative decrease in the total number of hours worked in Belgium, where the participation rate increased by only 3 percentage points over the last three decades as compared with 7 percentage points in the United States. In addition, the number of hours worked per person declined by about twice as much in Belgium as in the United States. As a result, the positive contribution to GDP per capita by the increase in labour productivity was partly offset by a decline in total hours worked.

Hence, for a narrowing of the GDP per capita gap relative to the United States, a relatively strong increase in the total number of hours worked is required. Higher growth in labour productivity growth would also help. The negative impact of demographic changes on the growth of the working age population

Figure 26. **Hourly labour productivity¹**
Level USA 1970 = 100, 1995 US\$ using PPP



1. In the business sector.

Source: OECD, *National Accounts*.

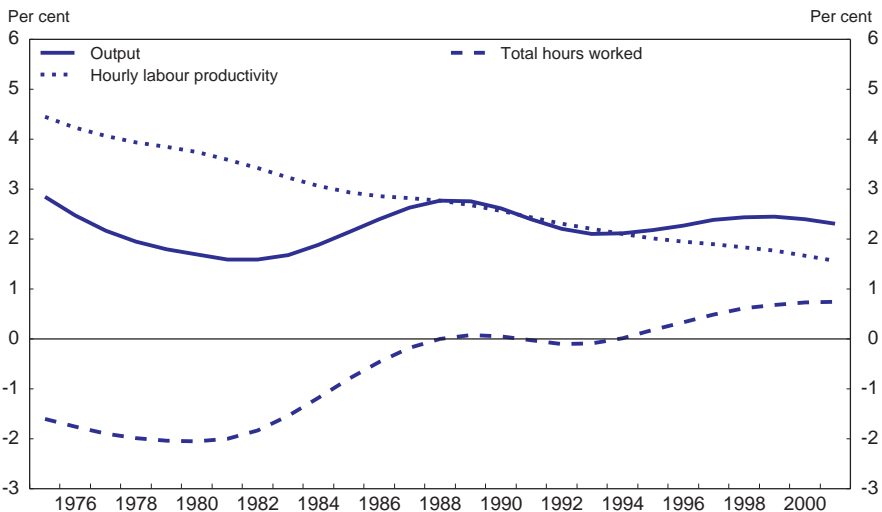
will make it all the more important to increase both labour utilisation and labour productivity. Policies should therefore focus both on labour market reforms, to increase participation, and on productivity growth, including through the further diffusion of information and communications technology (ICT). In this respect, improving the connection between the education system and the labour market plays a crucial role. In addition, fostering competition on product markets is a promising strategy to increase employment and productivity growth. The next section reviews structural developments in productivity growth and the contribution that the diffusion of ICT may have made to it in recent years.

Productivity growth

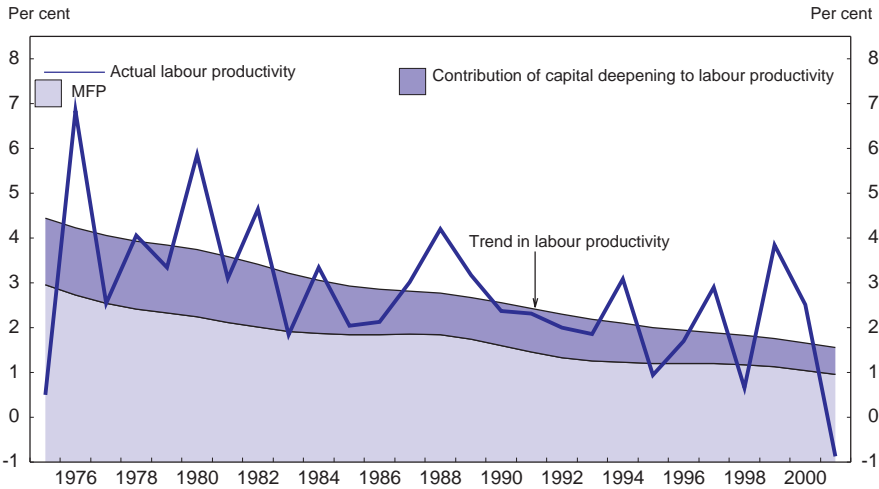
The contribution of increases in productivity to output growth

During most of the last three decades, output growth was almost entirely attributable (in an accounting sense) to increases in labour productivity, which for many years had to compensate for an unfavourable evolution in employment (Figure 27).⁸⁴ In the mid-1970s, for instance, output growth was about 3 per cent, which was the net result of a high, positive “contribution” of labour productivity growth (4½ percentage points) and a negative contribution from the number of

Figure 27. **Productivity and output growth in the business sector (trends)**



Source: OECD, *National Accounts*.

Figure 28. **Composition of trend growth in labour productivity¹**

1. In the business sector.

Source: OECD, *National Accounts*.

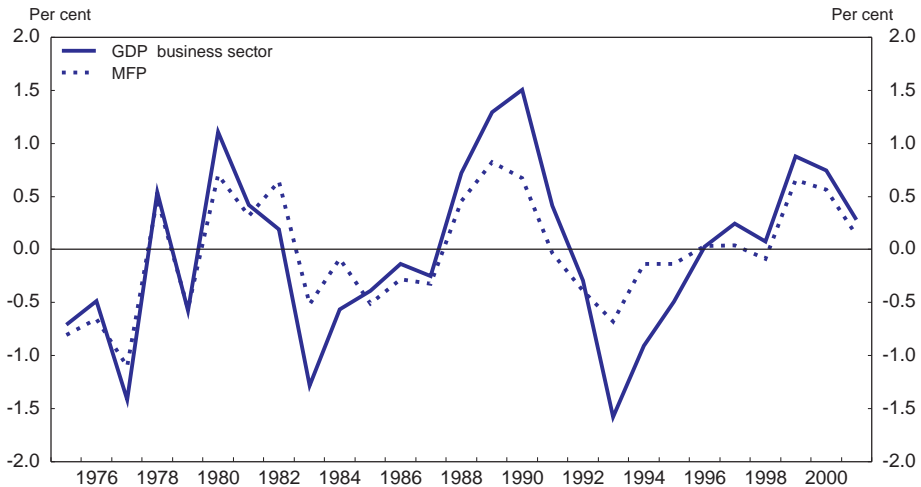
hours worked ($-1\frac{1}{2}$ percentage points). In the following two decades, the contribution of labour productivity growth declined to around $1\frac{1}{2}$ per cent. By 2001, labour productivity growth was still the main driver of economic growth, but employment growth was also contributing around $\frac{3}{4}$ percentage point, after having been very negative in the 1970s and 1980s, due to the closing down of large industries and restructuring measures. In 2001, trend output growth was half a percentage point lower than in 1975.

Within the standard framework of growth accounting, based on a simple production function depending on capital and labour inputs and multifactor productivity (MFP), the decline in Belgian labour productivity growth over the past 30 years can be mainly explained as the result of an unfavourable development in MFP growth (Figure 28 shows the smoothed figures). MFP growth fell from 3 per cent in 1975 to 1 per cent in 2001. While the rate of capital deepening also declined, from $1\frac{1}{2}$ per cent to $\frac{1}{2}$ per cent, MFP growth has remained the principal driver of output growth.

The impact of ICT on productivity

An important question is whether the “new economy” is already apparent in Belgium in data on productivity in recent years and how any favourable effects

Figure 29. **Productivity growth and the business cycle**
Actual minus trend growth (3-year centred moving average)



Source: OECD, *National Accounts*.

compare to the acceleration in productivity growth which has been observed for the United States, the leading country in this respect. Given that labour productivity growth is strongly pro-cyclical and cycles across countries may differ, a simple comparison of actual productivity growth figures in the first and the second half of the 1990s in both Belgium and the United States is far from conclusive. Indeed, in the second half of the 1990s, productivity growth in Belgium was slightly higher, on average, than in the first half, but this reflected also an improvement in conjunctural conditions (Figure 29).

After adjustment for the influence of the business cycle, the resulting figures for labour productivity in recent years, as presented in Figure 28, do not (yet) indicate a clear pick up. It should also be noted, however, that in the second half of the 1990s, the decline in trend growth was a bit smaller than in the first half. To some extent this bottoming out may have been the result of an increased diffusion of ICT, offsetting negative impacts on productivity from other factors in labour and product markets.

The positive impact ICT may have had on productivity during the second half of the 1990s is generally analysed for three channels: a) ICT capital deepening;

Table 21. Breakdown of trend output growth in the business sector

	1995	2001	Acceleration	Actual growth rate or contribution in 2001
GDP	2.2	2.3	0.1	0.7
Contribution of hours worked	0.1	0.5	0.4	1.1
Contribution of capital	0.9	0.8	0.0	0.9
<i>of which:</i>				
ICT capital ¹	0.3	0.4	0.1	0.0
<i>Idem</i> in the United States ²	0.5	1.0	0.5	0.0
Contribution of MFP	1.2	1.0	-0.3	-1.3
GDP	2.2	2.3	0.1	0.7
Growth of hours worked	0.2	0.7	0.5	1.6
Growth of labour productivity	2.0	1.6	-0.4	-0.9
Contribution of capital deepening	0.8	0.6	-0.2	0.4
<i>of which:</i> ICT capital ¹	0.3	0.4	0.1	0.0
Contribution of MFP	1.2	1.0	-0.3	-1.3

1. Kegels *et al.* (2002). The figures on the contribution of ICT pertain to the total economy and do not include software. The figure for 1995 is the average over the period 1991-95.

2. Averages over the periods 1991-95 and 1996-99 (Van der Wiel, 2001).

Source: OECD and Federal Planning Bureau.

b) technical progress in the ICT producing sector and c) the increased use of ICT. These issues are discussed below with the main findings summarised in Table 21.

Investment in ICT

Over the past two decades, investment in ICT goods in Belgium has shown a strong increase, not only in nominal terms – its share in GDP rose from 1.5 per cent in 1980 to 3.2 per cent in 2000 – but even more in real terms, induced by substantial decreases in ICT prices (Kegels *et al.*, 2002). The accumulation of ICT capital led to an increase in the share of ICT capital in the total stock of capital, from less than 3 per cent in 1990 to around 3.5 per cent in 2000 (Pamukçu and Van Zandweghe, 2002). As a result, the contribution of ICT capital to GDP growth has gone up as well, but only modestly, from an average 0.3 per cent in the first half of the nineties to 0.6 per cent in the second half. In 1999 and 2000, the (actual) contribution of ICT capital to growth had increased to 0.7 per cent.

In view of the very substantial ICT investments in recent years, this acceleration is still rather modest, but it is close to the European average (European Commission, 2000a). According to the Federal Planning Bureau, a small further improvement in the contribution of ICT capital can be expected, given time lags due to skill upgrading of workers and to reorganising activities within firms which have heavily invested in ICT. However, in comparison with the United States both the

(lagged) acceleration in the growth contribution by ICT capital and consequently also its level is likely to remain small.

Notwithstanding the low contribution by ICT investment to growth at the *macro* level, Kegels *et al.* provide some *micro* economic evidence that in some Belgian industries productivity growth has increased thanks to investment in ICT. Industries where, in 1995, the ICT share in total investment exceeded the average share, also had a productivity growth above average in the following years.⁸⁵ At least in some industries, the Belgian productivity performance was comparable to that in the United States. High productivity growth figures were recorded for wholesale and retail trade – 6.3 per cent and 4.2 per cent respectively in the period 1995-1999 – which are industries that can be characterised as very intensive ICT users.⁸⁶ This correlation between ICT investment and productivity growth in Belgium once more underlines that it remains important to maintain policies which facilitate rapid investment in ICT capital.

ICT producing sectors

A second channel by which ICT can affect productivity, is through technical progress in the ICT producing sector, which may be reflected by an acceleration (or slower deceleration) of MFP growth in this sector. Whether this channel has played a positive role in Belgium cannot be determined with certainty, due to a lack of data. In any case, trend MFP growth in the business sector did not increase from 1995 to 2000, but remained broadly stable. The ICT sector is also small in comparison with the United States, where the share of this sector in total value added of the business sector is twice as high as in Belgium (in Belgium it accounts for about 4.5 per cent of GDP and 2.2 per cent of total employment).

The acceleration of this contribution may have been limited by the relatively low level of R&D efforts in this sector (Kegels, *op. cit.*, p.12). In 2000, R&D efforts in the ICT sector were less important than in the EU and the United States, when measured as a share of total R&D expenditure by the business sector. Moreover, business sector R&D as a whole represents a relatively small part of GDP in Belgium. In 2001, government expenditure on R&D was about ½ per cent of GDP, still below the Lisbon target of 1 per cent for 2010. Therefore, public spending on R&D should be raised. This might lead to higher spending by the business sector, as has been observed for a large number of countries (Van Overbeke, 2001). Measures should also be taken to increase the relatively low number of scientists in Belgium. In this respect it is worth mentioning that as from 2003 the employment of scientific researchers will be stimulated by specific tax measures.

The use of ICT

In 2000, MFP growth in the business sector had picked up significantly relative to the early nineties. In Belgium, as in other countries where this has been

observed, a role has probably been played by the increased use of ICT, since a strong cross-country correlation has been found between ICT use, as shown by indicators such as the numbers of servers, PC density, internet access costs and MFP growth (Pilat and Lee, 2001). Over the period 1992-99, in many OECD-countries the increase in PC intensity, measured per inhabitant, was strongly correlated to the increase in MFP growth. Also, a strong relationship has been found between the number of internet hosts at the end of the 1990s and the acceleration in MFP growth relative to the 1980s. On both indicators, Belgium was around the average for OECD countries, as was the acceleration in MFP growth. In some other respects, however, Belgium is still lagging behind. As a percentage of GDP, IT expenditure is below the European average and although the diffusion of ICT among households is now progressing well, the evolution in the business sector appears slower (Belgian Progress Report, 2001). The government has reserved special funds to stimulate the adaptation to new technologies. To further stimulate the use of PCs, the government will no longer consider them as (taxable) income if they are provided by employers to their employees.

Factors inhibiting diffusion of ICT

In the second half of the 1990s, the contribution of ICT capital deepening (0.3 to 0.5 percentage point) to the acceleration in productivity growth in Belgium was significantly lower than in the United States (0.8 percentage point Jorgensen *et al.*, 2002). One reason for this, apart from differences in cyclical circumstances or in expectations of future benefits of investment in ICT, might be that ICT capital deepening was less attractive in Belgium because of high ICT prices. In the mid-1990s, office and data processing machinery and the costs of leased lines, used for the exchange of information between firms, were both around 40 per cent more expensive in Belgium than in the United States (OECD, 2001b and OECD, 2001c). Furthermore, Internet access costs in Belgium are still twice as high as the OECD average, mainly as a result of high telephone usage charges (OECD, Directorate of Science, Technology and Industry). Taken together, these factors might also explain why Belgium ranks low with respect to the development of e-commerce; in 2001, the number of secure servers per million inhabitants was 33 as compared to 52 in the European Union and 280 in the United States.

ICT capital deepening may also have been lower because competition in Belgian product markets was less intense and forced firms less to innovate and adopt new production techniques than firms in the United States (at least concerning the service sector) (Nicoletti *et al.*, 1999). Finally, stricter employment protection legislation than in the United States, hindering the implementation of new, ICT related work practices and adjustments of the labour force, may have had an unfavourable effect on ICT capital deepening, although in Belgium EPR is less strict than in most other OECD countries.

The labour market⁸⁷

It will be important to increase the participation rate, which currently is still relatively low (66.8 per cent in 2001), to meet the challenge of an ageing population. Participation is particularly low for people 55-64 (26 per cent) (OECD, 2002b). Many of these people are on early retirement and most of the older unemployed are no longer obliged to look for a new job. Despite these large withdrawals from the labour force, unemployment is high, at least in comparison with the best-performing OECD countries. Two important factors in this regard are the low degree of wage differentiation across regions, despite very different labour market conditions, and the long or even unlimited duration of unemployment benefits. Furthermore, the high number of benefit recipients in Belgium has led, via the need for social transfers largely financed out of the wage bill, to high labour costs and reduced international competitiveness. Serious skill mismatches are another problem for the economy.

The authorities show a growing concern about most of the above problems and are well aware of the need to take far-reaching measures to raise the employment rate from 59.9 per cent (2001) to 70 per cent, the objective set for 2010 at the Lisbon summit of the European Council in 2000 and worked out subsequently in National Action Plans (in Belgium drawn up by the government and the social partners).⁸⁸ For Belgium this is a very ambitious goal, since it would imply an annual increase in employment by 80 000 persons, which is much higher than the increase in the peak year 2000, when employment rose by 62 000 (HEC, 2001a).

Recent measures include a tightening of the job search requirement for new older unemployed, a better co-operation between placement services, and tax cuts to reduce the unemployment trap and raise the demand for labour (see Chapter III). Also, it has been made easier for workers to temporarily leave the labour market with a benefit, which should encourage them not to withdraw from it altogether. A wage norm had already been introduced in 1997 and was under discussion for the period 2003-04 at the time of writing.

This section first reviews the situation in the labour market, in particular the low participation rate and its causes, and then evaluates recent measures, leading to the conclusion that with present policies it is very unlikely that the Lisbon objectives will be met and that more has to be done, as the Belgian authorities have already indicated themselves. Recommendations are summarised in Table 22.

Current labour market conditions

Participation is low, in particular among older people...

Belgium has one of the lowest employment rates of the OECD, also in terms of hours worked per person in the working age population (Figure 30,

Table 22. **Follow-up on OECD recommendations for structural reform since 2000**

On the model of Boxes 2 and 3 in the last two *Surveys of Belgium*, the follow-up is presented as a table reminding previous recommendations and action taken since and recommendations for further reform.

Previous findings and recommendations	Action taken	Assessment/recommendations for further reform
Labour markets		
Continue the programme of cuts in non-wage labour costs centred at the lower end of the labour market and, if possible, step it up.	Further cuts in employers' social security contributions targeted on low-income earners were made in 2001 and 2002.	Further reductions in employers' social security contributions for employees earning around the minimum wage should be made so as to increase demand for their services.
To the extent that fiscal consolidation allows it, the tax reform should include a general in-work benefit scheme, possibly with no phasing-out at higher incomes, as a major structural measure which, by boosting net incomes, would both increase work incentives and make wage moderation more acceptable.	An earned income tax credit scheme was introduced in the context of the personal income tax reform, which is being progressively implemented over 2002-05.	The earned income tax credit should be increased and targeted on low-income employees according to family circumstances and hence to replacement rates from unemployment and related benefits.
Reduce replacement rates, if not by cutting unemployment benefits, at least by continuing to keep the increase in these benefits below that of wages. Reduce the duration of unemployment benefits.	Unemployment benefits continue to be indexed to prices, not wages, reducing replacement rates. No action was taken to reduce the duration of benefits.	Net replacement rates are being reduced by the earned income tax credit. Duration of the higher early stages of unemployment benefit should be limited further, including by abolishing regional variations in benefit duration, and by means testing access to benefits subsequently.
Take advantage of the window of opportunity provided by the strength of the economy to tighten benefit and eligibility conditions of the welfare system in general, and particularly the early retirement programme and the old unemployed programme. If an increase in the age limit is not possible, reduce the benefits, with cuts inversely related to age.	Job search requirements have been reintroduced for persons aged 50 to 55 who become unemployed persons and the age limit for an exemption from these requirements is being progressively raised to 58. The government also intends to tax unemployment benefit top-ups paid by employers.	Job search requirements will need to be more strictly enforced than in the past for this reform to be effective. The recent decision by regional placement agencies to provide more information on individual job seekers to the federal employment agency so that it can apply a stricter sanctions policy will help in this regard. The scope for unemployment beneficiaries to refuse job offers should be narrowed.

Table 22. Follow-up on OECD recommendations for structural reform since 2000 (cont.)

Previous findings and recommendations	Action taken	Assessment/recommendations for further reform
Extend the <i>plan d'accompagnement des chômeurs</i> (one of the main active labour market initiatives) to persons older than 46, or introduce a special plan aiming at keeping older persons in the labour force or activating some of those who have prematurely left it.	The government has extended the <i>plan d'accompagnement des chômeurs</i> to persons older than 46.	Further measures should be taken to bring the productivity of older workers more into line with their (seniority based) wages, in particular by life-long learning.
Make a major effort to simplify and consolidate the bewildering number of labour-market measures and their implementation. With a view to enhance their effectiveness, these measures should be more "durable". Reduce problems arising from the distribution of responsibilities among the federal government, Communities and Regions.	Plans have been made to give employers a clearer view on potential reductions in their social security contributions if they hire specific groups of workers, by streamlining the size of the reductions in the different programmes.	A further thorough analysis of the labour market programmes should be undertaken so as to make them more efficient. To this end, their effectiveness, possible dead-weight costs and administrative burden should be evaluated.
To increase wage flexibility further at the microeconomic level, continue to explore ways to encourage the use of "opening clauses" or equivalent arrangements, introduce bottom sectoral wage scales closer to the statutory minimum wage level, and widen exceptions to the minimum wage level for various target groups.	No actions have been taken.	Consideration should be given to widening the scope for wage determination at the company level, so as to better align collective wage contracts with labour market conditions.
Pursue efforts to promote wage moderation through self-discipline of the social partners, entailing a <i>de facto</i> phasing out of the law on employment and competitiveness.	The personal income tax reform, implying an increase in purchasing power, is likely to have contributed to the conditions for wage moderation.	Increasing the scope for enterprise-based bargaining should also enhance self-discipline.
Enhance labour market flexibility. Further relax restrictions on temporary work. Explore ways to ease further employment protection, for example, by allowing fixed-term contracts to be renewed on an unlimited basis, and shortening notice periods for white-collar workers.	No action has been taken.	Restrictions on temporary work should be further relaxed and employment protection regulation should be eased. The number of persons in a firm who cannot be made redundant should be reduced, especially in SMEs.

Table 22. **Follow-up on OECD recommendations for structural reform since 2000** (*cont.*)

Previous findings and recommendations	Action taken	Assessment/recommendations for further reform
Increase working-time flexibility.	Scope for flexible forms of working has been increased. One of the time credit schemes that have been introduced enables older workers with 20 years of work experience to reduce their working time by one fifth or one half.	This time credit scheme is intended to prolong working lives by giving older workers more time off without having to retire. It will be important to monitor its impact on total hours worked. Education and training should be made more responsive to client needs, including those of employers. Vocational education pathways to completing upper secondary level education should be improved. More emphasis should be given to teaching core subjects in secondary schools, such as Dutch or French, mathematics and science.
Product market competition and regulatory reform		
Make sure that the Competition Service and the Competition Council have the necessary staff and resources to allow them to perform fully their statutory role in the implementation of the Competition Act.	Directors were appointed to the Competition council and the Competition service was staffed up.	The section on investigations into vertical agreements and concerted practices needs to be strengthened. In view of further decentralisation in EU competition policy, the Competition Service should be enlarged.
Liberalise entry conditions in the distribution sector to diminish the power of incumbent shop owners to limit entry of new outlets.	No actions have been taken.	The recommendation is maintained.
Relax further rules on shop opening hours.	No actions have been taken.	The recommendation is maintained.
Network industries		
Fully implement plans to speed up the liberalisation process in a number of former public utilities and especially in the electricity sector, with a clearer distinction between production, transmission and distribution and the creation of an effectively independent regulatory body. Continue with privatisation efforts in general and more particularly explore ways to reduce Electrabel's near monopoly position in both the production and distribution of electricity.	In the <i>electricity</i> sector, an independent transmission system operator was nominated but with Electrabel as the majority shareholder; terms of third party access were elaborated.	Make the transmission system operator more independent from Electrabel. Adopt regulations to launch the regulator's business as an arbiter of competition. Provide municipalities with alternative sources of revenue from profits from electricity and gas trusts in order to facilitate the development of competition in electricity and gas distribution.

Table 22. Follow-up on OECD recommendations for structural reform since 2000 (cont.)

Previous findings and recommendations	Action taken	Assessment/recommendations for further reform
	<p>In <i>telecommunications</i> the two biggest operators were obliged to base their prices on average costs and Belgacom's tax privilege was ended.</p>	<p>Remove remaining price barriers to market entry in the local loop.</p>
	<p>In the <i>postal sector</i> the segment for letters and parcels will be further liberalised in 2003. The Federal Government has stepped up public investment over the coming years and signed a public service contract with La Poste sustaining the current density of the network and the amount of subsidies to be paid.</p>	<p>To let consumers benefit from competition, the government should withdraw from segments of the Belgian Post Group that reveal no public service properties. It should search for more cost-effective solutions of the public service obligation by separating infrastructure management from mail delivery and contracting the letter out to most efficient bidders.</p>
	<p>In the <i>railways</i>, infrastructure and traction were separated on an accounting basis and regulatory bodies for third-party access to rail freight installed. The state-owned Railway Company (Société nationale des chemins de fer belge, SNCB) was given targets and its investment budget stepped up.</p>	<p>To reap the benefits of competition and improve the inter-operability in international rail transport, fully separate infrastructure from traction and open passenger transport to competition. Strictly limit operational subsidies to those unprofitable routes that are not closed down because of a public service obligation and tender out these routes to the best bidder. Ensure fair inter-modal competition by adjusting the price of parking space and road access in congested cities.</p>
		<p>In all network industries with a need for regulation (railways, air transport, electricity and gas, telecommunications and postal services), the regulators should be independent from the technical ministries. Reduce the risk of capture by bundling several regulatory bodies and placing them under the direction of managers from outside the regulated industries (either within or outside the general competition authority).</p>

Table 22. Follow-up on OECD recommendations for structural reform since 2000 (cont.)

Previous findings and recommendations	Action taken	Assessment/recommendations for further reform
Public administration and financial markets		
Enhance the visibility and effectiveness of the Agency for Administrative Simplification by targeting a major problem such as shop opening hours, which could be a stepping stone toward tackling entry conditions in the distribution sector.	More than 80 projects were implemented until the end of 2002, mainly pertaining to administrative procedures and the readability of new legislation.	Make systematic use of cost-benefit and cost-effectiveness analysis in assessing the burden of regulations. Extend this work to existing legislation and give more weight to the analysis of regulation <i>content</i> , not just procedures.
Move forward as fast as possible in all the other identified areas of reform to take advantage of synergies and develop a general climate of dynamism and competition.	<i>Federal Administration</i> : an ambitious reform project is underway strengthening management and work incentives. E-government and single data collection will reduce the administrative burden. <i>Financial markets</i> : by its new laws on financial market supervision and corporate governance the Government enhanced the stability of this sector.	After completion of the planning phase in the Federal Government Service Finance, the overhaul should be speeded up in other areas. Extend the application of e-government from pilot projects to all administrative areas to spread the benefit as soon as possible to all businesses and households. Remain vigilant to the incentives for “tunnelling” in daily business operations, which may require further strengthening of minority shareholder protection.
Consider ways to further strengthen the financial infrastructure supporting the commercialisation of private research.	The spillover from research to innovative products improved due to spin-offs from academic institutions.	Regional initiatives to encourage start-ups financially should be limited to technology firms and must not distort investors’ attitudes towards risk.
Health care		
Curb the growth of <i>health care</i> expenditure by making the existing framework more effective. Therefore, closely monitor the use of the recently introduced <i>forfaits</i> in the pharmaceutical sector, and speed up the introduction of a global medical file (<i>dossier médical global</i>) backed up by an extensive and reliable database.	Since 1 May 2002, every patient has been strongly advised to declare one general practitioner as “keeper of the medical file” and access to free emergency services has become less attractive to avoid misuse. Thanks to telephone and online registration and the installation of a portal site, the number of contacts between firms and Social Security has been reduced and costs saved on both sides.	The actions taken should help to limit growth in health care expenditure.

Table 22. Follow-up on OECD recommendations for structural reform since 2000 (cont.)

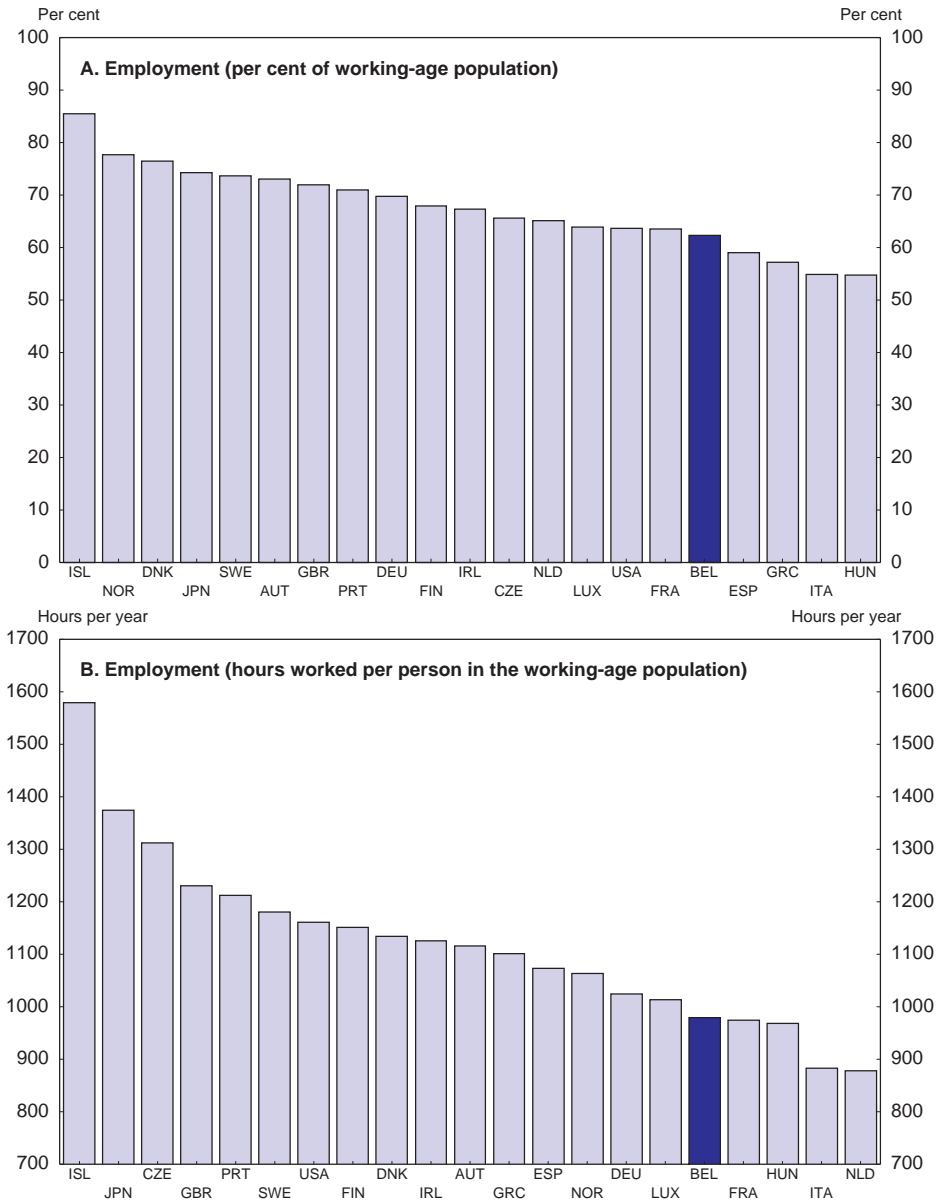
Previous findings and recommendations	Action taken	Assessment/recommendations for further reform
	<p>A national monitoring system for health expenditure by hospitals was introduced in 2002 using statistical information on average spending in previous years to calculate national reference values for defined medical operations. As from 2003 hospitals exceeding these values significantly will have to pay back part of their honoraires.</p> <p>Insurance companies and <i>mutualités</i> are given an active role in the monitoring of health expenditure mainly through data collection and exchange. Their administrative expenses will themselves be subject to evaluation.</p>	
<p>Consider complementing the current approach, largely relying on administrative mechanisms, with market-oriented initiatives, such as a reduction of the set of medical services covered by compulsory public health insurance and a greater role for risk-based additional coverage by the <i>mutualités</i> or private insurance. This should be combined with the introduction of capitation payments, and a level playing field for the private insurance companies and the <i>mutualités</i>, with the latter allowed to compete on the basis of contribution rates.</p>	<p>No major actions were taken.</p>	<p>The recommendation is maintained.</p>
<p>Sustainable development <i>Wallonia</i> is affected by water pollution manifest in bathing zones. Invest in sewage and waste water treatment where risks justify it.</p>	<p>The regional government is investing € 900 million in the period 2000-04 in sewage and wastewater treatment, with priority given to plants upstream of bathing zones.</p>	<p>Undertake more efforts to improve wastewater treatment in order to comply with EU directives on water treatment and bathing zones. Contribute to reconciliation between pollution abatement costs and benefits from cleaner water by claiming a more systematic use of cost-benefit analysis in the set-up of respective EU directives.</p>

Table 22. Follow-up on OECD recommendations for structural reform since 2000 (cont.)

Previous findings and recommendations	Action taken	Assessment/recommendations for further reform
Given that an important part of <i>sewage</i> from the Brussels capital region still flows entirely untreated into the river Senne, set up an investment programme in order to bring the city into line with legal requirements by 2005.	First treatment plant operating since August 2000. Construction of the second one has been delayed and will probably operate in late 2006.	Avoid further delay in construction. Internalise marginal treatment costs to discourage excess use of water.
In the <i>Flemish region</i> nutrient discharges due to manure production affects <i>surface</i> and <i>groundwater</i> . Strengthen enforcement of current rules and narrow the range of tax levels applied on nutrient use at the margin. Alternatively, introduce tradable discharge permits.	Significant extension of “vulnerable zones” requiring stricter rules on nitrate pollution as of 1 January 2003. Recruitment of additional inspectors to enforce existing legislation better – fines were attributed in 22 per cent of cases.	The Flemish region should improve the taxation of nutrients or introduce tradable permits in order to curb discharges more efficiently.
As to <i>greenhouse gas</i> emissions (GHG), in the absence of an EU-wide CO ₂ tax, develop national taxation or cap-and-trade systems, possibly deviating from the rule of equal marginal abatement costs for all polluters for the sake of international competitiveness. Increase the cost of road use at peak times.	Protocol in May 2002, thereby confirming the objective reducing greenhouse gas emissions by 7.5 per cent from their 1990 level until 2010. The regions made their voluntary contributions to the National Climate Plan and introduced a huge number of projects and measures to encourage the use of energy from renewable sources and a more rational use of energy, mainly through financial incentives. The Brussels region plans to reduce the number of daily car trips by cutting in the network.	The recommendation for the Federal Government on emission permits is maintained, if a preferable European-wide system is not introduced. Each region should tighten insulation standards for new buildings (as planned by the Flemish Government). Introduce higher parking prices and peak-load road pricing (rather than cutting the network) to reduce congestion and CO ₂ emissions from traffic. This would also help to improve local air quality.
In the area of <i>local air quality</i> , a re-balancing between the tax on petrol and the tax on diesel is needed at the expense of diesel.	In November 2001 the tax on high-sulphur fuel was increased driving it virtually out of the market. The sulphur content of the new fuel is 95 per cent lower. The Government increased the yearly car tax (<i>taxe de circulation</i>) for diesel cars making diesel cars more expensive than gasoline cars for all yearly distances travelled below 22 000 kilometres.	Further rationalise and simplify the tax treatment of vehicle use to eliminate the advantage for diesel. Given the need of switching to lower-cost means to reduce air pollution, sulphur-content regulations should be equalised across sectors. This entails the same tax treatment for motor and home-heating fuels thereby encouraging a faster switch to low-sulphur home-heating fuels. Moreover, economic instruments should be used (<i>e.g.</i> trading in emission permits). Producers of renewable energy should have to bid for subsidies to reduce rents.

Table 22. **Follow-up on OECD recommendations for structural reform since 2000** (*cont.*)

Previous findings and recommendations	Action taken	Assessment/recommendations for further reform
	As to <i>household waste</i> , Belgium has reduced the volumes going to landfills and incinerators through a sharp increase in recycling rates but at a high economic cost.	Limit subsidies for recycling to avoid excess costs. Benchmark municipalities one against another to spread most efficient practices. Bring households' payments for waste collection in line with treatment costs.

Figure 30. Employment rates: an international comparison, 2001¹

1. Data are from 2001 or the latest year available.

Source: European Labour Force Survey (Spring results) and OECD, *Employment Outlook*.

Table 23. **Employment and non-employment**¹
Thousands

	1999	2000	2001
Working age population	6 711	6 719	6 729
Employment	3 955	4 093	4 016
<i>of which:</i>			
Special labour market programmes	155	145	184
Employment rate	58.9	60.9	59.7
Benefit recipients not in employment	778	748	748
As a percentage of the broad labour force	16.4	15.4	15.7
Unemployed job seekers	475	439	431
Unemployment rate	10.7	9.7	9.7
Other benefit recipients not seeking a job	303	309	317
<i>of which:</i>			
Older unemployed scheme	132	140	148
Unemployed exempt from seeking a job for social or educational reasons	27	27	28 ²
Training or special leaves	25	28	30
Early retirement	118	114	110

1. Figures in this table are based on survey data from Eurostat (LFS) and (unrevised) data from the Office national de l'emploi. They can therefore differ from the (revised) labour market statistics on an SNA basis which are presented elsewhere in this survey.

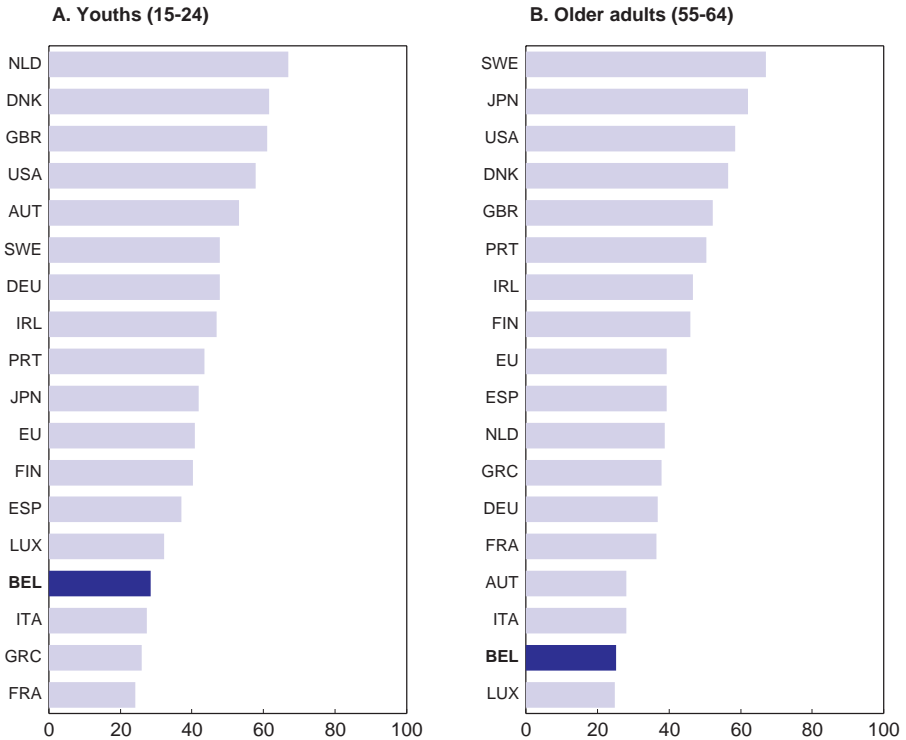
2. Break in series due to change in methodology used by the Office national de l'emploi.

Source: Ministry of Employment and Labour.

Table 23).⁸⁹ In terms of persons, from 1990 to 2001, the employment rate in Belgium, increased by 8 percentage points to 62.4 per cent on the basis of national administrative data. The progress during the 1990s was two to three times as large as in Germany and in France, but far less than in the Netherlands, where a strong increase in part time work accounted for an increase of almost 10 percentage points. The improvement in Belgium during the last decade was mainly due to the increase in the employment rate of women, from 41 to 51 per cent. Nonetheless, in 2001 the overall employment rate in Belgium was still 3 percentage points below the OECD average, largely due to the very low employment rate of the age group 55-64, which was only 25 per cent as opposed to 48 per cent in the OECD and the 50 per cent objective for 2010, which had been set at the Stockholm summit in 2001 (Figure 31). While in Germany and France the employment rate of this age group was only 5 percentage points lower than for prime age workers (25-55), in Belgium the difference was 17 percentage points. The effective average retirement age is 58 for men and 57 for women.

Inactive persons aged 50-64 (unemployed or retired) can be classified into three main categories. In 2001, 234 000 persons received a pension because they had already reached the official eligibility age (women, certain groups of civil servants etc). Most other persons participated in the early retirement programme

Figure 31. **Employment rate by age group¹**
2001



1. Total employment as a percentage of corresponding population. Data for Belgium refer to the old series (before the revision in November 2002) and for Austria data refer to 2000.

Source: OECD, *Employment Outlook*.

(110 000 persons) and the programme for older unemployed (148 000 persons) (National Office for Labour, 2002). Persons in the latter two categories are not obliged to look for a job and are not included in the official unemployment statistics. In 2001, these two programmes covered almost 6 per cent of the (total) labour force. A much smaller category, representing $\frac{1}{4}$ per cent of the labour force, included the older unemployed (55-64) that were still looking for a job. Recently, measures have been taken to limit the inflow into the older unemployed scheme (see below). However, by 2007 about two-thirds of the reductions is estimated to be offset by a higher inflow into the normal unemployment scheme. As a result,

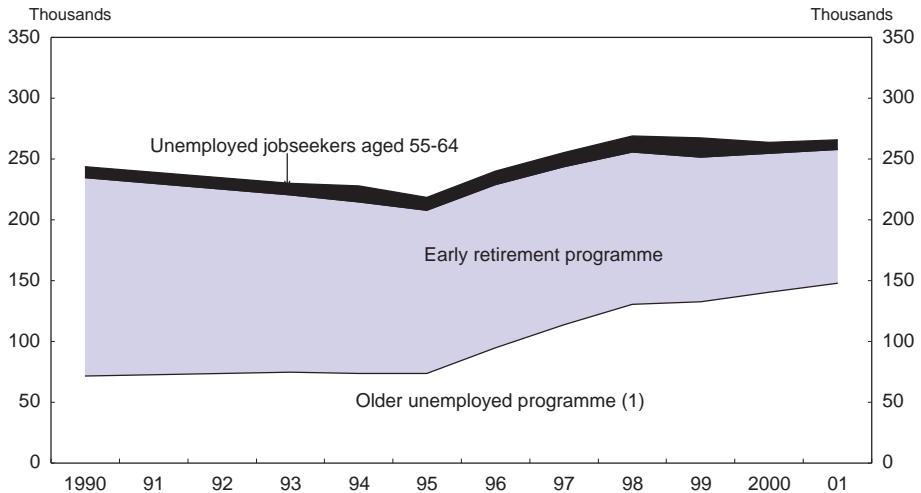
the share of the unemployed aged above 50 is set to rise from 7 to 23 per cent of total unemployment (FPB, 2002a).

While the early retirement programme was originally meant to create room for large cohorts of younger workers, it is still frequently used by firms “in difficulties”, who are exempt from the replacement obligation.⁹⁰ Workers aged 58 and over (or 55 to 50 for firms in restructuring problems) made redundant are entitled to an unemployment benefit which is topped up by their employer until the official pension age, which is 65 for men and has been raised on 1 January 2000 to 62 for women.⁹¹ Participation in the programme has no effect on pension rights. The inflow into this programme is now on a downward trend, reflecting measures in the first half of the 1990s to increase the effective pre-pension age, but also a shift to the other main programme, set up for older unemployed who are not expected to find a job any more. The older unemployed programme has seen an uninterrupted increase in the number of participants since the mid-1990s, at which time the government, in view of the high unemployment rate, lowered the eligibility age to 50. Recently it has been raised back to 55 (and it will be progressively raised to 58 in 2004) for the new unemployed, which should curb the net inflow into the two main early retirement programmes albeit only very gradually (Figure 32). Participation in the two schemes is relatively high in Flanders, which contrasts sharply with the tightness of the labour market in this region.

In 2001, the employment rate of persons 15-24 was 28.5 per cent. This was rather low, as compared to the OECD average of 44.4 per cent, but this is partly due to the fact that in Belgium education is compulsory until age 18 and the combination of working and learning is less developed in Belgium. Many youngsters enter the labour market only after having obtained a tertiary degree in their mid-twenties (a degree significantly increases their chances of finding a job). However, the employment rate of people 15-24 is also low because of high youth unemployment, in particular in former industrial areas which are still in the process of restructuring, where many youngsters leave school prematurely with only a certificate for primary or lower secondary education (see below). Only one-third of young jobseekers in this category find a job within half a year. The others remain unemployed for a long time or find a job only after having participated in one of the special programmes of the regional governments to upgrade their skills or to allow them to get work experience. In 2001, 108 000 youngsters had not yet worked but already received an unemployment benefit. In Wallonia, in particular, youth unemployment is high, with school leavers representing up to 33 per cent of the total number of unemployed in some municipalities (National Office for Labour, 2001, p. 211).

To some extent, the currently low employment rate in Belgium is also due to the relatively young age at which female employment rates start declining, reflecting that the feminisation of labour participation started later than in many other countries. Currently, the participation of young women (25-34) is already

Figure 32. Older unemployed and early retirement programmes



1. Older unemployed exempted from seeking a job.

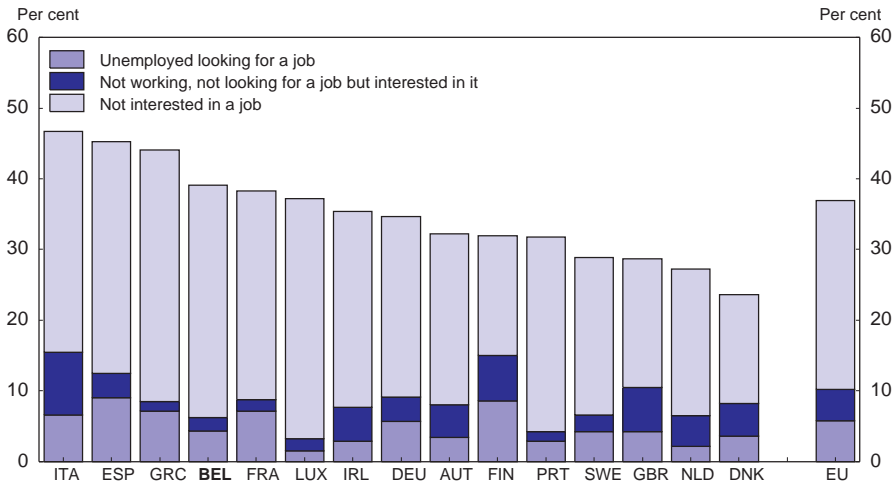
Source: Federal Ministry of Employment and Labour and OECD.

higher than the European Union average. By contrast, in the age group 50-59, participation is still some 20 percentage points lower than in the three main neighbouring countries and more than 40 percentage points lower than in Sweden (Eurostat, 2002b; HEC, 2002). However, this is likely to change over time, as the younger cohorts of women with a higher participation reach the older age brackets.

... implying a downward effect of demographic changes on the employment rate

Since in Belgium, like in other countries, the participation rate is lower in older age groups, the ageing of the population has an autonomous, downward effect on the employment rate. The large post-war baby boom generation is now reaching ages with higher early retirement rates. The age group 50-64 is projected to increase by some 400 000 persons by 2015, leading to an autonomous decline in the employment rate by 2 percentage points [High Employment Council (HEC), 2000, pp. II-25]. This decline will probably only partly be offset by a catching up in the participation rate by women and the projected increase in the share of higher educated workers, who tend to work longer. These prospects make it even more important to activate people not yet participating. Seen another way, in 2000, 32.9 per cent of the population of working age was not active and did not want to work anyway (against 26.7 per

Figure 33. **The non-working population and its interest in a job**
Per cent of working-age population, 2000



Source: High Employment Council, 2002 report.

cent in the European Union; Figure 33). Only a small pool of people (some 1.9 per cent of the working age population) which was not working or registered as a job-seeker, indicated an interest in obtaining a job and most of these had had only lower secondary education. The low labour reserve once more illustrates that a rapid policy change is urgent to substantially increase the participation and employment rate.

The number of benefit recipients is high due to insufficient incentives to work,...

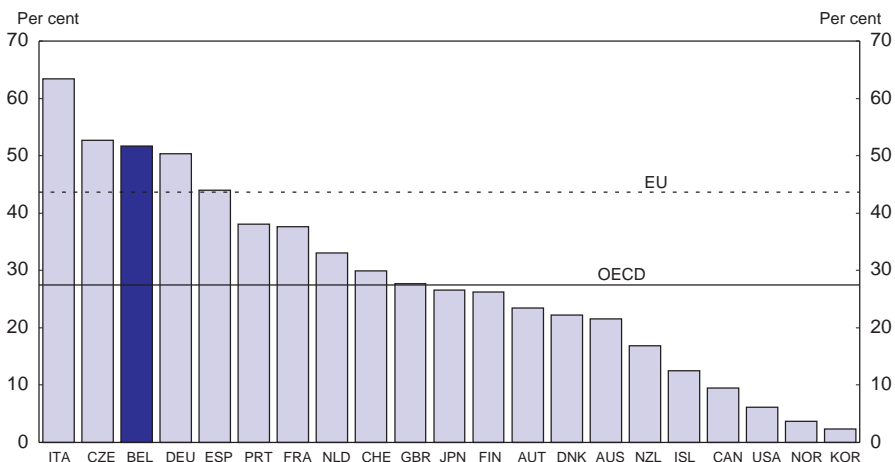
In 2001, almost 1 million working-age persons (compared with a labour force of around 4½ million people) received a total of € 6.2 billion from the national employment office. Some 380 000 benefit recipients were unemployed job seekers. The others received an early retirement income (260 000), were temporarily unemployed (130 000) or benefiting from a temporarily leave scheme (110 000) (National Office for Labour, 2002). Many of the benefit recipients are obliged to be registered as a job seeker, but, according to a recent survey, one-third of the long-term unemployed had never been invited by an employment agency (De Lathouwer and Bogaerts, 2001, p. 4).

Even though the chances of finding a job seem to be not very large, the incentives to look for it are not large either.⁹² Unemployed workers in Belgium are

obliged to accept a suitable job offered by the placement service, but are often exempt from the obligation to visit it regularly. The maximum unemployment benefit is relatively low (\$10 000 a year as compared to \$60 000 in Germany and around \$30 000 in France and the Netherlands⁹³) and in *gross* terms replacement rates are not exceptionally high either. But *net* replacement rates are generally higher (see Table 13 in Chapter III).⁹⁴ Also, unemployed over 50 (with at least one year of unemployment and 20 years of work) receive an additional seniority allowance (National Office for Labour, 2001). Despite recent measures, net replacement rates will remain rather high for low-income earners, especially for single parent families and second earners (80 to 90 per cent at the minimum wage level; Table 14 in Chapter III). An income increase by 15 per cent is considered by the High Employment Council as a minimum incentive to accept a job, but according to the Labour Force Survey of Eurostat and a recent survey in the Netherlands, unemployed workers would require income increases by at least 25 and 40 per cent respectively (Centrale Raad voor het Bedrijfsleven, 2002a).

In comparison with other countries it is not so much the benefit level, but rather the long duration of unemployment and related benefits that is exceptional in Belgium, despite a modest decline in long term unemployment in recent years (Figure 34). Benefit duration is unlimited for breadwinners and singles (Table 24).

Figure 34. **Incidence of long-term unemployment¹**
As a percentage of total unemployment, 2001



1. 12 months or more.

Source: OECD, *Employment Outlook*.

Table 24. **Employment duration and benefits by type of household**
Net, in euro per month

Household type	Unemployment duration	Age	Maximum benefit		Minimum benefit	
			As a percentage of social assistance benefit ¹		As a percentage of social assistance benefit ¹	
Breadwinner with dependents	1st year		986	127	843	108
	> 1 year	< 50	986	127	843	108
		> 50	1 084	139	902	116
Single person	1st year		986	169	708	121
	> 1 year	< 50	822	141	708	121
		50-54	895	153	755	129
		55-64	986	169	831	142
Second earner, no children	1st year		904	116	531	68
	2nd period ²	< 50	657	84	531	68
		50-54	739	95	614	79
		55-57	822	106	686	88
		58-64	904	116	755	97
	3rd period ³	< 50	374	48	374	48
		> 50	452	58	452	58

1. The social assistance benefits are 778 and 584 euro a month for breadwinners and singles respectively.

2. The second period ends after $12 + (A + 1) \times 3$ months, with A the number of years worked.

3. The maximum duration is either the local maximum or $A \times 6$ months if $A > 15$ and $A \times 6$ is more favourable to the unemployed. E.g. in Brussels, for women aged 46 and over the maximum duration is 77 months but for an unemployed woman with a labour history of 20 years the maximum duration is 10 years.

Source: Office national de l'emploi.

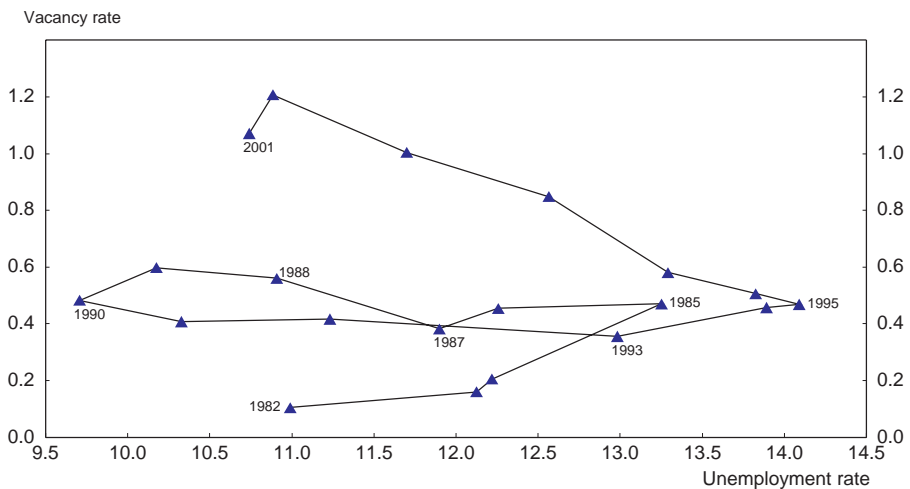
For partners of wage earners, benefits are suspended only if the unemployment duration is more than 50 per cent greater than the local average or half of the number of years worked, if that is more favourable to the unemployed person.⁹⁵ The present rules imply that in some municipalities the average unemployment duration for women of 46 and over is at least eight years (De Lathouwer and Bogaerts, 2001, footnote 4). Consequently, unemployed married women with a wage-earning partner may continue to receive benefits for many years, once they have become unemployed. These benefits are not replaced, after a certain period, by a means tested social assistance income, as is the case in many other countries. Furthermore, the suspension rule is no longer applied to unemployed persons above 50. Exemptions are also possible for partly disabled people or for households with a household income below a certain level. Moreover, unemployed can avoid suspension by proving exceptional and sustained efforts to find a job.

... *skill mismatches*,...

Many people of working age do not have the skills asked for by employers, be it to find a job (young people) or to continue to do a job properly (older people). In 2000 and 2001, around 10 per cent of the employers in manufacturing reported shortages of labour (HEC, 2002, p. I-17). The mismatch in skills was also reflected in the steep rise in the number of vacancies since the mid-1990s, to around 45 000 in 2001 (1 per cent of the labour force) resulting in an outward shifting of the Beveridge curve (Figure 35). Despite the economic slowdown, in 2001, labour shortages continued to be reported for a large number of professions, varying from bakers to ICT specialists. Problems in filling vacancies were largely due to a low supply of workers with sufficient skills (technical professions) and to a lack of experience (all professions) (Cefora and Upedi, 2002).

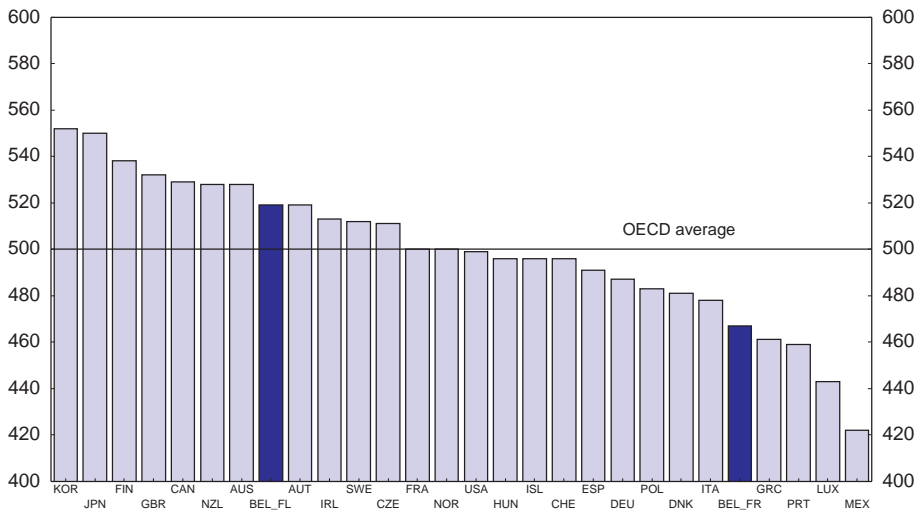
The mismatch seems to be felt in particular by employers who look for workers with higher secondary education. The relatively high shares of high and low educated youngsters in Belgium imply that the intermediate share with (higher) secondary education is low, also relative to the demand by employers (Eurostat, 2000a). According to the European Commission, in 1999 Belgium had the highest educational mismatch in the European Union (European Commission,

Figure 35. **Beveridge curve**¹



1. Registered unemployment and unfilled job vacancies as a percentage of labour force.
Source: OECD, *Main Economic Indicators*.

Figure 36. Student performance in science

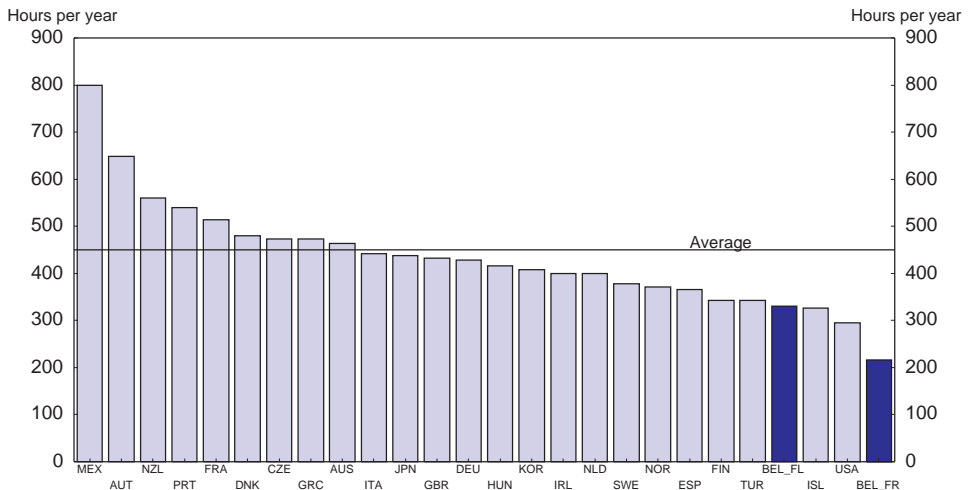


Source: OECD, Programme for International Student Assessment, 2002 (PISA).

2002b). The shortage of workers with higher secondary education not only reflects an insufficient supply by the educational system or insufficient pathways for vocational education in some areas, but also a lack of wage differentiation. In Belgium the difference between the wages of workers with low and high secondary education is only 3 per cent, the lowest percentage in the OECD, which implies an additional disincentive to complete higher secondary education.⁹⁶

Persistent shortages have been observed for professions requiring technical skills [Vlaamse Dienst voor Arbeidsbemiddeling en Beroepsopleiding (VDAB), 2000, p. 12]. According to the Flemish employment service (the VDAB), in Flanders these shortages were mainly of a quantitative nature, whereas in most other professions the problems were due to qualitative deficiencies or less favourable labour conditions. To increase the inflow into applied science faculties, the Flemish government has recently relaxed admission conditions somewhat. In general, however, Flemish school leavers are well educated and their scores in the latest PISA survey were above the OECD average (Figure 36). The low inflow into technical professions seems therefore mainly due a relatively low interest in technical matters. This may have its origin already in the first years in secondary education, since in Flanders the instruction time for mathematics and science for students aged 13 and 14 is lower than in most other OECD countries, including as a percentage of total instruction time (Figure 37) (OECD, 2001d).

Figure 37. **Instruction time for mathematics and science**
Students aged 13 and 14



Source: OECD, *Education at a Glance*, 2001.

In the French community the low inflow into technical professions may also be accounted for by the weaker performance of students in mathematics and science (OECD, 2001e). The government of the French community favours a more general education, on the grounds that this should provide youngsters, in particular those having difficulties with secondary education, with the basic skills needed to continue to learn later on during their professional life. For the same reason the authorities do not consider lowering the compulsory education age. However, a large number of youngsters do not finish general education. According to Vandenberghe (2002), in the French community repeaters and, more generally, students with learning difficulties in secondary education can too easily switch to less demanding classes, leading to concentrations of less performing and less motivated students.

Shortages of skills, due not only to insufficient supply by the educational system but also as a result of changes in the nature of the work within the enterprise, are increasingly dealt with by in-work training. The share of workers participating in courses increased substantially, from 2 per cent in 1993 to 8.8 per cent of the labour force in 2000, although it is still low compared with the United Kingdom, where it is already more than twice as high (HEC, 2002, p. 60). Another indicator of educational efforts, the number of unemployed following courses, *i.e.* those most in

need of training and adapting their skills, is also still relatively low (6.9 per cent of the unemployed job seekers). Women are underrepresented in life-long learning and the courses they follow tend to be shorter and less expensive.

... linguistic differences, wage rigidities and other factors which may limit mobility

One of the most striking disparities within Belgium concerns the unemployment rate which in 2001 was only 3.7 per cent in Flanders, whereas it was as much as 9.6 and 12.5 per cent in Wallonia and Brussels.⁹⁷ A substantial part of this divergence is due to the sharp but differentiated drop in employment in the minerals and heavy metals industry – by about 70 per cent in Wallonia and 30 per cent in Flanders – between 1973 and 1985. However, according to Estevão (2002), since the mid-1980s the difference in employment growth between Flanders and Wallonia (some 8 per cent), could no longer be attributed to shifts in the sectoral mix.

The large difference in unemployment rates may partly reflect a lack of mobility related to linguistic and cultural differences, as the chances of finding a job in another region are likely to be smaller for workers who only speak the language of their own community. However, in Wallonia in particular, unemployment rates also vary significantly across municipalities. Indeed, the authorities consider that there is already a reasonable degree of mobility between the regions. In 2001, around 20 per cent of Walloon employees, that is about twice the unemployment rate in Wallonia, had a job outside this region, of which 3 per cent worked in Flanders, 10 per cent commuted to Brussels while the rest worked abroad. In addition, Wallonia accounted for two-thirds of the 53 000 Belgian workers, who work abroad, in particular in Luxembourg (Steunpunt WAV van de Katholieke Universiteit Leuven, 2002). Flemish residents, in turn, commuted much less (12 per cent) to Brussels, Wallonia or the Netherlands, reflecting the tightness of the labour market in Flanders.⁹⁸

Apart from linguistic and cultural differences, obstacles to mobility to another region, despite some temporary allowances, are the costs of a removal (including real estate taxes to be paid on the acquisition of a new house) and – albeit less importantly – the costs of commuting, which may contribute to already serious unemployment or poverty traps.⁹⁹ In areas with high long-term unemployment, unemployed persons are probably also “trapped” by the long duration of their unemployment benefit. These traps largely depend on federal policies, since both minimum wages and social benefits are largely determined at the federal level, with contractual wage increases extended across sectors in Belgium. Unionisation is high, in particular in Wallonia. All this reflects a strong sense of social solidarity as well as the small size of Belgium, where a company usually does not differentiate wages for employees who do the same work but in different regions. More downward wage flexibility in Wallonia – for instance, to attract more enterprises to this region – would make the unemployment trap in this region larger, whereas lowering benefits solely in Wallonia would not be feasible for socio-political

reasons. All this means, however, that wage differentiation in Belgium has lost part of its role as an instrument for restoring equilibrium.

In the Belgian context it is therefore all the more important that the problem of limited wage flexibility is not aggravated by other inflexibilities in labour market conditions, such as working times. The share of temporary work has already risen from 5 per cent in 1990 to 9 per cent in 2000, but the share of fixed-term contracts is still substantially lower than in the European Union (9 per cent *versus* 14 per cent). Also, in some respects employment protection is still rather strict, as reflected, for instance, by the agreements in the so-called *commissions paritaires* consisting of social partners who themselves partly determine the number of workers to be protected.

Labour market policies

The main approaches adopted by the Belgian government or the social partners to increase employment are tax measures (to reduce unemployment traps), more flexible working times (to keep older workers longer at work) a more intensive coaching of young people to facilitate the transition from school to work and wage moderation (to safeguard international competitiveness). Another important goal for the federal and regional governments and the social partners is to simplify the bewildering patchwork of programmes and measures which has arisen in the past due to efforts to target increasingly smaller groups of inactive people. The main programmes and recent measures, both carrots and sticks, are evaluated below, first for workers and then for employers.¹⁰⁰

Encouraging activity: by reducing unemployment traps...

The Belgian government has recently stepped up measures to reduce the still high unemployment trap. These include reductions in social security premiums and tax reductions, targeted in particular at low wage workers (for a detailed overview see Table 14). In the period 1985-2000, the gap between the minimum wage and the minimum social benefit (the *minimex*) had continuously narrowed. The government does not consider cutting minimum social benefits to be an acceptable approach, since a substantial share (18 per cent) of the Belgian population already has an income below the poverty line, which the European Commission defines as 60 per cent of the median income. An increase in the gross minimum wage has so far not been considered either because of possible negative effects on international competitiveness.

By 2006, the total reduction in unemployment traps should lead to an additional increase in the number of employed by 24 000 persons (½ per cent of the labour force) (FPB, 2002b). In view of the only slow decrease in the replacement rate to a level in 2006 which may still be insufficient to be an effective incentive for large groups of unemployed, further tax reductions to reduce unemployment traps need

be implemented as soon as possible.¹⁰¹ Specific measures may be needed to make working more attractive to certain groups of inactive people, but their effectiveness should be closely monitored, as was illustrated by the only marginal effect of an additional allowance of € 745, introduced in July 2000 for single parent families, to compensate for the costs of childcare during the first year after the acceptance of a job. After its introduction only 110 parents applied for it (De Lathouwer *et al.*, 2001, p. 44).

... ensuring a more balanced working life...

Another measure to encourage workers to raise their lifetime participation rate was the introduction on 1 January 2002 (and implementation in the course of the year) of the so-called time credit system, which replaced the former career interruption scheme. The aim of the government was to make it easier for workers, through financial compensation, to temporarily withdraw from the labour market (a right), rather than leaving it permanently to care for children or because of burn out, for instance. Under the *old* scheme some 100 000 workers per year, mainly prime age women, already used this possibility to temporarily reduce their working time (by 3 to 12 months) or to interrupt their career and received a benefit which was somewhat below the minimum unemployment benefit for the partner of a wage earner. Persons above 50 were allowed to reduce working time (but at least continue working half time) until their pension, without any consequences for their pension rights, and received a double benefit. Employers, in turn, were supposed to fill the open places with long-term unemployed, thus benefiting from a reduction in social security contributions.

Under the *new* scheme, there are basically two different types of time credit. The first one allows all employees to interrupt working during a period of one year in total, spread over the whole of their career. This time credit can be extended to five years in agreements at the sectoral level, but the building up of pension rights stops after three years. The maximum benefit (paid by the ONEM) is € 516 a month at full time interruption. The second type of time credit can only be taken up by employees aged 50 and over with a working history of at least 20 years and a five-year seniority within the enterprise.¹⁰² It allows interruptions of 20 or 50 per cent until the official pension age. The building up of pension rights is not affected. The benefit varies from € 179 (for singles who work one day less) to € 385 at a working time reduction by one half. In Flanders, taking up a time credit is stimulated by an additional premium of € 50 to € 180. For older workers with monthly (gross) wages at around € 2 000 who opt for a reduction of one day, the loss in net income seems to be negligible. For firms with 50 employees or more, the percentage of workers on temporary leave is capped at 5 per cent.

Given the only recent introduction of the new scheme, its impact on the employment rate is not yet clear. Although it might indeed limit early retirement by older workers or the permanent withdrawal by young mothers, especially those

with a low education, the increase in benefits might also stimulate some workers, in particular two-earner-couples, to reduce their working time. Also, open places may not always be filled by temporary workers, either because no suitable candidates can be found, which would increase working pressure for the other workers, or because the employer prefers not to replace the temporary leaver (replacement is not obliged). The new scheme should therefore be closely monitored and, if it turns out to be used as a new form of pre-pension, be adjusted so that labour supply effectively increases, for instance by requiring those who go on leave for a certain period to extend their working life by a period of the same length.

In 2003, the new scheme, which currently is only accessible for private sector workers, will be extended to around 100 000 employees in state enterprises (la Poste, Belgacom and SNCB). Civil servants already get a higher pension if they stay longer at work. In the health and non-profit sector bonuses are given to those who continue to work at higher ages.¹⁰³

... and abolishing other obstacles to participation

Other measures recently taken or extended by the government to further stimulate labour supply include a premium of € 745 for unemployed persons who accept a job which requires a substantial commuting time, increased tax deductibility of commuting costs and of the cost of child care, and loans plus an intensive coaching for people younger than 30 who want to start their own company. Also the creation of childcare centres has been stepped up, since these satisfy at present only 20 per cent of demand (Centrale Raad voor het Bedrijfsleven, 2002b).

Discouraging inactivity: by tightening eligibility conditions to get benefits...

On 1 July 2002, a job search requirement was restored for *new* unemployed from 50 to 55 (to be raised to 58 in 2004), in particular to curb the high inflow into the older unemployment scheme. The pension age for women will be raised from 62, its current level, to 65 in 2009. Although these measures are steps in the right direction, their effectiveness is uncertain as long as no complementary measures are taken which at the same time tighten the access to the "normal" unemployment benefit scheme or increase the outflow of unemployed. Under this scheme, as was mentioned above, the duration of benefits is unlimited for breadwinners and the maximum duration for partners of wage earners is at least 1.5 times the local average unemployment duration.¹⁰⁴ This means that if the share of long-term (older) unemployed in the normal scheme were to increase, the maximum benefit duration for older unemployed would also automatically rise, implying that most of them would continue to receive (topped up) unemployment benefits. The share of older unemployed persons might also rise because unemployment benefits cannot be suspended for unemployed at age 50 and over. It would therefore be desirable to limit duration, make it independent of local circumstances and

replace unemployment benefits by means-tested social assistance benefits after a certain period. In addition, a further tightening of job search requirement is necessary if the EU objective of doubling the employment rate for the older working-age population is to be met. A comprehensive reform to meet this target also requires the removal of all public subsidies to early retirement and the scrapping of additional seniority-based unemployment allowances.

As a rule, unemployed persons are accompanied by placement services. They have access to an individual *plan d'accompagnement*, providing them with extra training and counselling. However, a large number of unemployed fail to find a job or no longer actively look for one. An absence of job search activity does not automatically lead to suspension of benefits, as the onus of proof rests with the employment service. Although the number of people not being sufficiently active in job search might be small, it would be preferable to reverse the burden of proof and require unemployed people to be able to show that they have seriously looked for a job.

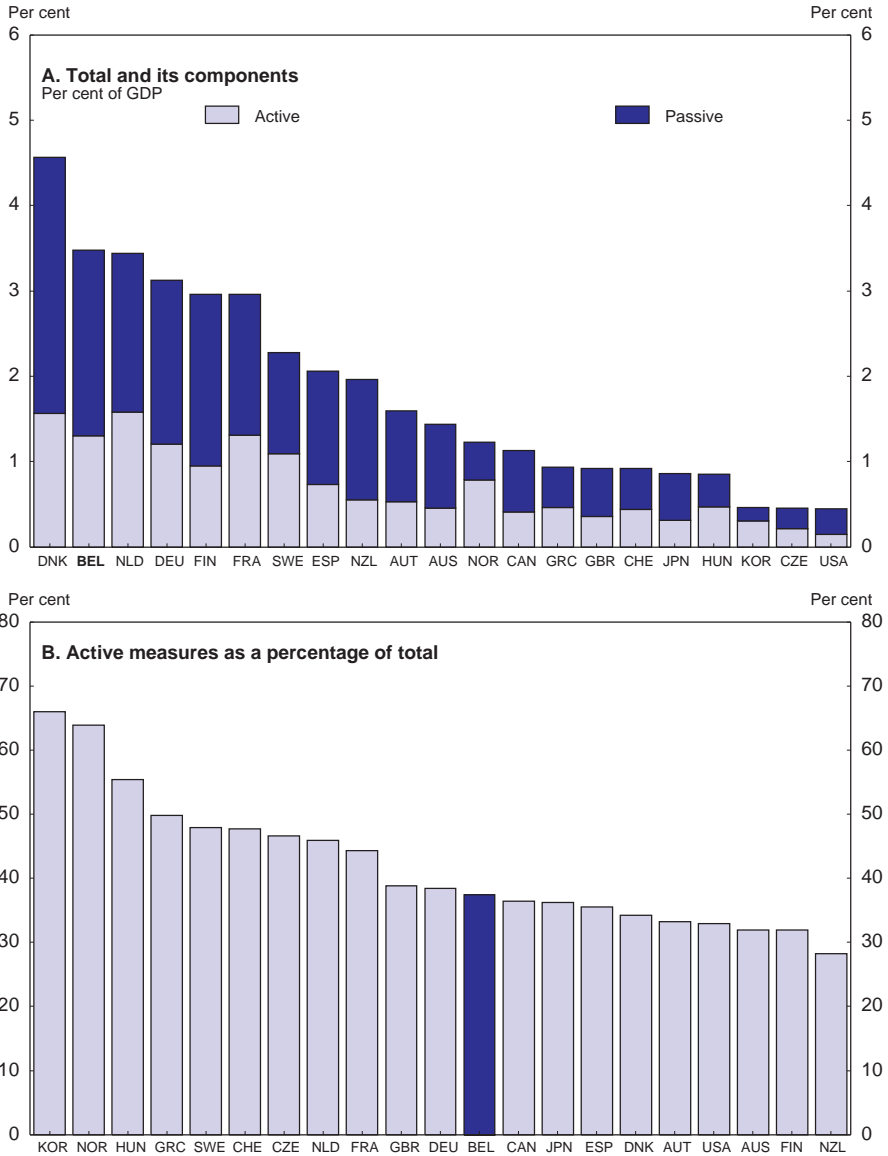
While the authorities are well aware of the necessity to closely monitor the co-operation of unemployed in finding a job, they are reluctant to impose too harsh sanctions, since one third of sanctioned unemployed turn out to leave the labour market permanently. To avoid getting to that stage, in 2000 sanction policy was changed. This led to a strong increase in the number of unemployed who were mildly penalised after 11 weeks already (on average), whereas under the old rules harsher sanctions had been imposed after 30 weeks only.¹⁰⁵

An obstacle to sanctions remains that the federal employment service, which pays the unemployment benefits and is in charge of sanctions, has no means of monitoring the co-operation of unemployed persons with the regional services, who are in charge of placement. In 2001, local authorities reported to the central authority about 300 persons who had refused a job. Furthermore, about 11 000 persons had not responded to a job offer by the employment office. Only 900 cases were reported by Wallonia, but this was said to be not surprising in view of the low number of job offers relative to the number of unemployed. Nonetheless, the regional placement services are aware of the need to co-operate more closely with the federal service and have recently stepped up initiatives to do so.

.... and using benefits for active labour market measures

Over the years, the authorities have developed several job schemes which they consider another important way to pull unemployed people out of inactivity. In 2001 (wage) subsidies for jobs created by the government in the public or non-profit sector represented 0.6 per cent of GDP (OECD, 2002b). Active measures represented about 40 per cent of total spending (some 1¼ per cent of GDP) on labour market measures (Figure 38). In 2001, almost 20 000 unemployed (½ per cent of the labour force) had a so-called service job in a private company or

Figure 38. **Public spending on labour market measures in 2001¹**
An international perspective



1. Or the latest year available.

Source: OECD, *Employment Outlook*.

in municipal services, such as gardening, cleaning and security services (*dienstenbanen or emplois-service*).¹⁰⁶ Unemployed may work in these jobs for at most three years and their employers get a substantial wage contribution. Another 40 000 persons were employed by the local employment agencies (ALE) in non-commercial jobs (ALE-jobs), consisting of community services such as cleaning and domestic services. These jobs, mainly filled by women, provide an additional income of at most € 170 a month, since the number of working hours is limited to 45 a month. An unemployed person who has worked for a public employment agency for 180 hours in six months is no longer obliged to look for a job. In the public sector, job scheme workers represent 12 per cent of total employment.

Although all these jobs allow unemployed workers to remain more or less in contact with the labour market, it is not clear to what extent this approach helps or stimulates them to find a regular job. Subsidies may have both large dead weight and substitution effects and the net employment gains may be small. Evaluations of wage subsidies in Belgium and the Netherlands, for instance, have suggested combined deadweight and substitution effects amounting to around 90 per cent (OECD, 2000b). Moreover, the ALE jobs provide unemployed with an additional income that may increase the replacement rate to over 100 per cent. For benefit recipients with an ALE job, a part time job would be unattractive anyway, according to the HEC.

Although all these jobs meet certain needs, they are probably not the best long term solution for most of the unemployed themselves, who would better be helped by training that prepares them for a normal job. In March 2000, for instance, an ambitious programme, including both work and training and costing about € 300 million a year, was adopted by the government (*le Programme Printemps*) to halve the number of social assistance recipients within five years and to double the outflow to regular jobs.¹⁰⁷ Since the introduction of this programme, the number of beneficiaries has fallen by 12 per cent to around 73 000 persons, despite the economic slowdown, and the outflow to a regular job has indeed doubled to 10 000. The programme should therefore certainly be continued.

Encouraging employers to hire: by lower labour costs...

In addition to the measures to increase the supply of labour, in Belgium a variety of programmes also exist to raise demand. Many of them include a reduction of labour costs for employers (see Chapter III). Since 1997, when the government started to lower non-wage labour costs, in particular for the low wage end of the labour market, these have been reduced by around 3½ per cent of the wage bill. A recent example of a more narrowly targeted measure based on lower social security premiums, was the reduction (by € 400 a quarter) for workers aged 58 and over. However, a significant part of the total amount each year available for general and more specific reductions in social security contributions is not used by employers.¹⁰⁸ This may be an indication that employers are not interested in hiring

certain groups of unemployed workers anyway and that first their productivity should be raised to make them more attractive.

Contrary to the reductions in recent years with mostly a more general character, many other measures, each with its own degree of non-wage labour costs reduction, had already been adopted in the past decade to increase employers' demand for specific groups such as young workers in training programmes, long-term unemployed, the first three employees hired by self-employed, and persons in firms who reduce working hours. Since this had led to a complicated patchwork of more than 20 programmes, on which employers no longer had a clear view, in August 2002, the government and the social partners decided to overhaul the present framework, starting with the harmonisation of the size of the reductions in social security contributions (SSC) in the different programmes, apart from the structural reductions for all workers in recent years.

The new framework will be implemented as from January 2004. The structural reduction in SSC will be increased at € 1 525 a year for monthly wages above € 1 785 (for the lowest wages a doubling of this amount is being considered). An SSC reduction of € 4 000 a year will be given to employers who hire long-term unemployed persons or youngsters, and to self-employed who hire their first worker. The reduction for employers in all other programmes will be equalised to € 1 600.

As far as the *size* of the SCC reduction is concerned, the measure considered by the government indeed implies a far-reaching simplification, but the number of programmes remains high. It is clear that better insight into the relative "prices" and benefits of the different programmes might help employers to decide to hire extra workers. However, as more transparency may also result in a shift in employers' preferences for individual programmes, a better use or a better outcome in welfare terms is not assured. Caution is also called for as regards the dead weight costs which remain inherent to many of the existing programmes. The proposed overhaul could therefore be an extra reason for a thorough evaluation of the effectiveness of the still bewildering number of existing programmes, some of which cover extremely small target groups (*e.g.* the 80 single parent families who benefited in 2001 from a special allowance for childcare) (National Office for Labour, 2001).

... and by a better education of the workforce

The government is seeking to raise the demand for labour not only through lower labour costs, but also by more "value for money", *i.e.* better skills and an educational system which is better adapted to the needs of employers. Placement services in all three regions therefore increasingly co-operate with companies to make an inventory of structural mismatches in the labour market and additional training needed for certain jobs. Sectoral counsellors and an increasing number of competence centres are also charged with providing information to school leavers who want to upgrade their skills and employers who are

looking for workers with specific knowledge. These measures are indispensable to smooth the transition from school to work, although it would obviously be preferable if the educational system itself already anticipated better the needs of employers. Hence, a stepping up of the co-operation between ministries of education and the business sector, so as to adapt educational programmes, is needed. Vocational education pathways to completing upper secondary level education should be improved. More emphasis should be given to teaching core subjects in secondary schools, such as mathematics and science and languages.

Furthermore, to combat youth unemployment, in particular among those who prematurely leave (secondary) school without a diploma, the regional governments are considering a *modularisation* of the educational curriculum, so that certificates can at least be given for the subjects the premature school leavers passed successfully. The governments and social partners are also considering the possibility of certificates for skills acquired outside school, during apprenticeships in training centres or enterprises. These certificates might indeed enhance the chances of finding a job, although there is a risk that certificates are also used for an early exit route by youngsters who otherwise would have felt obliged to leave school only after having obtained a diploma.

The government is trying to stimulate the adaptation of skills to the needs of employers not only in schools, but also in the enterprise, by means of training vouchers. The vouchers were introduced in Wallonia (2000) and Flanders (2002) to allow employers in firms with up to 50 employees to benefit in a flexible way from training subsidies.¹⁰⁹ Other financial incentives for employers include compensation for hours not worked by employees who opt for an educational leave during working time (around 35 000 in 2001).¹¹⁰ The courses need not be related to work, so a regular evaluation of the pros and cons would seem justified. In 1993, “fun courses” were excluded. Language courses have also become subject to restrictions. These should be reconsidered insofar as the courses are related to work.

To postpone the loss of knowledge of experienced older workers as long as possible, the government has given older persons who go on early retirement or take up a time credit the right to a *tutorat*, a training of younger workers in the company they left for a certain number of hours without any consequences for their benefit. An increase in the effective age of retirement might also increase the willingness of employers to invest in training.

Obligations for employers: training young workers and paying outplacement costs

Many young job searchers do not yet have the experience employers would like them to have. To prevent youth unemployment and to facilitate the transition from school to work, the regional governments rely on several programmes, the main one of which is the Rosetta programme. This scheme, introduced in April 2000, obliges firms with more than 50 employees to recruit into

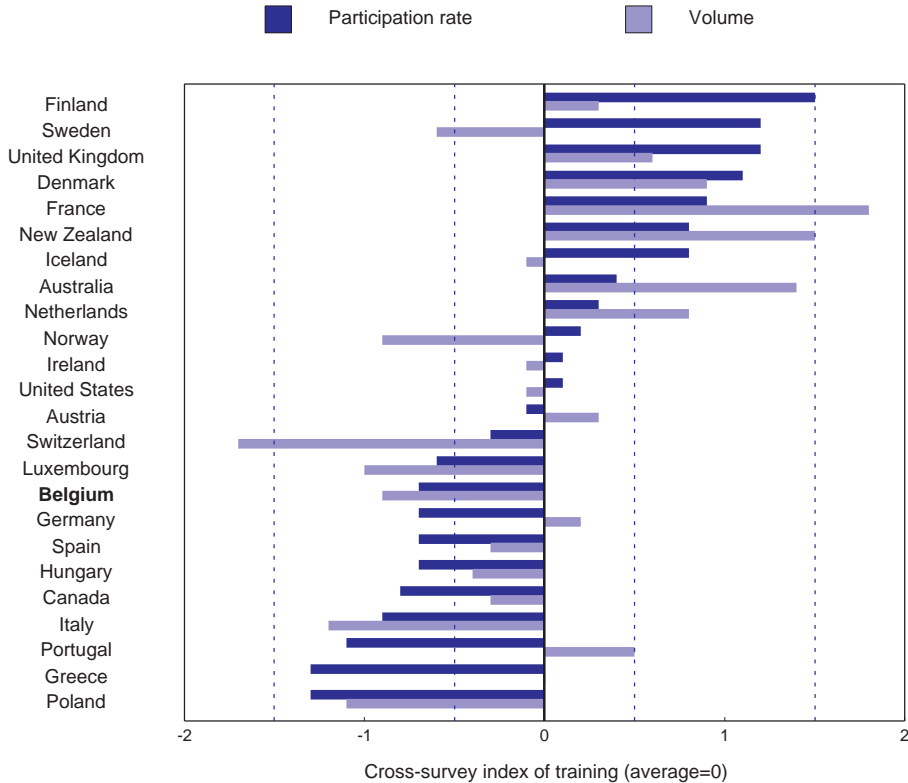
their labour force a quota of at least 3 per cent of youngsters eligible for a "First Job Agreement", *i.e.* school leavers below 25 within six months of leaving school. This (narrow) definition will be abolished in 2004. In practice, a broader group can already participate in the programme (youngsters up to 30 or with certain skills or long-term unemployed persons over 45). The Rosetta contract is an open-ended or fixed term contract of at least one year, which should allow employees to acquire work experience and to be trained on the job. Quarterly social security contributions are cut by around € 500 if a Rosetta job is filled by a low skilled youngster. Employers who hire this worker after the apprenticeship benefit from a reduction in social security contributions by 10 per cent during the first year.

The first experiences with the Rosetta programme (introduced in 2000) were positive. Over 90 000 youngsters, who followed the programme, found a job. However, participation of youngsters most in need of support by the programme, in particular those with a low education attainment or living in areas with an already high youth unemployment rate, is still low due to a lack of appropriate workplaces. Youngsters in Wallonia are the most poorly represented (European Commission, 2001b). At the same time, the programme seems to have dead-weight cost. This subsidy scheme should therefore be better targeted so that the needs of specific problem groups can be met with higher subsidies. However, it should also be evaluated to determine the extent to which participation is at the expense of other forms of education, because the number of agreements that combine education and work has decreased since the programme exists (Federal Ministry of Employment and Labour, 2002b).

Another obligation which employers are subject to, which has been agreed at the European level, is to increase expenditure on education and training of workers to 1.9 per cent of the wage bill in 2004 (in 2000 it was 1.4 per cent) which should increase the volume of job-related training towards the OECD average (Figure 39). It will be important for older workers in particular to benefit from this increase so as to enhance their productivity and hence employment prospects. As from 2002, employers also have to pay the costs of outplacement, to a maximum of 60 hours of training and a maximum of € 1 500 over a period of one year, if they make workers aged 45 and over redundant. A penalty has to be paid if this obligation is not met. This measure has received mixed reactions. According to training centres, a 60 hours course would certainly not be sufficient to prepare an unemployed person for another job. Also, the obligation to pay € 1 500 would probably not restrain employers from making workers aged 45 and over redundant and might even be an incentive to get rid of slightly younger workers. Here again, a close monitoring of the effect of the measure would be appropriate.

The government also discourages employers from making older workers redundant by other penalties. Until recently, the older unemployment programme

Figure 39. **Job-related training: participation and volume**¹



1. Cross-survey indices. Such training is defined as education and training received for a reason other than secondary education or initial vocational training.
 Source: OECD, *Employment Outlook*, June 1999.

was very popular with employers, who in a number of cases were prepared to pay additional allowances to redundant workers in exchange for not having to meet the more strict conditions of the early retirement programme). In response to this variant of early retirement (in Belgium called “Canada dry”), the government has announced an increase in taxes on additional allowances. However, as discussed above the government should go farther and gradually withdraw from the early retirement and older unemployed programmes, leaving the financing of these programmes to the social partners. So long as these programmes continue to exist, employers should at least be prevented from topping up benefits.

The employment rate and competitiveness: the wage norm

The main macro instrument designed to enhance employment is the so-called wage norm, which the government and the social partners agreed upon in 1996 to regain competitiveness. This ceiling, updated every two years, is supposed to limit the increase in labour costs per hour to the projected (weighted) increase in labour costs in Germany, France and the Netherlands. In 1998 and 2000, the government abstained from intervention so that the norm suggested by the social partners became the basis for wage increases at the sectoral level. These increases come on top of indexation to the so-called health index. Total labour costs further depend on wage drift and wage increases at the firm level.¹¹¹ Wages are therefore largely determined at an intermediate level, which typically tends to result in higher wage increases than centralised wage formation (which would be a better factor in the costs of unemployment) or decentralised wage bargaining (Nickell and Layard, 1999; Elmeskov *et al.*, 1998).

From 1997 to 2001, hourly wages in Belgium increased by 16 per cent, as opposed to 12 per cent in the three neighbouring countries (NBB, 2002b). For the years 1999-2000, the norm had been set at 5.9 per cent (per FTE), whereas the actual increase was 7.2 per cent in Belgium as compared to only 4.8 per cent in the neighbour countries, who lowered social security contributions, like Belgium did, but by a larger than projected percentage.¹¹² The overrun in the years 1999-2000 was concentrated in a few industries, in particular transport and communication (11 per cent) and business services (19 per cent). Workers who changed employers in tight labour market segments bargained higher wage increases. Part of the overrun could therefore be related to a significant increase in job rotation (40 per cent between 1998 and 2001). To what extent in 2001 and 2002 the overshooting has been more widespread had not yet been ascertained officially by the Central Economic Council at the moment of writing, but it was already clear that in 2001 a role was played by the automatic indexation to a higher than projected inflation.

Given the openness of the Belgian economy, it is understandable that both the authorities and the social partners attach great importance to wage moderation and competitiveness. However, despite the existence of the norm, competitiveness has deteriorated in recent years relative to the three main trading partners. In view of the repeated overruns, which seem to be no longer limited to sectors with labour shortages, it would therefore be better to abolish the norm. The overruns reflect the fact that employers and employees have designed several ways to circumvent the norm and to agree higher wages. In recent years, the norm may at best have prevented a further deterioration in competitiveness. In some weaker sectors it may also have inappropriately functioned as a floor rather than as a ceiling, thus pushing up the general wage level.

At the introduction of the wage norm, it was agreed that overruns measured at the end of the two-year periods should be followed by corrections in the

next wage round, but so far no corrections have been made. During the biannual periods, nominal wages were automatically adjusted to unforeseen price increases, whereas the neighbouring countries do not have such a mechanism, which may amplify labour market fluctuations due to shocks in the terms of trade for instance. Given the present indexation mechanism, even a strict compliance with the norm would not guarantee a favourable evolution of relative unit labour costs in the case of unforeseen price increases. Not only the wage norm but also the indexation mechanism should therefore be seriously reconsidered.

In the Netherlands, wages have been moderated for many years without a norm. In Belgium, the openness of the economy also requires more freedom for enterprises, in particular in the exposed sector, to adjust wages to productivity and internationally competitive levels. It would therefore be preferable to gradually shift part of the wage negotiation process from the sectoral level to the enterprise level by abolishing legal extension of collective wage agreements.

Options for further labour market reforms

The Belgium employment rate is still one of the lowest in the OECD. In the 1990s it rose significantly, owing to the increased participation of women, but the employment rate of older workers remained very low. Many old persons are still participating in the early retirement scheme or the scheme for older unemployed persons who are exempt from job search. They receive benefits that are financed by the state, include seniority based allowances and/or are topped up by employers who also benefit from the schemes in restructuring activities. In July 2002, for new unemployed the eligibility age for the older unemployment programme was raised from 50 to 55. Although this first measure to tighten job search requirements was a step in the right direction, much more needs to be done if the employment rate of older persons is to be doubled to 50 per cent by 2010 in line with the Lisbon objectives. A further raise of the eligibility age to 58 in 2004 is certainly not enough. A more comprehensive reform is required including first and foremost a rapid withdrawal by the government from subsidising early retirement and older unemployed programmes, leaving the financing of these programmes to the social partners and making the building up of pension rights more actuarially neutral (see also OECD, 2002j).

The success of such a reform depends on several measures in other areas. The government should prevent in particular the normal unemployed scheme from becoming a new, rapidly increasing pool of old unemployed workers. First, the outflow from the normal scheme could be stimulated by lowering and harmonising (across regions) the maximum benefit duration, which is currently still unlimited for breadwinners or single persons and also very high for unemployed partners of wage earners. Second, unemployment benefits should no longer be supplemented by seniority based allowances, but harmonised and replaced after

a certain period by social assistance benefits. Third, a stricter sanctions policy should be pursued by a better exchange of information between the federal employment agency, which pays benefits, and local employment agencies.

To improve the employability of workers – the other side of the coin – enterprises should invest more in permanent education and job related training, in particular of older workers, for whom the prospect of a low replacement rate after having been made redundant should become a strong incentive to participate in life long learning. If necessary, another way to bring productivity of older workers better in line with their wages, would be a gradual reduction of seniority based wage components. Lowering social security contributions paid by employers might also help to stimulate the demand for older workers but at possibly high costs. Furthermore, the government should not rely too much on the recently introduced system of time credits to extend working lives. It might have adverse net effects on labour supply and therefore needs to be closely monitored.

The measures recommended above should also contribute to a reduction in the persistently high unemployment rate in Wallonia and Brussels. In these regions, downward flexibility in wages and benefits is limited, because they strongly depend on agreements at the federal level. However, a gradual shift of wage negotiations from the sectoral to the enterprise level, to the extent possible, should be considered in order to better take into account local labour market conditions. A further reduction in replacement rates and higher structural reductions in social security contributions for employers could also contribute to raise the employment rate. However, this crucially depends on a rapid elimination of skill mismatches, which seem to be particularly high in Wallonia, where a high number of students leave school prematurely with only a lower secondary education certificate. The interest in technical areas should be stimulated, not only in Wallonia, but also in other regions with a still high number of vacancies. Vocational education pathways should be further developed and the *Rosetta programme*, although successful for some categories of youngsters, should be better targeted on those most in need of it.

Whatever measures are taken to raise the employment rate, the government should prevent a new proliferation of programmes and further elaborate its plans to simplify the present patchwork. It recently announced a welcome harmonising of the size of the reduction in social security contributions in different programmes by 2004. But more needs to be done. All present programmes should be thoroughly evaluated, including labour market programmes, which for many unemployed have become an alternative to looking for a normal job.

Finally, given the openness of the Belgian economy, a wage norm could in principle contribute to competitiveness and hence to an increase in the employment rate. However, in view of recent overruns, the possible interpretation of the norm in weaker sectors as a floor (rather than as a ceiling) and the apparent reluc-

tance to correct overruns, the question seems justified whether the norm is effective. It might therefore be preferable to reconsider the norm, in combination with the automatic indexation of wages to prices, and shift the emphasis of wage formation to the enterprise level by gradually abolishing legal extension of wages.

Product markets

Besides reforms required in the labour markets, fostering competition on product markets is a promising strategy to increase employment and growth according to recent empirical work in the OECD (Nicoletti *et al.*, 2001). This occurs through lower product prices (reflecting smaller profit margins and wage premiums) leading to higher volumes of goods and services produced and demanded. However, low productivity and non-pecuniary arrangements (*e.g.* high job security) currently offset the wage premium in industries where market mechanisms are displaced altogether (*e.g.* public monopolies). As a consequence wages need not to fall in the course of liberalising these sectors. As a general observation, lowering the degree of employment protection and the administrative burden on entrepreneurial activity in countries where these are high is expected to stimulate innovation and growth through easier entry and quicker expansion of new firms (Scarpetta *et al.*, 2002). Finally, more competition on product markets has generally a positive impact on innovation performance (Bassanini and Ernst, 2002). Therefore improvements in the way goods and services markets operate should play an important role in the Government's strategy of increasing employment rates and total factor productivity. What is most required is a powerful competition authority; more competition in network industries; a sound architecture of financial markets; and lower administrative burdens for citizens and companies.

Competition policy

The Belgian system of competition policy consists of two types of authorities – the general competition authority and sector-specific regulatory bodies for the surveillance of postal and telecommunications services, electricity and gas markets, air transport, railways and financial services markets. The general (cross-sectoral) competition authority, consisting of the Competition Council as a decision body and the Competition Service as an executive and investigative arm, received additional competencies by European Commission Regulation (EC) 2790/1999 of December 1999 conferring the observation of vertical agreements and concerted practices to national authorities. This was the first implementation step of the European Council's project of decentralising investigation of antitrust cases. To cope with the additional workload, the government decided to increase the staff of the council and the service (OECD, 2001f, p. 79). The restaffing of the Competition Council was completed in July 2001. After some delays, staffing of the Competition Service (38 posts) and of the body of

independent reporters in charge of directing the inquiries (four posts) was completed during 2002. Due to the delays, a backlog of unfinished work has built up, especially in the area of complaints. Even when running at full steam, the competition authority is not big by international standards. On 22 February 2002, the government agreed on the principles that should lead to the simplification and standardisation of the procedures governing market regulation in Belgium. The reform intends notably to clearly define the roles of various players in the regulatory system (technical ministries, sector specific regulatory bodies and the Competition Council) and to ensure strong and independent regulating structures. One specific feature of the Belgian organisation is the setting up, besides the Court and the administrative competition services, of a specific body (the Body of Reporters) responsible for investigations and bringing cases before the Court. The legislator clearly wishes to reinforce the separation between investigation and decision-making.

Although the vacancies are filled, coping with the newly assigned tasks will remain challenging. Vertical agreements and concerted practices are generally difficult to prove and investigations in these fields are resource consuming. At the same time, such investigations tend to unveil behaviour socially more harmful than many a merger at the lower end of the notification interval.¹¹³ Such mergers often obtain approval, either because the merging firms do not acquire a dominant position, or because the relevant market extends well beyond national boundaries so that even a turnover above € 40 million on the Belgian market is not problematic.¹¹⁴ In spite of the benign outcome of most merger examinations, almost a quarter of the Competition Service's staff were allocated to concentrations in 2001 (OECD, 2002d, p. 8). Reducing the workload in the field of merger control would free valuable resources to enhance investigations into vertical agreements and concerted practices and thus allow for a more efficient balance between traditional and newly assigned tasks. The government should therefore consider raising the notification thresholds for mergers.¹¹⁵ In the medium term, further tasks will be conferred to the Competition Council and Service. The European Council decided to confer further competencies to national authorities in the field of competition policy and issued the respective regulation in December 2000. As soon as this regulation is incorporated into Belgian legislation, probably by the end of 2002, under-staffing is likely to become important again, both for the Competition Council and for the Competition Service.

The imminent enlargement of the general competition authority should be seized to tackle a more fundamental issue of current competition policies in Belgium, which is the need for a clear institutional design specifying the responsibilities and the juridical status of each player in the national framework of competition policy. Both the partial decentralisation of European competition policy and the progressive deregulation of traditionally state-owned network industries have created new tasks that should be reflected by the institutional architecture. For the time being, the relationship between the sector-specific authorities and the

government varies across sectors. On the one hand, the regulator of the electricity and gas market (CREG) and the one of financial markets (BFC) enjoy a high degree of independence. The regulator of post and telecommunications (BIPT) will receive a similar status but the project of law has still to be voted by the Chamber of representatives, where it was submitted in July 2002 (Chambre des représentants, 2002). On the other hand, the regulatory authorities for air control and railway transports are within the Ministry of Mobility and Transports.

The coexistence of a general competition authority and a specialised authority for network industries may be justified by the trade-off between two goals. The one is to ensure low prices for consumers through competition and the other to provide network owners with incentives for capacity investment through adequate network access charges (Kumkar, 2000a, pp. 31-32). The challenge therefore consists of finding the minimal access charge that still provides the network owner with sufficient investment incentives. The first goal is best entrusted to the general competition authority that expands the control of concentration, vertical agreements and concerted practices to the new fields (rail transport, production and sale of electricity and gas, mail and telecommunication services). The second goal involves the practical implementation of non-discriminatory access to networks and the behavioural regulation of the network owner. This implies co-operation between the network owner and the regulator because the latter relies on a steady flow of information from the former on transport costs, network scarcity, the cost of public service obligations etc. Capture of the regulator by the regulated firm is a resulting danger that has to be limited by prescribing for the regulator a maximum of transparency in decision-making.¹¹⁶ Furthermore, if the network owner is a state-owned, vertically-integrated firm (*e.g.* SNCB and Belgacom), the specific task of a competition-friendly allocation of network capacities interferes with other interests of the government such as raising revenues, protecting employment in the public sector or granting a generous level of public services. This is why the behavioural regulation of the network owner should be made independent from the ministry in charge of the respective network industry. This has already been achieved for the electricity and gas markets and would also be desirable for the postal sector, telecommunications, the railways and air traffic. To make sure that the independent regulators use their discretionary power in line with the assigned objective (adequate network access charges and capacity investment), they are also to be made accountable for their activities.¹¹⁷ Any institutional solution should be guided by the three principles of transparency, independence, and accountability (Kumkar, 2000a, pp. 13-19).

Does this mean that there should be one independent regulatory agency per network industry? Although this would represent an improvement over the current situation of regulation within ministries, one should take into account two disadvantages of a sector-specific solution compared to a cross-sectoral one. First, the asymmetry of interest representation by stakeholders is bigger with a sector-specific agency. As a

head of the latter, the government could be tempted to appoint a high civil servant recruited from the state-owned enterprise on grounds of his or her technical and commercial experience. However, it is important that the top executive of the regulatory body come from outside the industry because this obliges the technical experts on both sides to give comprehensible explanations of their propositions and makes capture more difficult.¹¹⁸ Second, technical and institutional progress may reduce the intensity of network regulation needed in the future and make parts of the sector-specific agencies obsolete.¹¹⁹ In their own interest, the officials of the agency could then try to delay or prevent this step. Both of these disadvantages can be addressed by some combination of following steps. First several sector-specific regulators can be brought together under a common direction.¹²⁰ The sector specific regulators can then be absorbed into the general competition authority.¹²¹ Finally, the competition authority can be given a role in sunset provisions. For example, the competition authority can be empowered to declare that regulation is no longer needed in a sector and that declaration can directly or indirectly lead to bringing the regulation to an end.

Network industries

Railways

As in other EU countries, rail transport in Belgium is attributed an important role in cushioning the social and environmental costs of the substantial increase in traffic. However, despite rising road congestion problems, market shares of railways both in passenger and in freight transport have strongly declined in the past. One major problem is the lack of interoperability between national railway systems – a handicap hitting a small country like Belgium especially hard because it prevents rail transport to play out its comparative advantage where it is known to be biggest, *i.e.* on medium and long distances.¹²² Another major problem closely linked to the first one is the lack of competition in freight and passenger services. It is mainly due to their non-separation from infrastructure management¹²³ and has led to substantial rents for “insiders” in terms of labour hoarding, slow productivity growth (including low ICT use) and a low pace of organisational and product innovation.

In Belgium, these problems have led to a particularly low performance of the railway system. Belgium had the third highest cost per ton-kilometre among EU countries in 1997 and the second lowest revenue/cost ratio (Table 25). One reason for this appears to be that restructuring was slower than in most EU countries during the last two decades and especially in the 1990s, resulting in a relatively mild reduction in staff numbers (Table 26). In 1999, the ratio of railway staff per 1 000 inhabitants was the second highest among EU countries. As decomposition into labour and multi-factor productivity is not feasible for the railway industry

Table 25. Financial indicators for selected European railways

	Operating cost/Train km (£ sterling)			Receipts/Traffic units (pence)			Revenue/Cost ratio (cost recovery)		
	1994	1997	1989-94 Mean	1994	1997	1989-94 Mean	1994	1997	1989-94 Mean
Austria	14.2	14.5	14.8	3.3	3.3	3.4	0.38	0.39	0.40
Belgium	23.7	17.2	20.7	3.1	3.3	3.0	0.21	0.30	0.24
France	15.7	22.0	16.3	3.5	3.4	3.5	0.50	0.35	0.51
Germany	8.6	10.1	n.a.	5.0	4.8	n.a.	0.89 ¹	0.74	0.50
Britain	17.5	n.a.	11.2	6.0	n.a.	6.1	n.a.	n.a.	0.70
Italy	19.0	17.6	26.8	3.8	2.3	3.0	0.44	0.29	0.26
Netherlands	9.2	14.4	8.8	3.4	4.0	3.2	0.54	0.41	0.50
Portugal	10.4	7.5	12.0	1.9	2.0	2.1	0.37	0.37	0.37
Spain	11.5	10.2	12.7	2.8	2.5	2.8	0.36	0.44	0.35
Sweden	13.2	10.2	11.2	2.2	2.6	2.3	0.42	0.51	0.54
Switzerland	14.0	n.a.	13.3	3.9	n.a.	3.9	0.46	n.a.	0.48

1. Comparison with other countries difficult.

Source: OECD (2001g), p. 134.

Table 26. Changes in railway employment in European countries
In per cent

	1979-1999 ¹	Annual average ²	1991-1999	Annual average	Employees per 1 000 inhabitants in 1999 ³
Austria	n.a.	n.a.	-24	-3.0	6.3
Belgium	-33	-2.0	-7	-0.8	4.1
Denmark	-48	-3.4	-48	-7.1	2.1
Finland	n.a.	n.a.	-33	-4.3	2.5
France	-33	-2.0	-12	-1.5	3.0
Germany	-27	-1.6	-41	-5.7	3.0
Greece	-13	-0.7	-18	-2.2	1.0
Ireland	-72	-6.9	-18	-2.2	1.3
Italy	-49	-3.3	-48	-6.9	2.0
Netherlands	-4	-0.3	-6	-0.7	1.6
Norway	n.a.	n.a.	-53	-8.1	1.4
Portugal	-49	-3.3	-39	-5.3	1.3
Spain	-52	-3.6	-29	-3.7	0.9
Sweden	n.a.	n.a.	-44	-6.1	1.2
United Kingdom	-54	-5.1	-38	-5.1	1.9

1. Denmark, Greece: 1998, Ireland: 1997, Netherlands, United Kingdom: 1994.

2. Austria: 92-00, Spain, Denmark: 90-98, Ireland 89-97, Italy: 85-95, United Kingdom, Netherlands: 85-94.

3. Denmark, Greece: 1998, Ireland: 1997, Netherlands, United Kingdom: 1994.

Source: European Conference of Ministers of Transport.

due to missing data, empirical research on performance across EU countries has favoured measures of technical efficiency and cost efficiency. As to the former, results for Belgium are at best mixed, placing the country at the low end of the second third (Gathon and Pestieau, 1995; Coelli and Perelman, 2000) or at the end of the ranking (Cowie and Riddington, 1996).¹²⁴ When it comes to cost-efficiency of rail freight and passenger services, Belgium takes the penultimate position (Cantos and Maudos, 2000 and 2001).¹²⁵ If prices paid by passengers of the national railway carrier (SNCB) are low nevertheless, it is because not only infrastructure but operations as well are subsidised in line with the Government strategy for sustainable transport.

The issue of revitalising the railways and providing for their interoperability throughout the European Union needs to be tackled both at the national and at the supra-national levels. The European Union has been pushing for more competition in rail markets since 1991. Whereas past directives and regulations laid the ground by prescribing some vertical separation between infrastructure management and service provision, competition on rail freight markets started being introduced recently. In the near future, open access will be gradually extended to the whole freight network – enforced by European competition policy – while problems of interoperability are to be addressed by harmonisation and standardisation, and an opening-up of national passenger transport markets has been announced for later this decade (Box 4).

For these initiatives to succeed, national policies are key because national barriers protecting existing companies are still preventing market entry quite effectively. Recent action taken by the Belgian Government mainly consisted of transposing EU directives and pursued the broad aim of making railway transports more attractive and the national carrier more competitive (Belgian Progress Report, 2001). A law to be promulgated in 2002 transposes the vertical separation requirement in line with EU-directive 2001/12. Yet this separation is limited to accounting, whereas the juridical unity of the state-owned firm is maintained, making competition more unlikely. To make up for the resulting lack of incentives and move towards a more outcome-oriented mode of public management, the Government negotiated a new management contract with the SNCB fixing objectives and means to achieve them. Both quantitative targets (50 per cent more passengers; 50 per cent more goods on the rail by 2010) and qualitative targets (*e.g.* security, punctuality) were determined. Furthermore, to promote competition on rail freight market in line with another EU directive, a bill for the creation of two separate regulatory bodies charged with allocation of capacity and overall control, respectively, was presented in 2002. The award of licenses, however, remains with the Federal Ministry of Transports under these provisions. Finally, investment into infrastructure and rolling stock material will be increased substantially over the period 2001-12. Compared with the previous plan (1996-2005), the volume of the new investment plan is higher by about 60 per cent on average.

Box 4. Railway reform in the European Union

For more than a decade, revitalising the European rail sector to reverse the long-term trend of declining market shares of the railways both in freight and passenger transport has been preoccupation for the European Commission. Fostering on-track competition was seen as a means of achieving a better integration of national networks, the major requirement in rendering the railways efficient and competitive in relation to other modes of transport. A first directive (91/440/EEC) covered four areas (OECD, 2001g, p. 45):

- Financial strengthening to place railway undertakings on a sound financial footing.
- Management independence so as to run railway undertakings as commercial organisations.
- Separation of infrastructure from operations.
- Access to infrastructure for companies engaged in international combined transport.

Given slow progress in implementation following this 1991 directive, the latter two objectives were made more specific by two related directives (95/18 and 95/19) on licensing of railway undertakings and allocation and pricing of railway infrastructure for third party access, respectively. As it became clear that the international integration of rail services hardly improved during the nineties, the Commission launched a Directive on interoperability of high speed rail in 1996, which was extended to conventional rail in 1999. It dealt with improving the organisation of international services, particularly at border crossings, allowing locomotives and drivers to cross borders and developing a single market for rail equipment.

An overall evaluation of Directives 91/440/EEC, 95/18 and 95/19 led to revised proposals in 1999 in a communication that has become known as the Railway Package, COM(99)616. In the field of *financial strengthening* separate profit and loss accounts for passenger and freight services were to be introduced and cross-subsidisation to be prohibited. As to *management independence*, an active role for governments was acknowledged for infrastructure investment and public service contracts, but intervention was seen as going too far in many countries. This takes the form of over-regulation of passenger services and fares, of preventing adjustment to the size of the network (particularly closures) and political influence on procurement decisions and management appointments. In achieving *separation of infrastructure* from operations, the initially prescribed separation of accounts was judged insufficient because it left the incumbent railway undertaking too closely linked to infrastructure managers. Finally, *access to infrastructure* was judged unsatisfactory. Therefore the Railway Package required that control of access be the responsibility of an independent body and open access should progressively be granted for all international freight services. The European Commission thereby acknowledged that relying on co-operation between national Railway Companies (as an alternative to competition) did not yield the expected improvements in interoperability and henceforth sees full liberalisation as the final goal.

Box 4. Railway reform in the European Union (cont.)

The issues discussed in the Railway Package were tackled in three specific directives (2001/12, 13 and 14) of March 2001 relating to infrastructure access, licensing and safety certification of railway undertakings and capacity allocation which have to be transposed into national law until March 2003. In January 2002 the European Commission launched a "second Railway Package" intended to speed up the opening of rail freight markets and the improvement of inter-operability by five measures (European Commission, 2002c). Competitors must be given access to the Trans European Rail Freight Network for international services by 2003, for national services (cabotage) by 2006, and will enjoy access to the entire network for all types of freight services by 2008. The other measures aim at extending the inter-operability progress made on the high-speed network to the conventional network, finding a common approach to safety and creating a European Railway Agency to enhance mutual recognition of safety requirements. In its White Book on transport the Commissions has announced the next steps of its medium-term strategy (European Commission, 2001c, pp. 34-36). They will consist of removing further barriers to entry to the rail market (reinforcing regulators' powers, simplifying customs procedures, strengthening the rights of freight customers and passengers) and opening up the market in passenger services in three steps – niche markets, international services without cabotage and, finally, all services.

Excluding investments for the high-speed train network, which will be completed by 2006, about two-thirds of the SNCB's total investment will be financed by funds from outside the company (Ministry of Mobility and Transport, 2002, p. 2).

The Belgian economy would benefit from an internationally-integrated railway network with active competition among providers of transport services. First, opening a protected service sector to international competition involves welfare gains from trade, which are expected to be particularly large due to the input-providing character of most rail services for the economy. Conversely, malfunction in input markets puts a strain on Belgian goods producers unable to pass on costs to customers in an international environment with open goods markets and neighbouring countries moving forward in service liberalisation.¹²⁶ Second, horizontal integration of networks (interoperability) with other European countries would boost the railways' competitiveness compared to other modes, as intended by the government. To achieve this, the technical harmonisation efforts at the European level have to be supplemented at the national level, notably by an outright separation between infrastructure management and transportation services. Actually there is a trade-off between vertical and horizontal integration for at least two reasons (Knieps, 1996, p. 38 and p. 45). Given that infrastructure provision is

considered a public service obligation in most EU countries (and in Belgium), each system is bound to national boundaries and does not necessarily have an optimal size. Efficiency gains could be realised if mergers and spin-offs could lead to optimal size of active firms at least in the transport services business that allows both for niche suppliers and multinational transportation companies. Moreover, the economic incentives to exploit all economies of scale and scope from interconnection are much higher for a vertically disintegrated network owner than for an integrated firm.¹²⁷ The OECD expects that gains from improved interoperability in the wake of vertical separation more than outweigh its cost (mainly increased co-ordination) in Western Europe with its small, open and traffic-intensive economies (OECD, 2001g, p. 39). The Government should therefore push forward the separation between infrastructure and transport services.¹²⁸

Further conditions must be in place to provide for active competition in the rail market. As the state-owned carrier will continue to provide transport services, the regulatory framework has to be strengthened to ensure truly open access to the network. Competition policy has to prevent the SNCB from abusing its dominant position and the institutional setting should aim to avoid conflicts of interest between the regulation of network access and general transportation policy or public management of state-owned enterprises. Therefore the announced creation of an independent regulatory authority is welcome, but the Ministry of Transport should also delegate the awarding of licenses to an independent regulator as it plans to do for capacity management and safety control. Moreover, it might be preferable to integrate the new regulator into the framework of general competition authority in order to minimise its reliance on the incumbent company in staff recruitment and to install an efficient complaint body for potential entrants (see sub-section on competition policy above).

Withdrawing artificial market barriers would mobilise productivity reserves and competitive forces within the SNCB but the incumbent also needs managerial freedom to take commercial decisions. This is why some EU countries (*e.g.* Germany and the Netherlands) strengthened the managerial independence of their major rail companies. In Belgium the clear objectives given in the new management contract allow for a higher degree of freedom in choosing the means of how to achieve these objectives. However, the commercial freedom of railways is restricted more than necessary by preventing adjustments to the size of the network, by political influence on senior management appointments and by regulation of passenger services and fares (European Commission, 1998). As to the latter, the decision to declare all passenger services a public service obligation to be carried out by the SNCB is costly because it precludes competition in passenger transport altogether. There are more efficient and market-friendly ways of achieving the Government's aims of low prices for users and high network coverage, notably auctioning out to highest bidders

or public offerings to the provider claiming the lowest subsidy, while being responsible that quality standards are met. There is also a strong budgetary case for a conceptual separation between pricing policies and the organisation of the rail industry: letting competition bring down unit costs per passenger kilometre would greatly reduce the need for operational subsidies.¹²⁹ The government should therefore open up passenger rail transport to competition.

The infrastructure investment plan announced by the government should be carried out without any delay. Infrastructure bottlenecks should be removed as fast as possible because they increase the shadow price of network access and congestion-induced time costs of rail transports. Infrastructure is particularly important for freight transport, which the government wants to put on an equal footing with road haulage. The current system privileges passenger transport over freight without cost-benefit considerations. Inter-modal competition in freight markets is further distorted by favourable tax policies towards diesel trucks (raising air quality problems, see section on sustainable development). In general, road haulage pays less than its marginal social costs (including externalities from congestion, road wear and tear, and air pollution) according to empirical studies (European Commission, 1999a and 2000b). This leads to excessive use of the road network and exacerbates the already high social costs of congestion, the quantitatively most important negative externality of road transport. The appropriate answer consists of congestion pricing to allow for shifting part of the congested traffic towards off-peak periods (European Commission, 1999a, p.17), and indeed to rail transport.

Despite huge operational subsidies for rail passenger transport, road congestion remains a major problem in Brussels. Indeed train subsidies are a blunt instrument to achieve less road congestion because the relief from the modal shift is partially offset by the fact that mobility as a whole becomes cheaper compared with other goods, leading to an increase in overall traffic demand (Parry 2002). As pointed out in the last survey (OECD, 2001f, pp. 117-118 and 133-134), increasing the price for parking space in Brussels and peak-pricing of roads would be more efficient to reduce the social costs of congestion. Once one can correct the pricing of car transport in this way, it is no longer justified to set tariffs much below the marginal social cost for public transit (European Commission, 1999a, p.21). In the long run, this could even do more harm than good to sustainable mobility, since subsidies to mobility distort people's choices of residence against life in cities, where an ever higher share of employment is located as tertiarisation goes on. If commuting increases significantly faster than employment in an urban area, this could be an early warning sign that mobility is being under-priced. In co-operation with the city of Brussels, the governments should therefore reconsider pricing of parking space and road use at peak times, thus allowing for a reduction in operational rail subsidies.¹³⁰

Electricity and gas markets

In the *electricity* sector current policies hinge on adapting the regulatory framework to legal unbundling of production, transmission grid management and distribution of electricity foreseen in the Electricity Act of 1999 that transposed the EU electricity directive. The major challenges consist in the implementation of a *de facto* independent Transmission System Operator (TSO) and the taking-up of monitoring and control powers by the CREG (*Commission de régulation de l'électricité et du gaz*), the national regulator. In May 2001 the incumbent players and the Secretariat for energy agreed on the ownership structure for the TSO, the composition of its Board of Directors and on a timetable for remaining issues concerning the TSO. Specifically, municipalities should hold 30 per cent of the future TSO, Electrabel/SPE, the main producer, 30 per cent, and 40 per cent should be sold on the stock exchange. Furthermore, half of the Board of Directors should consist of independent members, who have been approved in the meantime. In June 2001 the incumbent network operator, CPTÉ, a subsidiary of Electrabel, created itself a new subsidiary, ELIA S.A., to become the TSO. In October 2001 an agreement was signed concerned with giving the municipalities their 30 per cent participation.

The liberalisation process has fallen behind schedule as the elaboration of the statutes of ELIA S.A. was delayed until September 2002. Only since then has the grid operator been able to carry out the pending steps of the electricity directive, namely the regulated transport tariffs, the terms of third party access, an investment programme for the network (especially interconnection capacity with other countries), a technical code for electricity transport, and dispute settlement. Once these rules of the game are fixed, the market players will have to align their daily operations to them and the regulatory authority will ensure that the rules be respected. But as long as these rules are not adopted, the CREG cannot play its operative role as an arbiter of competition.

These delays are one reason for the still low market share of new entrants, another one being that only big customers (buying more than a threshold level) are allowed to choose their supplier freely for the time being. About half of the electricity market has this eligibility at the moment. Cross-subsidisation from the household to the corporate sector further hampers competition from new entrants who cannot improve their profits by delivering to households.¹³¹ Complete freedom of choosing one's supplier is expected to be implemented at the latest date allowed by the EU directive (1 January 2007) except for the Flemish region that has decided to bring complete liberalisation forward by one year, *i.e.* to July 2003. A further reason for slow entry is that low availability of interconnection capacities prevents more electricity imports. If the liberalisation process continued to lose steam, it would be unlikely that market penetration by new entrants would reach substantial levels in the near future. Accordingly, the outlook for electricity prices in the eligible part of the market (medium-sized and big enterprises) would be

less favourable than it could be, and the economy would have to wait until 2006/07 for the efficiency gains from lower input prices to materialise. This is why the Government should speed up the reforms and complete the regulatory work that remains to be done.

The more pro-active attitude towards the liberalisation programme in Flanders is in part due to the fact that municipalities in the Flemish region rely less heavily on the monopoly rents from electricity distribution earned by their inter-municipal trusts (“*intercommunales*”) who still own *and* operate the network.¹³² Rather than financing public goods from distorted electricity prices, municipalities and regions should soon reach an agreement on how to substitute for the revenues to be lost. Removing this major source of resistance will improve chances for competition to take place.

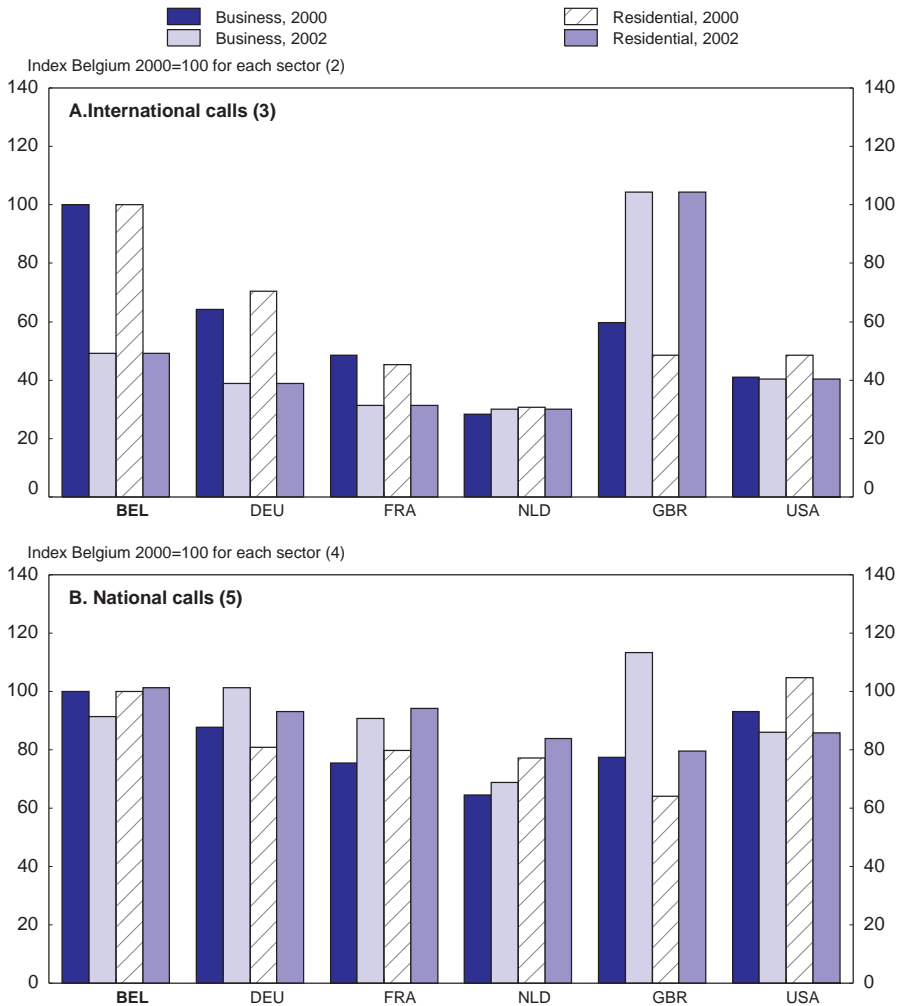
In the *gas* market, transport and retail have been unbundled and the eligible part of the market broadened in July 2001 and now covers some 58 per cent of the total market. Consumers will get free choice of suppliers in October 2006. In autumn 2001 the dominant firm, Distrigaz NV, took an important step by legally separating into Distrigaz NV and Fluxys. The latter is in charge of the operation and development of the transport grid, storage facilities and LNG terminal. In spite of this progress, the market share of new suppliers is still small (5 per cent). Regulation will have to ensure that Fluxys actually grants access to all suppliers on equal terms. To achieve this on a sustainable basis, the capital ownership structure will have to reflect Fluxys’ independence from dominant suppliers and producers. In October 2002 the CREG approved the tariff structure suggested by Fluxys and which implies that the average price for the transportation of gas will come down by 20 per cent compared to its level at the end of 2001. Although changes in the border price of gas will continue to depend largely on oil prices, the compression of profit margins due to more competition in distribution means lower average gas prices ahead for households on average. The regions are in charge of access regulation and the detailed implementation of the new framework. Whereas the Walloon and the Brussels regions still have to define the necessary legal provisions, the Flemish region decided last June to bring the date of full eligibility forward to July 2003.

Telecommunications and e-commerce

The market for *fixed line telecommunication* in Belgium experienced quite divergent price developments during the past two years. On the one hand, average charges for fixed line international calls fell by about 50 per cent, suggesting that competition has been effective. By May 2002 prices for international calls had come close to those applied in France, Germany and the United States, were significantly cheaper than in the United Kingdom but remained less affordable than in the Netherlands (Figure 40, panel A). On the other hand, prices in the field of

Figure 40. **Recent trends in prices for international and national calls in selected countries¹**

May 2002 versus August 2000, in US\$ using PPP



1. Fixed networks.
2. Prices for single international call in Belgium in August 2000: US\$ PPP 1.34 (business) and US\$ PPP 1.79 (residential).
3. Average call charge for one single call weighted by traffic (business: excluding tax; residential: including tax).
4. National call charges in August 2000: US\$ PPP 958.51 (business) and US\$ PPP 445.43 (residential).
5. OECD basket of residential and business telephone charges. Excluding international calls and calls to mobile networks.

Source: OECD (2001b) for 2000 data and OECD Secretariat for 2002 data.

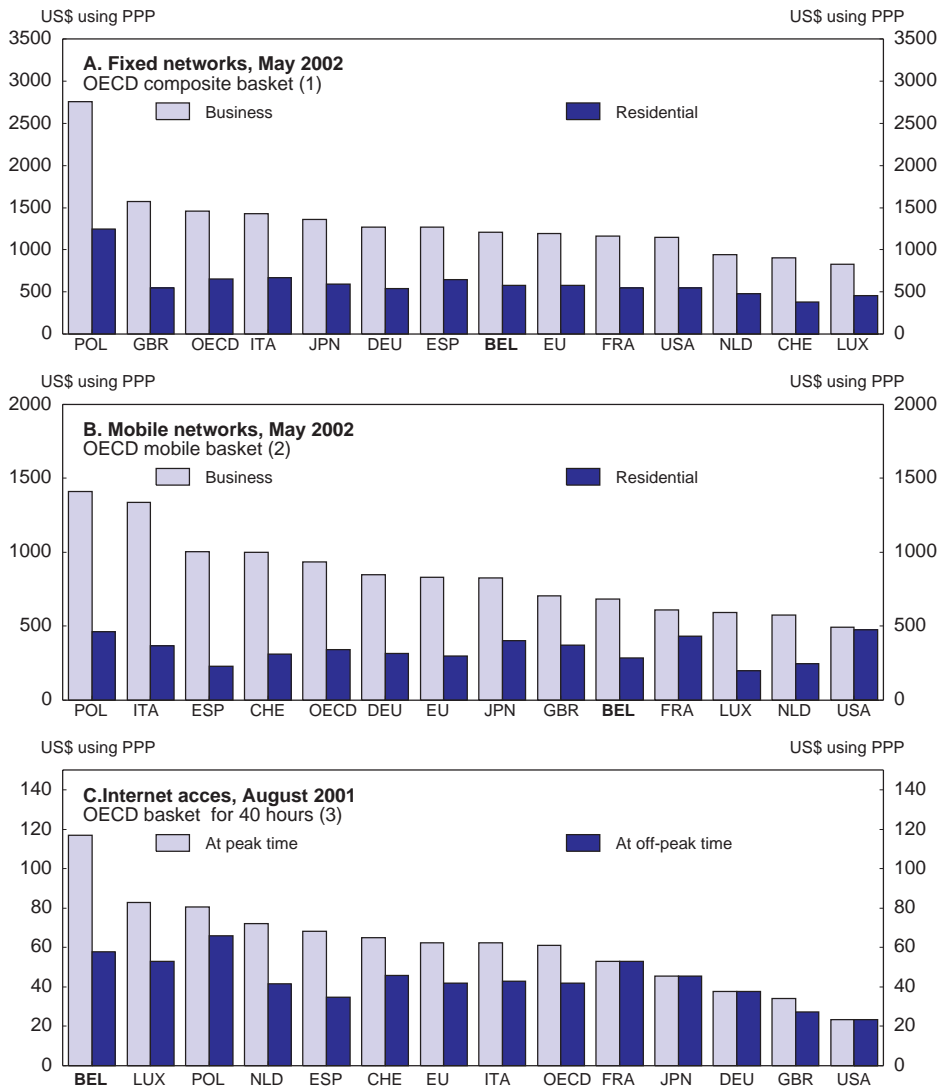
national fixed line telecommunication decreased only moderately for businesses (by 9 per cent) and stabilised for households.¹³³ With the average call charge roughly stable in Belgium and slightly on the rise in neighbouring countries, price convergence within the EU continued (Figure 40, panel B). The charge for the OECD composite basket for fixed networks in Belgium was only slightly above the EU average in 2002 (Figure 41, panel A).

Stabilising local call prices above average costs and huge differences in trends between international and national call prices point to slow progress in unbundling of the local loop. Despite an agreement reached in May 2001 between Belgacom (the incumbent firm) and other operators on opening the “last mile”, the number of fully unbundled lines is still low. The independent regulator for postal services and telecommunications, the Belgian Institute for Postal services and Telecommunication (BIPT), has therefore launched an accompanying process by promoting the easiest methods of collocation (Belgian Progress Report, 2001, p. 16). To lower the costs of access to the last mile, the Ministry of Telecommunications followed the suggestion by the regulator of prescribing a transparent average-cost based access pricing structure in February 2002.¹³⁴ Belgacom's dominant market position deserves particular scrutiny by the regulator, who should remove remaining price barriers to market entry for local calls.

Besides pricing, it is important to put all operators on an equal footing in other regulatory fields including taxation and the distribution of the costs of public services. As to taxation, Belgacom's real estate tax exemption was abolished as of 2002 to bring the incumbent's tax treatment in line with EU competition rules. As to the public service obligations imposed to Belgacom, the market leader claims that all operators participate in financing them. If the Government installs a “public services funds” (fed by contributions according to each firm's market share), it should ensure that only the net costs of public services be reimbursed¹³⁵ and that full reimbursement be conditional on the achievement of previously agreed outcomes.¹³⁶

The most remarkable recent development in *mobile telephony* was the high demand for capacity for the wireless local loop. The four licenses awarded from January to September 2001 turned out to be insufficient to cover demand so two more licenses were auctioned at the end of 2001. Nevertheless, at the moment operators are less enthusiastic to develop wireless telephony projects because of the high investment costs and bad economic conditions. The market share of Belgacom Mobile, the affiliate of the incumbent operator, is still high but has come down markedly since the arrival of two competitors. In February 2002, the bigger of the two, Mobistar, was judged as having significant market power, as had already been the case for Belgacom. As a consequence, both firms have to base their tariffs for call termination on actual costs, which could lead to lower tariffs according to national experts. Business mobile telephone charges had already fallen by 24 per cent (households:

Figure 41. Telecommunication prices in selected countries



1. Fixed and usage charges. Calls to mobile networks and international calls are included. VAT excluded. The business basket contains three times as many calls as the residential basket. About 85 per cent of business calls occur at day-time which further explains higher costs.
 2. Business: the basket includes 300 national minutes per month including 60 international minutes. Residential: 50 minutes per month, excluding international calls.
 3. The basket includes 40 one-hour calls. Off peak is taken at 20h.
- Source: OECD (2001b) and OECD Secretariat for 2002 data.

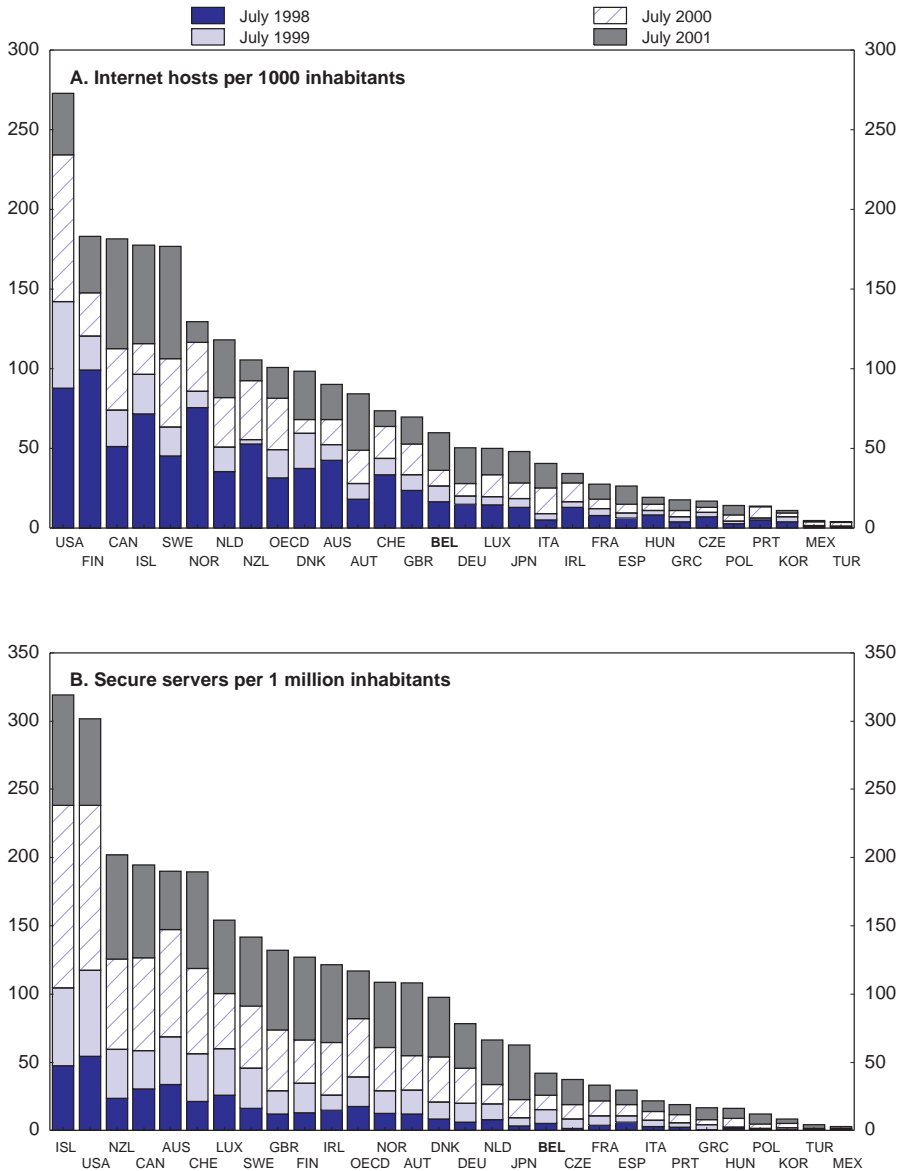
5 per cent) between August 2000 and May 2002. They are now lower than the EU average (Figure 41, panel B) and have ranked in the most competitive third of all OECD countries since May 2000. No longer falling prices for fixed network local calls due to incomplete unbundling have contributed to the success of wireless telephony, which has become an interesting alternative to the local loop (Belgian Progress Report, 2001, p. 16). A major recent breakthrough was the introduction of number portability for all users, which is expected to stimulate price competition in the medium term through switching of suppliers, mainly at the expense of the market leader.

Internet use was characterised by a gradual switch from dial-up to fast Internet access during the last two years. While prices for dial-up access increased sharply, making Belgium one of the most expensive OECD countries¹³⁷ (Figure 41, panel C) and reflecting significant market power in the fixed local loop, fast Internet access via broadband has been expanding at a remarkable pace since 1999. During 2002, prices applied by the main providers of internet access via DSL connections have declined. Two technologies are available for fast Internet access, ADSL and cable. The fact that Belgium has the leading penetration rate for cable television networks in the OECD area (OECD, 2001i, p. 23) facilitated an early launch of the first high-speed Internet access (August 1997). Since Belgacom introduced the DSL technology by launching its service in October 1999, a significant degree of “inter-modal” competition has developed. By the end of 2000, DSL services were available to 75 per cent of the population (OECD, 2001i, p. 24). The number of ADSL connections almost quadrupled from 145 000 in March 2001 to 503 000 in June 2002 (INS, 2002). Challenged by cable operators, the incumbent improved its DSL services in terms of speed, user-friendliness, and gratuity of the starter kit and speeded up the rollout of DSL-coverage.¹³⁸ As a result, Belgium has made up for its delay in Internet connection of households compared with the EU average; the penetration rate tripled from 1999 to 2001, reaching 36 per cent. The number of Internet hosts per 1 000 inhabitants reached 60 in July 2001, more than in France but less than in the Netherlands (Figure 42, panel A).

Inter-modal competition has enhanced ICT use by consumers and prepared the ground for a more dynamic development of *e-commerce* in the future. Yet besides high Internet penetration rates, the development of e-commerce requires safety conditions to be in place. The best available indicator to gauge how well these conditions are fulfilled is the number of secure socket layer (SSL) servers related to the number of inhabitants.¹³⁹ In Belgium, this ratio on average doubled each year between mid-1998 and mid-2001, slightly outpacing the rates of growth observed in other OECD countries on average (Figure 42, panel B). Yet due to low initial levels secure server penetration per capita still only reaches a bit more than one-third of the OECD average and 14 per cent of the one observed in United States.

For e-commerce to become an attractive alternative to traditional commerce, the comparison of transaction costs between the two forms of commerce is

Figure 42. Recent trends in the number of internet hosts and secure servers in OECD countries



Source: OECD (2001b) and OECD Secretariat for 2001 data.

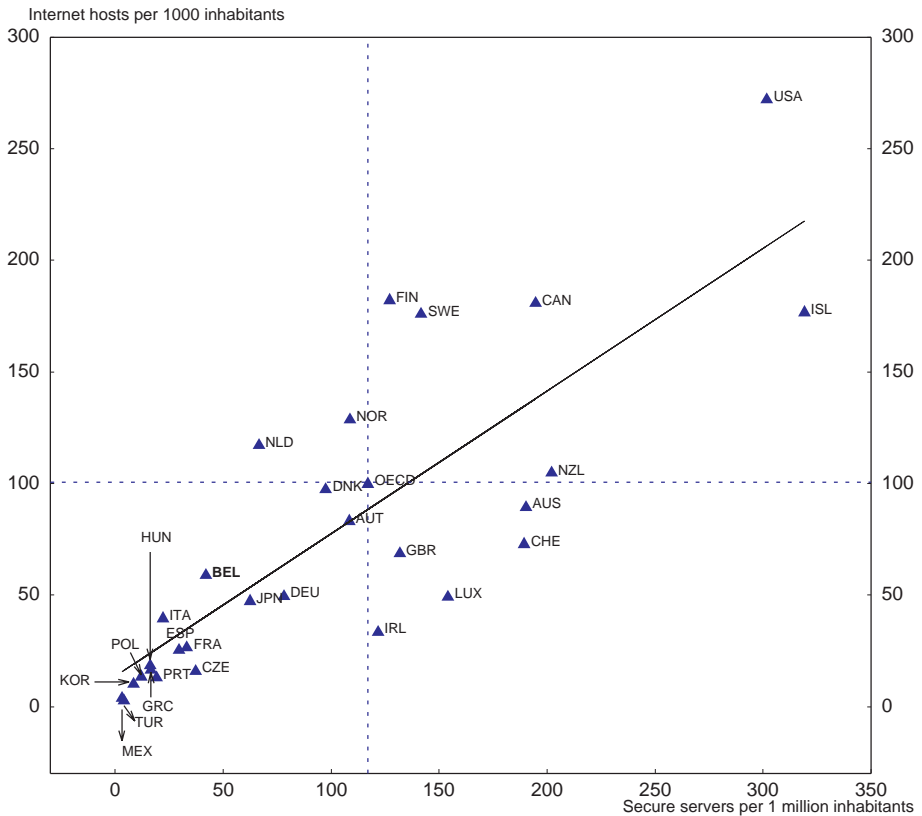
crucial. Unresolved regulatory problems as well as relatively high prices for broadband access make Belgium a still quite expensive place for e-commerce.¹⁴⁰ As far as regulation is concerned, the monopoly for electronic registered mail has not yet been abolished and the Ministry of Finance has still to agree on the certification of digital signatures and the use of electronic invoices. As to prices for broadband Internet access,¹⁴¹ the Belgian incumbent was one of the few suppliers of ADSL access in the OECD who did not yet include an unlimited amount of information covered by the monthly rental charge at the end of 2001. The additional per-unit cost beyond the threshold was the highest reported.¹⁴² Consequently, as commercial applications usually imply the transfer of huge quantities of information, the use of e-commerce in Belgium lags further behind the OECD average than does Internet host penetration, which is shown by a point above the regression line in Figure 43. By contrast, among the five countries with the highest secure server penetration, four have a tradition of non-metered access pricing.¹⁴³ As far as cable modem Internet access is concerned, it is true that the main Belgian operator grants an unlimited amount of information to subscribers, but the monthly fee ranks at the higher end of the price range internationally applied (OECD, 2001i, p. 56). Thus although infrastructure competition has greatly enhanced broadband penetration, price competition is still not strong by international standards and requires more scrutiny by the regulator.

Postal services

In the *postal* sector, where the market for letters and parcels above 350 grams was opened up in 1999, the limit is scheduled to come down to 100 grams in 2003. To prepare for competition, la Poste, the incumbent monopolist, underwent some more reorganisation after having been transformed into a limited liability company under public law in March 2000. The holding co-ordinating la Poste (Belgian Post Group BPG) created several subsidiaries that have diversified by mergers and acquisitions into new market segments. A listing on the stock market is planned for 2004. On behalf of the public owner, the Council of Ministers scheduled major investments to modernise the equipment and infrastructure over the coming five years.

To finance public service obligations, la Poste and the government signed up an agreement in May 2002, specifying the amount of subsidies la Poste will receive from 2002 to 2006. In 2002 the amount will increase by 8 per cent compared to the 2001 figure and reach € 227 million (close to 0.1 per cent of GDP).¹⁴⁴ The gap between this amount and the actual costs of public service operations is expected to disappear within two years thanks to productivity gains. Maintaining the current density of post offices is part of the agreement. Transparency of the costs of public services improved after the introduction of double-entry accounting.

Figure 43. Internet hosts and secure servers penetration at a glance
July 2001



Source: OECD.

For the Belgian postal sector, some regulatory and efficiency challenges lie ahead. The diversification of the post holding in combination with public subsidisation is at odds with active competition in the area of classical mailing. Public ownership provides BPG with advantages over private firms regarding liquidity and entrepreneurial risk in new electronic communications markets. These markets are typically characterised by initial losses and thus a substantial need for financial reserves.¹⁴⁵ This entails a danger of competition being distorted, even more so when two publicly-owned incumbent firms such as Belgacom and BPG conclude joint ventures. With a dominant position of the incumbent in new services, market

shares in classical mailing become easier to defend even if cross subsidising is not allowed.

The federal government should therefore withdraw relatively quickly from BPG segments that reveal no public service character. It should also withdraw from those parts of the classical mail industry that do not have natural monopoly characteristics. Just as with railways, market failure due to huge sunk costs only occurs at the level of infrastructure provision. The Government is considering separating mail delivery services (“mail”) and infrastructure management (“retail”) into independent business units (Belgian Progress Report, 2001, p. 19), which would be a welcome first step to prepare the withdrawal from delivery. It facilitates the identification of public service obligations and favours a more parsimonious use of subsidies. Last but not least, the public service obligation for rural areas does not mean that a state-owned enterprise has to provide the service. Once the monopoly has fallen, mail services could either be auctioned at minimum-subsidy claim in unprofitable areas or a universal service obligation imposed on all active firms. This obligation would be financed by a universal service fund fed by contributions from all active firms with the payoffs being determined according to the volume of public services actually delivered by each firm. In any case the state-owned “retail” branch of la Poste would rent fixed assets to the active mail delivery firm.

As long as the publicly-owned incumbent remains vertically integrated, care should be taken to put private enterprises on an equal footing in terms of competition. This includes an equitable fiscal treatment. At present, la Poste is not paying any taxes or dividends. Moreover, in line with the shrinking share of classical mailing in overall communication, cost-saving alternatives to traditional post offices (*e.g.* contracting-out to retailers) should be encouraged. Under the current system, la Poste has to ask the local authorities for permission if it wants to downsize unprofitable post offices to postal service points, which in general provide about the same range of services. Neither the local authority, which does not pay the subsidy, nor la Poste, which receives a subsidy in line with the actual costs, has an incentive to reduce the amount of subsidisation.

Financial markets

So far, the financial sector in Belgium has resisted reasonably well the global economic weakness, sectoral and regional crises as well as the decline in stock market valuations since 2001, partly due to the low exposure to the areas most hit and to a high proportion of traditional banking business. The ratio of own funds to a risk-weighted amount of outstanding credits for banks under Belgian law kept rising until the end of 2001 when it reached 12.9 per cent on a consolidated and 10.7 per cent on a company basis (NBB, 2002c, p. 54). This is well above the minimum solvency ratio imposed by the Basle Accord (8 per cent). The government has supported this favourable record by preparing a number of financial market

reforms since it came into office in 1999. In August 2002, a bill laying the ground for a major overhaul of the institutional framework of financial market supervision passed the parliament and the senate, and a bill aiming at strengthening corporate governance was turned into law. Furthermore, the government is preoccupied with improving the financing of small and medium-sized enterprises (SME) and with the development of venture capital markets.

Prudential supervision

Under the current system, two regulatory bodies, the Banking and Finance Commission (BFC) and the Office for Insurance Control (OIC) are in charge of micro-prudential supervision, whereas the NBB is in charge of the stability of the financial sector as a whole. Until now, co-operation between micro- and macro-prudential supervision was limited by the fact that only one member of the Executive Board of the NBB was also a member of the BFC. The major trends on financial markets in recent years have called this institutional arrangement into question. First, banks have more and more diversified into the insurance business and *vice versa*, strengthening the case for more active co-operation between the two micro-prudential supervision authorities. Second, the concentration process has continued – a major event in 2001 was the merger between Artesia and Dexia Bank Belgium – and has lowered the number of large banking groups on the Belgian market to four. Compared to the market structure in the past, this intensifies the repercussions of an individual default on the financial system as a whole, calling for enhanced co-operation between the micro- and the macro-prudential supervision levels. A further reason for such co-operation is the regulators' wish to encourage banks to smooth their own funds over the business cycle in order to limit the pro-cyclical tightening of credit supply in an economic downturn. This smoothing requires banks to build their solvency ratios to well above the minimum required in good times and implies integrating macroeconomic developments in the analysis and assessment of banks' stability. This co-operation between the supervisor and the central bank will become more important over the next few years, since banks' own funds requirements will change with the switch to the new Basle II Accords.¹⁴⁶ Third, bank and insurance ownership structures become more and more international, calling for enhanced co-operation in the exercise of international prudential activities. Belgium – the only country with Luxembourg where co-operation between micro- and macro-prudential supervision was rather loose – has accordingly adjusted its institutional architecture. This adjustment is also broadly in line with the overall stance of the ECB to have an enhanced involvement of national central banks in prudential supervision.¹⁴⁷

The new law tackles these co-operation issues by providing a strong institutional link between the three regulatory bodies involved at three levels. First, a new umbrella organisation, the Council for Financial Stability (CFS), chaired by the

governor of the central bank and composed by members of the executive boards of the three supervisory institutions, will deal with strategic issues of financial stability, crisis management, and other matters of common interest. Second, about half of the members of the executive board of both the BFC and the OIC will be chosen from the Executive Board of the NBB. Third, the law obliges the three institutions to co-operate in particular on operational matters (*e.g.* on international, cross-sector, macro-prudential, and legal issues).¹⁴⁸ Within the two micro-prudential authorities, the law ensures a better separation between the investigation and the decision-making functions. The BFC, the OIC and the NBB have to sign a Memorandum of Understanding specifying the modalities of their co-operation, which can lead to a merger by Royal Decree between the BFC and the OIC, with the NBB staying independent.¹⁴⁹ Moreover, the law rearranges the competencies between the BFC and market organisms involved in the supervision of securities markets, which became necessary after the integration of the Brussels stock exchange into an international commercial structure (Euronext). While standing ready to intervene, the role of the BFC in daily supervision work will henceforth be limited to tasks with a public service character. The dominant idea consists of giving the sector more autonomy in the welcome transition towards more integrated securities markets within the EU. Furthermore, the law centralises the procedure of appeal against all non-regulatory decisions and all decisions on takeover bids by the BFC and the OIC, for which the Brussels Court of Appeal will be responsible.

Corporate governance

The second major reform project of the current government hinges on corporate governance. The corresponding law was published in the *Moniteur belge* in August 2002. Legislative work in this area started well before the accounting scandals on international markets and addresses some of the deficiencies identified since. For instance, the quality of audit reports was called into question since it became obvious that companies providing both auditing and consulting services had a strong incentive to under-report on problems and malpractice. The new law contains provisions to encourage the independence of a company's statutory auditors. They are not allowed to accept any function with the company they review during the exercise and for two years afterwards. If they render other services, they must not declare themselves independent and these services must be mentioned in the reports of the audited company (OECD, 2002f, pp. 8-9). Thus without containing an outright prohibition of multiple services, these provisions could lead to a market-driven separation between auditing and consulting activities, as investors' demand for independent audits is currently high. If this turns out to be insufficient to solve the incentive problems of auditing companies, the government should stand ready to strengthen them again. Further transparency-enhancing provisions of the law hinge on the representation of a corporation in the Executive board of a company, on the disclosure

of important shareholdings and public offerings for listed companies, and on the functioning of the general assembly.¹⁵⁰

Another important issue is the protection of minority shareholders and the resolution of interest conflicts within groups of companies. The interests of small shareholders can conflict with those of large shareholders, management, or other stakeholders. Specifically, a controlling company may practice “tunnelling”, *i.e.* try to shift assets away from the dominated company, *e.g.* by applying unfair transfer pricing or forcing the controlled company to buy all shares in a capital increase (Johnson *et al.*, 2000).¹⁵¹ This is often judged to be legal as long as managers can “justify” their non-loyalty towards the subsidiary’s minority shareholders by an overriding interest of the group of companies (“duty of care”). In international comparisons, juridical systems governed by French civil law, such as France and Belgium, tend to give the highest weight to the duty of care at the expense of the rival principle, the “duty of loyalty” leading to minority shareholders losing lawsuits (Johnson *et al.*, 2000, p. 11). Investors’ additional risk of expropriation has to be compensated, thereby increasing the cost of capital, narrowing the access of firms to external finance and affecting the breadth and depth of stock markets (La Porta *et al.*, 2000).¹⁵² The new law on corporate governance addresses this problem by subjecting “significant operations involving a possible conflict of interest” (OECD, 2002f, p. 9) between members of a group of companies to specific procedures. To the extent that the interests of the dominated company and the potential harm to it become transparent, this represents a clear improvement over the status quo. However, shifting assets from minority to majority shareholders often takes the more subtle form of day-to-day management decisions, for instance on transfer prices, and does not necessarily involve significant operations, which the draft law applies to. If the collection of outside finance via the stock market is to be made more attractive, future amendments to corporate governance legislation should further strengthen the right of minority shareholders, since case law discriminated against them in the past.

But even under the existing legislation minority shareholders’ protection can be improved in cases involving vertically or horizontally linked firms. If the competition authority can prove that the terms of internal transactions are disadvantageous relative to those of comparable arms-length transactions, it can restore a level playing field by ruling against the controlling company. The Belgian competition authority has the legal possibility of launching investigations by its own initiative or at the request of the Minister of Economics. Admittedly, the power of deterrence originating from this possibility depends on the strength and operational efficiency of the competition authority.

Financing of SMEs and venture capital markets

The supply of risk capital to SMEs, especially in the case of start-ups, is considered insufficient by the government. In order to improve SMEs’ access both

to bank credits and to private equity, a task force chaired by the Minister of Finance presented a number of suggestions (André and Desimpel, 2002, pp. 5-7) to improve lending conditions to SMEs, in particular by:

- Classifying small enterprises in the “retail” (rather than “corporate”) sector of bank lending and taking into account more removable assets in the assessment of SMEs’ creditworthiness than for other companies, thereby reducing the lender’s own-fund requirements.
- Tax exemptions for profits and deductibility of losses for the lender to innovative small firms.
- Operational subsidies to business angel networks (a measure already in place in the Flemish region).
- Creating a system of small business investment companies (SBIC) similar to the American SBIC, which could benefit from public loans at subsidised interest rates and whose debt would be guaranteed by the State in case of a bankruptcy of the funds.
- Strengthening of the existing federal participation and regional guarantee funds, which provide public state guarantees for individual investment credits.
- Easing the rules governing listed closed funds investing primarily into non-listed companies (PRICAF), which are considered as being too strict. The task force wants the compulsory-listing requirement to be lifted for a new, to be created, category of PRICAF with a limited duration to ease the obligation of distributing 80 per cent of the funds’ profits, and ease the rules of diversification of assets over a number of firms.
- Harmonising the tax treatment of individual investors and investors acting through a risk capital vehicle.
- Favouring mergers of SME funds to achieve a critical mass of liquidity more easily.

The task force also made suggestions to enhance SMEs’ access to the stockmarket (André and Desimpel, 2002, pp. 7-11). Besides decisions enhancing transparency and accountability already made in the new law on corporate governance, the government is encouraged to:

- Increase the liquidity of markets for listed SMEs. Shares with double or multiple votes should give an SME access to outside finance while allowing the majority owner to maintain control. Furthermore, the system of stockmarket indices for small caps should be further developed.
- Increase the ceiling under which the yearly contributions by individuals to “saving-pension funds” are tax-exempted and require that part of those funds be invested in small caps.

Tax arrangements in favour of SMEs may be a relatively costly and thus inefficient way to promote the financing of SMEs, considering that the financing limits faced by this category of enterprises often result from a lower profitability and creditworthiness than that of bigger companies. Major factors that could explain such differences are restrictive labour market practices that put a barrier to firm growth (Scarpetta *et al.*, 2002) and high costs of administrative regulation which are generally more costly for SMEs (DeVil and Kegels, 2002). It would be preferable to reform these arrangements so that they impose less of a burden on such firms rather than to offer subsidised loans and preferential tax treatment. The latter should also be removed on grounds of fairness of the tax system.

As far as the strict rules for PRICAFs are concerned, they make sense in terms of investor protection. Given that these funds came into existence because the risk for a single enterprise of failing was too high to attract the necessary funds, diversification rules should not be relaxed by much. Neither should the obligation of distributing 80 per cent of the funds' profits be reduced too much as both these measures would have a negative effect on the amount of capital supplied by households to these instruments. Similar reservations apply to the task force's suggestions regarding listed company's shares with multiple votes. Their counterparts are shares without voting rights or reduced voting rights. The cost of capital might increase because minority shareholders have to be compensated for giving up some of their decision power, and the risk of being "tunnelled" might deter investors from supplying capital, as pointed out in the section on corporate governance. To back fundraising activities by SME and capital funds, priority should be given to measures that enhance investors' confidence.

A clear economic case for capital subsidisation can only be made if there are positive external effects of the activity supported. This is why state aid for SMEs should be targeted to SMEs that produce innovation spillovers. However, there are natural limits to this targeting given governments' inability to pick the winners more efficiently than markets and by the fact that inefficient rent-seeking activities could arise from governments selecting single beneficiary firms. A viable compromise is to target companies financed by venture capital markets because such companies generally produce an above-average number of innovations and because private companies carry out the risk assessment.¹⁵³

Furthermore, state aid such as credit guarantees or loan subsidies should be designed in a way that distorts as little as possible the incentives for entrepreneurs and venture capitalists to make efforts. In this respect, *ex post* subsidies are more efficient than the *ex ante* subsidies that prevail in the innovation subsidy arrangements in most countries.¹⁵⁴ Yet an important finding in the literature on venture capital markets is that one and the same measure may act as an *ex ante* subsidy on established companies but take the effect of an *ex post* subsidy on start-ups (Gebhardt and Schmidt, 2002, pp. 251-52).¹⁵⁵ This is why access to ven-

ture capital should be restricted to young companies. However, even incentive-compatible and targeted subsidies cannot prevent entrepreneurs and venture capitalists from taking more risk than without state aid on average (Gebhardt and Schmidt, 2002, pp. 251-52). This is why the benefits of more innovations (*i.e.* higher consumer surplus and an improvement in locational competitiveness) have to be carefully assessed against the costs of credit subsidies to taxpayers. Priority should be given to lower capital and labour market regulation and administrative burdens as these inflate the user cost of venture capital (Schertler and Stolpe, 2000, p. 4) and therefore impede access to capital for innovative just as for “ordinary” firms.

Public sector reform

The burden of administrative regulation is high in Belgium and has been receiving substantial interest for several years. In a recent study, the Federal Planning Bureau estimated at 2.6 per cent of GDP the total cost for enterprises and the self-employed of conforming to tax, employment and environmental regulations in 2000 (DeVil and Kegels, 2002). With € 7 600 per year and employee, small enterprises were hit hardest by administrative regulations.¹⁵⁶ These results are corroborated by the OECD's cross-country work, based on data for 1998, on product market regulation indicators, which found Belgium among the OECD countries with the most market-unfriendly product market regulation, mainly due to barriers to entrepreneurship. A closer look at the latter reveals that, although Belgium ranked among the average or better performers as to administrative burdens to corporations, communication of rules and procedures, legal barriers to entry, and antitrust exemptions, it is particularly restrictive in licenses and permits, administrative rules for sole proprietor firms, and sector-specific regulation (Nicoletti *et al.*, 2000, p. 70). The cross-country evidence for a positive relationship between “market-friendliness” of regulation and employment and growth performance presents a strong case for alleviating burdensome regulation.

Ways to reduce the administrative burden for enterprises include simpler regulations, better procedures to implement given regulations, and higher efficiency within the public administration in carrying out given procedures. “Copernic”, the vast modernisation programme for the federal administration launched in 1999, explores all three of these ways. As to the first, an Agency of Administrative Simplification (AAS) was created that has analysed the readability and potential impacts of draft regulations on the administrative burden and will extend this work to existing legislation.¹⁵⁷ As to procedures, the AAS completed an inventory of the most common formalities and evaluated their degree of inconvenience according to a pre-negotiated and transparent procedure.¹⁵⁸ Reorganisation projects are assessed against this benchmark in negotiations with the ministries and stakeholders concerned.¹⁵⁹ Most projects hinge on the introduction of e-government with the aims

of building a one-stop shop for businesses and citizens and putting into practice the principle of “single data collection”.¹⁶⁰ After completion of a series of pilot projects (phase 1) in October 2001, phase 2 is currently implementing the technological foundations of e-government.¹⁶¹ During phase 3, starting on 1 January 2003, more and more formalities will become computerised such that transport of persons and hardcopies will gradually become superfluous.

As to efficiency within the administration, the government used the “wind of change” from the introduction of e-government for an organisational overhaul. The Ministry of Finance leads the process and completed the planning phase in July 2002 (Box 5). Key points of the reform pertain to:

- An organisational matrix structure: policy areas are re-allocated uniquely to Vertical Federal Government Services (FGS) – roughly corresponding to Ministries. They share the services of four horizontal FGS (budget and management control, human resources, ICT, and the Prime Minister’s Services). Within each FGS a policy preparation unit and a policy council replace ministerial cabinets to separate technical expertise from political judgements and ensure continuity of services when the governments changes.¹⁶²
- Management culture: after competitive selection, top managers get a six-year mandate and huge autonomy in *how* to achieve defined objectives. Budgets to achieve them are negotiated *ex ante* and performance is controlled regularly. All civil servants receive personal objectives in line with the mission of the FGS and receive feedback.
- Human resources management: recruitment is to give more weight to function-specific skills, and needs-based job-oriented training is spurred by competency rewards.

“Copernic” is an ambitious reform that has the potential of enhancing motivation and freeing productivity reserves in the public sector. Internal re-organisation should be speeded up, since it is likely to improve the attractiveness of the public sector as an employer, which is crucial to face the recruitment needs due to the retirement wave expected for the second half of the decade. The introduction of e-government should be pursued without delay because the earlier the switch to e-government is completed, the earlier the positive spill-over effects of increased ICT use on economic growth can be enjoyed.¹⁶³

Ex post evaluation of “Copernic” should become a key element of the process and focus on the burden of administrative regulation. The latter should be quantified regularly to assess its evolution over time. Preventive (and if possible) quantitative assessment of impacts of new regulation on businesses and households should be firmly rooted in the legislative process. Until now, multicriteria analysis (*e.g.* in the AAS’s inventory and evaluation of administrative formalities) and compliance cost analysis (to estimate the total costs for businesses of fulfilling

**Box 5. Re-engineering the federal administration:
the example of Coperfin**

The Ministry of Finance, which plays a key role in citizens' perception of the federal Administration through its 122 tax collection agencies, was the first federal Ministry to complete the planning phase of its reorganisation project ("Coperfin") after ten months in July 2002. Change was perceived as being particularly pressing in this ministry because of:

- Under-equipment with ICT and lacking integration of communication systems.
- An urgent need for young staff and higher productivity, as more than half of the civil servants would retire between 2006 and 2012.
- The view that the taxpayer's willingness to co-operate depended not only on the tax burden but also on the quality and time costs of services provided by the tax administration.*

In order to enhance the efficiency of all operations and the professionalism of civil servants, 16 business re-engineering programmes (BRP) were set up. Eleven of them deal with improving operations in specific service areas (customs and excise, fiscal fraud, etc.); the five others strive to improve the way services are provided throughout the agency (*e.g.* the Citizen Relationship Management programme). The planning phase consisted setting up a timetable, formulating objectives and strategies, measuring the "gaps" between objectives and the current situation, and filling these gaps step by step – with each step representing a small BRP by its own. Each BRP delimited exactly the competence and responsibilities of each function, found best practices and determined infrastructure needs. At the moment "Coperfin" is in the stage of practical implementation. It is supported by a five-year IT investment plan (2001-05) to modernise the equipment, integrate the internal and external information systems, and create a federal tax communication centre securely accessible by Intra and Internet. On top of this plan, the IT-budget is considerably raised in 2003 to make a supplementary effort for the introduction of Coperfin.

Customer-orientation of the tax authority was recently enhanced by a free fiscal Internet database, including jurisdiction on delicate questions, and the creation of a call centre. Tax collection agencies were restructured to reflect better the specificity of the taxpayer (individual, SME, big enterprise). Furthermore, a horizontal BRP is charged with introducing risk management into all services, allowing for a better targeting of fiscal controls. Finally, civil servants' responsibility has increased since they have to defend their own decisions in court.

* In an opinion poll companies asked for better accessibility by telephone of the tax authorities, a more intensive use of the Internet for compulsory transactions with the Administration and better reception in agencies. Citizens wanted more understandable and more complete information from tax authorities.

administrative regulations as done in DeVil and Kegels, 2002) have been used. The toolbox should be enlarged by cost-benefit analysis, cost-effectiveness analysis (inquiring the costs of achieving a goal, if the benefits of a measure are too difficult to quantify) and risk analysis, each of which provide valuable information to find efficient ways in achieving regulatory objectives (European Commission, 2002e).

When assessing the success of internal reorganisation, an increase in the mobility of employees between the private and the public sectors may serve as one measure of success for the new human resources policy. On-the-job learning and mobility could be further stimulated by job rotation for ministerial staff, as experienced in Norway (OECD, 2002g, p. 6). While the new remuneration system is an improvement over the status quo, life-long learning would be stimulated further, if promotion prospects and not only salaries were based on the accumulation of skills and the willingness to use them. Productivity could also be strengthened by combining competency premia with premia on the achievement of previously-defined outcomes.¹⁶⁴ Finally, the government should examine whether the greater responsibility of civil servants will allow for flatter hierarchies and a more flexible time-management, thereby providing further non-monetary work incentives.

Sustainable development

There is growing concern that long-run sustainable development may be compromised unless countries take measures to achieve balance between economic, environmental and social outcomes.¹⁶⁵ Five issues arising from the different dimensions of sustainable development are reviewed in this survey. In most cases, indicators are presented and an assessment is made of the economic, and where relevant, social costs of government policies that affect the issue. One of them – the fiscal and social sustainability of retirement incomes – is dealt with above (see Chapter II). The remaining themes (air pollution, waste management, greenhouse gas emissions and water pollution) are considered below with more emphasis placed on the first two as the others were dealt with on the last Survey (OECD, 2001f). This section also considers whether institutional arrangements are in place to integrate policymaking across the different elements of sustainable development (Box 6).

Reducing air pollution

Main issues

The threats to ecosystems resulting from air pollution have noticeably diminished in the last decades, notably those from acid rain. Air pollution remains nevertheless a concern for human health. Photochemical pollution, concentrations of fine particles in the air and high occasional levels of ozone are harmful and subject to ambitious reduction policies that are largely co-ordinated at the European level

Box 6. Policy integration across sustainable development areas*

Sustainable development has been high on the policy agenda in Belgium. In 2000, a federal plan for sustainable development covering the period 2000 to 2004 was adopted. Sustainable development policies are assessed biennially by the Federal Planning Bureau, and annual reports are prepared by the Interministerial Committee on Sustainable Development. In the light of these reports, the Federal Council on Sustainable Development makes policy recommendations. Finally, a cross-ministry unit is responsible for guiding the implementation of a sustainable development plan. Federal administrations must report each year on their implementation of the plan which is intended to become the main instrument to integrate social, economic and environmental policies. Yet the strategy does not provide a clear order of priorities on its list of more than 600 actions which will compete for scarce resources. A clearer methodology for assessing the consequences of new and existing legislation on the sustainability of development is required. Indeed, the overall benefit of implementing the sustainable development strategy will crucially depend on the quality of the trade-offs that are made between different goals. In the area of the environment, policy making is mainly driven by health and conservation objectives, with the main criterion used in choosing between policies being budgetary rather than the maximisation of benefits relative to costs. Even when cost-benefit analyses are made, as is the case with the draft air and climate strategy, these studies are better classed as reports dealing with cost-effectiveness. A more systematic use of cost-benefit analysis could increase the return on outlays on environmental activities, which amounted to about 1.1 per cent of Belgium's GDP in 1996 (OECD, 1998b) and ought to have a greater role in policy design more generally. This absence points to a drawback of current environmental impact analysis. The environmental impact of investment projects is considered but the economic effects of environmental policies are not generally taken into account.

The split of responsibilities between the federal government and the regions reinforces the need for co-operation and co-ordination of policies. This will be particularly the case in respect of the Kyoto protocol which was ratified by the federal government but which will be primarily implemented by the regional governments. To this end, a co-operation agreement has been signed between the regions and the federal government to implement a National Climate Change Plan. In whatever fashion the burden is shared among regions initially, the integration of policies would be best achieved by allowing cross-border trade in emission permits – both at the domestic and international level – in order to avoid the unnecessary costs that possible discrepancies between marginal costs of abatement across borders could entail.

* The sections of this report dealing with sustainable retirement income, reducing air pollution and improving the management of household waste are inputs into the Organisation's follow-up on Sustainable Development as mandated by the Ministerial Council decision in May 2001.

due to the importance of transboundary movements of pollutants. The main issue in this area is to implement these reductions in a cost-effective way so that the net benefits of an improved air quality are maximised.

Performance

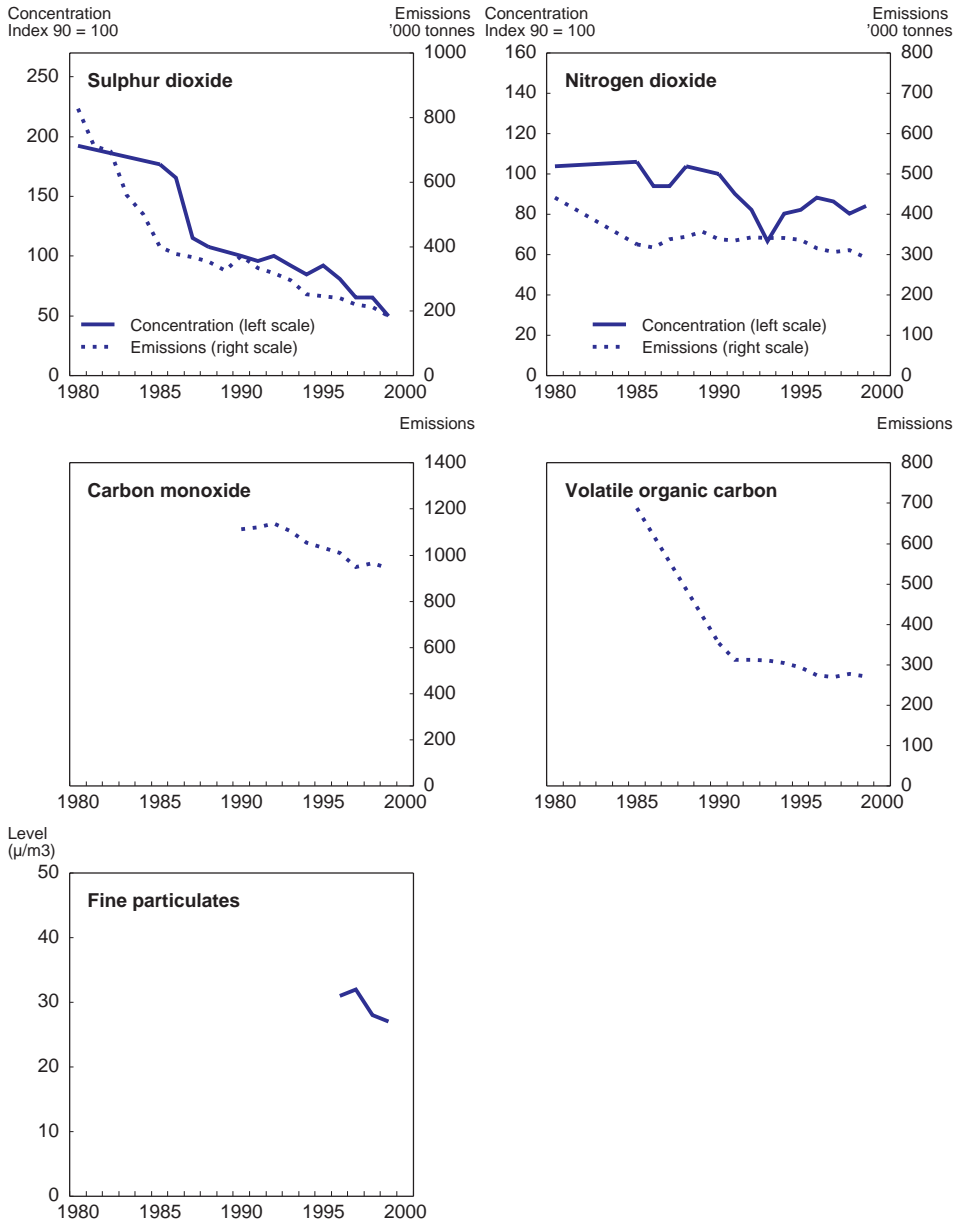
While sulphur dioxide emissions have been almost halved in the last decade, emissions of other pollutants (NO₂, VOC and CO) decreased at much slower rates (Figure 44). The reduction in emissions of nitrogen dioxide per unit of GDP was amongst the weakest recorded in Europe (Table 27) as the growth in the use of vehicles largely offset important falls in the pollution emitted by each vehicle. As a result, there are still a number of peaks in ozone concentration each year although extreme ones (concentration exceeding 180 µg per cubic metre) are less frequent than in the early 1990s (Figure 45). Concentrations of fine particulate matter also inflict high costs on society in terms of health expenditure and of lost years of life, estimated in the region of Flanders to amount to the equivalent of about 3 per cent of GDP¹⁶⁶ (MIRA-T, 2001). Such costs are expected to fall rapidly in the next decade as older more polluting cars are scrapped. Dioxin emissions from incinerators have been brought down aggressively in response to public concern about such pollution, and now modern, well-run, incinerators have minimal health impacts as indicated by scientific studies.¹⁶⁷

Policies

Belgium is committed to stringent air quality standards under various EU directives regarding both technological constraints on processes that produce pollution and national emissions of pollutants¹⁶⁸ (Table 28). Indeed, achieving the national ceilings will require measures beyond the current European plant-based limits, as the EU requires countries that transmit pollution to other countries to make a larger effort than countries where pollution is largely internal. Based on estimates from the European Commission, the benefits of attaining the targets for Belgium could lie in the range of 1¼ to 1½ per cent of GDP.¹⁶⁹ The associated costs, based on continued use of traditional command-and-control regulations, could fall within the range of ¾ to 1¼ per cent. The excess of benefits over costs of the new proposals is considerably less than from earlier emission reductions, illustrating the importance of switching to lower-cost means to reduce air pollution.

Some abatement methods appear to impose unnecessarily high costs on the economy. The common EU plant emission limits for stationary sources, and the associated technology requirements, result in different marginal abatement costs across sectors and weaken incentives to develop lower cost technology. There is, however, growing recognition that such policies may be forcing excessive abatement to take place in sectors where it is relatively costly. As a result, in designing its future policy to meet the 2010 targets, the Flemish region is evaluating the

Figure 44. Performance indicators: air pollution



Source: EMEP, OECD Environmental data 2002.

Table 27. Performance indicators: air pollution

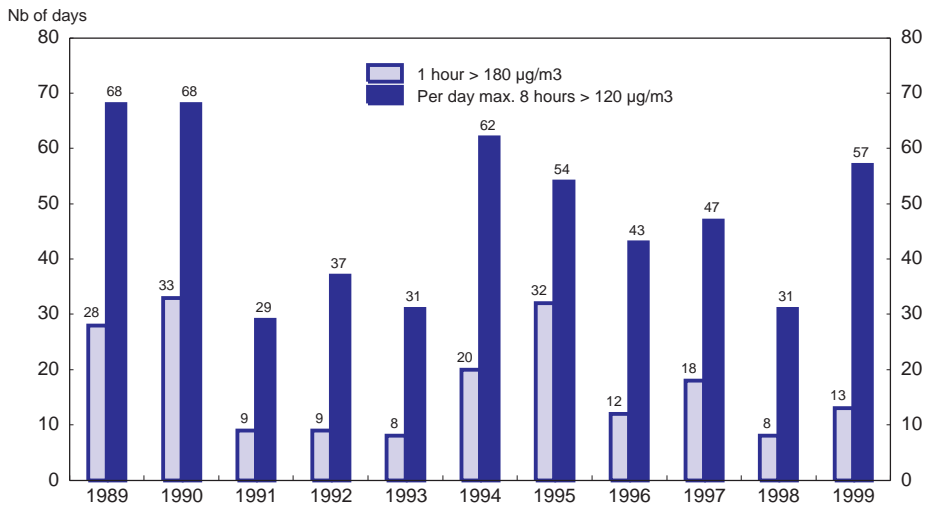
	Change in emissions per unit of GDP, 1990-99 ¹			Level of emissions, 1999 ²			Improvement in productive efficiency, 1990-1999	
	Sulphur dioxide	Nitrogen dioxide	VOC	Sulphur dioxide	Nitrogen dioxide	VOC	Sulphur dioxide per unit of electricity output	Nitrogen dioxide per vehicle
	Per cent per year			Grams per dollar of GDP				
Australia	3.1	-1.9	-2.9	3.9	5.5	4.1	n.a.	n.a.
Austria	-10.2	-3.5	-6.5	0.2	0.9	1.2	-77.2	-32.5
Belgium	-9.2	-3.6	-4.8	0.8	1.2	1.1	-64.4	-22.6
Canada	-5.3	-2.8	-2.9	3.2	2.6	3.5	n.a.	n.a.
Czech Republic	-19.1	-6.6	-5.7	2.1	3.0	1.9	n.a.	n.a.
Denmark	-14.2	-4.9	-5.2	0.4	1.6	1.0	-79.8	-38.9
Finland	-13.0	-3.8	-4.1	0.7	2.1	1.4	-65.3	-28.7
France	-8.3	-3.8	-5.1	0.5	1.2	1.4	-52.0	-37.8
Germany	-20.1	-7.1	-8.8	0.4	0.9	0.9	-85.2	-43.7
Greece	-1.4	-0.3	-0.2	3.6	2.5	2.6	-4.6	-22.3
Hungary	-6.1	-1.1	-3.8	5.5	2.1	1.4	n.a.	n.a.
Iceland	-1.1	-1.7	-4.9	3.7	3.9	1.4	n.a.	n.a.
Ireland	-8.1	-6.3	-7.9	1.7	1.3	1.0	-35.8	-19.0
Italy	-7.6	-4.3	-4.4	0.8	1.2	1.4	-52.8	-31.3
Japan	-1.7	-1.3	-2.4	0.3	0.5	0.6	n.a.	n.a.
Korea	-8.9	-3.0	n.a.	2.1	2.0	n.a.	n.a.	n.a.
Luxembourg	-18.7	-9.1	-7.9	0.2	0.9	0.9	n.a.	n.a.
Mexico	-0.4	-0.9	-9.3	1.6	1.6	1.4	n.a.	n.a.
Netherlands	-10.1	-6.5	-8.8	0.3	1.1	0.7	-50.2	
New Zealand	-0.4	-0.5	-1.6	0.7	3.0	2.6	n.a.	n.a.
Norway	-9.7	-2.8	-1.8	0.2	2.0	3.0	n.a.	n.a.
Poland	-10.0	-6.6	-4.8	5.1	2.8	2.2	n.a.	n.a.
Portugal	-2.1	-0.9	0.1	2.4	2.3	3.1	-17.7	-18.3 ³
Slovakia	-13.7	-7.4	-5.6	3.3	2.4	2.0	n.a.	n.a.
Spain	-5.8	-2.1	-3.5	2.2	1.7	3.6	-39.4	-14.4
Sweden	-8.3	-4.3	-3.9	0.3	1.3	2.1	-26.0	
Switzerland	-6.0	-5.4	-6.3	0.1	0.5	0.9	n.a.	n.a.
Turkey	3.2	1.0	0.0	3.4	2.3	1.6	n.a.	n.a.
United Kingdom	-13.9	-7.9	-6.6	1.0	1.3	1.4	-72.8	-51.0
United States	-5.5	-2.5	-4.7	2.0	2.7	1.9	n.a.	n.a.
European Union	-11.1	-5.0	-5.3	0.8	1.2	1.5		
OECD Europe	-10.1	-4.8	-5.0	1.2	1.4	1.5		
OECD	-6.7	-2.9	-4.4	1.5	1.9	1.6		

Note: For the OECD average data for countries with missing data for either 1990 or 1999, data for the latest year has been substituted. Estimated data for 1999 represents about 5 per cent of the area total. GDP is measured in 1995 prices. Cross-country aggregations use 1995 purchasing power parity exchange rates.

1. Australia: 1995-99 for sulphur dioxide; Korea and New Zealand: 1990-98; Mexico: 1994-98 for sulphur dioxide and VOC and 1990-98 for nitrogen dioxide; Slovakia: 1990-98 for sulphur dioxide and nitrogen dioxide and 1990-97 for VOC.
2. 1998 for Korea, Mexico, New Zealand and sulphur dioxide and nitrogen dioxide in Slovakia; 1997 for VOC in Slovakia.
3. Between 1990 and 1997 for Portugal.

Source: Cooperative Programme for Monitoring and Evaluating of Long-Range Transmission of Air Pollutants in Europe (EMEP); World Health Organisation; OECD (2002a).

Figure 45. Ozone concentrations exceeding thresholds



Source: Cellule interrégionale de l'environnement.

abatement costs for each sector, in an attempt to allocate efficiently the quantitative reduction efforts amongst the sectors. This would obviously lower costs by comparison to traditional regulation, but it would be even more efficient to let market forces equalise the marginal costs of abatement by authorising emitters to trade their permits or by establishing uniform taxes, a markedly different approach from that adopted by the Integrated Pollution Prevention and Control directive of the European Commission.¹⁷⁰ Indeed, the Flemish authorities are making a preparatory study of economic instruments and trading mechanisms, so that they can be introduced in the future. Policies to reduce sulphur dioxide emissions could also be made more effective if the taxation of sulphur content of fuel were to be harmonised across sectors. In the transport sector low sulphur auto fuels are taxed 2 cents less per litre than conventional fuels¹⁷¹ (European Conference of Ministers of Transport, 2000). These avenues have not been pursued as rigorously in agriculture, home heating and industry. As a result these sectors account for the bulk of acidification, since they continue to use fuel oil with a sulphur content 20 times higher than that used in road transport.

Technical standards have been the primary measures used to reduce air pollution from transport. Tight regulatory restrictions on vehicle emissions will cut pollution from new cars by 2010 to only a fraction of the 1980 level (Table 29). They

Table 28. Selected commitments to air quality

Concentrations			
Pollutant	Measuring period	Limit value	Date
SO ₂	1 hour	350 µg/m ³ : not to be exceeded more than 24 times each year	01/01/2005
	24 hours	125 µg/m ³ : maximum three times each year	01/01/2005
	Calendar year	20 µg/m ³	19/07/2001
NO ₂	1 hour	200 µg/m ³ : maximum 18 times each year	01/01/2010
	Calendar year	40 µg/m ³	01/01/2010
NO _x	Calendar year	30 µg/m ³	19/07/2001
PM ₁₀	Phase 1		
	24 hours	50 µg/m ³ : maximum 35 times each year	01/01/2005
	Calendar year	40 µg/m ³	01/01/2005
	Phase 2		
	24 hours	50 µg/m ³ : maximum 7 times each year	01/01/2010
	Calendar year	20 µg/m ³	01/01/2010
Lead	Calendar year	0.5 µg/m ³	01/01/2005
CO	8 hours	10 mg/m ³	01/01/2005
Benzene	Calendar year	0.5 µg/m ³	01/01/2005
Emissions			
Pollutant	Emission ceiling to be met in 2010 (kilotonnes)	Emissions 1990	Emissions 1999
SO ₂	99	288	157
NO ₂	176	308	296
VOC	139	282	254

Source: EU Directives 1999/30/EC, 2000/69/EC and 2001/81/EC; OECD.

are likely to have been cost effective, in a context where taxation of fuel is unable to take into account the variation in emissions from numerous individual mobile sources. In any case, the remaining need to reduce pollution from gasoline cars may be limited. Registration taxes can be made to depend more easily on the pollution characteristics of vehicles and this has been attempted in Belgium.¹⁷²

Changes in emission standards, fuel taxation and registration taxes are needed to achieve further pollution reductions in a cost effective way. For motorcycles,¹⁷³ greatly reduced emission ceilings will come into force in 2007. Lower registration taxes for compliant two-wheelers could speed their introduction. As to diesel vehicles, further reductions of the regulatory limits on particle emissions beyond those envisaged in EURO4 would appear to be called for, as cost-benefit ratios for this type of action appear favourable, especially as innovative technology is reducing costs in this area.¹⁷⁴ Such a strategy might need to be coupled with differential

Table 29. Road transport: emission standards and emissions

A. Emission standards for vehicles registered at different dates in EU countries

By fuel and emission standard on an urban test cycle, per vehicle-kilometre

Index Pre-Euro I gasoline car = 100, except for particulates¹

Type of vehicle	Pre-Euro I	Euro I	Euro II	Euro III	Euro IV	Percentage change
	1990	1993	1997	2001	2006	
Petrol car						
Carbon monoxide	100	15	10	7	4	-96
Hydrocarbons	100	9	4	3	2	-98
Oxides of nitrogen	100	19	9	6	3	-97
Particulates	5	2	2	2	2	-55
Diesel car						
Carbon monoxide	7	4	3	2	2	-71
Hydrocarbons	10	4	3	2	1	-90
Oxides of nitrogen	43	29	21	13	7	-84
Particulates	100	55	31	20	10	-90
Semi-trailer truck						
Carbon monoxide	44	22	18	9	7	-84
Hydrocarbons	183	87	78	47	33	-82
Oxides of nitrogen	1 704	893	650	461	325	-81
Particulates	700	482	185	124	24	-97
Bus						
Carbon monoxide	63	28	22	11	8	-87
Hydrocarbons	83	90	84	50	35	-58
Oxides of nitrogen	795	859	614	436	307	-61
Particulates	458	304	187	125	24	-95

B. Total road transport emissions in Belgium

	Thousand tonnes, 1995	Index, 1995 = 100 per cent					
		1995	2000	2005	2010	2015	2020
CO	593	100	72	45	29	20	17
NO _x	176	100	73	49	30	23	20
VOC	114	100	60	29	15	12	11
NMVO	109	100	60	29	14	11	11
Benzene	4	100	46	22	11	8	8
PM-diesel	6	100	75	47	30	25	25

1. No legal standard exists for gasoline cars. The base for particulates is pre-1993 diesel car emissions.

Source: Panel A: UK Department for Transport, Local Government and the Regions (2001), Panel B: 1995 data from national authorities and projections from European Commission (1999b).

registration taxes on vehicles that use clean diesel technology, thus encouraging the replacement of old polluting vehicles with new cleaner cars. Monetisation of the benefits (including, where possible, social effects such as improved health) from reducing particle pollution as opposed to reducing NO_x emissions will be essential in designing these limits, as there often appears to be a trade-off between the two types of pollution. In the meantime, price differentials can play a role in reducing pollution from the existing stock of diesel vehicles that pollute more than gasoline cars. The health damage from a diesel car is three times that of a gasoline car, though the extent of the damage is strongly dependent on where the pollution occurs (Proost and Mayeres, 2001). Nonetheless, the fuel used by these cars is taxed at a rate that is 43 per cent lower than gasoline. A revenue-neutral switch away from gasoline taxes (which more than cover external pollution costs, as argued in the last Survey¹⁷⁵) towards diesel taxation would improve cost efficiency. Such a move might have to be harmonised at the European level given the relatively small size of the Belgian territory.

Conclusions

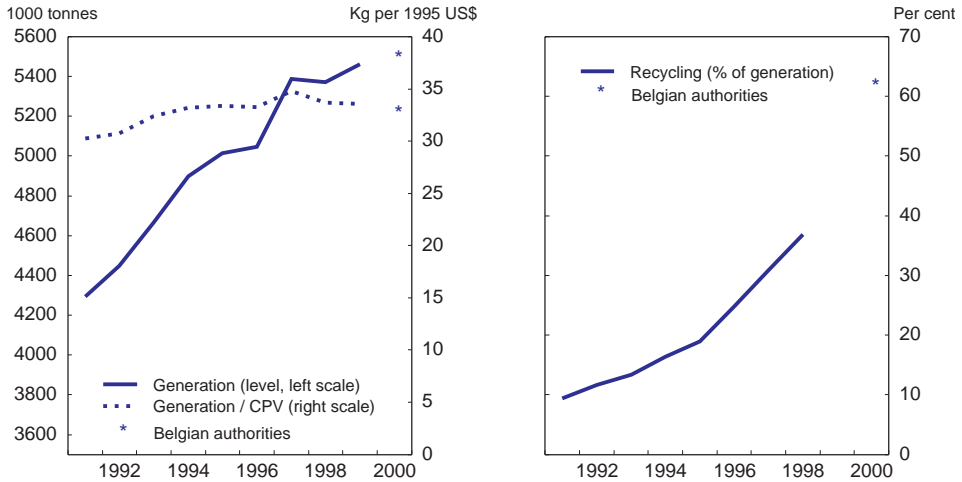
The marginal costs of reducing air pollution appear to be increasing quite substantially, at the same time as marginal benefits are falling. Consequently, it is important to shift towards more cost-effective ways to reduce air pollution. In this regard, further rationalisation and simplification of the tax treatment of vehicle use is needed in order to eliminate the harmful advantage granted to diesel, notably in the commercial transport sector, though this would probably require action at the European level to be effective; sulphur-content regulations need to be equalised across sectors; and, economic instruments ought to be introduced in industry where trading in emissions permits (or taxes) would help reducing possibly high abatement costs in achieving national EU-set emission targets, the more so if trading were allowed across regions.

Improving the management of household waste

Main issues

If mishandled, the disposal of waste can cause long-lasting damage to ecosystems and to human health, the main concerns being air emissions from incinerators and leakage to aquifers from landfills. In addition, waste disposal may involve negative externality in the form of amenity costs and is seen by some as the loss of a valuable resource that could be recycled or re-used. Belgium has not reduced its production of waste but has achieved very high recycling rates in a relatively short period of time. Indeed, the targets set by EU directives have been more than fulfilled. The principal concern in this area relates to the balance between the costs and benefits of this performance.

Figure 46. **Municipal waste and recycling**
Households, commerce and services



Source: EEA.

Performance

Municipal waste generation has stabilised relative to private consumption since 1997, after increasing faster than household spending in the previous decade (Figure 46). The level of waste production relative both to population and private consumption is similar to that observed in neighbouring European countries and considerably lower than that in North America (Table 30). Recycling rates in Wallonia and Flanders are amongst the highest ones in Europe but are much lower in the Brussels-Capital region (Table 31). The lion's share (80 per cent) of packaging waste is recycled.

Policies

Belgium's regions are responsible for waste policy,¹⁷⁶ and follow the waste hierarchy approach which puts priority on prevention and recycling over incineration and landfill. The overarching objective, to reduce as much as possible the volume of waste that is put in landfills, is justified by public opposition to new landfill sites that will be needed when existing capacity becomes full.¹⁷⁷ The regions regulate or tax landfills in order to meet the EU targets for this form of waste disposal. The Walloon region regulates access to landfills and puts mandates on

Table 30. Performance indicators: waste

	Waste per capita	Total municipal waste	Municipal waste relative to final consumption	Recycling relative to total municipal waste
	1998	Annual growth 1990-1998	Annual growth 1990-1999	Per cent of total (1998)
	Kg/capita	Per cent per annum		
Australia				n.a.
Austria	525	3.6	1.2	48.5
Belgium	529	3.2	1.7	42.8
Canada	820	4.4	2.2	22.5
Czech Republic				0.2
Denmark				29.6
Finland				33.2
France	486	1.2	0.1	9.5
Germany	547	-1.3	-3.2	29.5
Greece	358	3.3	1.1	8.0
Hungary				0.0
Iceland	600	1.5	-0.9	10.3
Ireland	541			7.6
Italy	464	3.7	2.2	0.0
Japan	406	0.2	-1.4	3.9
Korea	333	-7.6	-11.4	26.2
Luxembourg	665	2.2	-0.6	49.3
Mexico	307	4.8	2.3	0.7
Netherlands	576	2.7	0.0	44.7
New Zealand				0.0
Norway	635	4.6	1.3	24.7
Poland	306	0.8	-4.2	1.8
Portugal	430	4.6	1.2	5.0
Slovakia				12.7
Spain				16.7
Sweden	449	2.8	2.2	19.4
Switzerland	607	0.8	0.0	39.8
Turkey	365	2.7	-1.0	0.7
United Kingdom	532	2.1	-0.1	7.0
United States	711	1.1	-1.9	27.3

Source: OECD.

municipalities, such as banning the discarding of organic material such sites. Flanders has introduced levies on waste put in landfills at a level sufficiently high to ensure that costs for incineration or recycling are competitive with landfill. There is also opposition to the construction of new incinerator plants due to fears about dioxin pollution that appear unfounded (see section on air pollution).

Table 31. **Waste treatment in the regions**
Per cent of total

	Wallonia	Brussels-Capital	Flanders
	2000	2001	2000
Recycling	65.3	30.4	66.1
Incineration	16.8	68.5	23.3
Landfill	17.8	1.1	10.6

Source: Regional authorities.

Consumers have been reoriented away from purchasing packaging-intensive products through the use of economic instruments. *First*, in 1993, the government introduced a set of taxes, known as *ecotaxes*, on products identified as potentially harmful when dumped. The taxes were altered thereafter so that they reward recycling. The structure of the tax system then became unduly complicated and a number of taxes, such as that on beverage cans, are now being redesigned along simpler lines. A uniform packaging charge has been introduced on all drink containers that cannot be re-used or do not consist of a high percentage of recycled material. At the same time, excises on all drinks and VAT on non-alcoholic drinks were reduced by a similar aggregate amount, so giving a bonus to consumers who purchase drinks in re-usable containers. *Secondly*, in 1996, there was an inter-regional agreement requiring that companies take back household packaging waste at the end of the consumption cycle, which is a form of extended producer responsibility. Packers delegate their responsibility to one non-profit organisation (FOST Plus).¹⁷⁸ With the fees received from packers, FOST Plus compensates recycling organisations for the costs incurred and also pays the municipalities for the extra costs of collecting separately, storing and recycling household packaging waste. These costs vary substantially between local authorities that have not been successful in containing costs, with the contributions of companies to FOST Plus rising 69 per cent in the three years to 2001.¹⁷⁹

In addition to confronting consumers with high-cost packaging, households are directly charged according to the use they make of waste disposal services. In the Flemish region, 90 per cent of the municipalities differentiate household waste collection payments according to the cost of treating the waste through only accepting waste in sacks and containers that are priced according to the type of waste they are allowed to hold. In Wallonia, some municipalities weigh the containers for unsorted residual waste and electronically bill the households. However, all direct charges for waste cover less than half of municipal expenditure. Subsidies flow from regions to municipalities. Subsidies granted by the Flemish region increased by 90 per cent in the three years ending 2000, of which 39 per cent goes to waste

Table 32. **Cost of household waste collection, sorting and treatment**
Euro per tonne

	Collection	Sorting	Treatment take-back ¹		
Residual waste	75 Wallonia and Flanders		Landfill:	55	Wallonia
	75 Brussels-Capital			51	Flanders
Bulky waste	112 Wallonia	75	Incineration:	114	Wallonia
				87	Flanders
				100	Brussels
Glass	51 Belgium	0		-10	
Paper/cardboard	97 Wallonia	0	}	2.40 in 1999	
	75 Flanders				
	75 Brussels			-58 in 2000	
PET bottles	177 Belgium	194 Belgium		20	
Steel	177	194		-15	
Aluminium	177	194		-220	
Drinks cartons	177	194		32	

1. Cost are exclusive of taxes. A negative cost indicates a positive price for the sorted material on the market for secondary material, since it reduces the net cost of the waste stream. A positive cost for secondary material relates to a negative price on the market for this secondary material.

Source: EUNOMIA Research and Consulting, 2002; RDC, 2001; regional authorities.

prevention.¹⁸⁰ In addition, since 1999, Wallonia has used a further instrument to incite municipalities to reduce the collection of unsorted waste and so increase recycling. Each municipality must pay a tax to the region for every tonne of unsorted waste that is collected above a pre-set threshold level, partially accounting for the fall in this type of waste in the past three years.¹⁸¹

The evolution of the current structure for waste disposal and reduction in Belgium casts doubt on the advisability of using quantitative targets to determine the proportion of waste to be recycled, incinerated or land-filled. For recycling, private costs for many products are double those for incineration (Table 32), as the end-product of recycling can rarely be sold for a price that justifies the extra resources that are needed to operate such programmes.¹⁸² FOST Plus currently ensures the recycling of 81 per cent of packaging. This level of operation is associated with a steeply rising cost curve, even with a very generous estimate of the externalities of the different methods of waste treatment.¹⁸³ Consequently, one study suggests the optimal recycling rate is between 45 and 70 per cent (RDC, 2001).¹⁸⁴ Moreover, the external costs of alternative treatments are low at between € 10 and € 20 per tonne of waste burnt according to several studies. They are mostly

related to the somewhat lower property prices in areas surrounding incinerators. Given the opposition to new incinerators and the high costs of other methods of recycling, a compensation scheme for those close to new incinerators would appear to be one way to speed new construction and reduce costs to society. In any case, the existing recycling operation needs to move away from charging on a cost-plus basis, to using market mechanisms. For example, packagers could fulfil their recycling obligation either by purchasing certificates from an authorised recycling company or by paying a fine that would reflect the private and external costs of an alternative treatment method. Such a system would ensure competition within the recycling industry but would also place a limit on costs. However, putting a price-based system in place would require abandoning targets for the proportion of waste to be recycled, as this share would be determined by the market.

Conclusions

Whereas waste production has continued to increase, Belgium has reduced the volumes going to both landfills and incinerators through a sharp increase in recycling rates. This appears to have come at a considerable cost for society. Municipalities should now endeavour to improve the efficiency of these services. Benchmarking municipalities one against each other could help identifying and spreading best practices. Economic instruments to prevent waste production should be more carefully calibrated to avoid excess costs. In particular, unless recycling is seen as a goal in its own right, a ceiling should be placed on the payments paid to subsidise recycling (because of the steeply rising cost curve once one half of waste is recycled) so that total costs do not exceed the costs of alternative means of treatment including externalities and the taxing of excess unsorted waste collection should be reviewed. Finally, households' payments for waste collection should be more directly linked to costs, while illegal dumping should be avoided through appropriate policing.

Climate change policies

Achieving the announced reduction in greenhouse gas emissions will be challenging

Under the agreement reached by EU member countries to implement the Kyoto protocol, Belgium accepted to reduce its greenhouse gas (GHG) emissions by 7.5 per cent from their 1990 level until 2010.¹⁸⁵ Belgium ratified the Kyoto Protocol in May 2002. Several factors illustrate how challenging it will be to achieve the emission reduction goal. First, at the national level GHG emissions were 6.3 per cent higher in 2000 than in 1990, as they kept rising in Flanders and Brussels while stabilising in the Walloon region due to lower economic growth during the nineties, on average, but also to structural and technological change, in particular in energy-producing industries (Federal Department of the Environment, 2002).¹⁸⁶ Second, according to national projections, GHG emissions will further increase to reach 113 per cent of

their 1990 level by 2010 on policies in place as of 1999 (EEA, 2002, p. 9). Even if all additional measures currently discussed were implemented, total GHG emissions would come down only slightly from their level in 2000 and miss the target by around 15 per cent.¹⁸⁷ Third, the divergent regional evolutions over the nineties and the complex institutional structure in Belgium, where the regions are competent for environmental policies but the federal level is in charge of raising taxes, make a quick resolution of the problem of inter-regional distribution of the emission goals difficult.

The regions were very active but should redirect their policies to enhance both ecological effectiveness and economic efficiency

The regions have elaborated action plans aimed at stabilising or reducing GHG emission levels and contributing to the National Climate Plan. In 2001 the Flemish government set up the Task Force Climate Policy Flanders which is the forum for discussion on integrated climate policies in Flanders. Its first task was the working out of the Flemish climate policy plan, currently under discussion in parliament, supporting the stabilisation objective for 2005. The plan aims at, *inter alia*, achieving a more rational use of energy by introducing a system of tradable green certificates and the rational-use-of-energy action of the electricity suppliers. It also contains the framework for an optimal use of flexible mechanisms combined with other policy instruments like voluntary agreements. The Walloon region adopted its action plan for climate change in July 2001. The Brussels Region adopted a draft Climate Plan in March 2002 that aims at reducing GHG emissions due to energy consumption in residential heating, industry and road traffic.¹⁸⁸ It is intended to reduce road traffic in the city,¹⁸⁹ mainly through downsizing the capacity of the network, reducing the capacity of open-air parking and increasing its price.¹⁹⁰ The economic costs of cuts in the network are unnecessarily high because the rate of road utilisation is lowered through higher time costs from exacerbated congestion rather than by internalising congestion and pollution externalities.¹⁹¹ A more efficient way of striking a balance between different means of transport would be to prevent the existing network from being over-used. Pricing parking space adequately is proposed but its use in conjunction with peak-load pricing for road use was found to be most efficient in the context of Brussels (see Chapter IV, section on railways). These road transport policies would allow for important synergies in achieving not only the climate policy objective but also in improving local air quality and reducing the high private and social costs resulting from road congestion. They would also allow for a removal of all operational rail subsidies.¹⁹²

Besides purchasing emission permits, the Federal Government may also have to legislate

The Prime Minister announced in October 2002 that Belgium would have to draw on purchases of emission rights if it were to meet the GHG emission reduction target. The implementation of flexible mechanisms in Belgium will be

most likely guided by a co-operation agreement between the regions and the federal government, to clarify the competencies of each in this matter.¹⁹³ In order to comply with Kyoto commitments, the federal government is creating a “Kyoto Fund” (the former Fund for rational energy use), which will allow to buy emission rights and to start implementation of a policy of rational energy consumption. The Kyoto Fund is financed by a small tax on electricity transports (€ 0.0003/kWh) and will see its volume increase by 20 per cent as of 2003. However, the agreement reached among EU countries at the UNFCCC¹⁹⁴ Bonn conference in 2001 limits the use of permit purchases stating that domestic action in each EU country shall constitute a significant element of the reduction effort made. The authorities should not rely on regional initiatives alone but strongly support the introduction of an EU-wide cap- and trade system, for industrial point sources, currently under discussion as this would allow to equalise marginal abatement costs in a bigger area and thus to determine the level of regional contributions to CO₂ reductions endogenously.¹⁹⁵ The federal government has also increased tax subsidies for households’ use of public transport and bicycle and is introducing a tax deductibility for purchases of energy-friendly equipment. Such subsidies are likely to distort consumer choices and should be closely monitored with respect to their impact on GHG emission reduction.

In the absence of an EU-wide legislation, the federal government should either consider introducing a unilateral national CO₂ tax or start issuing emission permits in a cap-and-trade system, as recommended in the last *Survey* (OECD, 2001f, p. 124). A tax solution should be designed as an input-tax on carbon rather than an electricity consumption tax like in some other European countries to give the electricity sector an incentive to switch to less carbon-intensive means of production. While a CO₂ tax is more complete in coverage, emission permits are particularly suitable for sectors with stationary CO₂ emission sources. The initial allocation of emission permits to energy-intensive industries with high export shares should be large enough to avoid a loss of international competitiveness.

Water quality¹⁹⁶

Public investment into sewage and wastewater treatment has increased in Wallonia and Brussels

Wallonia is affected by water pollution manifest in bathing zones. More than half of the bathing zones failed to comply with EU norms in 1996, mainly due to severely insufficient coverage with wastewater treatment. The Survey recommended carrying out assessments of the health risks arising from non-complying bathing zones and to invest in sewage and waste water treatment where risks justify it. The Walloon region is investing more than € 1 000 million in the period 2000-04 in sewage and waste water treatment. Priority has been given to treatment plants upstream of

bathing zones with corresponding investments completed in 2001. As a consequence the number of bathing zones has increased from 10 to 14 according to the regional classification.¹⁹⁷ The regional government and the municipalities will need to undertake still more efforts to improve wastewater treatment in order to comply with the 1991 EC Water Treatment directive, thereby contributing to respect the 1975 EC directive on bathing water. However, as these directives do not necessarily ensure that the benefits from better water quality outweigh pollution abatement costs, Belgium may want to be more active at the EU level to promote a more systematic use of cost-benefit analysis in setting up EC directives and regulations in the area of water.¹⁹⁸

Sewage from the *Brussels capital region* flowed entirely untreated into the river Senne until the late 1990s, heavily affecting water quality downstream. It was recommended to implement an investment programme in order to bring the city into line with legal requirements by 2005. A first treatment plant has been operating since August 2000. The construction of the second one has been delayed and the authorities now consider that legal requirements should be met in late 2006. Further delays before all wastewater is treated should be avoided. Moreover, the price for water charged to households and companies should ensure that marginal treatment costs be internalised to discourage excess use of water. This would help to minimise operating costs and future investment costs.

The Flemish region is enforcing regulations on nutrient discharge more strictly

In Flanders the relative part of nutrient input due to manure production from livestock farming into surface and groundwater has increased during the 1990s. Pollution reduction incentives including fines and specific taxes were tightened step by step to become effective. Great strides have been made towards checking the flow of nitrates from farming.¹⁹⁹ Giving the institution enforcing existing legislation more means resulted in an increasing inspection capacity, leading to 440 fines on 2004 inspections at farm level in 2001. The special levy for non-compliance with fertiliser limits was applied to 324 farms with corresponding revenues totalling € 296 318. Moreover, areas classified and protected as “vulnerable zones” for nitrate pollution from agriculture will be extended to 46.6 per cent of Flanders’ agricultural land as of 1 January 2003, up from 10 per cent. Current taxes and fines (€ 1 per kilogramme of nitrogen or phosphate produced above the nutrient production threshold and a similar amount for non-treatment of manure produced under treatment obligation) and the significant reduction in authorised maximum fertiliser levels should result in a marked curbing of discharges. A further measure that should reduce nutrient losses is that when two farms merge, their nutrient production threshold will be reduced by one-quarter. Tradeable discharge permits could be a means to achieve these reduction targets at minimum cost.

Notes

1. Exports of goods comprise 85 per cent of exports of goods and services.
2. The reclassification of public radio and television enterprises from the market sector to the government administration sector also reduces measured growth in consumption expenditures in 2002. This change in national accounts classification was made following the decision to transfer control over television licence fees to the regions. This reduced the share of own revenues for those enterprises below the minimum required to be classified as an enterprise. Consequently, television licence fees are recorded in the national accounts as a tax, not private consumption, and collective private consumption expenditure now only includes the value of inputs.
3. This is based on a partial elasticity of private consumption with respect to financial wealth of 5 per cent.
4. Direct listed share holdings only accounted for 8.3 per cent of households' financial assets at the end of 2001. Taking into account some assets directly linked to listed shares, the proportion rises to 12.3 per cent if equity mutual funds are taken into account and to 15.9 per cent if index-linked mutual funds are also included.
5. There is normally a three quarter delay between commitments with architects and construction getting underway.
6. This includes unemployed persons entitled to a benefit, young workers during the waiting period, voluntarily registered persons and other unemployed jobseekers.
7. This reduced inflation by 0.3 percentage point in April and will have the same effect in October. The fact that the trimmed mean of underlying inflation (see Figure 9), which excludes extreme price movements such as that related to the abolition of the television licence fee, is falling underlines that other factors are also contributing to the decline in underlying inflation.
8. The health index excludes petroleum products for transport and cigarettes and alcohol from the consumer price index.
9. It should be noted a monetary conditions index abstracts from many important factors in the monetary transmission mechanism, including asset prices, long-term interest rates and the credit channel. However, it is doubtful that taking these factors into account would alter the current assessment of monetary conditions.
10. The initial autumn 2000 projection by the National Accounts Institute ("Budget économique") expected GDP growth to be 3.1 per cent in 2001 but the government decided to base the Federal budget on 2.5 per cent growth. Unlike in many other countries of the euro area, the government in Belgium has been providing itself with a safety margin since several years to meet the budget target even in case of lower-than-projected GDP growth ("golden-hamster-principle"). Over the cycle, this should ensure

government projections that are at best cautious and at worst realistic. A variety of the hamster principle was to neglect that the implicit interest rate on public debt had come down until mid-2001.

11. Other one-off government receipts and negative outlays equivalent to 0.3 per cent of GDP occurred in 2001 and therefore do not affect the two-year comparison 2000-02. Sales of public buildings and restitution by private companies of reductions in social security contributions under the "Maribel" arrangement (incompatible with EU legislation), contributed 0.3 per cent of GDP. The auction of UMTS licenses held in 2001 yielded another 0.2 percentage point. This was less than in other European countries due to the small size of the Belgian market, the unexpected withdrawal of a fourth bidder and the date of the auction well after the peak in telecommunication share prices.
12. The OECD estimates for Belgium of the GDP-elasticity of direct tax revenues from households and of current expenditure are 1.3 and 0.4, respectively (Van den Noord, 2000, p. 19). The OECD measure of the adjusted fiscal balance is cruder than Bouthevillain *et al.* (2001) in that it does not take into account changes in the composition of growth in GDP by expenditure in different years (*e.g.* stronger-than-average consumption *versus* stronger-than-average export growth) although these might affect the government budget balance.
13. The implicit interest rate on public debt came down only in 2002. In 2001 it remained stable as the rate on bonds with a maturity of up to one year increased – this rate follows reductions in market rates by the ECB with a time lag – and the share of long-term debt in total debt kept rising. Interest payments relative to GDP came down in 2001 on average because of the significant fall in the debt-to-GDP ratio in the course of the year 2000 and a moderate further reduction in 2001.
14. In general the funds available to Ministries are not spent to 100 per cent. A constant utilisation rate of credits implies a special saving effort in Ministries, which had seen their budget reduced and in those, where the credit utilisation rates for whatever reason had been low in 2001.
15. Another net stimulus of 0.1 per cent came from regional and local initiatives. The Flemish region abolished the radio and television fee, reduced registration taxes from 12.5 to 10 per cent and granted a one-off tax reduction by € 62 on revenues of 2000. These Flemish measures were partly offset by increases in personal income tax supplements levied at the municipal level.
16. Net VAT receipts usually swing around substantially at cyclical turning points, since refunds have a longer lag than gross receipts. Nevertheless the deterioration of revenues between 2000 and 2001 appeared to be extraordinary. The sustained buoyancy of refunds (driving down net receipts) can be explained partly by the strength of exports in the second half of 2000 when the domestic economy had already cooled down. After the announcement of tighter controls by the government in July 2001 refunds fell sharply suggesting that the measure was a success. Refunds have been corrected since mid-2001, leading to growth in net VAT receipts during the first nine months of 2002 (+2.4 per cent) despite sustained weakness in the economy.
17. The remaining part of the margin was dedicated to spending priorities identified in the fields of Community finance, social security, and social transfers to the poor.
18. These calculations are based on primary expenditure deflated with the national index of consumer prices.
19. Potential output is projected to grow by an average 2.3 per cent in the 2002-04 period.
20. The OECD output gap for Belgium (in per cent of potential GDP) averaged 0.1 from 1997 to 2001 but only –1.5 from 1992 to 1996 (whole decade: –0.7).

21. The level of tax revenues reshuffled to the communities as a percentage of GDP will be higher by 0.3 in 2005, 0.6 in 2010, and 1.1 in 2020 compared with the level in 2001.
22. This results from a sensitivity analysis by the NBB.
23. This projection does not yet take into account government plans to take over gradually the debt of the national Railway Company. A first step of debt assumption equivalent to about 2 per cent of GDP is planned for the end of 2004, provided that the debt-to-GDP ratio remains below 100 per cent after the debt takeover.
24. By contrast, spending pressures are going to ease in the field of security after full implementation of the police reform.
25. As the Flemish Region has decided tax cuts, the scope for the Walloon and Brussels Regions reaching their targets by tax increases is limited by inter-regional tax competition.
26. The regions, however, being the responsible authority, do subscribe to the commitment to convince the local authorities to respect their budgetary targets.
27. For an individual benefits are based on 1.33 per cent of career average earnings per year of employment, with a maximum of 45 years employment taken into account. A married couple can choose between a pension based on the earnings of each spouse or can draw the highest of the two pensions increased by 25 per cent. Earnings more than 27 per cent above the pay of the average production worker do not give the right to a pension.
28. Past earnings have not always been up-rated in line with average earnings and not all employees work for 45 years.
29. For people with career-average earnings less than 40 per cent of average pay, there is a minimum pension equivalent to 30 per cent of the earnings of the average production worker, provided the person has worked for 15 years. Thus a low-paid person, earning 30 per cent of average earnings, would have a replacement rate of 80 per cent.
30. No matter how few years a person has worked, there is a guaranteed minimum pension that is equal to 20 per cent of average earnings. The share of pensioners receiving this minimum fell from 6.7 to 5.3 per cent of all pensioners between 1990 and 2001.
31. The legal retirement age for women is progressively raised to that for men. It will be 63 in 2003 and 65 in 2009.
32. 260 per cent of GDP compared with 244 per cent in the United Kingdom and 308 per cent in the United States.
33. Proceeds of the fund are invested in government bonds, as occurs with similar arrangements in the United States (the social security fund) and the Netherlands (the silver fund). In common with these other arrangements, transfers to the fund amount to an accounting entry within the public sector: they have no direct effect on the public debt ratio.
34. In April 2002 the Study Group on Ageing (*Comité d'Étude sur le Vieillessement*) published its first report (High Finance Council 2002). It was prepared by the Federal Planning Bureau (FPB) which serves as the Secretariat to the Study Group and ensures consistency of the scenarios with the FPB's medium-term macroeconomic projections (*e.g.* FPB, 2002b). The report was then used by another section of the High Finance Council (*Section "Besoin de financement des pouvoirs publics"*) in its annual report 2002 (July 2002), which gives general recommendations concerning the budgetary position.
35. Second-pillar pension benefits paid out as annuities are now also taxed at 16.5 per cent as lump sum withdrawals of accumulated savings. The complementary savings scheme (including employees' contributions to pension saving funds, life insurances

- and the second pillar) receive the following favourable tax treatment: a personal income tax reduction amounting to between 30 and 40 per cent; exemption from the withholding tax on interest (assumed to accrue at a rate of 4.75 per cent per year); and a tax rate on benefits of 17.5 per cent (see Chapter III, Box 1).
36. Measured on a System of National Accounts (SNA) basis for all levels of government.
 37. Part of the high share of personal income taxes in the total (and low share of property taxes) is explained by the fact that the real estate withholding tax is included in personal income taxation whereas the comparable tax (rates) in other countries is included in property tax. Even allowing for this factor, however, the share of personal income taxation in the total remains high in Belgium by international comparison.
 38. The average effective tax rate on labour equals the labour tax wedge expressed as a share of gross labour costs. The labour tax wedge is the difference between labour costs to the employer and the wage that the employee receives after all taxes have been paid. It is calculated by applying tax rules to a hypothetical worker. The main alternative approach to measuring the tax burden on labour is to calculate the labour tax ratio (see Carey and Rabesona, forthcoming, for a discussion of the advantages and disadvantages of this approach). Such calculations also show that Belgium's tax burden on labour is one of the highest in the OECD, though not the highest, as suggested by the AETR calculations. When consumption taxes are included, the labour tax ratio in Belgium is still high, although there are now six countries with higher ratios; this ratio was 50 per cent in Belgium in 2000, compared with EU and OECD averages of 46.5 per cent and 43.1 per cent, respectively (*op. cit.*).
 39. A number of studies were used to make assumptions for the elasticities of labour demand with respect to real labour costs and of wages with respect to unemployment.
 40. The government has also reduced employers' social security contributions for workers aged 58 or more, although the fiscal scale of this measure is very small in relation to the structural reductions (targeted on low-income earners). The reductions for older workers, which came into effect in 2002, are proportional to the age of the employee and are intended to discourage employers from making such employee redundant and to encourage employers even to hire such workers.
 41. Stockman (2002) distinguishes between low-skilled, high-skilled and special programme (for which wage cost reduction measures are conditional on creating additional employment or meeting other regulatory conditions) employment. Low wages are defined as 65 per cent of APW or less. Low wage earners represented 27 per cent of full-time equivalent employment in 2001 while special programme employment accounted for only 2 per cent. With a wage benchmark, the low-wage measure generates 4 040 extra jobs by 2007, compared with 1 530 for the same reduction but focused on high-wage earners and 1 840 for a general measure (the same percentage reduction in social security charges at all wage levels). Net substitution between low- and high-wage labour is particularly strong with the low-wage measure (one high wage job is lost for three additional low-wage jobs) but weaker if the high-wage measure is implemented (one low-wage job lost for 10 additional high-wage jobs). The reduction in real labour costs per employee (market sector) is larger with the low-wage measure (-0.21 per cent) than with the high-wage measure (-0.07 per cent) or the general measure (-0.09 per cent). He also finds that the increase in employment and decline in labour costs is smaller in the absence of a wage benchmark; on the other hand, labour productivity is higher.
 42. These arise when net replacement rates from unemployment and related benefits are sufficiently high that it is not worth while for an unemployed person to accept a job.

This problem mainly concerns low-income earners with dependants; replacement rates in Belgium are lower for unemployed persons without dependants, decline over time for such persons, and are capped in all cases, resulting in low replacement rates for high-income earners (see Annex I for details).

43. Individual social security contributions were cut by € 82.5 per month for full-time employees earning up to € 1 150 per month. This reduction is progressively withdrawn, falling to zero for salaries of € 1 350 and above and adding 41.25 per cent to the marginal effective tax rate on incomes in the withdrawal range.
44. This measure should stimulate increased labour supply and, for persons earning sufficiently more than the minimum wage for their wages to be flexible, reduce labour costs and hence, increase labour demand. For persons earning the minimum wage, this measure does not reduce labour costs and hence, increase labour demand. It could even contribute to higher unemployment among persons only able to find employment at the minimum wage rate.
45. The following complimentary measures aimed at specific unemployment traps have been taken:
 - A one-off payment of € 75 is paid to a single parent families taking up employment after a long period of unemployment so as to help with the costs of returning to employment;
 - A one-off payment of € 75 is paid to long-term unemployed persons accepting a job which requires them to travel far;
 - So as to encourage older unemployed persons to accept a lower-paid job than their last one, social security rights are based on the previous (higher) salary;
 - The statute of persons without employment who become unemployed again after a part-time job has been improved;
 - The part of earnings between € 849 and € 912 that could be confiscated has been reduced; and
 - The increased family benefit given to long-term unemployed persons is maintained during the first two quarters of taking up employment and continues if the new job lasts less than six months (previously, a stand-down of six months after taking up a job was required before being able to claim again an increased family benefit).
46. The tax credit is progressively withdrawn as (full-time) income rises above 56 per cent of the average production wage (APW) and is completely phased out by 67 per cent of APW.
47. This reform is complemented by transforming deductions for dependants into refundable tax credits. This will enable families that don't have enough taxable income to benefit fully from the current deductions to do so in the new system.
48. The tax credit rises from € 78 per year in 2002 to € 500 per year in 2005.
49. For example, the *Working Families Tax Credit* in the United Kingdom for a single-earning couple at 54 per cent of APW (the highest income at which the tax credit in Belgium is € 500) with two children aged under 16 family was £4 470 (23 per cent of APW) in 2001.
50. Net replacement rates were still high – 79 per cent or more for all family types except singles – at the minimum unemployment benefit.
51. This margin, which is considered to be appropriate by the High Employment Council (*Conseil supérieur de l'emploi*), is necessary at least partially to compensate for the costs of working, such as for transport, childminding, and clothing.

52. The ACS was phased out earlier for low-middle income earners. The schedule for phasing it out is as follows:

Taxable income €	Additional crisis surcharge (per cent)				
	Income earned in:				
	1999	2000	2001	2002	2003
0-19831.47	2	1	0	0	0
19831.48-21070.94	phased transition	phased transition	phased transition	0	0
21070.95-29747.21	3	2	1	0	0
29747.22-30986.68	3	phased transition	phased transition	phased transition	0
30986.69 and above	3	3	2	1	0

53. The allowance for the first income bracket (€ 0-4 320) increases from 20 to 23 per cent in 2002 and to 25 per cent in 2003. But the upper limit to the deductible amount (€ 2 880) remains unchanged. This means that taxpayers with a tax base exceeding around € 55 000 do not get any additional allowance.
54. Feedback effects refer to the effects on employment via the impact of the reform on other economic variables. For example, an increase in employment will increase consumption demand and output, raising demand for labour and hence, employment.
55. Stock options are taxed at grant rather than at vesting, as in most other countries. This is done to preserve consistency with the general exemption of capital gains (not related to a professional activity, such as property development, for example) from taxation under Belgian law. However, it is difficult to see why gains on stock options should not be considered as labour income and taxed accordingly, as is already the case, for example, for property developers.
56. The overall social security contribution rate is about 48 per cent (35 per cent for the employer, less € 979, plus 13 per cent for the employee) while the standard company tax rate is presently 40 per cent (including the ACS of 3 per cent). Although stock options grants are not subject to social security contributions, personal income tax receipts from taxation of them is entirely handed over to the National Social Security Office.
57. These are that:
- the exercise price is fixed at grant;
 - the option cannot be exercised either before the end of the third calendar year following that in which the grant is made or after the end of the tenth year following that in which the grant is made;
 - the option cannot be transferred to other living persons;
 - the risk of a fall in the value of the underlying shares after granting of the option cannot be directly or indirectly covered either by the persons granting the option or by someone with a link to that person; and
 - the underlying shares are in the firm for which the beneficiary provides labour services or in a firm that has a direct or indirect equity interest in the former firm in the sense of the Royal Decree of 8 October 1976 concerning firms' annual accounts.

58. If these conditions are not satisfied, options are valued at 15 per cent of the underlying shares, rising by 1 per cent per year beyond five years.
59. The profit-sharing plan:
- must be voluntary, organised by the firm and elaborated within the firm;
 - must result from collective negotiations between employers and workers;
 - must be proposed to all employees of the firm;
 - must contain a predetermined formula which clearly shows the link to the firm's profits;
 - must not replace regular remuneration – profit-based payments are supposed to be an income supplement;
 - is not subject to the same rules for taxation and social security contributions as regular remuneration;
 - shall enable workers to take their share of profits either in cash or in the firm's shares or in a combination of the two, in proportions fixed in the plan.
60. Employers may not deduct distributions of profits to employees from taxable corporate income but do not have to pay social security contributions either (although one half of corporate tax paid on these distributions is transferred to the social security system). If the distribution is paid in shares or in cash that is lent back to a SME employer, employees pay 15 per cent tax. In the event that the distribution is in cash, employees pay a 13.07 per cent solidarity contribution plus a 25 per cent tax on the distribution net of the solidarity contribution.
61. Taking the example of a firm that wishes to grant its workers € 100 out of post-corporate tax profits, this would give workers € 85 after tax if paid as shares or in cash that qualifies for the same tax treatment or € 66 after-tax if paid in cash. For a regular salary payment that reduces after-tax profits by € 100, the after-tax benefit for the employee is € 65. (It is assumed that the corporate tax rate is 33 per cent, the marginal income tax rate is 50 per cent, the employer social security contribution rate is 25 per cent and the employee rate is 13 per cent.) As noted above, profit-share payments are not tax deductible for companies. As employers equally do not have to pay social security contributions on such payments, the cost to after-tax profits of a € 100 profit-share payment is € 100. If the payment is made in shares (including the equivalent SME case of cash lent back to the employer), the employee pays a 15 per cent final tax, giving a final after-tax benefit of € 85. If the profit share is paid in cash, the employee pays a final tax of 34.8 per cent [$13.07 + (1 - 0.1307) * 25$], giving an after-tax benefit of € 65.9. Finally, a regular salary payment that reduces after-tax profits by € 100 is € 199 [$= 100 / (1 - (0.33 + 0.25 * (1 - 0.33)))$]; all labour costs, including social security contributions, are tax deductible. Out of this amount, the gross wage received by the employee is € 149.5, which falls to € 129.85 after the deduction of employee social security contributions. Personal income tax reduces this amount to € 64.9.)
62. The dividend is first taxed as part of company profits at 40.17 per cent and is then taxed again at the dividend withholding tax rate of 25 per cent, giving a total tax rate of 55 per cent [$0.4017 + (1 - 0.4017) * 0.25$]. This was the top personal income tax rate before the current personal income tax reform.
63. The lowest rate is for companies with taxable profits of less than € 25 000. In this case, the corporate income tax rate is 29.71 per cent, giving a total tax rate (including the 25 per cent withholding tax) of 47 per cent [$0.2971 + (1 - 0.2971) * 0.25$]. There is a phasing out range for companies enjoying reduced rates, so that the average corporate

- income tax rate is 39 per cent (excluding the ACS) at the € 323 750 limit for progressive corporate income tax rates, the same as the standard corporate income tax rate.
64. If the property is purchased and re-sold within this period, a capital gains tax of 16.5 per cent applies. To calculate the gain, the purchase price is increased either by the notary fee paid or by a lump sum rate of 25 per cent and by 5 per cent per year since the purchase year.
 65. Since 1986, there is an additional interest deduction which can exceed the amount of imputed rentals. It concerns only building, purchase of a newly-built house or renovation work [minimum amount of € 22 261 (2000 value, indexed)]. In addition, this deduction only applies to the principal residence, which has to be owner occupied, and financed by a mortgage loan with a duration of at least 10 years. The tax deduction is limited to the first income bracket of € 55 652 (2000 value, indexed and increased for dependent children) for building or purchasing a new house and to the first bracket of € 27 838 (2000 value, indexed) for renovation work. Up to 80 per cent of the amount obtained after the first limitation is taken into account may be applied in the first 5 years (sliding proportion to 10 per cent in the 12th year).
 66. Incidentally, the high rate of owner-occupied housing is another factor to take into account when considering the adequacy of Belgians' savings for retirement.
 67. However, Belgium's real estate property withholding tax is recorded as income tax in OECD *Revenue Statistics*, whereas rates are recorded as a property tax. There is also a tax reduction on the first € 12 500 of the purchase price of a principal residence.
 68. The second principal residence must be bought within two years of the sale of the first.
 69. The tax-exempt amount is € 60 000 in a Reinforced Development Zone for Housing and Urban Renewal (Espaces de développement renforcé du logement et de la rénovation urbaine) and € 45 000 elsewhere. There is no "imputation through time" system, as in Flanders.
 70. These are 12.5 per cent. It is assumed that the property is held indefinitely.
 71. As noted above, effective tax rates are negative on second pillar savings.
 72. For example, for a long-term government bond yielding 5 per cent in nominal terms and 3 per cent in real terms, the real effective tax rate is 25 per cent (*i.e.* the 15 per cent final withholding tax on 5 per cent expressed as a percentage of 3 per cent).
 73. While Flanders and Brussels-Capital have respectively implemented and announced small reductions in duty rates on direct-line successions recently, they have not reduced the rates on other successions.
 74. This and a number of the following sections on corporate taxation draw heavily on Valenduc (2002b).
 75. These were the following:
 - "Upstream taxation" and anti-abuse rules were introduced (1990, 1991, 1996) to ensure that the participation exemption system (which allows a company to deduct 95 per cent of a dividend it receive from a company in which it has a significant shareholding) did not lead to a double exemption of distributed profits.
 - The notional withholding tax credit of 15/85 for interest received from abroad was replaced by a credit for foreign withholding tax effectively paid (1991).
 - The notional tax credit for resident companies providing new equity or lending money to a co-ordination centre was repealed (1990-91), although the preferential tax regime for co-ordination centres remains in force.

- The large investment allowance introduced in the early 1980s to compensate for high inflation was restricted to small businesses or investments that generate externalities (such as R&D or environmental investments) with the rate linked to the inflation rate (1992).
 - The conditions to be met to qualify for reduced corporate tax rates for small businesses were made more restrictive (1993).
 - Disallowed expenses were expanded (including, for example, part of car expenses) and a thin capitalisation rule for interest deductions was introduced (various measures from 1989 to 1995).
 - A tax credit was introduced for new equity raised by SMEs (1996).
76. This measure uses tax statistics to obtain a corporate profit series that excludes losses. The reason for excluding losses is that they cause the standard tax ratio measure to vary over the business cycle even when there is no change in tax policy. To construct this modified tax ratio, tax data on corporate profits must be adjusted to exclude deductions that are considered to be tax expenditures (increasing the tax base) while disallowed expenses that are genuine economic expenses are deducted from the tax base. See Valenduc (2002b, p. 60) for more information.
77. This approach adapts the King-Fullerton (KF) (1984) methodology to deal with investment projects that earn some economic rent. The resulting Average Effective Tax Rate (AETR) is a useful indicator in the case of imperfect competition. By contrast, the KF approach only considers marginal investments and thus is only appropriate to discuss the effects of the tax system under perfect competition.
78. Capital export neutrality means that taxation is the same regardless of where an investment is made. These reforms improved capital export neutrality by making exemptions of foreign-source dividends and interest from Belgian taxation more dependent on the foreign taxes actually paid on such income.
79. A closed economy framework is used because SMEs do not have direct access to world capital markets. Shareholders are thus subject to personal income tax in Belgium. Accordingly, the AETR must integrate both taxation of the SME and the taxation of private savers in Belgium. In fact, SME managers play a major role in financing their companies.
80. Belgian co-ordination centres are subject to income tax on a cost-plus basis but interest paid is not included in the cost-base. Combined with the fact that the tax base includes neither interest, nor dividends received, nor retained earnings, this means that co-ordination centres are not subject to tax on investment income. Despite this, the Belgian parent can still benefit from a 95 per cent tax exemption on dividends received from a co-ordination centre and from a full exemption on capital gains on shares in the co-ordination centre (Valenduc, 2002a).
81. Personal income tax reductions since the government took office (abolition of the 3 per cent ACS, reindexation of tax brackets and abolition of the top two tax brackets (52.5 per cent and 55 per cent)) have reduced marginal income tax rates by around 15 per cent, approximately the same amount as the announced reduction in progressive company tax rates.
82. Benefits are also considered because they are a close substitute for taxes in redistribution. For example, if benefits are indirectly means tested through withdrawing tax concessions, as occurs in Belgium, this will tend to reduce the redistribution effect of the benefit system but to increase that of the tax system relative to direct means testing, as occurs in Australia or the United Kingdom. For the purposes of an international

comparison, it is also preferable to focus on the working-age population as high reliance on public old-age pension systems in some countries, such as Belgium, exaggerates the initial inequality of income distribution and the redistribution effect of government transfers.

83. See Box 3 for a summary of the main recommendations for tax reform.
84. Series have been smoothed with a Hodrick Prescott filter up to and including 2001. To mitigate the so-called endpoint problem, series have been extended up to 2005 on the basis of projections in the OECD *Economic Outlook 72* (OECD, 2002a) and by the Federal Planning Bureau (FPB, 2002). A lambda of 30 was chosen to obtain a symmetric distribution of filtering weights up to 2001. At this lambda for annual data, for cycle lengths up to nine years, at least 90 per cent of the cyclical components is excluded from the original series (Bouthevillain *et al.*, 2001).
85. These data at the branch level were only available for 1995.
86. Figures calculated by Kegels *et al.* (2002) before the upward revision of employment figures in November 2002.
87. Aggregate figures on employment and participation rates in this section incorporate the upward revision in November 2002 (by around 3 percentage points). Revised disaggregate data are not yet available.
88. Percentages on the basis of the European Labour Force Survey. Other goals are halving the number of youngsters with only primary education and an increase in the employment rate of women to 60 per cent.
89. In 2000, the employment rate, measured in terms of persons, was about 3 percentage points lower than in the OECD and even 9 percentage points lower than in the Netherlands. Already before the upward revision of employment data, however, Belgium ranked more favourably, if employment rates were measured in full time equivalents (relative to the Netherlands, for instance, the lag would decrease to 2 percentage points European Commission, 2002a).
90. Due to these exemptions in 2001 only 57 per cent of the persons entering the early retirement programme were replaced.
91. The official pre-pension age is 60, but social partners are allowed to set a minimum age of 58 in sectoral agreements. The pension age for women is being progressively raised to 65 by 2009.
92. According to Cockx (2001), the chances to find a job are particularly small for low-skilled workers, for which there is insufficient demand. In 2000, the unemployment rate among Belgians born outside Europe was about 35 per cent (Federal Ministry of Employment and Labour, 2002a).
93. OECD (2002c). Figures refer to 1999 and have been calculated using purchasing power parities.
94. This is due to lower tax rates, higher child and other allowances and lower municipality taxes. Other allowances may concern the costs of healthcare, electricity and public transport.
95. In that case the number of years worked must be at least 15 years.
96. Université catholique de Louvain (2000); OECD (1998a). Workers with a tertiary degree had a 17 per cent higher wage than workers with a secondary education.

97. HEC (2002), p. 122. According to the broader national definition, used by the Federal Ministry of Employment and Labour, the unemployment rates were 7.9, 17.1 and 19.8 per cent respectively (September 2002).
98. The above figures imply that an increase in outward mobility of Walloon workers by around one-quarter (from 20 to 25 per cent) would halve the unemployment rate in the region.
99. The cost of commuting by public transport is, however, limited. Reimbursements by employers are fully deductible from personal income taxes up to a commuting distance which in 2003 will be raised from 25 to 50 km.
100. For more details on the measures taken up till 2000, see Federal Ministry of Employment and Labour (2001).
101. Social security contributions by workers with a monthly wage below € 1 500 (around half a million employees), are to be further lowered in 2003, resulting in net income increases of up to 4 per cent, part of which would lead to a further reduction in the replacement rate.
102. Having worked for at least 20 years is a condition many women under the previous scheme did not meet, but those already in the old scheme were allowed to switch to the new scheme.
103. The bonus corresponds with the wage for 2 hours (age 45) to 6 hours (workers 55 and over).
104. In 1999, 11 000 unemployed lost their benefit because the duration of their inactiveness exceeded the average duration of their reference group of unemployed by more than 50 per cent.
105. Communication by the Federal Ministry of Employment and Labour.
106. Since January 2002 these jobs are integrated in the so-called ACTIVA plan.
107. <http://meta.fgov.be/pdf/pd/frdf25h.pdf>
108. Federal Ministry of Employment and Labour, Press release 28-08-2002
109. Vouchers represent a subsidy of € 30 for each amount of € 30 spent by a firm on training. In 2001, for vouchers the government had reserved some € 50 million.
110. The budgetary cost in 2000 was around € 50 million.
111. For 2001 and 2002 the total increase was limited to 6.4 per cent, except for very well performing industries, which were allowed to increase wages by an additional 0.6 per cent.
112. Written communication by the Central Economic Council.
113. In Belgium a merger is subject to notification if at least two of the firms involved have a turnover higher than € 15 million and at the same time the combined Belgian turnover exceeds € 40 million.
114. For example, in 2001 only two mergers notified earlier led to a Phase II investigation. No merger decision was appealed against at the Brussels Court of Appeal. This compares with a total of 48 notified mergers. During the eight years from 1994 to 2001, 5 decisions not to approve a merger were taken, 32 cases are outstanding (OECD, 2002d, p. 6).
115. In the Netherlands, the turnover threshold for the individual firms engaging into a merger was lifted from € 14 million to € 30 million in 2002.

116. This gives other stakeholders (service providers without network and consumers) a chance of articulating their interests.
117. This requirement is met in Belgium by the annual reports of the regulators for the electricity and gas markets (CREG) and of the telecommunications and postal sectors (BIPT).
118. Another measure to increase the personal distance between the regulator and the regulated firm consists in sector-to-sector job rotation within the regulation agency, a common practice in the German Cartel Office.
119. See Knieps (2000, p. 20) for technical progress and Kumkar (2000b, p. 374) for finding optimal allocation rules for network access revenues by a learning process.
120. The benefits of bringing telecommunications and electricity regulation under a common roof are discussed in Kumkar (2000, pp. 26-27).
121. In the Netherlands, for example, the regulation agency for electricity and gas is affiliated to NMa, the overall competition authority. It is also interesting to note that the Australian Competition and Consumer Commission regulates access pricing in several sectors including telecommunications.
122. Due to technical, administrative and legislative barriers, trains lose most of the travel time at boundaries. The average speed of international rail freight haulage is only 18 km/hour (European Commission, 2001c, p. 28).
123. Market entry is prevented by falling marginal and huge sunk costs in infrastructure management, *i.e.* this stage of railway service production is a natural monopoly, whereas traction presents ample scope for competition. In analogy to air traffic, some authors consider capacity management and security services as a separate stage of production "in between", since fixed costs are not sunk, making the market for these services contestable and thus removing the static inefficiency implied by its monopolistic provision (Knieps 1996). At each stage, vertical disintegration involves efficiency gains from actual or potential competition, which have to be assessed against higher co-ordination costs.
124. The somewhat better result for Belgium from input distance function estimates in Coelli and Perelman (2000) is called into question when using the stochastic frontier method (rather than a deterministic approach) to account for cross-country differences in exogenous factors (Trujillo 2003, forthcoming).
125. One insight from a comparison between the six studies reported is that results are sensitive to the measure chosen. Rank correlation coefficients for the ten countries covered by all six studies are broadly positive (but mostly below 0.5) only after ignoring the Gathon-Pestieau results. This makes the consistently low performance of Belgian railways all the more striking.
126. This holds in application of the theory of effective tariff protection, which states that lower tariffs on inputs than on final goods and services strengthen the protection for domestic value added. In the current situation, tariffs on goods imports are virtually zero whereas access to essential service input markets is nearly prohibitive.
127. A vertically disintegrated network owner maximises revenues from (regulated) user fees and therefore has an incentive to get a maximum number of trains on his network. In a vertically integrated firm such a strategy would cost market shares to the in-house transport services branch and joint profit maximisation would account for the trade-off between the market share of own transport services and revenues from third-party access.

128. Already in 1998 the European Commission noted the insufficiency of mere accounting separation, since it leaves incumbent railway undertakings closely linked to infrastructure managers who control access (European Commission, 1998).
129. Unit costs are likely to come down following liberalisation. Reform experience in other countries (*e.g.* Germany) shows that niche market suppliers are capable of providing transport services at terms accepted by customers on routes given up by the former incumbent (OECD, 2001h, p. 80).
130. One motivation for cheap transports is to combat labour market mismatches. However, this is better achieved with specific labour market and labour tax policies (Chapters III and IV). Besides, receipts from pricing congestion can be used to lower distortionary taxes on labour.
131. Belgian households still pay higher electricity prices than the EU average (they used to have among the highest prices in the European Union), whereas companies pay less than the EU average according to the authorities.
132. In most cases, Electrabel is a capital co-owner in these trusts ("*intercommunales mixtes*").
133. In line with an OECD-wide trend, fixed charges were increased and bundled with set-up charges – occurring when the first time unit costs more than subsequent units – in the basic subscription. In terms of prices, Belgacom *de facto* abolished the distinction between local and long-distance calls (OECD, 2001b, p. 171). The incumbent, which has still a 95 per cent market share for long distance calls, reduced prices for national calls in 2001 from € 1.74 (ten minutes call) to € 0.54. On the other hand, the price of local calls increased from € 0.49 to € 0.54, staying among the highest of the EU (32 per cent higher than the EU average. These price evolutions initiated by the incumbent may have created difficulties for other operators mainly active on international and long distance calls. More recently, new types of subscriptions combining a higher monthly fee with some amount of free time were introduced together with moderate increases of variable charges for national calls.
134. Press Release by the Ministry of Telecommunications of 6 February 2002. http://belgium.fgov.be/fr_index.htm. This calculation system also applies to binary access services for large band Internet access.
135. This means that gross costs for public services provision, currently estimated at € 62 to 86 million, would have to be lowered by the receipts from fees for public services and the intangible benefits in terms of enhanced visibility.
136. Currently the incumbent firm takes more time than agreed on for breakdown services and for connecting new users to the network (BIPT 2002).
137. Measured in US dollars at purchasing power parities (PPP), the average costs of 40 hours Internet use per month at peak hours increased by 44 per cent between September 2000 and August 2001. This is more than what could be explained by the "rebalancing" of local call prices by incumbent operators observed in many OECD countries (OECD, 2001b, p. 173). For off-peak Internet use, the price increase reached 12 per cent over the same period.
138. Demand pressures also contributed to a quicker coverage of the territory. The ombudsmen of the telecommunication sector reported 333 complaints in 2001 referring to non-availability of high-speed Internet access.
139. An SSL protocol is to encrypt information before transmitting it *via* the Internet to protect client data but also to ensure privacy of information subscribers pay for, thereby overcoming the failure inherent to markets for information (OECD, 2001b, p. 103).

140. According to an EU-wide survey, uncertainties about the conditions of use appear to be the main obstacle for e-purchasing, whereas high costs are the main obstacle for e-sales (OECD, 2002e, p. 2).
141. They usually consist of an initial connection charge, a monthly rental charge including an unlimited or limited amount of free flows and – in the latter case – a charge per Megabyte beyond the threshold.
142. On a more positive note, users of Belgacom ADSL Internet access are exempted from initial charges, and the monthly charge ranges on an intermediate position among incumbent suppliers within the OECD area (OECD, 2001i, p. 53). Note, however, that price comparisons in the field of broadband Internet access have to be interpreted with caution due to the huge diversity of service qualities – especially connection speeds. Assuming that a Belgian user remains below the included allowance, he gets about 15 Kbps per USD PPP spent, which is the eighth most competitive offer by all incumbent firms in the OECD.
143. In North America, non-metered access is the standard pricing model. In Australia and New Zealand, broadband access usually implies a per-unit cost beyond specified thresholds. However, in all four countries flat rates are applied to the traditional dial-up connections (PSTN), by which most persons got acquainted to the Internet in recent years.
144. About one-quarter of the subsidy is to cover the costs for a number of free financial services la Poste delivers. Discussion is under way to replace the subsidy by a universal banking service funds financed by all banks.
145. La Poste took away most of the market shares from a private competitor in a classical business-to-business mailing service by combining this mailing service with preferential general mail tariffs. The European Commission stopped this practice considering it as an abuse of dominant position (European Commission, 2002d, p. 32).
146. A characteristic of the Basle II Accord is that capital requirements will become more responsive to banks' individual risk profiles. A number of banks will have to increase their own funds; others will be allowed to relax them. Yet the repercussions of Basle II on the banking sector as a whole will be limited, according to preliminary results from the NBB's quantitative impact study (NBB, 2002b, p. 136).
147. The Banking Supervision Committee, composed by ECB staff and national regulators, is in charge of macro-prudential co-operation. Regarding international co-operation on the micro-prudential level, an EU directive on financial conglomerates is being prepared by the EU Commission. In the meantime, given the presence of two bi-national conglomerates, the BFC and OIC signed Memoranda of Understanding with other national authorities.
148. In this context, the CFS will have to decide which activities should be pooled and manage these pooled activities. The modalities of this pooling of resources will have to be precised in a protocol between the three institutions. If this protocol is not signed six months after the appointment of the new Boards, the Minister of Finance may impose a pooling of resources.
149. The Minister of Finance backs such a merger (L'Echo of 11 July 2002).
150. See OECD, 2002f, pp. 8-9, for further details.
151. This becomes especially likely when the managers of a subsidiary and of the controlling firm are the same persons. A typical case of tunnelling with a Belgian subsidiary (Flambo) as the loser is described in Wymeersch (1993).

152. The strongly negative correlation between minority protection and ownership concentration around the world (La Porta *et al.*, 1998) further strengthens the relevance of this point.
153. Kortum and Lerner (2000) show that \$1 of venture capital generates 5 to 10 times as many patents as \$1 of R&D investment in big companies.
154. In case of *ex ante* subsidies promising and less promising projects get the subsidy due to asymmetric information and moral hazard problems. By contrast, payments that are made conditional on success (*ex post* subsidies) would increase private actors' marginal utility of additional efforts.
155. This is particularly obvious for interest subsidies. In case of a well-established big company the probability of bankruptcy is low even if an innovative project fails. Thus the subsidised credit crowds out a normal bank credit. This is different for a start-up the survival of which depends on the success of the innovative project. Bank credits are generally not available in this case and the venture capitalist asks for high dividends to compensate his high risk. If part of the investment is financed by a subsidised loan, the outcome is the same in case of failure but the start-up has to pay back less high dividends in case of success.
156. Further insights of the study are that regulations themselves are the major source of dissatisfaction and that often interactions with the administration depend on the person contacted and decisions lack explanation.
157. The harmonisation of conditions for cuts in employers' social security contributions provides a successful example of how not only the readability but also the *content* of legislation can be made less complex.
158. First an indicator of the burden is obtained as a weighted average of "marks" for various aspects (*e.g.* fees, proper guiding information, number and readability of forms, possibility of electronic exchange). This indicator is then multiplied with the frequency of the formality and the number of persons concerned (OECD, 2001j, p. 45).
159. More than 80 projects were implemented at the time of writing. About the same number of further projects are scheduled until 2005 (<http://premier.fgov.be/topics/reports/sav/mix-corr.ppt>).
160. The government shall not ask the citizen one and the same information twice. Agency B shall get an information from Agency A rather than from the citizen.
161. Technological foundations of e-government include a metropolitan area network for Brussels, Internet portals for citizens and companies and a "back-office" with the Business Crossroads Databank for data exchange between government agencies. Further elements are a single identification number for citizens and companies, the electronic identity card, and a public key infrastructure for interactive communication.
162. The policy preparation unit, composed by civil servants, provides technical expertise and policy options. The policy council, composed by the Minister, the president and managers of the FGS, and external experts, gives strategic advice and controls the implementation of measures.
163. Moreover, the current economic environment of low activity is favourable to the implementation of the reform as finding the high number of ICT consultants needed to modernise information systems and provide training services is much easier than during in a boom.
164. This incentive mechanism was implemented for the senior level of ministerial staff under the "at risk pay" scheme in Canada and led to conditional pay rises of between 15 and 25 per cent. The lessons learned include that corporate priorities should be

- precise enough to enable executives of making comparable, measurable and “stretching” commitments that cannot vary arbitrarily between services (OECD, 2002h).
165. Such concerns led the OECD Ministerial Council to ask the Organisation to initiate peer reviews of sustainable development.
 166. Such a cost is similar to that estimated for Austria and France in 1996. The estimated cost of particle pollution is much lower in Switzerland, reflecting lower use of diesel vehicles in that country (Künzli *et al.*, 1999). However it is extremely difficult to separate the cost of particle pollution from that of other pollutants (Sommer *et al.*, 2000). Consequently, these estimates are best seen as overall estimates of the car air pollution. About three-quarters of these health costs relate to the value placed on the loss of life, the remainder being reduced morbidity costs. The value placed on loss of life would be markedly less if it were to reflect just lost income and consumption, rather than the willingness-to-pay to avoid death as revealed by labour market and survey data.
 167. A study concluded that dioxin emissions from an incinerator in the vicinity of Antwerp did not produce any statistically significant effect on human health (Nouwen *et al.*, 2001). Exposure to dioxin was even found to decline while incineration activity increased twofold.
 168. The ceilings for Belgium under the EU agreement are lower than its commitments within the framework of the UNECE convention on long-range transboundary pollution.
 169. The higher estimate refers to initial Commission proposals which were slightly more demanding than the objectives in the final version of the directive. The lower estimate refers to a scenario with significantly less demanding objectives than in the directive.
 170. The issue is complicated, however, by the fact that some pollution avoidance technologies result in higher energy consumption which in the absence of appropriate pricing of carbon emissions could compromise the least cost achievement of Kyoto limits. Consequently, requirements regarding both greenhouse gases and conventional air pollutants should be simultaneously implemented for comparable time horizons and the regional systems should be connected with each other and with wider international efforts through permit trading.
 171. The EU auto/oil policy will limit the sulphur content of motor fuels to 50 parts per million by 2005. US regulations require diesel fuel to contain less than 15 parts per million by 2007.
 172. For diesel cars, there is an excise compensating duty (*taxe compensatoire d'accise*) in addition to a higher annual vehicle tax (*taxe de circulation*). This tax penalty on diesel cars is offset, on average, by the lower duty on diesel fuel for motorists insofar as they do more than 22 000 kilometres per year. There is also a registration fee which has to be paid when the car is bought (*taxe de mise en circulation*). Between 2003 and 2005 that fee will be differentiated in favour of less polluting cars, with a permanent reduction for liquid petroleum gas (LPG) powered cars. Over the same period, the registration fee will cease to be higher for EURO4 compliant diesel cars.
 173. By 2010, motorcycles may account for 14 per cent of hydrocarbon emissions but only 2½ per cent of road traffic by 2010. Currently, the emissions of hydrocarbons from the average motorcycle are the equivalent of those from 200 cars compliant with present EU standards.
 174. Diesel-engined cars with almost zero particulate emissions are currently price competitive on European markets. In the United States, significant progress has been made in

- the development of filters for diesel trucks (EPA, 2002). Even without these advances on the cost side, benefits of a major reduction in particles emitted by trucks were estimated to be 17 times greater than the costs (EIA, 2000).
175. This does not mean that Belgium transport prices take into account all externalities. A major one, congestion, is not adequately reflected in prices (Prost *et al.*, 2002). Fuel taxes are not well suited for internalising congestion costs which would better be contained through road pricing.
 176. The only exceptions are federal taxes and the regulation of product quality for which the federal government is responsible within the limits of EU internal market rules.
 177. In Flanders, only one out of ten existing landfills for household waste is planned to operate after 2010. In Wallonia, a public enquiry to identify new landfill sites ended in 1999 with the decision not to create new landfills. The Brussels-Capital region has no space available for new landfills.
 178. FOST Plus does not intervene directly to either collect or recycle waste in contrast to the position in Germany. Moreover, there is competition amongst recycling companies. There is, however, a lack of transparency in determining the payments that are made to recyclers and local authorities.
 179. This increase reflects one-off investment costs, while the amount of recycled packaging waste subsidised by FOST Plus rose by just 21 per cent in the same period.
 180. Municipal waste collection and treatment costs € 155 per household (€ 62 per person). Just under 5 per cent of this cost is met by regional subsidies.
 181. For 2002, the threshold is set at 240 kilograms per inhabitant and the tax rate is € 35 per tonne. The introduction of this levy may have been one reason behind the fall in the collection of mixed waste from 310 to 175 kg per capita between 1998 and 2000.
 182. Euro per tonne for plastics and euro per tonne for other drink containers against euro per tonne for incineration.
 183. According to FOST Plus's annual report, a 4 per cent increase in quantity of material recycled would result in a 40 per cent increase in cost.
 184. Such a difference between the actual and optimal recycling rate led the Chairman of FOST Plus to write "Is this additional cost still justified when one takes into account the existence of other environmental black spots, especially in the light of the larger social context?" and "Is it not a waste of time and energy to consider packaging as the scapegoat on the debate on the environment?" (FOST Plus, 2002).
 185. In this section, the year 2010 is a synonym for the target period 2008-12 for which all policy commitments pertaining to the Kyoto protocol are formulated.
 186. In the Walloon region, CO₂ emissions by energy-producing industries fell by 28.8 per cent from 1990 to 1993 (Federal Department of the Environment, 2002).
 187. The forecast that the target is missed at current policy settings is not very sensitive to the assumption on energy prices. If oil and natural gas prices were 20 per cent higher, the final energy consumption would lie 3 per cent below the baseline projection in 2007 (FPB, 2002, p. 109).
 188. House insulation and building insulation, energy audits and certification are the main actions that will be carried out, in order to reduce the contribution of residential warming and industrial consumption to total CO₂ emissions.

189. In its Regional Development Plan the Brussels Region sets a target of 20 per cent reduction for road traffic by 2010 compared with 1999. Besides the RDP the Brussels Region has a Mobility Plan with the objective of stabilising the number of car trips in the morning rush hour at its 1991 level by 2005.
190. The broad aim is to enhance the technical and environmental performance of transport (through “green” taxes).
191. Moreover, worse congestion mitigates the ecological benefits from the expected reduction in road use as lower speed and more stop-start-driving boost CO₂ emissions per vehicle (OECD, 2002i, p. 35).
192. Operational rail subsidies should not only be removed on competition policy grounds. Oversupply of public transport results in higher emissions than adequately priced private transport (Sustainable Mobility Programme, 2001).
193. A co-operation agreement on the implementation of the national climate plan and the co-ordination of the international reporting obligations should be launched early in 2003.
194. United Nations Framework Convention on Climate Change (UNFCCC).
195. To increase the efficiency of such a measure, EU governments should ensure that a considerable share of emission permits would be auctioned rather than grand-fathered.
196. This section provides a short follow-up on assessments and recommendations of the previous *Survey* (OECD, 2001f). It will therefore deal with sewage in the Brussels region, bathing water in the Walloon region and effects from livestock on groundwater quality in Flanders, although each region has policies on other water quality issues than those described here.
197. Following a legal action by the EC, the Walloon region and the EC reconsidered the classification of bathing zones. There is still some disagreement since the EC identifies 21 bathing zones down from 30.
198. Article 174 section 3 of the EU Treaty requires such a review.
199. A large information campaign also helped to obtain better surface water quality in some rural areas.

List of acronyms

AAS	Agency of Administrative Simplification
ACS	Additional Crisis Surcharge
ADSL	Asymmetrical digital subscriber line
AETR	Average effective tax rate
ALE	Local employment agencies
APW	Average Production Worker
BFC	Banking and Finance Commission
BIPT	Belgian Institute for Postal services and Telecommunication (Regulator of post and telecommunications)
BPG	Belgian Post Group
BRP	Business re-engineering programmes
CFS	Council for Financial Stability
CO	Carbon monoxide
CO₂	Carbon dioxide
CREG	Regulator of the electricity and gas market (<i>Commission de régulation de l'électricité et du gaz</i>)
DSL	Digital Subscriber Line
ECB	European Central Bank
EEA	European Environment Agency
EMEP	Co-operative Programme for Monitoring and Evaluation of the Long-range Transmission of Air Pollutants in Europe
FGS	Federal Government Service
FPB	Federal Planning Bureau
FTE	Full-time equivalent
GHG	Greenhouse gas
HEC	High Employment Council
ICT	Information and communications technology
INS	National Institute of Statistics
KWh	Kilowatt hour
LNG	Liquefied natural gas
LPG	Liquid petroleum gas
METR	Marginal effective tax rate
MFP	Multifactor productivity
MNE	Multinational enterprise
NBB	National Bank of Belgium
NMVOC	Non-methane volatile organic compound
NO₂	Nitrogen dioxide
NO_x	Nitrogen oxides
OIC	Office for Insurance Control

ONEM	Federal body administering unemployment benefits (<i>Office national de l'emploi</i>)
PM	Particulate matters
PPP	Purchasing power parities
PSTN	Public Switched Telephone Network
SBIC	Small business investment companies
SME	Small-and-medium-sized enterprises
SNA	System of National Accounts
SNCB	Belgian National Railway Company (<i>Société nationale des chemins de fer belge</i>)
SO₂	Sulphur dioxide
SO_x	Sulphur oxides
SSC	Social security contributions
SSL	Secure socket layer
TSO	Transmission System Operator
ULCM	Unit labour costs in the manufacturing sector
VAT	Value added tax
VDAB	<i>Vlaamse Dienst voor Arbeidsbemiddeling en Beroepsopleiding</i> (placement service of the Flemish region)
VOC	Volatile organic compound

Bibliography

- André, E. and A. Desimpel (2002),
“Accès des PME au crédit bancaire et aux marchés boursiers”, Intermediate report of the Task Force to the Minister of Finance, Brussels.
- Bassanini, A. and E. Ernst (2002),
“Labour market institutions, product market regulation, and innovation: Cross-country evidence”, *OECD Economics Department Working Paper 316*, Paris.
- Belgian Institute for Postal Services and Telecommunications (BIPT) (2002),
Rapport de l'I.B.P.T. concernant l'évolution du service universel des télécommunications pendant l'année 2001, Brussels.
- Belgian Progress Report (2001),
Economic Reform of the Products, Services and Capital Markets, Belgian Report for the European Union, Brussels.
- Blundell, R. (2000),
“Work incentives and ‘in-work’ benefit reforms: a review”, *Oxford Review of Economic Policy*, Vol. 16, No. 1.
- Bouthevillain, C. P. Cour-Thimann, G. van den Dool, P. Hernandez de Cos, G. Langenus, M. Mohr, S. Momigliano and M. Tujula (2001),
“Cyclically adjusted budget balances: An alternative approach”, *ECB Working Paper 77*, Frankfurt.
- Bretin and S. Guimbert (2001),
“Tax competition, to cure or to care?”, ministère de l'Économie et des Finances, Paris.
- Brouwer, M. and B. Hendrix (1998),
“Two Worlds of Venture Capital: What Happened to US and Dutch Early-Stage Investment?”, *Small Business Economics* 10 (4), pp. 333-48.
- Bruvoll, A. and K. Nyborg (2002),
“On the value of households' recycling efforts”, *Discussion Papers 316*, Statistics Norway, Kongsvinger.
- Cantos, P. and J. Maudos (2000),
“Efficiency, technical change and productivity in the European rail sector: A stochastic frontier approach”, in: *International Journal of Transport Economics*, 27 (1), pp. 37-56.
- Cantos, P. and J. Maudos (2001),
“Regulation and efficiency: the case of European railways”, Part A: Policy and Practice, *Transportation Research*, 35 (5), pp. 459-472.
- Carey, D. and J. Rabesona (2002, forthcoming),
“Tax ratios for labour, capital and consumption”, *OECD Economic Studies*, Paris.

- Cefora and Upedi (2002),
"Fonctions critiques", Enquête auprès des consultants en intérim, Brussels.
- Centrale Raad voor het Bedrijfsleven (2002a),
Sociaal-economische nieuwsbrief 71.
- Centrale Raad voor het Bedrijfsleven (2002b),
Sociaal-economische nieuwsbrief 73.
- Chambre des Représentants (2002),
"Projet de loi relatif au statut du régulateur des secteurs des postes et des télécommunications belges", 11 July 2002, www.lachambre.be/documents/1937/1.pdf
- Cockx, B. (2001),
"The Design of Active Labour Market Policies. What Matters and What Doesn't?", IRES and Department of Economics, Université Catholique de Louvain.
- Coelli, T. and S. Perelman (2000),
"Technical efficiency of European railways: a distance function approach", *Applied Economics*, Vol. 32, pp. 1967-1976.
- Central Economic Council (*Conseil central de l'économie*) (2002),
Analyse du dérapage salarial sur la période 1999-2000, Brussels.
- Cowie, J. and G. Riddington (1996),
"Measuring the efficiency of European railways", *Applied Economics* 28, pp. 1027-1035.
- Dang, T.T., P. Antolin and H. Oxley (2001),
"Fiscal Implications of Ageing: Projections of Age-related spending", *OECD Economics Department Working Paper* 305, Paris.
- De Callataÿ, E. (2002),
"Réforme et conservatisme: analyse critique de la réforme de l'impôt des personnes physiques en Belgique," *Bulletin de documentation du ministère des Finances*, No. 3.
- De Coster, G. and C. Valenduc (2002, forthcoming),
"Recettes publiques et politique fiscale: les années 1990", *Institut belge de finances publiques*.
- De Lathouwer, L. and K. Bogaerts (2001),
Financiële incentieven en laagbetaald werk, University of Antwerp.
- Dellis, A., A. Jouten and S. Perelman (2001),
"Micro-modelling of Retirement in Belgium", *Centre for Economic Policy Research Discussion Paper* No. 2795 (www.cepr.org).
- DeVil, G. and C. Kegels (2002),
"Les charges administratives en Belgique pour l'année 2000", *Planning Paper* 92, Federal Planning Bureau, Brussels.
- Devreux, M. and R. Griffith (1998a),
"The taxation of discreet investment choices", *Institute for Fiscal Studies Working Paper* 98/16, London.
- Devreux, M. and R. Griffith (1998b),
"Taxes and the location of production: evidence from a panel of US multinationals", *Journal of Public Economics*, Vol. 68.
- Elmeskov, J., J. Martin and S. Scarpetta (1998),
"Key lessons for labour market reforms: Evidence from OECD countries' experience", *Swedish Economic Policy Review*, No. 5.

- Englert, M., N. Fasquelle, M.-J. Festjens, M. Lambrecht, M. Saintrain, C. Streel and S. Weemaes (2002),
“Perspectives financières de la sécurité sociale 2000-2050: Le vieillissement et la viabilité du système légal des pensions”, *Planning Paper 91*, Federal Planning Bureau, Brussels.
- Estevão, M. (2002),
“Regional Labour Market Disparities in Belgium”, *IMF Working Paper WP/02/134*, Washington D.C.
- Eunomia Research And Consulting (2002),
Costs for Municipal Waste Management in the EU, Final Report to the DG Environment, Brussels.
- European Commission (1998),
“Implementation and Impact of Directive 91/440/EEC”, COM(1998)202, Brussels.
- European Commission (1999a),
TRENEN II STRAN, ST 96 SC 116, Final Report for Publication, project funded by the Commission under the Transport RTD Programme of the 4th Framework Programme.
- European Commission (1999b),
Economic Evaluation of a Directive on National Emission Ceilings for Certain Atmospheric Pollutants, DG Environment, Brussels.
- European Commission (2000a),
“Potential output, the ‘New economy’ and output gaps – measurement issues and policy applications”, (ECFIN/771/00-EN), Brussels.
- European Commission (2000b),
Pricing European Transport Systems (PETS), project funded by the European Commission under the transport RTD programme of the 4th Framework Programme, Brussels.
- European Commission (2001a),
Company taxation and the internal market, Brussels.
- European Commission (2001b),
“The Rosetta Plan: A springboard for young people into employment, Belgium, *Peer Review*, Brussels.
- European Commission (2001c),
“European Transport Policy 2010: Time to decide”, *White Paper*, Luxembourg.
- European Commission (2002a),
Broad Economic Policy Guidelines 2002, Brussels.
- European Commission (2002b),
European competitiveness report 2002, Brussels.
- European Commission (2002c),
“Towards an Integrated European Railway Area: The New Railway Package”. Memo, DG Transport, Brussels.
- European Commission (2002d),
European Union competition policy – 2001, Luxembourg.
- European Commission (2002e),
“Business Impact Assessment Pilot Project. Final Report – Lessons Learned and the Way Forward” *Enterprise Papers No 9*, DG Enterprise, Brussels.
- European Environment Agency (EEA) (2002),
“Analysis and comparison of national and EU-wide projections of greenhouse gas emissions”, *Topic report 1/2002*, European Topic Centre on Air and Climate Change, Copenhagen.

- Eurostat (2000a),
Enquêtes sur les forces de travail, Luxembourg.
- Eurostat (2000b),
Labour Force Survey 2000, Luxembourg.
- Federal Ministry of Employment and Labour (2001),
La politique fédérale de l'emploi, Brussels.
- Federal Ministry of Employment and Labour (2002a),
Belgisch rapport over de kwaliteit van de arbeid, Brussels.
- Federal Ministry of Employment and Labour (2002b),
Tewerkstelling van de jongeren, situatie en vooruitzichten, Brussels.
- Federal Planning Bureau (FPB) (2002a),
Perspectives économiques 2002-2007, Brussels.
- Federal Planning Bureau (FPB) (2002b),
"General and selective reductions in employers' social security contributions in the 2002 vintage of Hermes", *Working paper 02-06*.
- Federal Planning Bureau (FPB) (2002c),
The Namea Air For Belgium 1994-1998, Brussels.
- Federal Department of the Environment (2002),
Belgium's third national communication under the United Nations Framework Convention on Climate Change, Ministry of Social Affairs, Health and the Environment, Brussels.
- Förster, M.F. assisted by M. Pellizzari (2000),
"Trends and driving factors in income distribution and poverty in the OECD area", *OECD Labour Market and Social Policy Occasional Papers 42*, Paris.
- Fost Plus (2002),
Rapport annuel 2001, April, Brussels.
- Gathon H.J. and P. Pestieau (1995),
"Decomposing efficiency into its managerial and its regulatory components: The case of European railways", in: *European Journal of Operational Research* 80, pp. 500-507.
- Gebhardt, G. and K.M. Schmidt (2002),
"Der Markt für Venture Capital: Anreizprobleme, Governance Strukturen und staatliche Interventionen", *Perspektiven der Wirtschaftspolitik* 3 (3), pp. 235-255, Oxford.
- High Employment Council (HEC) (2000),
Verslag 2000, Brussels.
- High Employment Council (HEC) (2001),
"Het Belgische arbeidsmarktbeleid in het kader van de Europese Werkgelegenheidsstrategie/La politique belge de l'emploi dans le cadre de la stratégie européenne pour l'emploi", Brussels.
- High Employment Council (HEC) (2002),
Verslag 2002, Brussels.
- High Finance Council (HFC) (1991),
Rapport sur certains aspects d'une réforme de l'impôt des sociétés, Ministry of Finance, Brussels.
- High Finance Council (HFC) (1993),
Analyse comparative du régime fiscal de l'assurance-group et des fonds de pension, Ministry of Finance, Brussels.

- High Finance Council (HFC) (2001),
La réforme de l'impôt des sociétés : le cadre, les enjeux et les scénarios possibles, Ministry of Finance, Brussels.
- High Finance Council (HFC) (2002),
Rapport Annuel, Study Group on Ageing, Brussels.
- International Monetary Fund (IMF) (2001),
"Belgium: Selected Issues", IMF *Country Report* No. 01/45, www.imf.org, Washington D.C.
- Immervoll, H., F. Berger, M. Borsenberger, J. Lumen, B. Scholtus and K. de Vos (2001),
"The Impact of Tax-Benefit Systems on Low-Income Households in the Benelux Countries", *Schmollers Jahrbuch* 121, pp. 313-352, Berlin.
- Johnson, S., R. La Porta, F. Lopez-de-Silanes and A. Shleifer (2000),
"Tunnelling", NBER *Working Paper* 7523. Cambridge, Mass.
- Jorgenson, D., M.S. Ho and K. Stiroh (2002),
"Projecting Productivity Growth: Lessons from the US Growth Resurgence", *Economic Review*, Federal Reserve Bank of Atlanta.
- Kegels, C., M. van Overbeke and W. van Zandweghe (2002),
"ICT contribution to economic performance in Belgium: preliminary evidence", *Federal Planning Bureau, Working Paper* 8-02, Brussels.
- Kesti, J. and C. Balle eds (2000), *European Tax Handbook 2000*, International Bureau of Fiscal Documentation, Amsterdam.
- King, M. and D. Fullerton (1984),
The taxation of income from capital, NBER and University of Chicago Press.
- Knieps, G. (1996),
Wettbewerb in Netzen – Reformpotentiale in den Sektoren Eisenbahn und Luftverkehr, Walter Eucken Institut Vortraege und Aufsätze 148, Tübingen.
- Knieps, G. (2000),
"Der disaggregierte Regulierungsansatz der Netzökonomie", in G. Knieps and G. Brunnekreeft (eds.), *Zwischen Regulierung und Wettbewerb*, Heidelberg.
- Kortum, S. and J. Lerner (2000),
"Assessing the contribution of venture capital to innovation", *Rand Journal of Economics* 31, pp. 674-692.
- Kumkar, L. (2000a),
"Zur institutionellen Ausgestaltung der Strommarktregulierung: Brauchen wir eine eigenständige Regulierungsbehörde für den Stromtransport?" *Kiel Discussion Paper* 371, Kiel.
- Kumkar, L. (2000b),
"Wettbewerbsorientierte Reformen der Stromwirtschaft: Eine institutionenökonomische Analyse", *Kiel Study* 305, Tübingen.
- Künzli, N., R. Kaiser, S. Medina, M. Studnicka, O. Chanel, P. Filliger, M. Herry, F. Horak Jr, V. Puybonnieux-Textier, P. Quénel, J. Schneider, R. Seethaler, J-C. Vergnaud, H. Sommer (2000),
"Public-health impact of outdoor and traffic-related air pollution: a European assessment", *The Lancet* 356.
- La Porta, R., F. Lopez-de-Silanes, A. Shleifer and R. Vishny (1998),
"Law and Finance", *Journal of Political Economy* 106, pp. 1113-55.

- La Porta, R., F. Lopez-de-Silanes, A. Shleifer and R. Vishny (2000),
“Investor protection and corporate Governance”, *Journal of Financial Economics* 58 (1),
pp. 3-27.
- Ministry of Finance (2000),
Impôt des personnes physiques, Brussels.
- Ministry of Finance (2002a),
“Le Programme de Stabilité de la Belgique (2003-2005)”, Brussels.
- Ministry of Finance (2002b),
Tax Survey No. 14, Brussels.
- Ministry of Mobility and Transport (2002),
“L’avenir du rail en Belgique”, <http://vici.fgov.be/mobil/fr/L'avenir.pdf>, Brussels.
- Mira, T. (2001),
Milieu- en natuur rapport Vlaanderen: thema's, Vlaams minister van Leefmilieu en Landbouw,
Leuven.
- National Bank of Belgium (NBB) (2002a),
“Effets du passage à l’euro fiduciaire sur l’inflation”, *Revue économique* 2002 II, 8^e année,
Brussels.
- National Bank of Belgium (NBB) (2002b),
“Évolution économique et financière”, *Rapport* 2001, Vol. I, Brussels.
- National Bank of Belgium (NBB) (2002c),
Financial Stability Review, Issue 1, Brussels.
- National Institute of Statistics (NIS) (2002),
Médias et audiovisuel, http://statbel.fgov.be/figures/d75_fr.asp#2, Brussels.
- Nickell, S. and R. Layard (1999),
“Labor Market Institutions and Economic Performance”, in O. Ashenfelter and D. Card
(eds.), *Handbook of Labor Economics* 3, pp. 3029-3086.
- Nicoletti, G., A. Bassanini, E. Ernst, S. Jean, P. Santiago and P. Swaim (2001),
“Product and labour market interactions in OECD countries”, *OECD Economics Department
Working Paper* 312, Paris.
- Nicoletti, G., S. Scarpetta and O. Boylaud (1999),
“Summary indicators of product market regulation with an extension to employment
protection legislation”, *OECD Economics Department Working Paper* 226.
- Nouwen, J., C. Cornelis, R. De Fre, M. Wevers, P. Viaene, C. Mensik, J. Patyn, L. Verschaeve,
R. Hooghe, A. Maes, M. Collier, G. Schoeters, R. Van Cleuvenbergen and P. Geuzens (2001),
“Health risk assessment of dioxin emissions from municipal waste incinerators: the
Neerlandquarter (Wilrijk, Belgium)”, *Chemosphere* 43, pp. 909-923, Pergamon Press.
- OECD (1994),
Taxation and household savings, Paris.
- OECD (1998a),
Education at a Glance, Paris.
- OECD (1998b),
Environmental Performance Reviews of Belgium, Paris.
- OECD (2000a),
“Towards global tax co-operation: Progress in identifying and eliminating harmful tax
practices”, *Financial Market Trends* 77, Paris.

- OECD (2000b),
Policies towards full employment, Paris.
- OECD (2001a),
"Corporate tax incentives for foreign direct investment", *Tax Policy Studies*, No. 4, Paris.
- OECD (2001b),
Communications Outlook, Paris.
- OECD (2001c),
The New Economy; Beyond the Hype, Paris.
- OECD (2001d),
Education at a Glance, Paris.
- OECD (2001e),
Knowledge and Skills for Life: First Results from PISA 2000, Paris.
- OECD (2001f),
Economic Survey of Belgium, Paris.
- OECD (2001g),
Railway Reform, European Conference of Ministers of Transport (ECMT), Paris.
- OECD (2001h),
Economic Survey of Germany, Paris.
- OECD (2001i),
"The Development of Broadband Access in OECD Countries", Working Party on Telecommunication and Information Services Policies, DSTI/ICCP/TISP(2001)2/Final, Paris.
- OECD (2001j),
"Appendices: OECD flagship report on regulatory quality", Meeting of the Regulatory Management and Reform Working Party, Public Management Committee, OECD, Paris.
- OECD (2002a),
OECD Economic Outlook 71, Paris.
- OECD (2002b),
OECD Employment Outlook, Paris.
- OECD (2002c),
Benefits and wages, OECD indicators, Paris.
- OECD (2002d),
Annual Report on Competition Policy Developments in Belgium – 2001" Directorate for Financial, Fiscal and Enterprise Affairs, Competition Committee, DAFPE/COMP(2002)27/03 (for official use), Paris.
- OECD (2002e),
"E-Commerce In Europe: Main Findings of the Eurostat Pilot Survey (2000-2001)", Working Party on Indicators for the Information Society, DSTI/ICCP/IIS/RD(2002)2 (for official use), Paris.
- OECD (2002f),
"Survey of Actions Taken or Contemplated to Improve the Integrity and Transparency of Financial Markets", DAFPE/CMF(2002)17/REV1, Paris.
- OECD (2002g),
"Public Service as an Employer of Choice", *Policy Brief*, Paris.

- OECD (2002h),
“Performance Management Program in the Canadian Federal Public Service”, OECD-Germany High-Level Symposium, Berlin, 13-14 March 2002, PUMA/HRM(2002)12, Paris.
- OECD (2002i),
Strategies to Reduce Greenhouse Gas Emissions from Road Transport: Analytical Methods, Paris.
- OECD (2002j),
“Vieillir au travail : comment promouvoir l’emploi des plus de 50 ans en Belgique ?”, *Rapport national sur la Belgique*, Paris.
- Office national de l’emploi (2001),
Jaarverslag 2001, Brussels.
- Pamukçu, T. and W. Van Zandweghe (2002),
“Constructing Productive ICT Capital Stock Series for Belgium”, *Federal Planning Bureau Working Paper 12-02*, Brussels.
- Parry, I.W.H. (2002),
“Comparing the efficiency of alternative policies for reducing traffic congestion”, *Journal of Public Economics* 85, pp. 333-362.
- Pilat, D. and F.C. Lee (2001),
“Productivity growth in ICT producing and ICT using industries: A source of growth differences in the OECD?” *OECD STI Working Paper 2001/4*, Paris.
- Pissarides, C. A. (1998),
“The impact of employment tax cuts on unemployment and wages: The role of unemployment benefits and tax structure”, *European Economic Review* 42, pp. 155-83.
- Proost, S. and I. Mayeres (2001),
“Should diesel cars in Europe be discouraged?”, *Regional Science and Urban Economics*, Vol. 31 pp. 453-470, Elsevier.
- Proost, S., K. Van Dender, C. Courcelle, B. De Borger, J. Peirson, D. Sharp, R. Vickerman, E. Gibbons, M. O’Mahony, Q. Heany, J. Van Den Bergh and E. Verhoef (2002),
“How large is the gap between present and efficient transport prices in Europe?”, *Transport Policy* 9, pp. 41-57, Pergamon Press.
- RDC (2001),
“Evaluation of costs and benefits for the achievement of reuse and recycling targets for the different packaging materials in the frame of the packaging and packaging waste directive 94/62/EC”, RDC-Environment and Pira International, Brussels.
- Saintrain, M. (2001),
“Effets macro-économiques et budgétaires de la réforme fiscale,” *Bulletin de documentation du Ministère des Finances*, No. 3, pp. 129-143.
- Scarpetta, S., P. Hemmings, T. Tressel and J. Woo (2002),
“The role of policies and institutions for productivity and firm dynamics: Evidence from micro and industry data”, *OECD Economics Department Working Paper 329*, Paris.
- Schertler, A., and M. Stolpe (2000),
“Venture Mania in Europe: Its Causes and Consequences”, *Kiel Discussion Paper 358*, Kiel.
- Sommer, H., R. Haler, O. Channel, M. Herry, M. Buero, S. Masson, J-C. Vergnaud (1999),
Economic Evaluation of outdoor and traffic-related air pollution: a report to the WHO Ministerial Conference EDMZ, Bern.
- Stockman, P. (2002),
“General and selective reductions in employer social security contributions in the 2002

- vintage of HERMES – a revision of WP8-01”, *Federal Planning Bureau Working Paper 6-02*, Brussels.
- Trujillo, C.R. (forthcoming),
 “Measuring technical efficiency of European railways using a stochastic frontier model: An innovative approach”, Institute for Transport Studies, University of Leeds.
- United Kingdom Department for Transport, Local Government and the Regions (2001),
Transport Statistics Great Britain 2001, London.
- United States Commercial Service (2001),
 “Environmental Technologies Market Profile”, *Belgium Market Profile*, www.usatrade.gov.
- United States Environmental Protection Agency (2000),
Heavy-Duty Engine and Highway Diesel Sulfur Control Requirements: Regulatory Impact Analysis, A cost-Benefit Analysis, EPA 420-R-00-26, Washington D.C.
- United States Environmental Protection Agency (2002),
Highway Diesel Progress Review, EPA 420-R-02-16, Washington D.C.
- Université catholique de Louvain (2000),
Pour construire l'avenir de la Wallonie et de Bruxelles, Leuven.
- Valenduc, Christian (1996),
 “Imposition des revenus des facteurs de production et de la consommation en Belgique”, *Bulletin de documentation du Ministère des Finances* 4, pp. 211-238, Brussels.
- Valenduc, Christian (2002a),
 “Effective or implicit tax rates? Some evidence from the past reforms and the present debate on corporate income tax in Belgium”, *Bulletin de documentation du ministère des Finances* 4, pp. 54-89, Brussels.
- Valenduc, Christian (2002b),
 La réforme de l'impôt des personnes physiques: ses effets sur l'imposition des salaires, l'incitation à l'emploi et la distribution des revenus”, *Bulletin de documentation du ministère des Finances*, Brussels.
- Van den Noord, P. (2000),
 “The size and role of automatic fiscal stabilisers in the 1990s and beyond”, *OECD Economics Department Working Papers* 230, Paris.
- Vandenberghe, V. (2002),
 “Un enseignement à réguler, des filières à régulariser”, Université Catholique de Louvain.
- Van der Wiel, H. (2001),
 “Does ICT boost Dutch productivity growth?”, *CPB Document* 16, The Hague.
- Van Oberbeke, M. (2001),
 “Les politiques de recherche et d'innovation aujourd'hui”, *Federal Planning Bureau Working Paper 01-01*, Brussels.
- Vlaamse Dienst voor Arbeidsbemiddeling en Beroepsopleiding (VDAB) (2000),
 “atabebeer and -analyse: Knelpunt beroepen 2000” Brussels.
- World Health Organisation (1999),
 “Questions/Réponses sur les dioxines et leurs effets sur la santé humaine”, *Aide-mémoire* n° 225, Geneva.
- Wymeersch, E. (1993),
Groups of Companies in the EEC: A Survey Report to the Commission on the Law Relating to Corporate Groups in Various Member States, Berlin.

Table of Contents

Assessment and recommendations	9
I. Recent economic developments and prospects	23
Recent economic developments	25
Monetary conditions support growth	36
Outlook	38
II. Fiscal policy	41
Overview	41
Recent developments	43
Forces shaping the budget balance in the short and medium run	45
Assessment	47
Sustainable retirement income	49
III. Tax reform	55
Forces shaping tax policy	55
Main features of the tax system	58
Main options for reform	86
IV. Progress in structural reform	93
Productivity growth	95
The labour market	101
Product markets	135
Sustainable development	163
Notes	180
List of acronyms	198
Bibliography	200
<i>Annexes</i>	
I. The impact of an increase in the labour tax wedge on the labour market	209
II. Personal income tax reform	218
III. Effective taxation of second-pillar savings	225
IV. Redistribution through the tax-benefit system	226
V. Calendar of main economic events	231



Boxes

1. Tax treatment of long-term saving	72
2. Corporate income tax reform	85
3. Recommendations for tax reform	90
4. Railway reform in the European Union	141
5. Re-engineering the federal administration: the example of Coperfin	162
6. Policy integration across sustainable development areas	164
A1. Unemployment benefit replacement rates	211
A2. Minimum wage rates	214
A3. Results of cross-country studies on the labour-market effects of the tax wedge on labour	215
A4. An illustration of the functioning of the marital quotient and transfer of the exempted quotient in the case of a married couple without children	218
A5. General schema for calculating personal income taxes	220

Tables

1. Demand and output	27
2. Contributions of expenditure components to GDP growth	28
3. Household appropriation account	30
4. Unemployment and job vacancies	32
5. Inflation by HICP component	35
6. Wage costs in the market sector	36
7. Short-term projections	38
8. General government financial balances	44
9. The Stability Programme of November 2002	47
10. Public finances and ageing: 2000 to 2050	51
11. IMF estimates of the impact of changes in the tax wedge on employment	62
12. Budget cost of reductions in social security contributions	63
13. Impact of tax and social security reforms since 1999 on net replacement rates for low wage earners	66
14. Valuing unquoted stock options	69
15. Productivity of value added taxes	70
16. Effective tax rates on investment in owner-occupied housing	77
17. Tax expenditures, nominal and effective corporate income tax rates	79
18. AETR for various locations of an investment made by a parent located in a country using an exemption system	84
19. New company tax scales for SMEs	85
20. Direct investment tax incentives at a corporate tax rate of 30 per cent	86
21. Breakdown of trend output growth in the business sector	98
22. Follow-up on OECD recommendations for structural reform since 2000	102
23. Employment and non-employment	111
24. Employment duration and benefits by type of household	117
25. Financial indicators for selected European railways	139
26. Changes in railway employment in European countries	139
27. Performance indicators: air pollution	167
28. Selected commitments to air quality	169
29. Road transport: emission standards and emissions	170
30. Performance indicators: waste	173
31. Waste treatment in the regions	174
32. Cost of household waste collection, sorting and treatment	175

A1. Net replacement rates in the first month of benefit receipt, 1999	212
A2. Net replacement rates 60 months after claiming benefit, 1999	213
A3. Statutory minimum monthly wages	214
A4. Summary of recent studies examining the effects of the tax burden on labour	216
A5. General tax rebates on replacement income	219
A6. The general rule for the vertical limitation of tax rebates on replacement income	219
A7. Personal income tax scales, before and after the reform	220
A8. Timetable for implementation of personal income tax reform	221
A9. Budget cost of personal income tax reform	222
A10. Gini coefficient for the working age population, mid-1990s	227
A11. Effect of reform on the progressiveness and redistributive effect of the personal income tax	229

Figures

1. Growth and the NBB's business cycle indicator	23
2. Real GDP growth in Belgium and the euro area	24
3. Comparison with recent business cycles	25
4. Export volumes, export market growth and export forward orders	26
5. Stock building and manufacturers' assessment of the adequacy of stock levels	28
6. Capacity utilisation and business investment	29
7. Growth in activity and employment	31
8. Underlying inflation	34
9. Monetary conditions index (MCI)	37
10. General government finances	42
11. Government outlays	56
12. The evolution of the tax burden and tax mix	59
13. Effective tax rates on labour income	61
14. Marginal effective tax rates on labour income	62
15. Employers' social security contribution rates, 2002	63
16. Employment ratios by level of educational attainment	64
17. Marginal effective tax rates on low salaries after the tax reform	67
18. Gross assets of pension funds and insurance companies and financial assets of households	75
19. Share of owner-occupied housing in selected OECD countries	76
20. Corporate income-tax rate and tax ratio	78
21. Gap between effective and nominal corporate income tax rates	79
22. Average effective tax rates for small and medium enterprises	80
23. AETR for parent-subsidiary case	81
24. Change in AETR resulting from the use of a Belgian co-ordination centre	82
25. Level of GDP per capita, 1970-2001	93
26. Hourly labour productivity	94
27. Productivity and output growth in the business sector (trends)	95
28. Composition of trend growth in labour productivity	96
29. Productivity growth and the business cycle	97
30. Employment rates: an international comparison, 2001	110
31. Employment rate by age group	112
32. Older unemployed and early retirement programmes	114
33. The non-working population and its interest in a job	115
34. Incidence of long-term unemployment	116
35. Beveridge curve	118

36.	Student performance in science	119
37.	Instruction time for mathematics and science	120
38.	Public spending on labour market measures in 2001	126
39.	Job-related training: participation and volume	131
40.	Recent trends in prices for international and national calls in selected countries	147
41.	Telecommunication prices in selected countries	149
42.	Recent trends in the number of internet hosts and secure servers in OECD countries	151
43.	Internet hosts and secure servers penetration at a glance	153
44.	Performance indicators: air pollution	166
45.	Ozone concentration: days exceeding thresholds	168
46.	Municipal waste and recycling	172
A1.	The labour market effects of an increase in the labour tax wedge	210
A2.	Cumulative change in the personal income tax ratio, 1990-2005	223
A3.	Redistributive effect, average rate and progressivity of the personal income tax	228
A4.	Tax reductions by level of salary	228

BASIC STATISTICS OF BELGIUM, 2001

THE LAND

Area (1 000 km ²)	30.5	Major urban areas (thousand inhabitants)	
Agricultural area (1 000 km ²)	13.4	Brussels	964.4
		Antwerp	931.6
		Liège	584.4
		Ghent	496.6

THE PEOPLE

Population (thousands)	10 263	Total labour force (thousands)	4 494
Inhabitants per km ²	337	Total domestic employment (thousands):	4 148
Net increase (31.12.2 000)	24 048	Agriculture	28
Net migration (thousands, 31.12.2 000)	14	Industry and construction	838
		Other	3 282

PRODUCTION

Gross domestic product (billion euro)	254	Gross domestic product by origin, at market prices (per cent):	
Gross domestic product per head (US\$)	22 189	Agriculture	1.3
Gross fixed investment:		Industry	19.5
Per cent of GDP	20.7	Construction	4.7
Per head (US\$)	4 601	Other	74.5

THE GOVERNMENT

General government (per cent of GDP):		Composition of the House of Representatives	
Current expenditure	46.3	(number of seats):	
Current revenue	46.9	Liberals	41
Gross debt	108.6	Socialists	33
		Christian-socials	32
		Ecologists	20
		Others	24
		Last election: 13.6.1999	

FOREIGN TRADE

Exports of goods and services (per cent of GDP)	85.6	Imports of goods and services (per cent of GDP)	82.0
Main exports (per cent of total), SITC, Rev. 3 :		Main imports (per cent of total), SITC, Rev. 3 :	
Iron and steel products (67 + 68)	5.8	Iron and steel products (67 + 68)	4.2
Chemical products (5)	19.8	Chemical products (5)	18.3
Machinery and equipment (71 to 77)	14.9	Machinery and equipment (71 to 77)	18.0
Textile products (65)	3.2	Textile products (65)	1.9
Transport equipment (78 + 79)	15.2	Transport equipment (78 + 79)	12.9
		Energy (3)	8.7

THE CURRENCY

Irrevocable conversion rate :	40.3399	Currency units of euro per US\$, average of daily figures:	
		Year	1.1166
		December 2002	0.9817

Note: An international comparison of certain basic statistics is given in an annex table.

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 Belgium were reviewed by the Committee on 18 November 2002. The draft report was then revised in the light of the discussions and given final approval as the agreed report by the whole Committee on 19 December 2002.

•

The Secretariat's draft report was prepared for the Committee by David Carey, Hubert Strauss, Gerrit van den Dool and Boris Cournède under the supervision of Andreas Wörgötter.

•

The previous Survey of Belgium was issued in March 2001.



From:
OECD Economic Surveys: Belgium 2003

Access the complete publication at:
https://doi.org/10.1787/eco_surveys-bel-2003-en

Please cite this chapter as:

OECD (2003), "Progress in Structural Reform", in *OECD Economic Surveys: Belgium 2003*, OECD Publishing, Paris.

DOI: https://doi.org/10.1787/eco_surveys-bel-2003-6-en

This document, as well as any data and map included herein, are without prejudice to the status of or sovereignty over any territory, to the delimitation of international frontiers and boundaries and to the name of any territory, city or area. Extracts from publications may be subject to additional disclaimers, which are set out in the complete version of the publication, available at the link provided.

The use of this work, whether digital or print, is governed by the Terms and Conditions to be found at <http://www.oecd.org/termsandconditions>.