Public Sector Performance

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An international comparison of education, health care, law and order and public administration

Social and Cultural Planning Office
The Hague, September 2004

Social and Cultural Planning Office of the Netherlands

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b. to contribute to the appropriate selection of policy objectives and to provide an assessment of the advantages and disadvantages of the various means of achieving those ends;
c. to seek information on the way in which interdepartmental policy on social and cultural welfare is implemented with a view to assessing its implementation.

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Preface

The performance of public services is subject to sometimes fiery debate in the Netherlands. Whereas, in the late 1990s, reforms of social security programs received a great deal of attention, in recent years the focus has shifted to failing public sector performance. Opinion polls and available statistical evidence indicate that the quality of public services leaves a lot to be desired, with waiting lists for health care, staff shortages in education and low crime clear-up rates. The aim of the present report is to trace differences in public sector performance in the Netherlands and twenty-eight other industrialized countries and to improve insight in the factors that might explain these differences. The exercice serves several purposes. Above all, international comparison of public sector performance allows the identification of best practices, may suggest explanations of perceived and actual differences in public performance and could contribute to more effective government interventions in the public sector.

This report is the result of a joint venture of BZK and SCP. In view of the Dutch Presidency of the European Union in the second half of 2004, the Dutch Ministry of the Interior and Kingdom Relations (BZK) asked the Social and Cultural Planning Office of the Netherlands (SCP) to investigate public performance in the EU member states and four major non-EU Anglo-Saxon countries. The Ministry is particularly interested in the productivity and effectivenes of public sector producers and in the quality of their products. Taking lessons from abroad may assist in implementing improvements deemed necessary.

However, the present report will be used not only for the national policy agenda, but also to initiate an exchange of know-how with EU partners during the Dutch Presidency. To this end, the results will be discussed at a Conference of Directors General and permanent secretaries for the public service, scheduled to take place during the second half of the Dutch presidency. It is hoped this Conference will produce recommendations for improving the performance of various public bodies.

The project has been managed by Dr. Bob Kuhry (SCP). This work would not have been possible without the active support of the Ministry of the Interior and Kingdom Relations (and particularly Frans van Dongen) and an advisory committee led by Professor Flip de Kam. Thanks are due to Mr. Paul Smit (Research and Documentation Centre of the Dutch Ministry of Justice) and Dr. Esther Backbier (Ministry of Justice) for contributions to chapter 5. We are also grateful to the Public Management Institute ('Instituut voor de Overheid') of Leuven University to participate in this project and to contribute to chapter 6. This contribution of Steven van de Walle, Miekatrien Sterck, Wouter van Dooren, and Professor Geert Bouckaert is part of a more exten-

sive report on public sector performance, published separately by the Public Management Institute of Leuven University. Finally, we thank Mrs. Pauline Thoolen and Mr. Paul van Oijen of the Dutch Ministry of Education for useful comments.

Data from Eurostat, the OECD, the World Bank and the Council of Europe proved particularly useful in providing an empirical foundation for the findings. Of course, the authors remain responsible for all findings and conclusions presented in this report.

Professor dr. Paul Schnabel
Director of SCP

Summary

Flip de Kam, Bob Kuhry and Evert Pommer

Aim of the present report

By adopting the Lisbon Agenda, member states of the European Union (EU) set themselves in 2000 the daunting task of making the Union the most competitive economic area in the world. Four years on, it seems increasingly doubtful whether this ambitious mission can be successfully completed. Anyway, the performance of the public sector of national economies is a crucial factor in the race to achieve the goals included in the Lisbon Agenda. Countries can try to improve the functioning of their public sector by adopting best practices found in other nations. The present report is written with these purposes in mind. It compares the performance of the public sector in the twenty-five EU member states and in four non-EU members of the Organisation for Economic Co-operation and Development.

Our main aim is to trace differences in public sector performance (in terms of productivity, quality and effectiveness in the delivery of services) of all countries concerned, and to identify institutional factors that might help explain the differing performance of nations. The following policy areas will be addressed: education (Chapter 3), health care (Chapter 4), the criminal justice system (Chapter 5) and public administration (Chapter 6).

For good measure, Chapter 2 first presents key demographic and socio-economic data for the twenty-nine countries covered. This essential background information is supplemented by data on the level and composition of public expenditures, and economic performance.

Demography and the economy (Chapter 2)

The population of the countries covered varies enormously in size, from almost 300 million in the United States (US) to less than 0.4 million (Malta). Population growth in non-EU Anglo-Saxon countries, Luxembourg and Ireland is about 1% per year. Most other countries under review record limited population growth. The Czech Republic, Hungary and the Baltic states see their population actually decline. Gross Domestic Product (GDP) per capita is highest in the mini-state of Luxembourg, with the US following at some distance. Greece, Portugal, Spain and the new member states follow at a considerable distance.

In 2003, government spending in the EU amounted on average to 47% of GDP. The public expenditure ratio was 48% in the Netherlands and in excess of 50% in Sweden, Denmark, Belgium, France, Austria, and Slovakia. Ireland and the US have

the lowest ratios, at 33% and 35% respectively. A breakdown of public expenditure shows that Sweden, Denmark, France, Belgium, Finland and the Netherlands devote a relatively large share of public outlays to finance individual consumption (health care, education, and so on). By contrast, income transfers (social security benefits) claim a relatively limited share of GDP in the Netherlands, and also in the Anglo-Saxon countries and Ireland.

If both public outlays and private expenditure on health care, education, social security and traditional government functions (public administration, law and order, defence) – for which we use the term 'public service sector'– are lumped together, the picture changes significantly. For example, the US government spends 16% of GDP on consumption goods, putting the country almost at the bottom of the league of nations covered in the report. However, in terms of production ('value added') of the public service sector (accounting for almost 20% of GDP) the US is located in the higher middle range of the league. It follows that the level of 'social' expenditure in the US is no lower than in other countries, but a much greater proportion is paid for directly from private resources.

Indicators to measure macro-economic performance are drawn largely from the criteria contained in the Stability and Growth Pact and the Lisbon Agenda. We focus on GDP growth, unemployment, labour market participation, inflation, the budget deficit, income inequality and the poverty rate. This summary highlights budget balances and income inequality.

In the late 1990s, virtually all governments succeeded in reducing the budget deficit. In recent years, partly in response to the economic downturn (Europe) and as a consequence of an expansive policy stance (US), many countries saw their budget position deteriorate once more.

Income inequality was reduced in most countries during the past ten years. One exception is the US, where inequality has been increasing for decades. The poverty rate, according to an EU benchmark, averaged 16% in the EU-15 in 2000. It was substantially higher in the US (23%), Australia, Ireland, Portugal and Greece. At the other end of the spectrum are the Czech Republic with a poverty rate of 8% and the Northern European countries, Germany, Slovenia and Slovakia on 10% to 11%. In 2000, the Netherlands had the lowest poverty rate of the EU-15 (10%).

Some postulate a trade-off between efficiency and equity. Generous benefits (serving to reduce income inequality) are thought to blunt work incentives, thus limiting potential GDP growth. At the same time, high government spending on income transfer drives up the tax burden, which can undermine the competitive position of countries. However, a recent analysis of the performance of EU member states (CPB/SCP 2003) found the opposite: countries with limited income inequality, such as Denmark, Sweden, Finland and the Netherlands, also post high labour market participation rates. They do, however, have a relatively large proportion of part-time workers and a relatively short official working week. Clearly, high taxes stimulate workers to prefer untaxed leisure time over taxed working hours. Including the Anglo-Saxon countries in the analysis makes the picture more varied: labour market

participation is highest in countries with marked income inequality, such as the US and the United Kingdom.

Can the outcome of explorations in Chapter 2 be used to compile some kind of economic 'Champion's League'? Four of the measures examined concern stability and growth (GDP growth, unemployment, inflation and the budget deficit), the fifth concerns the personal income distribution. We have combined the four indicators of stability and growth, unweighted, country by country, to calculate a composite score. Scores awarded were then confronted with national performance in the fight against poverty. The results show that the Central European countries combine moderate economic stability and a low poverty rate. Western and Northern European countries score generally well on both dimensions, while the Southern European countries show a less positive performance. The Anglo-Saxon countries, including the UK, are characterised by moderate economic stability and a relatively high poverty rate. The Netherlands scores reasonably well in terms of economic stability, and is apparently successful in bringing down the poverty rate.

Education (Chapter 3)

Government intervention in the production and consumption of education is justified by positive externalities, and for reasons of social justice – to create equal opportunities of access. Based on the structure of primary and secondary education, the report identifies four types of education system:

1. Systems with a strong degree of differentiation from the first or second year of secondary school onwards. This groups comprises Belgium, Germany, Luxembourg, the Netherlands and Austria, as well as Hungary, Slovakia and the Czech Republic.
2. Systems with a uniform first phase of secondary education. In the second phase, pupils receive either general or vocational education. This group comprises France, Ireland, Italy, Spain, the United Kingdom, Cyprus, Lithuania, Malta and Australia.
3. Systems where primary and lower secondary education are integrated. In these systems, too, there is differentiation between general and vocational education from the second phase of secondary school. This group includes the Scandinavian countries, Portugal, Latvia, Estonia, Poland and Slovenia.
4. Systems with uniform primary and secondary education, where vocational education plays a minor role: the US, Canada and New Zealand.

On average, countries spend 5.5% of GDP on education. The leaders include Denmark, Sweden and Cyprus, with a figure of around 8%, while Greece, Luxembourg and Slovakia make up the rear, on 4%. The Netherlands finds itself with 5.3% somewhere in the middle range, having gained considerable ground in recent years. The number of teachers per 1000 inhabitants ranges from 21 in Spain to around 45 in Lithuania and the US. Here, too, the Netherlands is in the mid-range, on 27. Teachers' pay is relatively high in countries as diverse as Denmark, Spain, Portugal, Australia and New

Zealand. It is low in Sweden and a number of the new member states. The Netherlands pays high salaries to teachers in upper secondary education, and fairly average salaries for primary and lower secondary teachers.

Enrolment among school-age children is virtually 100% in all countries, as would be expected. In the 15-19 age group, enrolment ranges from 72% (Italy) to 91% (Belgium). The Netherlands follows directly behind the leaders, along with France and Germany. The EU Lisbon Agenda sets targets to reduce the number of early school leavers. Those leaving school should boast at least a basic qualification, i.e. they must have completed a general or vocational course at upper secondary level. Currently, only 50% of all youngsters achieve a qualification at this level in Malta and Portugal. By contrast, Denmark, Germany and the Czech Republic score 90% or more. At around 70% to 80%, the Netherlands again finds itself somewhere in the middle. Most of the new member states and the Anglo-Saxon countries do well on this criterion.

A distinction is drawn in the report between two forms of tertiary education (A and B). Type A involves relatively long, theoretically-oriented courses, and type B relatively short, skills-based courses. With an entry rate for tertiary type A education of over 50%, the Netherlands takes a position in the upper middle range. At the head of the field are Finland, Sweden, Poland, Australia and New Zealand, with entry rates of 65% or more. If tertiary type B education is also taken into account, the Netherlands switches to a mid-ranking position.

Only the non-European Anglo-Saxon countries, Sweden, Denmark, Austria and Italy spend more per pupil in primary education than the Netherlands (4000 euros per year). Spending levels in Greece, Ireland and – in particular – the new member states are substantially lower, reflecting lower per capita income in these countries. In terms of spending on secondary education, the Netherlands is somewhere in the middle (5500 euros per pupil). Spending is substantially higher in Austria, France and the United States, and considerably lower in Greece, Ireland and the new member states.

Dutch primary and secondary schools have a high student/teacher ratio. Only Ireland and Australia have larger primary school classes, while only Canada has a higher student/teacher ratio in its secondary schools. Recently, the Netherlands has introduced measures to reduce primary class sizes, raising spending per pupil substantially between 1998 and 2002. The extra money is intended to improve the quality of education, but whether this lofty goal will be met remains to be seen. Research trying to link average class size and educational attainment in Dutch primary education has not found small classes to have a positive effect on the quality of education.

One objective indicator to assess the quality of national educational systems is the probability that pupils will complete their course successfully. Data on the 'survival rate' are available for tertiary education. The country average is 67%. The Netherlands comes close, on 69%. Spain, Ireland, Finland, the United Kingdom and Poland post relatively high scores (75% or more), while Sweden and Italy have low survival rates (between 40% and 50%). Apparently, this is the price Sweden pays for its very high intake figures.

A subjective measure of quality is public confidence in the education system. Parents express great confidence in schools in Finland, Malta, Ireland, Austria, Poland and Slovenia, and voice doubts on the quality of schools in Greece, Italy, the Czech Republic and Portugal. The Netherlands and the US take a middle position. Strikingly, public confidence bears little or no relation to the type of education system, the level of education spending (in terms of GDP); however, there is a positive correlation with objectively defined qualifications obtained by pupils.

Results of international comparative achievement tests – which measure reading skills, mathematical skills and scientific literacy among 15-year-olds – are highly informative. The Netherlands scores high on these tests, as do Finland and Canada. The United States ranks somewhere in the middle, whereas Luxembourg, a number of Mediterranean countries and the new member states book low achievement test scores.

Besides data on pupils' skills, information is also available on the quantity and quality of academic research performed. A quantitative indicator is the number of academic papers published per 100,000 inhabitants. The average for the EU-15 is around 100. With its score of 140 the Netherlands is among the leaders, along with the Scandinavian countries and the United Kingdom. The US comes close to the EU-15 average. One measure of the quality of academic papers is the extent to which they are cited by other academics. Roughly speaking, the score for this indicator is consistent with that for the number of papers published.

Alongside skills, or educational achievement, educational attainment – the level of qualifications acquired – is an important yardstick to measure the quality of an education system. An indicator is the proportion of the population aged 25-34 year to have attained upper secondary education or tertiary education. The country average is around 62%. The Netherlands scores only slightly higher (65%), which puts it behind eleven other nations. Portugal comes bottom with 20%. The Netherlands occupy a similar mid ranking position with respect to the proportion of tertiary (type A plus type B) graduates.

We have attempted to encapsulate the overall effectiveness of national education systems in a single measure which combines achievement and attainment indicators. Top of the table are Canada and Finland, which score high on both indicators, followed by the other Anglo-Saxon countries, Sweden and the Netherlands. The Netherlands is something of an exception, combining a high score for achievement with a fairly mediocre score for attainment.

OECD analyses provide additional insight into the effects of education systems in the form of literacy tests among 15-year-olds (Education at a Glance 2003: 91-98). They distinguish between 'within-school variation' and 'between-school variation'. Scores reported by the OECD appear to correlate closely with the four education systems distinguished here. Countries in group 1 have high between-school and low within-school variation. The reverse applies to the other groups, particularly group 3 (the Northern European countries).

Promoting equal educational opportunity for children from different backgrounds is an important aim of Dutch education policy. This presumably is also the case in other countries. Ideally, the average achievement score should be high and there should be little difference in the performance of children from families with high or low socio-economic status. Reading skills scores suggest that these two aims are not mutually exclusive. It would therefore appear that there is no unavoidable trade-off between equality of opportunity and quality. Education systems that perform well are also better at reducing differences related to the varying social background of pupils.

Is there a link between the attributes of education systems, the average level of achievement and inequality of educational opportunity? Our results are far from unambiguous. Group 1 – countries with maximum differentiation in their education system – includes the Netherlands, with a high average score for achievement and good equality of opportunity, and also countries where the reverse applies (Germany and Luxembourg). Group 3 – countries with minimum differentiation – includes countries that score well in both respects (Sweden and, above all, Finland) and one country with fairly poor scores: Portugal. On balance, however, a pattern does emerge. Most countries in group 1 perform less well in terms of equality of educational opportunity and have mediocre to poor scores on results of the school system. The Netherlands seems to be the exception that proves the rule. The countries in groups 3 and 4 generally score well on opportunity and results, and countries in group 2 are widely distributed around the average on both counts.

Although further research is certainly needed in order to draw definite conclusions, our preliminary results indicate that broad-based, undifferentiated educational systems generally perform better.

The effectiveness of national education systems can be set against the costs of education (in euros). On the curve (the 'frontier') are Poland, with very low costs and poor results, Hungary and the Czech Republic with moderate costs and moderate results, New Zealand with good results at fairly low costs, and Finland and Canada which incur fairly high costs, but achieve very good results. The Netherlands, the United Kingdom and Ireland also strike a good balance between costs and effects. The US, Sweden and Denmark achieve reasonable effects, but incur relatively high costs. Portugal, Greece and Italy have fairly low expenditure, but record also poor results.

It was agreed in the Lisbon Agenda that the number of early school leavers should be reduced to 10% by 2010. By then, 80% of all persons aged 25-64 years should have attained at least upper secondary education.[1] It is doubtful whether either of these targets will actually be hit. Despite the rise in the overall level of education over the past half century, there are signs that many countries are reaching saturation point. The Netherlands, for example, has a persistent problem group of around 17% – a figure that is rising, if anything – comprising unqualified school leavers and problem pupils for whom upper secondary education is simply an unattainable goal. A further 8% begin upper secondary education but fail to complete it. Against this background, it is difficult to understand why some other countries do not seem to have similar problems on this scale. Part of the explanation may well be that some countries apply less rigorous standards for their final qualifications. Some features of the Dutch school system may also have a negative impact, notably early and radical differentiation by school type that might lead to stigmatisation. The arrangements in lower secondary education may contribute to a discontinuation of the school career of pupils and weaken the labour market position of school leavers. If lower secondary education were to last three years or – as is the case in some countries – would start at the age of eleven, pupils would have the opportunity to make the switch to secondary vocational education earlier, and would experience greater incentives to complete their education.

The moral of this story for policymakers in the Netherlands is that the nation will not succeed in bringing about a substantial reduction in the number of early school leavers, without either changing the system or setting more flexible qualification standards. As a result, the Netherlands is also unlikely to achieve the Lisbon target for secondary and higher qualifications. As a matter of priority, the country should therefore reduce the number of people leaving secondary professional and higher education before graduating.

Health Care (Chapter 4)

Universal access, high product quality and financial sustainability are key objectives of government health policy in virtually all OECD countries. The funding of health care is one of the greatest challenges facing governments today. Health spending is on the rise, for a number of reasons. One reason is that the costs of health care products are rising much faster than the costs of other goods and services. Many expect demographic ageing to push up health spending further.

The financial sustainability of largely publicly funded health care is a prime concern for policymakers in the EU-15 countries. Most of the new member states face a .

[1] Other objectives, such as those connected with lifelong learning and the reduction of differences in higher education enrolment rates between men and women do not fall within the scope of this chapter.

different challenge of improving the efficiency and accessibility of their health care system

Most countries try to maintain the financial sustainability of their system by adjusting supply and introducing more market forces. Measures to adjust supply include providing more health care outside expensive institutions, introducing tighter budget restrictions and reducing the coverage of the compulsory insurance package. Market forces can be strengthened by introducing out-of-pocket payments to reign in demand for services. In addition, policymakers hope to encourage individuals to adopt a healthier lifestyle. Cleaning up the environment can also improve public health.

Although policy objectives are roughly the same everywhere, countries have put very different health care systems in place to achieve them. This applies both to supply mechanisms and to funding. In some countries, private parties supply care: doctors are self-employed, hospitals are privately run. In other countries, most doctors are on the payroll of state-run hospitals. In funding, the main focus is either on private payment (including premiums for private health insurance) or on funding from the public purse (taxes, compulsory social insurance contributions). Most countries in fact have mixed systems. At opposite ends of the spectrum are the United States, which has a mainly private system, and Sweden with its virtually exclusively public system.

Countries covered in this report can be grouped as follows:

1 East European countries where funding is from compulsory contributions (Bismarck system) and patients are rarely required to make out-of-pocket payments.
2 Countries with a largely public health care system and a role for out-of-pocket payments: Finland, Latvia, Portugal, Italy, Australia and New Zealand.
3 Countries with a largely public system and few out-of-pocket payments: Denmark, Spain, Canada, Ireland and the United Kingdom
4 Corporatist countries, where funding comes from compulsory contributions and patients are frequently required to make out-of-pocket payments: France, Germany, Belgium and Austria.
5 A heterogeneous 'other' group consisting of the US, Greece, Sweden, Cyprus, Malta, Luxembourg and the Netherlands

In 2000, the EU-15 countries spent over 8% of GDP on health care. In the accession countries, health spending is 5% to 7% of GDP. The US has by far the highest health spending ratio of all, at 13% of GDP. High costs are caused in part by high incomes earned in the health care sector. Also, litigation by patients has pushed up insurance premiums, increased the number of medical tests carried out and prompted health care suppliers to use the most modern equipment available.

In the Czech Republic, Sweden, Denmark and the United Kingdom, more than 80% of health spending comes from public coffers. The Netherlands belongs to a broad band of countries where 65% to 80% of health care is publicly funded. The

US is the only country where more than half of all health care is privately financed. In the Netherlands, private financing comes mainly from insurance premiums. The share of out-of-pocket payments is fairly small. In Portugal, Finland, Spain, Greece, Poland and New Zealand, on the other hand, private financing is mainly in the form of out-of-pocket payments.

The large differences in health spending per capita correlate strongly with GDP per capita. The higher a country's income, the greater the demand for health care and the higher the cost price of health care products. There is virtually no link between spending levels and the type of health care system. Another notable point is that the differences in spending levels cannot be explained to any great extent by the degree of demographic ageing. Factors such as lifestyle (smoking, alcohol consumption, overweight), the use of medical equipment and the degree to which general practitioners act as gatekeepers to specialist care also offer very little explanation for differences in the share of GDP devoted to purchasing health care services.

Inpatient care is provided in regular hospitals, psychiatric hospitals and nursing homes. Austria is notable for its relatively high number of hospital admissions: 270 per 1000 inhabitants. Austria as well as other countries in the corporatist cluster (particularly France and Germany) generally have high admission rates. The admission rate is high in the East European countries and Finland, too. Spain, Portugal, the Netherlands, Canada and the US have fairly low hospital admission rates, at around 100 per 1000 inhabitants. The average number of hospital bed days per patient in the EU-15 was 6.7 in 2000. The Netherlands posted a higher figure: 8.6 bed days.

There are major differences in the number of doctors' consultations per capita, both general practitioners (GP) and medical specialists. Two countries – Hungary and the Czech Republic – record exceptionally high scores, with an average of over 12 consultations per person per year. The score in most countries is somewhere between 4 and 8, and the Netherlands comes just below the EU-15 average, on 6.

There seems to be a slight positive correlation between the number of GPs and the number of hospital admissions. Where GPs act as gatekeepers, one might expect to see a negative correlation. However, this is not the case at country level, suggesting there is in fact complementarity between the consumption of both health services: countries where people visit the doctor more frequently also make greater use of inpatient care provisions.

Costs per bed day differ significantly from one country to another. These costs are relatively high in Sweden, followed at a slight distance by Canada, the US, Italy and Spain. The Netherlands comes just behind the leaders. Germany, the UK and Finland have the lowest costs per bed day in the EU-15. Analyses suggest that in the Netherlands three factors play a role in increasing costs per bed day: (1) more intensive treatments in hospitals, (2) demographic ageing and (3) the general rise in the relative cost price of labour-intensive services. The lower the number of bed days per capita, the higher

the cost per day. This is probably partly because of more intensive treatments and the more efficient use of the capacity available.

Product quality is an increasingly important issue in health care. On the basis of the data available, we can report here only on waiting times for non-urgent curative care (elective surgery) and public confidence in the health care system as a whole. Nine of the EU-15 countries report substantial to long waiting times for elective surgery. Five EU countries (Belgium, Austria, France, Germany and Luxembourg) report no waiting times of any note. The Netherlands occupies a position in the middle.

Generally speaking, it would appear that greater capacity, more financial resources and higher user payments, all reduce the likelihood of waiting lists. Thus, waiting list problems occur primarily in health care systems with limited market forces. Since there is a clear link between capacity and the length of waiting lists, one is inclined to conclude that additional resources can help reduce waiting times. However, this is not necessarily the case. In practice, an unconditional increase in supply can cause a rise in demand. Policy makers may therefore consider to introduce targeted financial incentives, to prevent this happening. Improving patient management in hospitals, such as more efficient planning of procedures and prevention of cancellations, can also help reduce waiting times.

One important quality indicator is public confidence. Residents of Malta, Austria and Finland express great confidence in their health care system, in contrast to the residents of some Mediterranean countries, including Greece, Italy and Portugal. Health care systems in the new member states of Eastern Europe do not generally enjoy much public confidence either.

The main aim of health care systems is of course to improve the health of the population. Good health is reflected in long life expectancy, low infant mortality, a high proportion of healthy life years and a general feeling of good health. These indicators together constitute an index of health status, measuring the effectiveness of national systems. Scores on this index range from 1.6 in Hungary to 6.3 in Sweden. Most countries score between 5 and 6. Portugal, the US and the new member states fail to make 5.

There is certainly no direct relationship between health spending as a proportion of GDP and the effectiveness of the health care system. The US combines relatively limited effectiveness with extremely high spending. On the other hand, the Czech Republic manages to achieve a reasonable effectiveness score with relatively limited inputs. Limited inputs are in some new eastern European member states linked to low labour costs, which is the source of dissatisfaction in the profession. Quite surprisingly, the relationship between a country's health status index score and health spending is hardly affected by differences in the demographic make-up and life styles of the population.

As noted, accessibility, quality and financial sustainability are other important dimensions of health care systems. Therefore, it is interesting to examine health

scores and health spending in conjunction with these dimensions, focusing on the effectiveness of systems in a broader sense. Indicators of the functioning of national systems selected here are (1) public confidence, (2) the length of waiting lists for non-urgent hospital care and (3) the proportion of health spending in the form of out-of-pocket payments. It is assumed that high out-of-pocket payments might impede access to health care for the poor. By analogy with the method applied by the World Health Organisation, the health of the population and the functioning of the system have been given equal weight.

Sweden, France and Austria lead the broad effectiveness index. Leading countries owe their position to the fact that they score fairly well on all four components (health of the population, confidence, waiting lists and out-of-pocket payments). Only Sweden scores lower on the waiting list indicator. France has very high out-of-pocket payments. Countries at the bottom of the list score badly on at least one indicator: Hungary for the health of the population, Portugal and Poland for the high proportion of health spending out of patients' pockets.

Some of the countries that do well in terms of effectiveness in the narrow sense (health status of the population) drop down the ranks when the effectiveness of their system in a broader sense is measured.

If the aim is to achieve good health at a reasonable cost, one could do worse than follow the examples of Sweden and France. Austria and Belgium do almost as well. Although Germany and Luxembourg achieve similar results in terms of health and health care, these countries incur considerably higher costs. The Netherlands, Australia, Canada and Denmark achieve a slightly lower standard of health and health care with similar costs as Sweden and France. Spain and Finland achieve the same levels – as do Ireland, the UK, Italy, New Zealand and Greece, albeit to a slightly lesser extent – but these countries spend much less on health. Portugal spends almost the same as Spain, but clearly achieves lower standards of health and quality. The same applies to Hungary, which spends almost the same as the Slovakia and the Czech Republic, but achieves lower standards. The US is again the exception: a poor performance in terms of the health of the population and the functioning of the system, at very high cost.

The correlation between the five types of health care system and the score on the composite index appears to be fairly weak, although corporatist systems do have systematically higher scores. They appear to allow countries like France, Germany, Austria and Belgium to achieve good performances. However, with the exception of France, corporatist countries fail to achieve the standards of Sweden, even though their spending exceeds Swedish levels.

Law and order (chapter 5)

Observed trends in crime figures may have specific national causes, but they will often fit in wider international patterns. For instance, over the past ten years violent crime in the Netherlands and most of its neighbours rose at roughly the same rate.

Clearly, then, forces not confined to the Netherlands are at work. For various reasons, national crime figures are sometimes hard to interpret. The compilation of international comparative crime statistics is especially fraught with difficulties, because law enforcement is organized so differently in the countries covered by this report.

In classifying legal systems, one can start with the traditional distinction between the Anglo-Saxon common law tradition and the continental European civil law tradition. However, the specifics of the criminal justice system depend on many other system properties, including the distinction between an adversarial and an inquisitorial legal system (the former is characterized by a passive role of the judge and is typical for the Anglo-Saxon and Scandinavian countries), the importance of private security firms (high in the Anglo-Saxon countries), and the repressiveness of the system (severity of punishment and staff per inhabitant; high in Southern and Central Europe and the US). On the basis of these criteria eight country groups are recognized: a Scandinavian, three West-European, a South European, a Central European and two Anglo-Saxon groups.

In the publicly-funded law and order sector, staff numbers range from 270 (in Finland) to 830 per 100,000 inhabitants in Italy. Relatively high numbers also occur in most other Southern and Central European countries, low numbers in the Scandinavian countries, the UK, Australia and Canada. However, the latter three countries and the US are characterized by a sizable private security sector. At 400, numbers are slightly on the low side in the Netherlands. For the police force alone, the staff numbers for Finland, Italy and the Netherlands are 150, 540 and 260 per 100,000 inhabitants, respectively. The Netherlands has average staffing levels in its prison service. Greece, Slovakia, Denmark and Belgium have low numbers of prison staff, in contrast to the US and Estonia, which have high staffing levels.

Sweden and New Zealand have the highest levels of recorded crime, at over 10,000 offences per 100,000 inhabitants. Ireland, Cyprus and Slovakia, on the other hand, post fewer than 2000 recorded offences per 100,000 inhabitants. The Southern European countries and new member states also do fairly well. The same applies to the US, despite its bad reputation in this respect.

Arguably, the most dramatic of all crimes is homicide. Curiously, homicide is relatively frequent in a number of countries that do not otherwise post high crime rates, such as the Baltic states and the US. Even the rough data in this report support the theory that wide availability of firearms increases the likelihood of violence involving firearms.

The pattern is very varied when it comes to other violent crime. England/Wales, Sweden, Belgium and Finland have high rates of assault. The highest figures for rape are found for the US, followed by Ireland, Sweden and Belgium. Robbery is most prevalent in Estonia. The Netherlands has average rates for all of these crimes. Greece, Italy and the new member states (with the exception of the three Baltic states) record low rates of violent crime.

Sweden has the highest rate of property crime, followed by the Netherlands, England/Wales and Denmark. The Netherlands' high rate is mainly the result of the

many bicycle thefts that occur here. Low property crime figures are typical of the Southern European countries and the new member states. The number of drug-related crimes is particularly low in the Netherlands. This can be explained by the Netherlands' policy of tolerance, whereby drug dealing is prosecuted, but possession of drugs for personal use is not. The scale of problematic drug use and the proportion of young people who have used marihuana or cannabis are also relatively low in the Netherlands. By contrast, however, the Netherlands is unmistakably a major centre of the international drugs trade.

The prison population in the Netherlands is not particularly large in comparison with other countries. The number of prisoners is just below the EU average. However, the Dutch prison population has grown rapidly since 1987. The US and the Baltic states are notable for their very large prison populations.

In the system analysis we focus on the repressiveness of the criminal justice system, that is, the extent to which countries are tough on crime. We measure 'toughness' by comparing the type and length of sentences and the staff and resources deployed in the fight against crime. The Southern and Central European countries have rather repressive systems. The US and Latvia are the most repressive, with more than 50 prison days per recorded offence.

To obtain a comprehensive snapshot of the way the entire criminal justice system functions, the number of convictions can be expressed as a proportion of the number of recorded offences. By this criterion, Greece has the highest score, at over 40%, followed by a number of new member states with scores between 15% and 25%. Finland and England/Wales have the highest rates among the EU-15 (15% to 20%). The Netherlands comes bottom of the table, on 7%. However, the latter number rises considerably if out-of-court settlements by the public prosecutor are counted as convictions.

Labour productivity in the criminal justice system can be expressed as a quotient of the number of convictions and the number of staff. Thus defined, productivity is very high (at 5 to 8 convictions per full-time equivalent) in Finland, Sweden and England/Wales. We should note, however, that in the case of Sweden multiple crimes are counted as as many convictions. Productivity is low (at less than one conviction per FTE) in Ireland, the Southern European countries and in a number of new member states. The Netherlands scores1.7 convictions per FTE. However, this number rises considerably if out-of-court settlements are taken into account.

Staff numbers in the criminal justice system per 1000 offences vary sharply from country to country. They fall well below 50 in the Netherlands, Denmark, Finland, Sweden, England/Wales and Canada. Cyprus lies at the other extreme, on 900. Greece, Spain, Ireland, Italy, Portugal, many of the new member states and the US also have high scores (between 140 and 280 FTE per 1000 offences). The Southern European countries and many new member states have low crime rates and high staff numbers. The reverse applies to Sweden, Finland, Denmark, Canada, England/Wales and the Netherlands.

Like Denmark, Ireland, Finland and Sweden, the Netherlands has a ratio of

prisoners to prison guards of 1:1. In the majority of countries the ratio is between 1:1 and 3:1, but it is much higher in Slovakia and the US. Expenditure per prisoner is also very high in the Netherlands, at approximately 90,000 euros per prisoner, as against 30,000 in the US. It is not clear whether the high staffing levels and high expenditure per prisoner in the Netherlands should be seen more as a sign of inefficiency or as an indication of high quality.

Only a fairly small proportion of crimes (10% to 20%) are reported to and recorded by the police. Population surveys therefore give a clearer picture of crime rates. The key questions in such surveys concern the extent to which respondents have themselves fallen victim to crime. Strikingly, the Netherlands turns out to have the highest risk of victimization, mainly as a result of the high frequency of two types of offence: bicycle theft and car vandalism. The picture is clearly different when it comes to certain other types of crime.

There is strikingly little correlation between fear of crime and the actual risk of victimization. Respondents in Portugal, Poland and Australia often say to feel unsafe, even though the probability of falling victim to crime in those countries is very low, average and high respectively. The Dutch feel relatively safe, on the other hand, even though they have a relatively high risk of victimization.

Scores for confidence in the police and criminal justice system range from 2 to 8 (out of 10). The highest marks go to Denmark (8), Finland (over 7) and Austria (almost 7). The Netherlands has an average score (5). The Czech Republic, Estonia, Latvia and Slovakia score less than 4.

Contrary to expectations, there is a weak positive correlation between crime rate and confidence in the police and criminal justice system. The Northern and Western European countries, Australia and New Zealand typically have average to high crime rates, but in surveys respondents express average to high confidence in the system. The Southern European countries and, more especially, the new member states, combine low confidence with low crime rates. Table S.1 relates these surprising outcomes to a number of other findings.

Table S.1 Connections identified in this report (schematic)

	crime rate	repressiveness (severity of punishment))	repressiveness (number of staff)	likelihood of punishment	productivity	confidence
Northern and Western Europe, Australia, New Zealand	high	low	low	low, except for Finland and England/Wales	high	high
Southern and Central European countries	low	high	high	high, except for Portugal and Spain	low	low

Source: SCP

Countries in each group have similar levels of repressiveness (severity of punishment and size of resource inputs), likelihood of punishment and productivity. The low productivity in countries with low crime rates is associated with high staff numbers in relation both to population size and crime figures. Low confidence in the police and criminal justice system in these countries is probably connected with another inherent aspect of repressiveness: a strong focus on tackling crime and catching offenders might mean that there is less regard for the rights of offenders and the quality of evidence. There might also be a link between low pay in the public sector and low confidence in connection with corruption in some of these countries (see also Chapter 6). An alternative explanation could be that a lack of confidence moves people not to report crimes to the police. Indeed, the discrepancy between the number of crimes reported in population surveys and registered offences is relatively high in countries such as Poland, Portugal and Spain. However, this registration failure can only partly explain the differences between the country groups. Further research of an entirely different kind would be needed to shed more light on such relationships.

Public Administration (Chapter 6)

Declining confidence in government institutions and growing demands on the public finances have prompted governments to initiate policies aimed at trimming the public sector and increasing its efficiency and effectiveness. The view that decentralization may improve the functioning of the public sector is gaining support in many quarters. Decentralization is usually seen from a financial perspective, with a focus on devolving public resources. Three groups of countries may be distinguished here. Firstly, the Scandinavian countries, with a very strong local sector; second, a number of Central European countries, including France, with a medium-sized local sector, and finally a number of countries with a small local sector, mainly Southern European countries. The degree of decentralization is also reflected in the distribution of public servants among different government tiers. Over the years, the statistics show a shift in staff employed by central government to staff on the payroll of local and regional authorities. The Scandinavian countries and most of the federal countries have relatively small central governments. Belgium is an exception. In unitarian states such as France, the Netherlands and Italy, the proportion of public servants working in central government is significantly higher.

Outlays for public administration purposes (policy making, legislation and general management) vary between 1.3% (United Kingdom) and 4.8% (France) of GDP. Most countries spend between 2.5% and 3.5%, except for Ireland and Spain (somewhat less) and Sweden and Austria (somewhat more). The number of government employees per 1000 inhabitants ranges from 4 in Cyprus to 33 in the United States. In EU-15 countries the ratio of public administration staff is relatively low in Greece, Italy and Ireland and high in Belgium, Denmark and France. The staff-ratio ends up between 15 and 25 per 1000 inhabitants in the other EU-15 countries.

The financial reform agenda focuses on three major policy issues: (1) introducing greater financial responsibility for public sector managers, (2) working towards results-based budgets and (3) adopting multi-year budgets.

More involvement of elected officials with the budget implies greater limits to discretionary powers of public managers. One indicator of the degree of parliamentary control over the budget and the ensuing restrictions for managers is the degree of detail to which the budget is appropriated. In some countries, parliamentary appropriation occurs at an aggregated level and it is possible to carry over unused budget resources at the end of the year, albeit sometimes only under certain conditions. This group includes Australia, Denmark, the Netherlands and the United Kingdom. Diametrically opposed to this group is a cluster of countries with less management freedom, where there is no end of year flexibility and parliamentary appropriation is very detailed (the US, Slovenia, Spain). Another indicator of parliamentary control is the legislature's influence on the budget. In most countries studied, the budget submitted by the executive is approved without major amendments (amounting to less than 3% of the total budget) and in some countries parliament approves the budget without making any amendments.

Increasingly, governments focus on results of policy efforts as the basis for their budgeting. Also, a number of countries are moving towards accrual budgeting, a system showing costs and benefits instead of cash flows. Australia, New Zealand, Finland and Sweden have introduced full or partial accrual budgeting whereby performance information is provided for all programmes. In the US, the Netherlands, Denmark, Slovenia and Spain performance information is included in the budget documents, but they have opted (as yet) not to make the move towards accrual budgeting. Finally, Ireland, Portugal, Austria, the Czech Republic and Greece maintain the traditional line-item cash budget geared mainly to inputs, with little performance information.

The third trend in the modernisation of government finances has been a move towards the adoption of multi-year budgets. Most countries add multi-year forecasts to their budgets to place their annual income and expenditures in a longer-term perspective. In most cases, these forecasts are purely informative. However, in Italy and the United States, parliament does have to approve the multi-year budget.

Nowadays, strategic human resources policy, competency management and equal opportunities policy are key concepts in the modernisation of human resources management. The Lisbon agenda aims to raise the employment rate of women from an average of 51% in 2000 to more than 60% by 2010. As yet, an average of 47% of staff employed in public administration and defence are women. The average is much higher in education (69%) and in the health care and social welfare sectors (80%).

The development of a knowledge-based society also has implications for the services produced by the public sector. When ranking the e-performance of public administrations, the list is headed by the US and the other Anglo-Saxon countries. The Scandinavian countries and the Netherlands perform well too.

By the very nature of its products – shaping policy in a wide variety of areas, law making, maintaining public order, managing the government apparatus – no 'natural' performance indicators are available for the public administration as such. Arguably, the functioning of government administrations can therefore be measured best by using subjective indicators. Such indicators reflect mainly trust and confidence in the Civil service. For the purpose of this report, four indicators of government quality have been selected: (1) the size of bureaucracy, (2) transparency and (3) effectiveness of government interventions, and (4) corruption. Bureaucracy seems to hinder economic activities more in Southern then in Northern European countries. Between 1995 and 2003, bureaucracy is perceived to have been on the increase, especially so in New Zealand but also in Germany, Sweden and the United Kingdom. Transparency of government is judged by survey respondents markedly more positive then bureaucracy. Within the EU-15 area, Northern countries generally perform well in this respect. The level of transparency has strongly improved between 1995 and 2003. Effective implementation of decisions and regulations is found in the Scandinavian countries. Greece, Germany and Italy are seen as having some difficulty in implementing government decisions. Effective implementation of governmental decisions did not change much between 1998 and 2003. In the perception of respondents, corruption levels differ strongly in European countries. Especially Scandinavian countries are seen as less corrupt. The relatively poor scores of Italy and Greece are striking, as well as the poor scores of most new member states in Eastern Europe.

Confidence of the population in the Civil service differs strongly across countries. On average, confidence in the Civil service amounts to about 70% of confidence in other public sector institutions, like health care, safety, justice, education and social security.

Tentatively, the effectiveness of public administrations can be assessed by relating expenditure on administrative services (per capita) to subjective statements of respondents in opinion surveys on (1) the quality of government performance and (2) confidence in government institutions. For the purposes of this report, subjective statements on the quality of the government are bundled into a composite index of perceived bureaucracy, transparency, effectiveness and corruption. It turns out that there is only a weak relation between expenditure per capita and government performance as perceived by respondents. Low spending countries are seen as generally performing slightly below average, whereas high spending countries do slightly better. The most striking observation concerns Finland, which combines a fairly moderate spending level with a perceived high quality of government interventions. In general, a strong correlation exists between subjective quality of government expressed by the business community and confidence in the Civil service expressed by the population at large.

To summarize, from an EU-15 perspective it is possible to identify two clear extremes and a large middle group. The Nordic countries are highly territorially decentralized. Local authorities are sizeable and enjoy a large degree of autonomy. Financial management and *e*-government are fairly well developed. A relatively large number of women work in the public administration. The performance of the government and Civil service is valued highly, both by the business community and the population. In terms of most indicators, the Netherlands and Luxembourg are in line with these countries, except in terms of the gender balance. The other outlier comprises a number of Mediterranean countries, particularly Italy, Greece and Portugal. Spain differs somewhat from these three. Local administrations operate on a much smaller scale, but no clear picture emerges as to their financial modernization processes. These countries also post low scores when it comes to *e*-government. Few women are employed in the public service, and the appreciation of administrative performance is below the European average. The third and largest group of countries are located somewhere in between and exhibit no systematically differing properties. This group includes the countries of Central Europe (Belgium, Austria, Germany, France) and the Anglo-Saxon countries (the United Kingdom and Ireland).

Public sector performance (Chapter 7)

The concluding chapter of the report synthesizes findings presented in earlier chapters. It links the performance of the public service sector of welfare states to (1) institutions and (2) scarce resources allocated to (public) programmes. A typology of the public service sector of the countries studied should tie in with structural characteristics of welfare arrangements, which – at least in part – determine the degree to which citizens enjoy basic rights such as to education, health care, law and order and quality services from a trustworthy public administration. Three sets of indicators are employed to group welfare states in terms of public services delivered: (1) resource inputs, (2) the way countries finance the services concerned and (3) how services are delivered to citizens. The first set of indicators represents the input of scarce resources to produce public sector services. Since inputs are measured in absolute levels at comparable prices, this indicator reflects to a large degree income per capita in the countries covered in the report. The second set of indicators reveals the public versus private orientation of national institutions. The key factor here is the degree to which health care and education programmes are publicly or privately financed. Notably, this set of indicators also reflects the degree of repressiveness of law and order institutions. Countries with a stronger orientation towards private financing of health care and education tend to tackle law and order problems more rigorously. A final set of indicators reflects three policy dimensions: the type of welfare state, the degree of differentiation in the education system, and the type of criminal law system.

Combining the first and second sets of indicators, we find three country clusters: Poland, Lithuania and Greece are located in the private, low expenditure area; the US

in the private, high expenditure area and Denmark, Sweden, Luxembourg, Austria, Belgium and France are in the public, high expenditure area. When combining the second and third sets of indicators, the Scandinavian countries are found in one cluster, reflecting a publicly oriented welfare system, relatively low expenditure on the police and judiciary, a school system with little early differentiation between pupils and a Beveridge-type health care system. A second cluster comprises most of the countries of Western and Central Europe, with publicly-oriented systems, generally strongly differentiated school systems and Bismarck-type health care systems. A third cluster includes the non-European Anglo-Saxon countries, which combine a stronger privately-oriented system with a Beveridge-type health care system and a uniform education system. A final cluster holds the Southern European countries, with a Beveridge-type health care system and various types of education system.

To measure the quality of public sector services, separate scores for education, health care and the fight against crime may be combined to create a single performance index for each country for which sufficient data are available. This particular index may be said to represent the allocation function of the government. The score of most countries deviates unambiguously from the average. Ireland and Finland score well above average, followed by a group of EU-15 countries, the Czech Republic, Slovakia and Canada. Poland, Hungary and Portugal make up the rear. Ireland achieves its top position thanks to its very low crime rate, a good score for education and an average score for health. Finland scores very well on the quality of education and health services, but is beaten to the top position by Ireland because of its poor score on law and order.

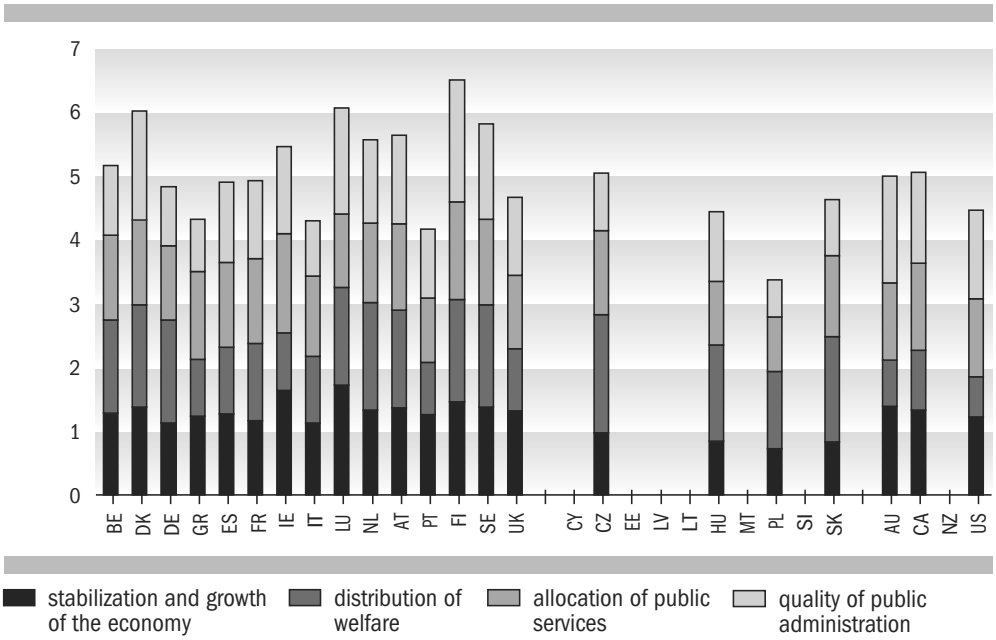
At country level, a significant relationship is established between overall public service sector performance and certain system characteristics, but the observed correlation is rather weak. Income per capita still appears to have the strongest influence on overall performance of the public service sector. Also, our results suggest that publicly-oriented systems perform on average better than privately-oriented systems. When overall performance in the policy areas of education, health care and law and order is linked to inputs (resources used), it appears that Ireland and Finland combine relatively limited expenditures (as a proportion of GDP) with high levels of performance. Spain, the United Kingdom, the Czech Republic, Slovakia, Hungary and Poland also use relatively few resources. However, the last two countries, in particular, are characterised by a relatively weak performance. Portugal is rather exceptional, with weak performance at average expenditure levels, as is the US, with fairly poor performance and extremely high spending, especially on health care.

The performance of the public service sector can be put into broader perspective, and be related to the three conventional functions of the government: distribution, stabilization and allocation. Here, the quality of public administration is added as a separate function and relevant economic indicators have been selected with the Lisbon

Agenda in mind. Altogether, nineteen different criteria are involved in the analysis. However some of these criteria are closely correlated and most other criteria show a considerable degree of correlation. As a result 43 percent of total variance can be explained by one single factor or principal component. Only economic growth, poverty rate and crime are independent of this common factor. Altogether, 85% of total variance is explained by the first 5 components. In a plot of the country positions on the first and second component, summarizing characteristics of the performance of countries, a by now familiar grouping of countries emerges: Central , Southern, Western and Northern Europe and the Scandinavian countries.

The score on various government functions can be combined in one overall index of public sector performance. Figure S.1 shows the performance of twenty-two countries in terms of (1) stabilization and growth of the economy, (2) distribution of welfare, (3) allocation of public services and (4) quality of public administration.

Figure S.1 Overall performance of countries



Source: various

The score for individual variables generally lies between 2 and 8. The variation in the overall score is considerably smaller, at 3.5 to 6.5. This is because no country posts high scores for all individual performance variables. Leaders like Denmark and Finland score high for the quality of their public sector and for distribution, but low on allocation, particularly as a result of their high crime rates. Poland trails the rest of the field, but does well on criteria like economic growth, income distribution and preventing school drop-outs. Generally speaking, the new member states score badly for stability and allocation, the Anglo-Saxon countries do badly on distribution, and Poland in particular does badly in terms of the quality of its public administration.

The overall performance of the public service sector can also be related to the confidence that the population vests in their national institutions. Italy, Greece and the Czech Republic score particularly low on public confidence. The Northern European countries, Austria, Ireland and Luxembourg book the highest scores. The Netherlands falls somewhere in the middle, together with the bulk of the Western European countries. There is a fairly strong correlation between public sector performance and confidence in the government expressed by the public. Notable exceptions are the Czech Republic, with reasonable performance but low confidence, and Poland, where the reverse applies.

Furthermore, the overall performance of the public service sector can be related to the resources absorbed by producers active in the public service sector. Roughly speaking, there is little connection between public sector performance and the level of government spending. By this measure, Finland is the most efficient in producing public services of high quality at moderately high costs, while – in terms of efficient production – Ireland scores slightly above average. Just behind these leaders we find Sweden, Denmark, Austria, Luxembourg and the Netherlands; the first three countries post relatively high government spending levels, while the last two have fairly average spending. Australia, Canada, Spain and the Czech Republic combine an average performance score with fairly low government spending, while others (particularly Germany, Belgium and France) occupy fairly average position in both respects. The US and the United Kingdom perform fairly poor at relatively low public spending levels.

One of the most striking outcomes of the analysis in the present report is that the same clusters of countries repeatedly emerge in analyses of public sector performance, regardless of the policy area reviewed, or the level of analysis. Again and again, Northern European countries, Western European countries, Southern European countries, Central European countries, and Anglo-Saxon countries are demonstrated to form fairly consistent clusters. Table S.2 lists some of the main characteristics of these five groups of countries.

Table S.2 Country clusters

	Northern European[1]	Western European[2]	Southern European[3]	Central European[4]	Anglo-Saxon[5]
1. ageing	medium	medium	high	low	low
2. prosperity (GDP per capita)	medium	medium	low	low	high
3. economic growth	medium	low	high	high	medium
4. public spending (% GDP)	high	medium	low	low	low
5. size of public service sector (staff)	high	mixed	low	low/ medium	medium
6. private share of public service sector	low	medium	low/ medium	low	medium/ high
7. educational differentiation	low	high/ medium	medium	mixed	low/ medium
8. educational performance	medium/ high	medium/ high	low	low/ medium	high
9. health care system	Beveridge	Bismarck	Beveridge	Bismarck	Beveridge
10. health care performance	high	high	medium/ high	low/ medium	medium/ high
11. repressiveness of criminal justice system.	low	medium	medium	medium/ high	mixed
12. crime	high	medium	low	low	mixed
13. quality of public admin istration	high	medium	low/ medium	low/ medium	medium/ high
14. aggregated confidence	high	medium/ high	low/ medium	low/ medium	medium*

1 Finland, Sweden, Denmark
2 Germany, Austria, France, Belgium, Netherlands; Luxembourg is a special case
3 Greece, Portugal, Spain, Italy; Cyprus and Malta are special cases
4 Czech Republic, Slovakia, Hungary, Poland , Slovenia and Baltic States
5 United Kingdom, US, Canada, Australia, New Zealand; Ireland is a special case
* Based on partial data.

Source: SCP

Country characteristics taken into account include demographic profile (1), institutions (7, 9, 11), resource inputs (4, 5, 6) and performance of the public sector (2, 3, 8, 10, 12, 13, 14). It should be noted that, though there is a considerable correlation between public sector performance in the different areas, it is by no means perfect. See the previous discussion of results shown in Figure S.1.

In most respects, the Netherlands shares characteristics with other Western European countries. The Netherlands falls somewhere in the middle when it comes to the size of its public service sector. Public confidence in the public sector is fairly low. In our own ranking of public performance, the Netherlands comes sixth. In the World Competitiveness Yearbook, the Netherlands spent several years near the top of the rankings. The country was hit severely by the economic downturn after 2000 and political upheaval in 2002-2003. It would appear that both factors contribute significantly to explain the recent fall of the country to the middle of the ranks among EU-15 countries.

Concluding comments

After mining some of the most outstanding sets of international comparative data on public sector performance, our main, sobering conclusion is that policymakers can draw no quick and easy lessons from our analyses of these data. This is not to say that international comparisons can shed no light on the cost effectiveness of government interventions in individual policy areas (see the relevant chapters in this report). We should note, though, that – at the present stage – it seems difficult to perform in-depth analyses, given the limited quality of and lack of detail in the data available. In particular, in many cases there is a lack of robust and comparable data on output of the agencies concerned and on outcomes of government policies pursued. Therefore, it is to be hoped that international organisations – notably Eurostat and the OECD – continue their efforts aimed to broaden the scope and enhance the quality of statistical work in progress. To this end, different quality and performance indicators are currently formulated.

Having said that, the material brought together in the present report allows to draw a number of conclusions that should be relevant to policymakers and certainly merit further analysis.

Spending ratios are a case in point. Participants in national policy debates often point out that their country spends a smaller share of GDP on, for example, health care or education that other nations do, with the implied message that expenditure on the government programs involved should be raised. However, our report demonstrates convincingly that there is no one-to-one relationship between resources made available to sectors like health care and education and the (overall) performance of the public sector. Put simply, in many cases more money does not guarantee more effective policy outcomes. Apart from differences in the efficiency with which public sector services are produced, there are several explanations for the weak link between public money and public performance. Firstly, demography is important. If the age group 0-14 is shrinking, less resources are needed for primary education without loss of quality. Similarly, ageing populations imply greater demand for nursing homes. Seen in that light, policymakers may be surprised that the report finds no clear link between the relative size of age group 65 and over and the level of health care spending. Relative wage levels in the market sector and the public sector of the economy offer a second explanation for the weak link between money and policy outcomes. If wage levels in the labour intensive production of public services are relatively low, taxpayers get more and arguably better services, if a given share of GDP is available for (public) funding. Conversely, relatively high wage levels in the public sector reduce the volume and arguably the quality of public services that can be bought for the money available. A final explanation is that large bureaucracies often have trouble handling an outpour of new money. Part of additional resources will be used to improve working conditions and incomes, or simply be wasted.

Clearly, public spending and private payments for public services should be lumped together to measure the total resources a nation devotes to health care,

education and other service sectors. This is yet another reason why public spending ratios should be interpreted with care.

The report distinguishes between four types of education system and ranks countries in five groups on the basis of their health care system. It appears that there is no systematic relationship between country systems and spending levels and between country systems and performance.

A fourth finding of interest is that in many instances there is no one-to-one relationship between the quality of public sector services as perceived by citizens or the business community (subjective performance indicators) and quality measured by objective performance standards. In those cases where citizens underestimate public sector performance, policymakers may consider providing additional information to the public at large, in order to redress misperceptions. Comparative performance data included in the present report may support designs of campaigns to better inform the public.

Some other examples of policy-relevant conclusions from the report include:

- Policies aimed to stimulate economic growth and policies to further equity are not mutually exclusive. The hypothesised negative correlation between the level of government spending and taxation on the one hand, and economic growth on the other hand, is much weaker than is often maintained.
- In education systems, early differentiation between pupils generally leads to poorer performance. However, the exception that proves the rule seems to be the Netherlands, which produces reasonable to good outcomes with a highly differentiated education system in place.
- Radical systemic change will be needed in the Netherlands to reduce the number of early school leavers.
- High health spending provides no guarantee whatsoever of good system performance. This is best illustrated by the US and Germany. The same can also be said of the privatization of health care.
- Repressive criminal justice systems correspond with lower crime rates than systems geared to the reintegration of offenders.

These and other conclusions have been examined in detail in the individual chapters.

1 Introduction

Bob Kuhry and Flip de Kam

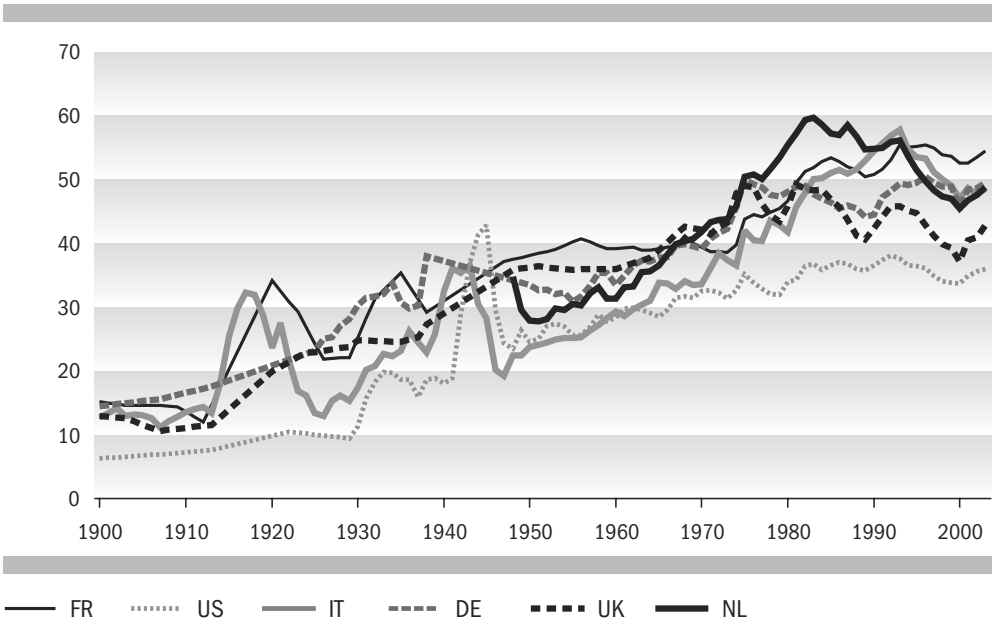
1.1 *The Lisbon Agenda and the public sector*

Improving the performance of the public sector is a goal that is high on the policy agenda in almost all industrialised countries. The present report reviews the performance of four public services: education, health care, law and order and public administration in twenty-nine countries. Since public sector performance is linked closely to the overall economic performance of nations, it can be placed in a broader context.

In 2000, by adopting the Lisbon Agenda, member states of the European Union (EU) set themselves the daunting task of making the Union the most competitive economic area in the world within the next ten years. Four years on, it seems increasingly doubtful whether this ambitious mission can be successfully completed. In the first half of 2004, the world-wide economic recovery is as yet not reflected in impressive growth perspectives for the EU-area as a whole. Many observers maintain that institutional change is a prerequisite for the Union to catch up with the United States and the dynamic Asian economies. The usual culprits include inflexible labour markets, low labour participation rates, high levels of government spending and taxation, low levels of public investment and lagging R&D-effort. Those who do not accept these explanations (in full), will nevertheless agree that public sector performance is an important factor in the race to achieve the goals set out in the Lisbon Agenda. Most will also agree that countries can improve the functioning of their public sector by adopting best practices found in other countries. The present report is written with these purposes in mind. It compares the performance of the public sector in the 25 member states of the European Union and in four non-European Anglo-Saxon countries.

In all countries selected for this report, public expenditure as a proportion of Gross Domestic Product (GDP) has grown strongly throughout most of the twentieth century. Only in the 1990s, public spending ratios stabilised and, in many countries, fell in fact, sometimes significantly so. To illustrate, Figure 1.1 shows trends in public expenditure in the Netherlands, France, Germany, Italy, the United Kingdom (UK) and the United States (US).

Figure 1.1 Public expenditure as a percentage of GDP in six OECD-countries, 1900-2003



Source: Musgrave and Musgrave (1984, fig. 7.1), with additional data from the OECD and Statistics Netherlands

The economic growth in the larger part of the twentieth century was accompanied by an even stronger increase of public expenditure. The stagflation of the 1970s and the deep recession of the early 1980s convinced many that excessively high public spending and taxation levels can hamper economic growth. As a result, many countries introduced policies geared to pruning the social security system and privatising nationalised industries. The United Kingdom under prime minister Margaret Thatcher led the turn-around towards smaller government and deregulation. The trend was reinforced by the spectacular collapse of the command economies of Eastern Europe. The notion that government intervention in a broad range of policy areas is inevitable to correct for market failures, which predominated in the 1960s and 1970s, came under increasing pressure from a countermovement that emphasised the negative side of government interventions: large bureaucracies, inefficiency and high tax levels with a possibly devastating effect on economic growth.

The 1990s saw yet another trend, i.e. the rise of New Public Management, which aimed to rationalise public services. Osborne and Gaebler (1992) is often seen as the key publication here. The authors stress the basic principle that the financing, budgeting and organisation of public services should take explicit account of the products delivered (output) and the effects achieved (outcomes).

The economic recession of the recent past (2001-2003) pushed up public spending ratios once more (see Figure 1.1), prompting governments once again to reconsider the scale and organisation of the public sector of their economies. Furthermore, in the Netherlands and probably in a number of other EU-countries as well, there has been growing dissatisfaction with the standard of service provided by the public sector. Many members of the public regard service levels as inadequate. Waiting lists

for health care, delays and some severe accidents in the public transport system, staff shortages in education and declining clear-up rates in the police service dominated public debate in the Netherlands (SCP 2002b). But this is not only a Dutch issue. Many other European countries face related problems.

The present Government is committed to improving the performance of the public sector in the Netherlands. This commitment is formalised in the document sealing the current coalition agreement, which opens with the following statement (Balkenende 2 2003):

> *'The Dutch public is more aware than ever of the deficiencies in our society and the need to improve the quality of our democracy, public services, law and order, education and health care. At the same time, the economic and budgetary position of the country has suffered a dramatic deterioration... The government will strive to achieve a strong society, effective governance, improved democracy and a safe and secure society. To this end it will pursue policies to restore national competitiveness, control the proliferation of regulation and reduce bureaucracy, increase personal responsibility and give individuals a greater say, and guarantee law and order and security. The government cannot do this on its own. Solving the country's problems will require each of us to contribute to the effort, according to our ability and means.'*

The coalition agreement document emphasises individual responsibility, cutbacks in publicly financed social security, streamlining of the public sector and improving the efficiency and quality of public services. These themes have also been stressed by previous Governments, irrespective of the political parties participating in the coalition.

This policy stance of re-assessing public sector involvement in decision-making by economic agents is to a large extent inspired by dissolving national borders and the globalisation of the economy, and more in particular the enlargement and gradual integration of European Union member states. These developments have increased competitive pressures, prompting the Netherlands – and other industrialised countries as well – more than ever before to pursue effective policies to promote economic growth and make themselves more attractive as a place to do business. As a result of growing competition between countries, there seems to be a move towards international convergence: no single country can afford to diverge too far from the others in terms of a number of crucial parameters such as its tax burden, labour market participation rates, socio-economic institutions, and labour productivity. Moreover, in many fields EU-countries have agreed on common goals and common arrangements, which may stimulate converging trends in policies pursued. Policymakers in individual countries are increasingly aware of the need to know how they are doing relative to the competition (and how the European Union is doing in relation to the rest of the world). Policymakers also want to consider what measures they might take to make their countries more competitive. These concerns have been

a major factor in the growing attention paid to international comparisons of public sector performance.

Although this report aims to compare the performance of the public sector in a range of countries, it is not our primary objective to show how individual countries 'score' in terms of public sector effectiveness and efficiency. Rather, in describing institutional arrangements, resource inputs, programme outputs and policy outcomes (results) in the selected countries, the report aims to focus on opportunities for policymakers to learn from 'best practices' in other countries.

National debates often take place within the 'narrow confines of democracy'. Despite globalisation and the creation of the European Union, there is therefore a tendency to make only cautious adjustments to the national systems that have developed over time, and make only cautious changes to it. Countries that in many ways are similar to our own, such as the other EU member states, have sometimes opted for entirely different policy solutions to address similar problems. Some dilemmas that have caused political controversy to drag on and on in the Netherlands have been solved in a radically different way in other countries, sometimes without much ado. To take an example, since the mid-1980s the Netherlands has taken steps towards introducing patient payments for health care services. The underlying idea was that out-of-pocket payments would stimulate individuals to have a good think before deciding to visit a doctor. The resulting lower consumption of health care provisions might help curb the growth in health care spending. Until now, in the end all such initiatives from policymakers came to nothing, because of fierce opposition on the grounds that patient payments may make health care less accessible to people on low incomes. Our neighbour Belgium, however, has had a system of substantial individual contributions in place for a long time. It might be useful to examine whether the payment system of our southern neighbours has had any negative impact on the health state of the population in Belgium.

For decades, the Netherlands has also been embroiled in a heated debate about whether to introduce a uniform system of secondary education for all 12- to 16-year-olds. The proponents argue that a uniform system improves the educational prospects of youngsters from the lower social classes. Opponents say a uniform system not only holds back gifted youngsters, who miss a stimulating educational setting, but also increases learning problems of less talented pupils, who would drop out in huge numbers if faced with a too demanding curriculum heavily based on theory. However, countries as diverse as Sweden and the US have had positive experiences with a uniform system of secondary education.

Thus it is clear that an international comparison can put the provision of public services in various countries into proper perspective, by indicating what factors may contribute to different outcomes. Such an analysis could provide a basis for making improvements in the productivity, quality and effectiveness of public services in individual countries. However, measuring public performance is not an easy task. Annex 1.1 discusses some issues that arise when attempting to measure public performance.

The government performs a number of tasks which cannot simply be left to the market. They include the provision of 'public goods' and 'private goods' with major externalities (Musgrave and Musgrave 1984). The consumption of public goods is non-rival and non-exclusive. Examples include dikes and national defence. Major externalities are associated with the consumption of private goods such as education (well-informed public, productivity of the labour force), health care (to counter epidemics) and cigarettes (premature death).

The government therefore has a clear responsibility for important social functions such as public administration, education, health care, social protection and social security. The government itself will not necessarily supply all services needed to fulfil these functions. It can also task third parties with producing these services, such as private non-profit organisations (schools, hospitals) or privately owned for-profit enterprises (building and maintenance of public infrastructure such as roads). Another way of safeguarding the public interest is to regulate markets via legislation.

Box 1.1 Three definitions of the public sector

The term 'public sector' is often used indiscriminately. Three definitions can be found (see Kuhry and Van der Torre 2002; Kuhry 2003):

- Legal definition: the public sector includes government organisations and organisations governed by public law.
- Financial definition: besides the above organisations, the public sector includes private organisations largely funded by public means, including non-profit organisations providing education and health care.[1]
- Functional definition: in this case the public sector includes all organisations in the field of public administration, social security, law and order, education, health care, and social and cultural services, irrespective of their funding source and the legal form of the supplier. The functionally defined public sector is sometimes termed the 'quaternary sector'[2] in policy debates in the Netherlands and Belgium.

In this report, the functional definition is applied. Instead of the awkward term 'quaternary sector' the term 'public service sector' will be used in this context (see further elaboration in Section 2.3).

1 In the Netherlands, the term 'collective sector' is used in this connection. This concept differs from 'general government' as used in the National Accounts by the inclusion of 'corporations' largely funded with public means.

2 'Quartaire sector' in Dutch.

1.2 *Aim and scope of the report*

The aim of this report is to trace *differences in public sector performance in the Netherlands and other countries and to provide insight into factors that might explain these differences.*

It should be stated at the outset that there are major differences between the countries included in the report, in terms not only of public sector performance, but also of per capita expenditure and the proportion of GDP spent on various services traditionally produced with significant or exclusive government involvement. Furthermore, the countries with the highest spending levels are not necessarily the ones with the best public services.

For example, education spending ranges from 4 per cent of GDP in Greece and Luxembourg to more than 8 per cent in Denmark and Cyprus. At the same time, the proportion of the population aged 25-64 that has successfully completed higher education varies from 7 per cent in Austria, Portugal and Denmark, to almost 30 per cent in the US.

The differences in the health care sector are even greater. The number of hospital admissions per 1000 inhabitants ranges from 100 in the Netherlands to 275 in Austria, and the number of GP (general practitioner) consultations from 2 per inhabitant in Sweden to 22 in Hungary. Spending on health care as a proportion of GDP ranges from 6 per cent in Ireland and Poland to almost 13 per cent in the US. But although the US leads the field in health care spending, it lags behind in terms of various effect indicators such as average life expectancy.

There are also major differences in the police service and judiciary. In Finland, these organisations employ around 2500 people per million inhabitants, while in Italy the corresponding figure exceeds 8000. The number of recorded crimes varies from 20,000 or less per million inhabitants in Ireland, Slovakia and Cyprus, to over 100,000 in Finland and Sweden. Despite low staffing levels and high crime rates, 100 offenders are convicted for every 1000 crimes in Finland, compared with only 10 in the Netherlands.

Such observed differences in productivity, quality and effectiveness of public services in the various countries logically lead to the question how they come about and how countries can learn from each other and thus improve their public sector performance.

An attempt will be made to explain the differences in public sector performance between the twenty-nine countries included in the report, in the hope of highlighting opportunities to improve productivity and effectiveness of public services.
In view of the aim of this report, an attempot is made to answer the following research questions:

1 To what extent do countries differ in terms of public performance in the fields of education, health care, law and order and public administration?
2 To what extent do differences exist between countries in terms of productivity, quality and effectiveness in the delivery of these public services?

3 To what extent are public services taken up by target groups of government policy?
4 To what extent can the differences in public performance be ascribed to national institutions?

With these questions in mind, the following policy areas will be addressed in subsequent chapters: education (Chapter 3), health care (Chapter 4), law and order (Chapter 5) and the public administration system (Chapter 6). This selection reflects current policy priorities in the Netherlands, which focus particularly on fighting crime, and improving health care and education. Services produced have been grouped into clusters, such as public administration, defence, compulsory social insurance, primary education, secondary education, tertiary education, hospital care, nursing home care, outpatient care, the police, the judiciary and prisons. The choice of clusters depends to a large extent on the availability of comparative data.

Whenever possible, an attempt has been made to move from pure description to a more *in-depth* analysis by consulting available literature and experts, and using national data sources. As far as possible, differences in public performance have been related to the system for and organisation of the production of public services, taking into account policy aims, regulations, institutional characteristics, the method of funding, the composition of the population and other relevant external factors.

The final Chapter 7 undertakes to *synthesise* our findings, by:

– doing a statistical analysis of output and outcome versus resources used for all policy areas considered, by analogy with a recent study by the European Central Bank (Afonso et al. 2003);
– making an attempt to define a typology of countries based on the organisation of their public services. The next question to consider is whether these institutional characteristics correlate with public performance.

Countries

System descriptions and the analysis cover twenty-nine countries divided into three groups: the fifteen countries that were members of the European Union at the end of 2003 (EU-15), the ten EU member states that joined the Union on May 1, 2004 (New Entrants) and four Anglo-Saxon countries (Australia, Canada, New Zealand and the US). The full list of countries is in Table 1.1. The abbreviations used in all tables and figures of this report are based on the ISO 3166 standard.

Table 1.1 Countries included in this report

formerly EU-15	new EU member states	non-EU Anglo-Saxon countries
Belgium (BE)	Czech Rep. (CZ)	Australia (AU)
Denmark (DK)	Estonia (EE)	Canada (CA)
Germany (DE)	Cyprus (CY)	New Zealand (NZ)
Greece (GR)	Latvia (LV)	United States (US)
Spain (ES)	Lithuania (LT)	
France (FR)	Hungary (HU)	
Ireland (IE)	Malta (MT)	
Italy (IT)	Poland (PL)	
Luxembourg (LU)	Slovenia (SI)	
Netherlands (NL)	Slovak Rep. (SK)	
Austria (AT)		
Portugal (PT)		
Finland FI)		
Sweden (SE)		
United Kingdom (UK)		

The Anglo-Saxon countries have been included because they are economically highly advanced countries with relatively low tax burdens. Most probably, this has implications for the business climate, but also for the standard of public services.

Data

It is important to consider developments over time to gain an idea of the stability of the data, of emerging trends and possibly converging national policies. In principle, the report covers the period 1995-2002. However, it was clear from the outset that 2002 figures would not be available for all subjects addressed in the report. Although it can be useful to trace long-term developments, it was decided not to delve into the past in all areas. Data are often simply not available, and those that are cannot always be readily compared. This applies, for example, to education, where, due to differences in definition, pre-1995 OECD-figures are not comparable with figures for more recent years.

Box 1.2 Data required to measure public sector performance

Measuring public sector performance requires that the following data be available:

1 Data on the production of public services, using indicators that give a good idea of the output delivered.
2 Data on the productivity of public organisations, whereby production (output) is related to the resources used (inputs) – such as staff, equipment, capital – and the expenditure involved.
3 Data on the quality and effectiveness of public services, some based on objective measurement and others on subjective assessment (opinion polls).
4 Data on the take-up of public services by target groups of government policy.

Issues that arise when measuring public sector performance are spelled out in greater detail in Annex 1.1 to this Chapter. Annex 1.2 introduces the participants in the project group which prepared the present report. Annex 1.3 specifies the members of the advisory board.

1.3 Outline of the report

Chapter 2 deals with relevant demographic and economic characteristics of the countries selected for this report. Next, the chapter reviews the level of government spending and the size of the public service sector sector and investigates performance indicators for macroeconomic policy.

Some important policy areas are examined in separate chapters: education (3), health care (4), law and order (5) and public administration (6). Generally speaking, these chapters are similarly structured: an introduction outlines the importance of the sector, and is followed by sections describing system characteristics, resources used, consumption and production of services, their quality and the productivity and effectiveness of services provided. However, some of the chapters have a slightly different structure.

Chapter 7 summarises the report's findings, makes an attempt at synthesising these findings, and reflects on the study.

Finally, the report contains five technical annexes, of which the last three are only available on the internet (www.scp.nl)[3].

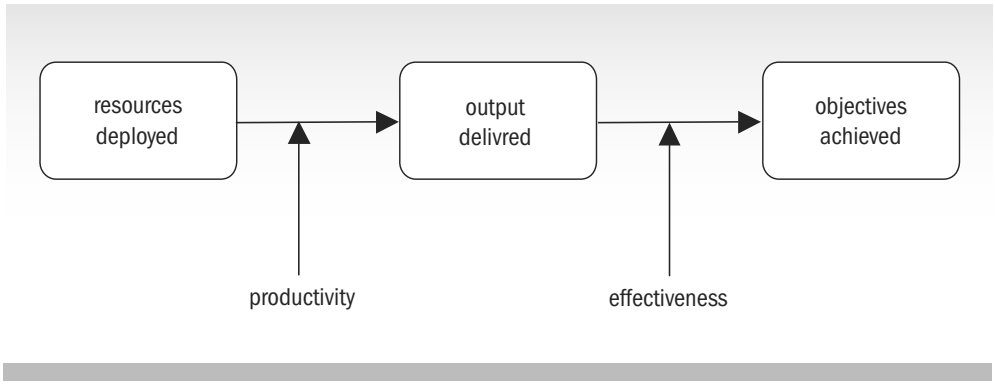
3 Annex A describes in a broad sense the available data. Annex B addresses methodological questions (the use of purchasing power parities, the computation of country averages and aggregation techniques for indicators). Annex C gives details on the sources of individual tables and indicates which missing numbers have been estimated by what method. Annex D summarizes national sources consulted for compiling data on the resources used by the administration of justice. Annex E gives for every individual figure the numerical values of the country scores behind histograms, line diagrams and scatterplots.

Annex 1.1: Measuring public sector performance

Any production process involves the resources deployed (=input), the process itself (=throughput), the product (=output) and effect (= final outcome) (Haselbekke et al. 1990).

The relationship between resources deployed and output delivered provides an insight into productivity, and the relationship between the output delivered and the objectives achieved reflects the effectiveness of the production process (see Figure 1.2).

Figure 1.2 Input and output of public services



In the private sector, the production volume can be derived from the market value of the goods in question. Time series can be obtained by adjusting the result using a relevant price index to get value indicators.

Since services produced by the public sector are not generally traded in markets, their market value is usually unknown. In most cases, therefore, *physical production indicators* are used. This term refers to various types of indicator that can be used as a direct or indirect measure of production. They include:

1 performance indicators, which refer to the final product;
2 consumption indicators, which refer to the consumers of the services;
3 process indicators, which refer to the activities performed or interim products produced.

Performance indicators refer to the final product of service providers. As such, they are best suited for assessing the efficiency of services. Examples include the number of patients treated successfully, the number of pupils or students finishing their studies successfully in education and the number of concert performances.

Consumption indicators refer not so much to production in itself, as to the number of people consuming the products. They are therefore suitable for analysing and forecasting the demand for services. Examples include the number of hospital patients, the pupil numbers in schools and audience numbers at concerts. In many cases, consumption indicators can be used to reasonable or good effect as measures of production. If the number of hospital admissions or school pupils is chosen as the

measure of production, it is assumed that the likelihood of recovery and examination pass rate are constant.

Process indicators can refer to tasks performed, and thus are a measure of the efforts of the staff concerned. Examples include the number of operations performed in hospitals, or the number of lessons taught in schools. In some cases, process indicators can be used as an indicator of production. In the case of home care, for example, production can be measured in terms of number of staff contact hours. This assumes that staff perform a constant amount of work per contact hour.

These indicators refer to the delivery of private goods and services to end users. It is often impossible to create an adequate performance indicator for purely public goods, which cannot be related to individual consumers. For example, it is not easy to identify the performance delivered by services like the public administration and defence. However, the resources deployed (staff, money) can be compared with total domestic production. This indicates what proportion of its production capacity a country sacrifices to maintain the services in question.

Total productivity refers to the relationship between the volume of production and the volume of resources deployed. *Labour productivity* concerns the relationship between production and the number of staff deployed. *Actual cost per unit product* is also important. This number is obtained by adjusting the total costs using a generic price index, and dividing the result by the production volume. The price index for household consumption, GDP or national spending can be used. This key figure shows the trend in the cost price of public services relative to a standard package of goods and services.

Heterogeneity often hampers measurement of production, when certain producers produce several products or types of product. In health care, for instance, we can look either at a patient's required level of care or diagnosis category, in the police service we can look at types of crime, or in education at target groups.

In such cases it is paramount to find a single production measure to allow comparison with the resources used. This presents no problem in the private sector, because individual products can be weighted according to their value, the market price. This is not possible in most public services and individual production categories have to be weighted and aggregated on the basis of the resources used (preferably integrated costs, or staff numbers in the absence of anything better) per unit product. In theory, therefore, it is perfectly possible to make adjustments for the heterogeneity of products. But this requires detailed production data to be available, and the analyst should be able to make sensible assumptions about the factors used for weighting.

One of the biggest problems associated with measuring the performance of public service providers lies in the fact that the quality of the products tends to be inadequately reflected in product indicators based on quantitative measurements. *Quality* is a vague and complex concept that refers to the extent to which the characteristics of a product meet given requirements. It is useful to distinguish between:

1 objective and subjective measures of quality, and
2 system, process and product quality.

Objective measures of the quality of services might include the percentage of trains that run on time, the average call-out time for the fire service, the percentage of lessons cancelled in schools, the percentage of incorrect administrative decisions, the percentage of complaints upheld etc. However, many relevant aspects of quality cannot be measured, such as medical staff's manner towards patients and the correct following of procedures. Subjective quality assessments of products or the production process by users, supervisors (inspectors) or staff can provide extra information.

Besides the quality of the product itself, the quality of the production process can also be relevant. One can indirectly test the quality of products by establishing whether the production process meets certain requirements (adequately trained staff, adherence to procedures, measures to assure quality testing). Secondly, certain aspects of the production process not directly related to the end product might be very important to the user. Clean toilets and good fire safety in schools, though not part of the actual education product (the acquisition of knowledge and skills), are nevertheless important conditions. System quality refers to the convergence of demand and supply. Imbalance of demand and supply can create waiting lists or inefficiency.

If quality is not adequately reflected in the measure of production, developments such as smaller class sizes in education and more staff in nursing homes can lead to a fall in observed productivity. Similarly, better educated and therefore more expensive teachers, or fewer residents per room in nursing homes can result in an increase in the cost price. On the other hand, the effects of such intended boosts to quality are often difficult to measure. Even when adequate measurement is possible (e.g. the average delay to train services or waiting lists for medical treatment), it often proves impossible to incorporate the outcomes satisfactorily in a workable product indicator. One therefore often has to make do with additional quality indicators in combination with production figures corrected for quality.

The last *Social and Cultural Report* (SCP 2002b) reviewed the concept of quality in some detail and looked at empirical data on the quality of public services. The key element of the exercise was to focus on answers from the public (subjective measurement) obtained through public opinion polls, which included questions concerning education, health care, law and order and the public administration. Another recent source of information is the Local Services Benchmark produced by the Ministry of Economic Affairs (2002). There are also a relatively large number of international comparative studies of respondents' opinions concerning public services, including

the Eurobarometer, the European Values Study, the World Values Study, the European Social Survey and the World Competitiveness Yearbook.

It is often much more difficult to relate production processes directly to *effects (outcomes)* than to output. It is therefore useful to distinguish between objectives that can be measured objectively via the final product, and deeper, underlying social objectives. Direct objectives of education, for example, include achieving as many final examination passes as possible, the objectives of curative care might include successful completion of treatment, and those of the police service, solving crime. The better a product indicator reflects a direct goal of the production process, the more applicable it will generally be. In hospitals, for example, analyses often lose their focus because admissions, patient days and so on are often used as indicators rather than the number of successful treatments. The same applies to analyses of education, where pupil numbers are often used as product indicators instead of their school results. Examples of deeper, underlying aims include producing well-informed citizens and ensuring there is a well-educated supply of labour (education), helping people live a long and healthy life (health care) and fighting crime (police). This type of objective, which concerns the indirect effects of services, is also examined extensively in this report.

The term *effect indicator* generally refers to key figures that describe the extent to which these underlying objectives are achieved. The degree to which this is the case, the *effectiveness*, is often determined not only by the production process, but also by external factors. The more neutral term goal *achievement indicator* is therefore often more appropriate in this context (see, for example, Ministry of Finance 1994).

It is also useful to relate production to the *target group*. For instance, the number of diplomas awarded in tertiary education can be related to the age at which such qualifications are normally obtained. Such relationships can be regarded as the *reach* of a particular type of public service.

Annex 1.2 Participants in the project

The Social and Cultural Planning Office (SCP) of the Netherlands has a long tradition in studying trends in the consumption, costs and productivity of public services in the Netherlands. SCP work covers services in the field of public administration, education, health care, the police and the judiciary, social security, culture/recreation/sport and public transport. From the outset, the idea has been to conduct both wide-ranging and in-depth analyses. Recent publications covering a broad spectrum of services include the *Memorandum Quartaire Sector 2002-2006* ('Memorandum on the Quaternary Sector 2002-2006'; SCP 2002a) and De vierde sector ('The Fourth Sector'; Kuhry and Van der Torre 2002). Both reports contain a chapter with international comparisons of public services in the 15 EU-member states. The report *Maten voor Gemeenten 2004* ('Measures for Municipalities 2004', Kuhry and Veldheer 2004) focuses on the performance of local authorities. In-depth studies have mainly focused on analysing productivity and developing models for forecasting demand for public services.[4]

The SCP has also done some work on international comparisons. The theme of the *Social and Cultural Report 2000* (SCP 2000) was the Netherlands' position in relation to the other EU member states, in terms of the performance in areas like education, health care, the judiciary and the criminal justice system, social security and public administration.

On worlds of welfare (Wildeboer Schut et al. 2001) looks at the organisation and operation of the socio-economic system in eleven OECD-countries. The report attempts to develop a typology of welfare states on the basis of their institutional characteristics, identifying three empirical types of welfare state: liberal, social-democratic and corporatist. It then tests whether these three different types have produced different outcomes in terms of the traditional aims of the welfare state: to provide protection from loss of income, combat poverty and limit social inequality.

Recently, the SCP published *Social Europe* in collaboration with CPB Netherlands Bureau for Economic Policy Analysis (CPB/SCP 2003). The report examines social policy in the 15 EU member states, addressing subjects like public opinion, labour market participation, poverty, labour market policy and the organisation of the social security system. The authors of *Social Europe* observe that Western European welfare states are under pressure from a number of trends: ageing populations, immigration, the rapid penetration of information and communications technology,

4 Examples include the SCP reports *Doelmatig Dienstverlenen* ('Efficient Service Provision', Goudriaan et al. 1989), *Trends in onderwijsdeelname* ('Trends in educational participation', Kuhry 1998), *Public Provision and Performance* (Blank et al. 2000), *Een model voor de strafrechtelijke keten* ('A Model for the Criminal Justice System'; Van der Torre and Van Tulder 2001), *De vraag naar kinderopvang* ('Demand for Childcare'; SCP/SEO 2001) and various publications on the demand for health care (see, for example, Woittiez et al. 2003).

individualisation and growing policy competition. Given the growing diversity within the EU, not least because of the accession of ten new members, it is recommended that open co-ordination be given preference over harmonised social policy.

A second partner involved in the current research project is the Dutch Ministry of the Interior and Kingdom Relations (BZK). A number of years ago, BZK commissioned two research institutes to produce an international comparative study: *Arbeidsvolume publieke sector in internationaal perspectief* ('Employment in the Public Sector in International Perspective' IOO/IVA 1998). The key question addressed in the study was how staff numbers in the Dutch public sector compared with those in Belgium, Germany, Denmark and Sweden. BZK hopes that the outcomes of the present study can be used to improve quality and performance of the public sector, here and in other EU member states.

A number of experts from other organisations have been involved in the study. They include researchers from the Dutch Ministry of Justice, who have a longstanding record of producing international comparisons of crime statistics and the performance of criminal justice systems (see, for example, Ministry of Justice 2000, WODC 2003 and Smit 2003). Researchers from the Public Management Institute (Katholieke Universiteit Leuven, Belgium) were also involved. The Institute has a long history of performing management analyses of public sector organisations, and specialises in the study of performance indicators and public sector reform. Its research often has an international dimension (see, for example, Pollitt and Bouckaert, 2004).

Annex 1.3 Members of advisory committee

Prof. Dr. Mr. C.A. de Kam	(Economics Department, Groningen University, chair)
Drs. F. J. M. Van Dongen	(Ministry of the Interior and Kingdom Relations)
Dr. H. de Groot	(International Board of Auditors for NATO)
Dr. F. Bos	(Netherlands Bureau for Economic Policy Analysis)
Dr. S.E.P. Raes	(Ministry of Economic Affairs)
Drs. M.R. Leijten	(Cabinet Office)
Drs. B. Akkerboom	(Ministry of the Interior and Kingdom Relations)
H. S. K. Boerboom	(Ministry of the Interior and Kingdom Relations)
Drs. P.J.H.M. van Montfort	(Ministry of the Interior and Kingdom Relations)

2 Demography and the economy

Bob Kuhry, Ab van der Torre and Rolph Heesakker

2.1 Introduction

This chapter presents some key demographic and macroeconomic data for the 29 countries covered by the report. Macroeconomic data includes several indicators to measure economic performance and the size of the public sector. The chapter has three sections:

- Section 2.2 (key data) reviews fundamentals, such as population size (by age groups) and Gross Domestic Product (GDP). These are important to standardise other data, such as the number of doctors per capita, or health care spending as a percentage of GDP.
- Section 2.3 (public sector) examines total public expenditure and employment in the public sector. To sharpen the focus of the analysis, it is useful to distinguish between the concepts of public administration, government, the public sector in a legal or financial sense and the public service sector (public sector in a functional sense, see Box 1.1). The concept of the public service sector is highly relevant, since the measurement of resources spent on health care, education and public safety may produce radically different outcomes when private expenditure and public outlays are lumped together.
- Section 2.4 (macro-economic performance) presents indicators for economic growth, unemployment, inflation, budget deficits and the poverty rate. Most of these indicators relate to criteria included in the European Stability and Growth Pact and the Lisbon Agenda.

2.2 Key data

This Section summarises key demographic and economic data. They are examined for two reasons:

- Firstly, because they are used in later chapters of the report to standardise performance and expenditure indicators, since the raw data can be misleading, given the very different size and income level between countries. Standardised data like expenditure per capita or as a proportion of GDP are much more revealing.
- Secondly, these data provide a broad outline of the socio-economic system of countries and can therefore serve to explain differences in performance of or spending levels for particular services. For instance, a relatively high level of health care spending can be a result of a high proportion of elderly people in the population. It may also be assumed that the number of years young people spend in education will be related to the level of prosperity or unemployment in a given country.

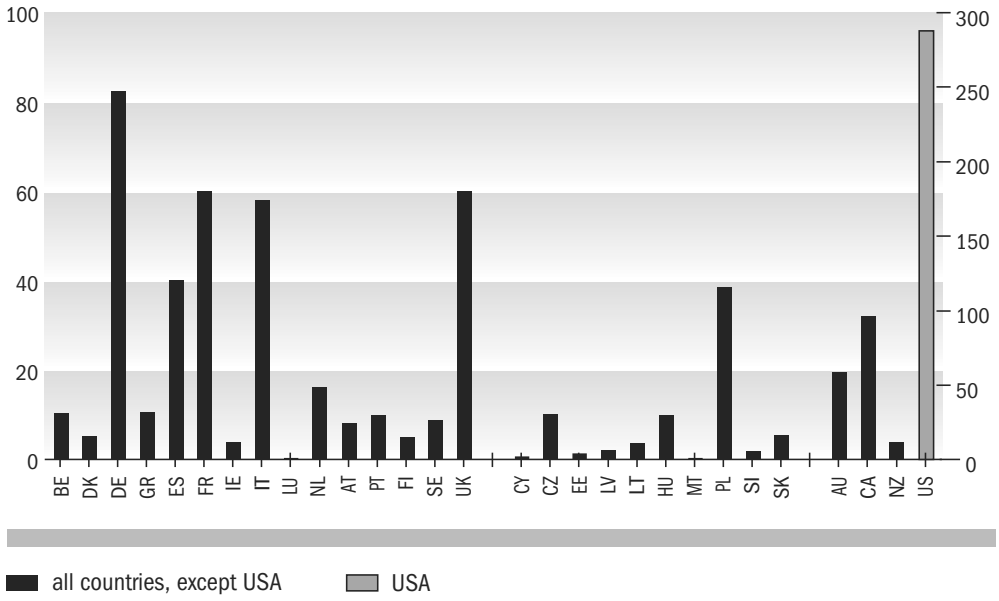
Population

Demography has major implications for a country's economic and social development. Most relevant are population size, the current age-profile of the population and long-term demographic trends. Population size determines variables such as per capita expenditure, doctors per head of population, and so on. The age profile of the population is important, among other things, for the economic growth potential of a country: youngsters under the age of 15 and elderly people over the age of 64 do not generally participate in the production of goods and services. It is therefore useful to divide the population into three age groups: young people (0-14), the elderly (65+) and the potential labour force (15-64).[1] Certain public spending programmes are also tied to age: young people are the main target group of education, the elderly take up pension payments and make disproportionate use of health care facilities. Long-term demographic trends determine the growth of the overall population and the share of each of the three age groups distinguished above. Changes in the size of total population and the share of major age groups are the result of the birth rate (fertility), mortality (life expectancy) and international migration.

Countries covered in the report vary markedly in terms of total population size. By far the largest is the United States (US), with a population of around 300 million in 2003. Eight of the countries included in the analysis have a population of between 20 and 80 million (see Figure 2.1): Australia, Canada, Poland, Spain, Italy, France, the United Kingdom (UK) and Germany. There are eighteen countries with a population of 10 million or less. Malta, Cyprus and Luxembourg actually have fewer than a million inhabitants. With its population of 16 million, the Netherlands is always keen to stress that it is the 'biggest of the small countries'. The EU-15 have a total population of 375 million, and the new member states count 75 million inhabitants, more than half of whom (39 million) live in Poland.

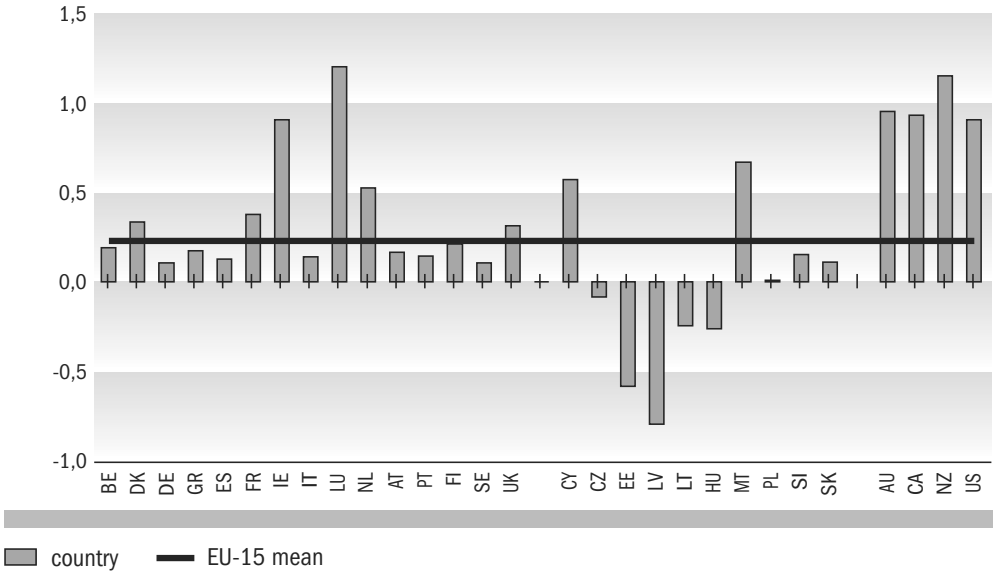
[1] Drawing the line at 15 might seem a little dated, given the fact that nowadays the majority of young people are in full-time education until the age of 18. However, because the traditional age 15 limit is used in setting policy goals under the Lisbon Agenda, we have stuck to it in this report.

Figure 2.1 Total population, 2003 (million inhabitants)



Source: US Bureau of Census

Figure 2.2 Average annual growth rate of population, 1995-2003



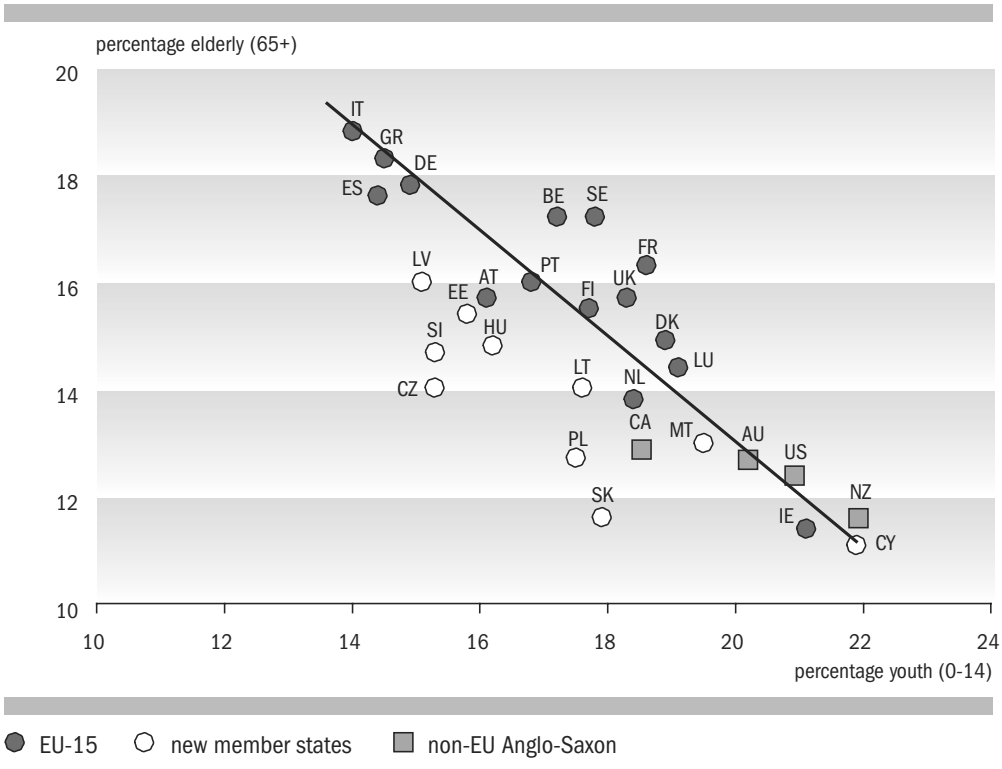
Source: US Bureau of Census (SCP revision)

Figure 2.2 looks at trends in population size over the period 1995-2003. The non-EU Anglo-Saxon countries, and EU member states Ireland and Luxembourg, saw their population rise by around 1% a year. Growth in the Netherlands, Cyprus and Malta was around 0.5%. In most of these countries, high net immigration is the main explanatory factor. The other EU countries and new member states Slovenia and

Slovakia post a population growth rate between 0.1% and 0.5%. The majority of these countries have an ageing population as a result of the declining birth rate during the past few decades, coupled with a gradual rise in life expectancy. Most of the former Eastern bloc countries have a declining (Hungary, the Czech Republic and the Baltic States) or more or less stable (Poland) population. Estonia and Lithuania have actually seen their populations fall by more than 0.5%. A similar trend is occurring in the Russian Federation. The contracting of the population in these countries can be attributed mainly to falling birth rates, prompted by the disappearance of childcare services and growing financial uncertainty as a result of rising unemployment and a high divorce rate (De Jong and Broekman 1999). Life expectancy is also poor (see also Section 4.7). This applies particularly to men, whose life expectancy in these countries is an average ten years lower than it is for women. The cause lies mainly in lifestyle (unhealthy diet, smoking, alcohol consumption), and also in violence, accidents and suicide (Van Hoorn and Broekman 1999). In this respect, the Baltic states are faring worse than the other new accession States.

Figure 2.3 shows the percentage of young and elderly people ('dependency ratios') in each country.

Figure 2.3 Population by age group, 2002



Source: US Bureau of Census, SCP revision

Population of the countries situated in the top left panel of Figure 2.3 have aged most (i.e. have less youngsters than elderly people): Italy, Greece, Spain and Germany. The other extreme (more youngsters than elderly people) lies in the bottom right panel: the non-EU Anglo-Saxon countries, Ireland and Cyprus.

The combined dependency ratios of the young and the elderly determines *demographic pressure*, given the fact that people in these age groups do not generally participate in the labour market. The complementary group – the 15- to 64-year-olds – are known as the *potential* labour force. A line corresponding to a demographic pressure of 33% has been drawn in the figure. A country's position perpendicular to this main axis reflects its relative demographic pressure. In a number of new member states and – to a lesser degree – in the Netherlands, the demographic pressure is relatively weak, while in countries like Belgium, Sweden, France, the United Kingdom and Denmark it is relatively strong.

Forecasts suggest that the 'dejuvenation' of the populations of the Baltic and Central European states will continue for several decades, while ageing will continue throughout Europe well into the 21st century. The total population will continue to grow for a few decades in Northern and Western Europe, but will in fact decline slightly in Central Europe, and fairly heavily in the Baltic states (Van Hoorn, Van der Gaag and Huisman 1999).

Economy

Gross Domestic Product (GDP) measures the size of the economy. It is a fairly rough measure since, in the absence of market prices, production in the public sector is valued at the costs of the resource inputs, and household production is not included. To allow international comparison, GDP in national currencies has to be converted to a standard unit. To this end, the US dollar is often used, but this report expresses GDP in euros.

As is customary in international comparisons, national currencies are not converted using exchange rates, but 'purchasing power parities' (PPP). To determine PPP, international bodies such as Eurostat, the OECD and the World Bank regularly establish what a certain representative basket of products costs in different countries.[2] Amounts in national currencies are then converted to euros, using the ratio of the cost of the basket in euros in the Netherlands to the cost of the same basket in the local currency. PPP allow calculating the purchasing power sacrificed for the goods and services included in the particular 'basket' used. For comparisons over time, the amounts taken into account must also be corrected for inflation.[3]

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2 A well-known but highly simplistic variation on this is based on the price of a Big Mac in the national currencies of the countries concerned.

3 This is determined by inflation in the country whose currency has been chosen as the standard – the Netherlands in this case – because the difference between the inflation rate in the standard country and the other countries has already been accounted for in purchasing power parity.

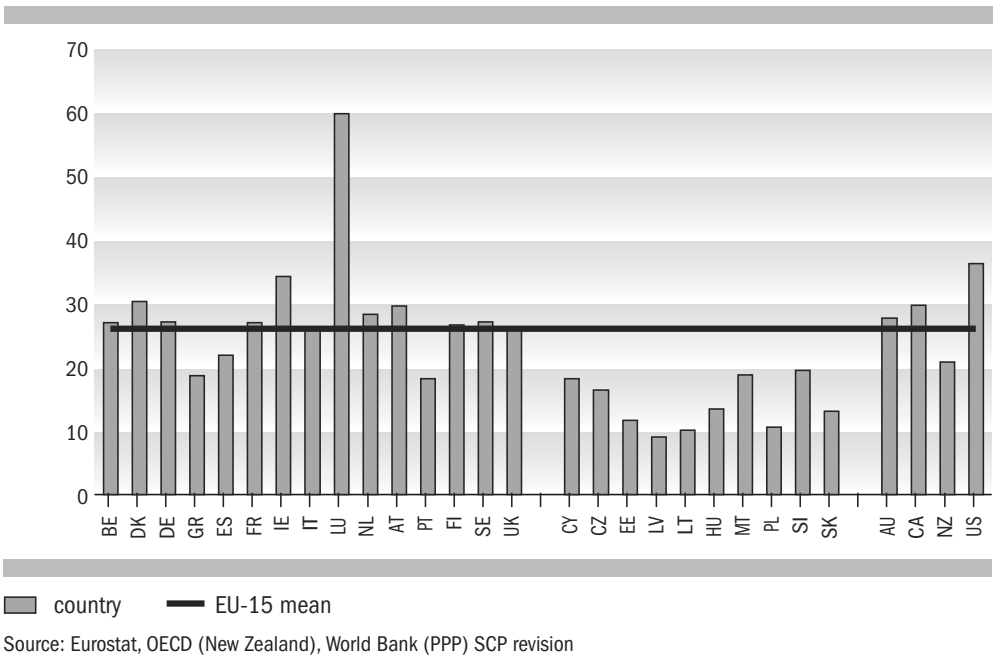
Annex B.1 discusses some of the finer details of converting currencies using purchasing power parities, and explains why the amounts are expressed not in nominal euros but in *Dutch* euros.

In this report, GDP is often used to standardise amounts spent (e.g. education spending or health care spending as a proportion of GDP). In that case, it is not necessary to convert national currencies to Dutch euros. However, problems associated with international comparisons of national currency amounts crop up, once one wants to calculate necessary to country averages.
GDP is also often standardised, relative to the size of the population. GDP per capita gives an impression of a country's level of prosperity (Figure 2.4). To compare the prosperity of nations, conversion of GDP per capita in a single currency via purchasing power parities is essential.

Luxembourg is the most prosperous of the 29 countries, with GDP per capita at almost 60,000 euros. The EU-15 average is 25,000 euros per head. The US and Ireland stand well above that, at 35,000 and 33,000 euros respectively. At 27,000 euros, the Netherlands is in the upper reaches of the middle section. A number of Southern European countries (Greece and Portugal) and all new member states come in with a relatively low score (below 20,000 euros). Poland and the Baltic states have the lowest GDP per capita, at around 10,000 euros.

The EU-15 average is just over 70% of GDP per capita in the US. Around half of the 30%-gap can be explained by the higher labour participation rate and number of hours worked per employee in the US: in terms of GDP per hour worked – a measure of labour productivity – France, the Netherlands, Belgium and Luxembourg are actually ahead of the US (CPB/SCP 2003).

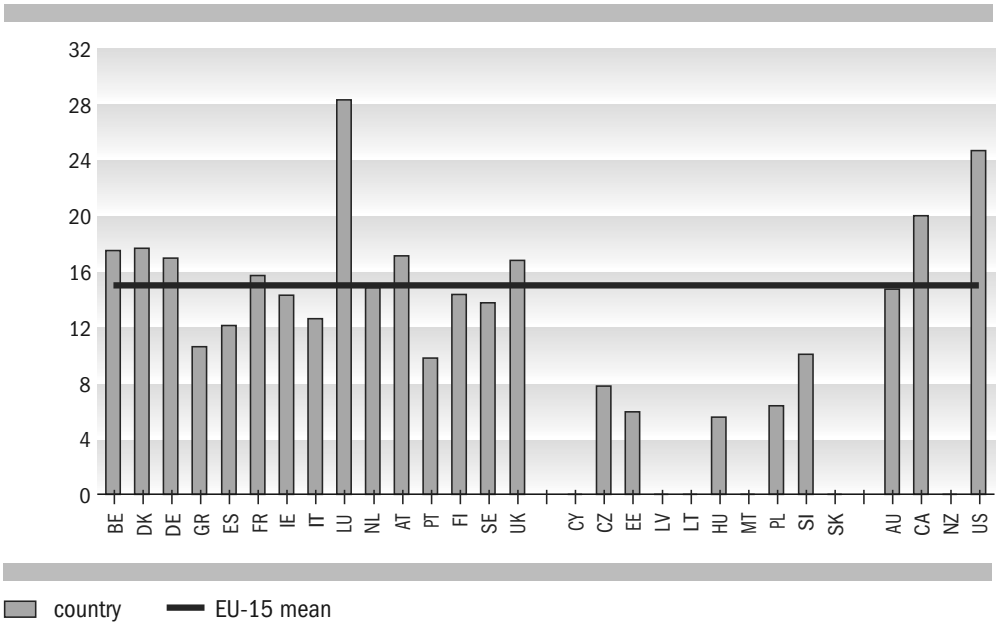
Figure 2.4 GDP per capita, 2002 (1000 NL€, purchasing power parities)



Source: Eurostat, OECD (New Zealand), World Bank (PPP) SCP revision

GDP has its disadvantages as a measure of prosperity. Firstly, it might be that a proportion of value added within national borders is remitted to third countries in the form of company profits. Secondly, some of the value added is consumed by the government. Thirdly, the value of household production is not included in GDP. Finally, the welfare aspect of leisure time is disregarded. Figure 2.5 therefore shows an alternative measure of prosperity: standardised disposable income per household, which to some extent compensates for these shortcomings. Standardisation is needed because of the economies of scale at work in households (two single people living alone need more money than a cohabiting couple, on housing for example) and because children are not as expensive to maintain as adults.[4]

Figure 2.5 Mean equivalised net income, 2000 (1000 NL€)



Source: Eurostat, Luxembourg Income Study (New member states, non-EU countries) SCP revision

The pattern in Figure 2.5 is fairly consistent with that in Figure 2.4, in that the US, Canada and Luxembourg have a high income and the new EU member states and a number of Southern European countries record low income levels. However, standardised disposable household income is also relatively low in Sweden and Finland (as a result of the high proportion accounted for by the public sector) and in Ireland (because of the high proportion of company profits not directly showing up in family budgets[5]).

4 Eurostat's standardisation formula has been used here: $I_h^* = I_h / (0{,}5 + 0{,}5\ v + 0{,}3\ k)$, where I_h is household income, I_h^* is standardised household income, v is the number of adults and k is the number of children.

5 Despite all the literature on the 'Irish miracle', we have been unable to find any further analysis of this question. These could be resources used for reinvestment in the company or dividends for foreign investors.

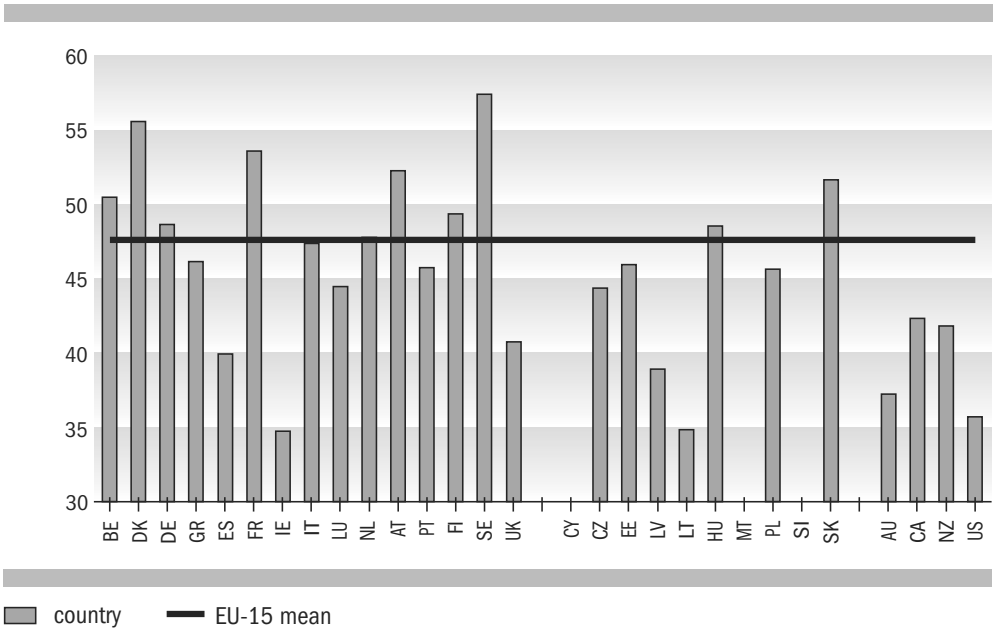
2.3 *Public sector*

This section focuses on total public spending and the use of resources by the entire public sector. The separate subsectors are discussed in the subsequent chapters. The confrontation between total resources spent and total performance delivered is postponed to the final chapter.

Public expenditure

The public spending ratio (Figure 2.6) is a measure of the burden placed upon the economy by the public sector. It ranges from 57% in Sweden to 35% in Ireland. With a score of 47%, the Netherlands was near the EU-15 average. Values above 50% are found for Belgium, Denmark, Sweden, France, Austria and Slovakia. Ireland, the Czech Republic, Lithuania, Australia and the US have public spending ratios below 40%.

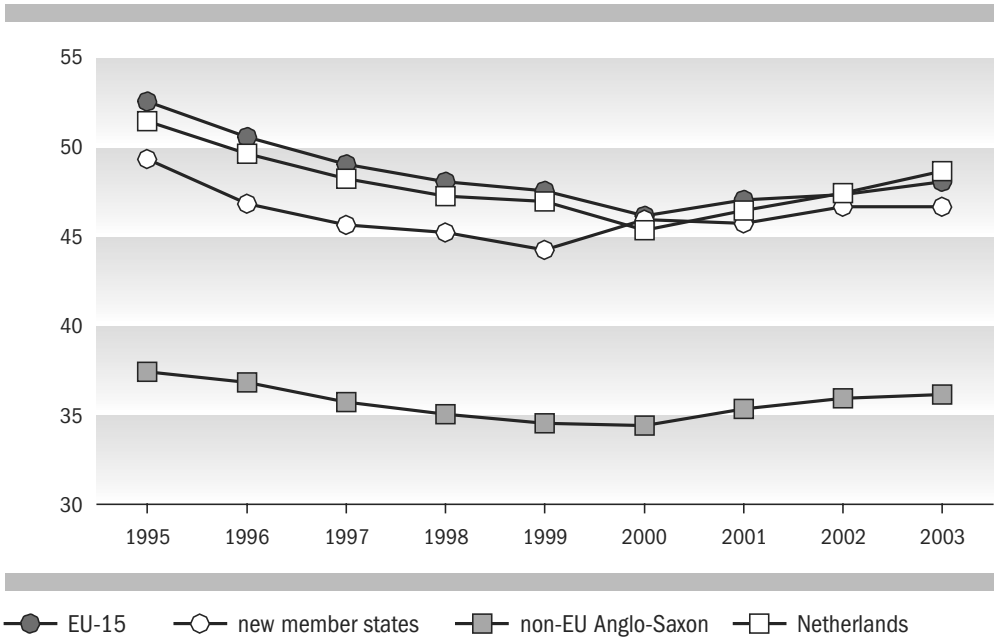
Figure 2.6 Public expenditure, 2002 (percentage of GDP)



Source: Eurostat, OECD (Czech Republic, Hungary, Poland, Slovak Republic and non-EU) SCP revision

In most countries, the public spending ratio fell between 1995 and 2001 (Figure 2.7). The trend in the Netherlands is reasonably consistent with the average for the EU-15 and the new member states. Since 2000 the share of public spending in GDP has slightly increased again in the Netherlands, as a consequence of 'investments' in education, health care and public safety.

Figure 2.7 Public expenditure, 1995-2003 (percentage of GDP)

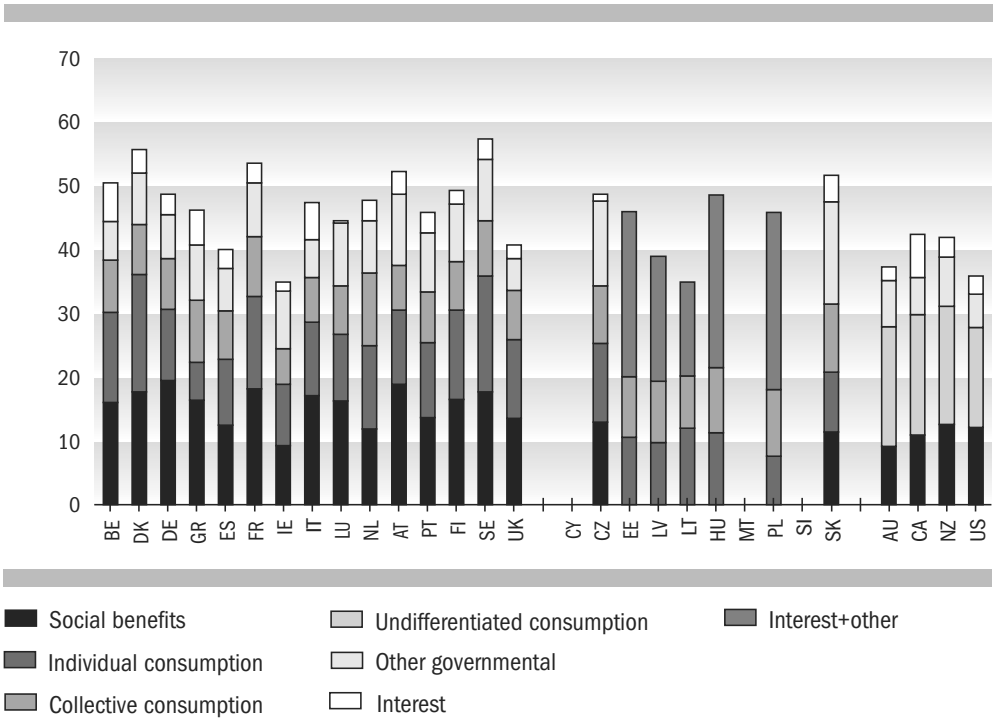


Source: OECD, Eurostat (Estonia, Latvia, Lithuania), World Bank (Czech Republic, Malta, Poland) SCP revision

Figure 2.8 divides public expenditures into five categories:
- Collective consumption, which includes purely collective services provided by the government (public administration, defence, police and infrastructure)
- Individual consumption, which includes individual services to members of the public (including education and health care)
- Individual transfers in the form of social security benefits and social assistance
- Interest paid on the national debt
- A heterogeneous category of 'other' expenditures.

Data shown are for the last year for which data are available (2002 in some countries, 2001 in others).

Figure 2.8 Public expenditure, 2002 (percentage of gdp)



Source: Eurostat, OECD(Czech Republic, Hungary, Poland, Slovak Republic and non-EU) SCP revision

Along with the Scandinavian countries, Belgium, France and Portugal, the Netherlands spends ample resources (24% of GDP) on collective and individual consumption. Sweden tops the list with 28% of GDP, while Greece brings up the rear with 16%. The Netherlands spends more on collective consumption (11% of GDP) than any other of the 29 countries covered in this report.

By contrast, the Netherlands, Ireland and the non-EU Anglo-Saxon countries record the lowest social security spending. In 2002, the Netherlands transferred 12% of its GDP to benefit recipients, even somewhat less than the corresponding figure for the US. In contrast, in Germany and France social security programmes absorbed 19% and 18% of GDP, respectively. The relatively low share of social security expenditures in the Netherlands can be explained to some extent by the relatively small number of senior citizens. Outlays on the state old age pension programme (6% of GDP) are significantly below the EU-15 average of 10%. On the other hand, the Netherlands has a relatively large number of people claiming disability benefits with costs of the programmes concerned at 2.7% of GDP, one-and-a-half time the EU-15 average of 1.8%. Another significant explanation is the recent privatisation of sickness benefits, the costs of which run at around 1% of GDP. The picture of relatively low social security expenditure in the Netherlands would be even more pronounced after correcting for the fact that, unlike many other countries, the Netherlands taxes the social security benefits in full (see Einerhand et al. 1995; Adema 2001). However, it is important to note that expenditure on rent subsidies, subsidised jobs and the

health care sector have not been taken into account. Applying a broader category 'social expenditure' (see for example CPB/SCP 2003), the Netherlands' position moves towards the EU-15 average.

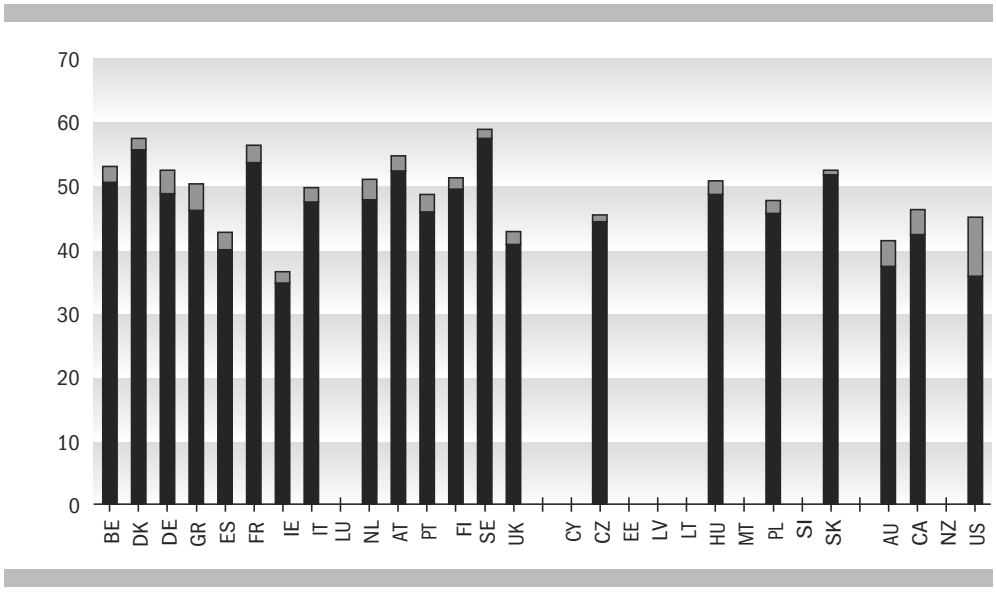
In terms of interest paid on public debt, Belgium, Greece, Italy and Canada top the table, at around 6% of GDP. At 3% of GDP, the Netherlands is close to a middle position. Interest payments are relatively low (around 2% of GDP or less) in Ireland, the United Kingdom, Australia, Finland and the Czech Republic. This is a negligible item in Luxembourg's budget. Of course spending on interest depends on the size of the national debt, which in most of the first group of countries mentioned is 100% of GDP or more. Again the Netherlands falls somewhere in the middle, with national debt running at 55% of GDP.

The decline in the public expenditure ratio that occurred in most countries between 1995 and 2002 is partly explained by lower interest payments. Most countries saw their debt ratio drop, combined with a sharp fall in interest rates. In the case of the Netherlands, transfer payments also fell sharply, from 18% of GDP in 1990, to 15% in 1995 and 11.5% presently, partly as a consequence of much lower unemployment.

Consumptive government expenditure as a proportion of GDP can be interpreted as a measure of operating costs of the public sector. In most countries, this ratio remained more or less stable between 1995 and 2002. For certain purposes, however, it is not enough simply to compare levels of government expenditure. If, for example, one wants to relate expenditure to performance or to the effects of services like education and health care, it is necessary to take account of all resources deployed, including private funding. The same applies to analyses of demand or need for certain services. It may be assumed that the demand for (or use of) services across countries is fairly stable (given GDP per capita), but countries will differ in the mix of public and private financing of those services, reflecting voter preferences and the prevailing ideology. It is therefore useful to add private spending to consumptive government expenditure on services such as health and education. The result is shown in Figure 2.9: private expenditure on education and health care has been lumped together with all public consumption spending and is then expressed as a percentage of GDP.[6]

6 A similar correction is also possible for transfer payments. For instance, one could add private spending on sickness benefit insurance to public expenditure. This would make spending on transfers in the Netherlands more comparable over time and with other countries (see also the OECD's analyses on total (public plus private) social security expenditure, Society at a Glance 2002, 56-57). However, such a correction is not relevant in the context of this report.

Figure 2.9 Total public expenditure plus private expenditure health and education, 2000 (percentage of GDP)



Source: Eurostat, OECD (Czech Republic, Hungary, Poland, Slovak Republic and non-EU) SCP revision

In the non-EU Anglo-Saxon countries, in particular, with a relatively low level of government expenditure, the correction for private expenditure has significant impacts. The most striking example is the US, where health care expenditure is not only relatively high (12.7%), but of which 55% is in fact paid for from private resources.

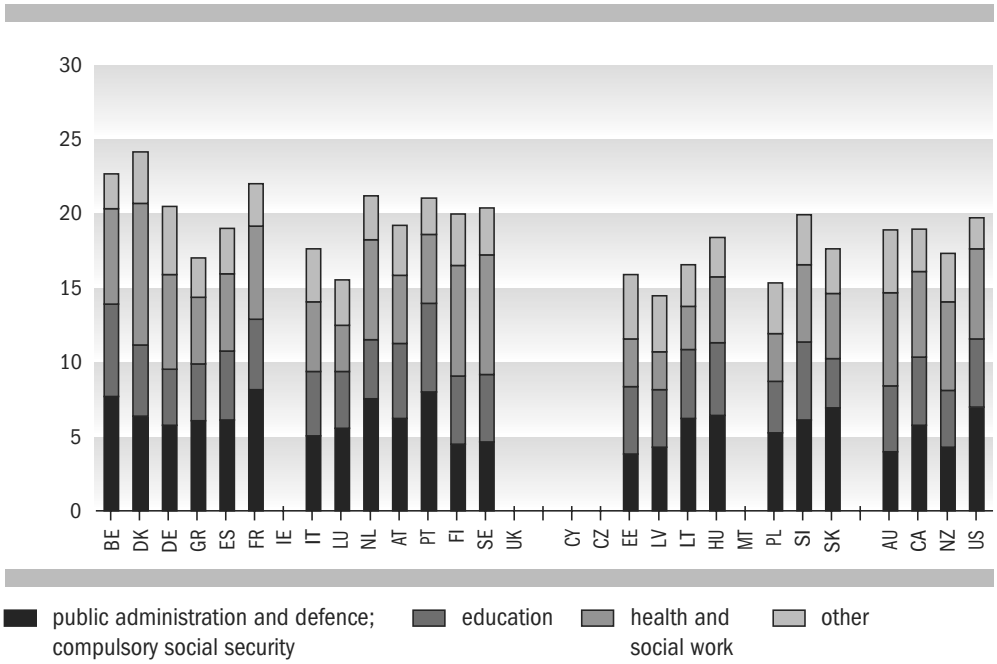
Public service sector

The Social and Cultural Planning Office has for many years used the Dutch term 'quartaire sector' (in this report not translated as 'quaternary sector', but as 'public service sector'). This sector is defines as the collection of services related to the traditional functions of government: public administration, defence, infrastructure, education, health care, social services etc. This definition is in line with the COFOG classification. It takes into account both public producers and private producers, whether paid from the public purse or not. Roughly speaking, the public service sector corresponds to NACE economic activity classes 75 to 92.[7] The available international data do not allow to present the total costs of the public service sector thus defined. Instead, Figure 2.10 shows the value added in the public service sector, estimated on the basis of the costs incurred (wage costs plus capital costs). Material expenditure

7 This is the operational definition used in this paper, given the lack of detailed data on all countries involved. In Dutch applications, branches such as distribution of pharmaceuticals, public transport and sheltered employment are also included.

– goods and services used as input by public service sector producers but produced by other sectors – is not taken into account.[8]

Figure 2.10 Value added in public service sector, 2001 (percentage of total value added)



Source: OECD, Eurostat (Estonia, Latvia, Lithuania, Hungary, Slovenia) SCP revision

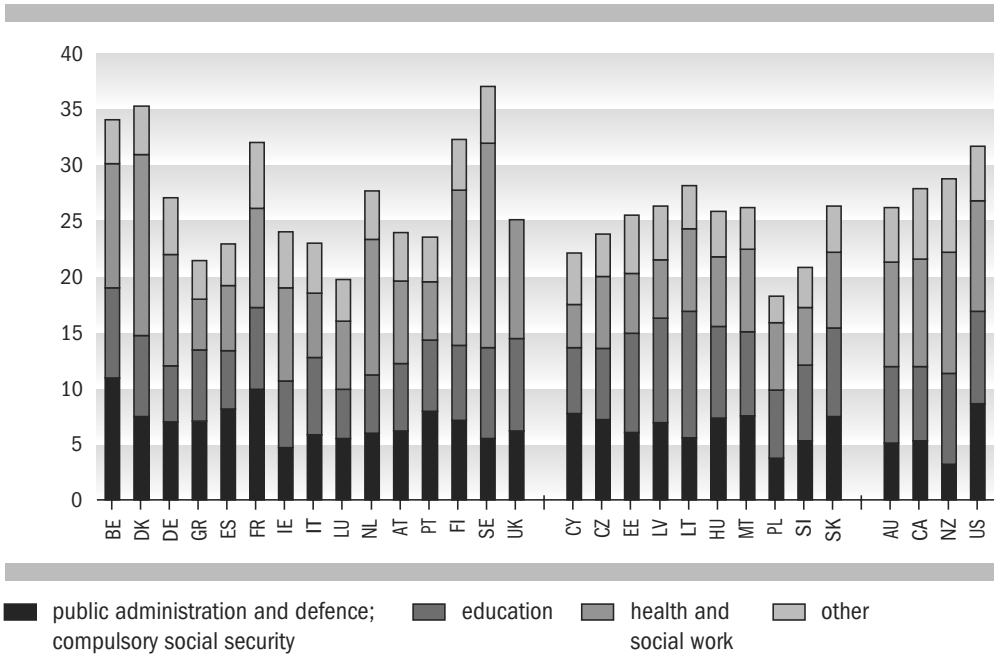
Figure 2.6 illustrates that public spending as a proportion of GDP ranges from around 35% in Ireland and the US to 57% in Sweden (factor 1.6). After a simple correction for private expenditure on education and health care (Figure 2.9), the spread between spending ratios is somewhat smaller, at least in relative terms: US 41% to Sweden 62% (factor 1.5). Concentrating on consumptive public spending (Figure 2.8) the difference between Sweden and the US is even more pronounced: 16% as opposed to 28% (factor 1.8). However, as Figure 2.10 makes clear, the value added in the public service sector differs very little: 19.5% in the US, against 20.5% in Sweden (factor 1.05). This low public spending on goods and services by the US government, that EU countries tend to finance largely from tax revenues, are compensated by much higher private spending. Value added in the public service sector shows significant variation between countries. Denmark is at the top of the list with 24% of GDP, followed by Belgium

8 SCP publications on this subject (see for example Kuhry and Van der Torre 2002; Kuhry and Veldheer 2004) compare the integrated costs of public service services with production volume as measured on the basis of physical product indicators (pupil numbers, patient numbers, number of crimes solved etc.), but this approach cannot be applied systematically here as we do not have sufficient data on the other countries.

and France. The Netherlands, along with Germany, Sweden and Portugal are highly placed in the mid-section, while Luxembourg, Latvia and Poland post low scores (around 15% of GDP).

Figure 2.11 presents a similar picture for employment in the public service sector. The share of this sector in total employment is generally higher than its share in GDP (aggregate value added). There are two reasons for this: (1) Public services tend to be relatively labour-intensive, and (2) in the public service sector there is little or no official operating surplus, since many producers do not try to make a profit. Employment in the public service sector ranges from 18% in Poland to 35% in Denmark. The Netherlands (27%) has a high medium score. The high score for the US is very striking (32%).

Figure 2.11 Employment in public service sector, 2001 (percentage of total employment)



Source: OECD, ILO (new member states, excluding Hungary and Poland) SCP revision

In the National Accounts, the activity class "public administration and defence" has a rather broad definition. For the analyses in Chapter 6, it is useful to define the term 'public administration' more precisely. With this aim, Figure 2.12 classifies employment in the 'public administration and defence' sector in greater detail, distinguishing between public administration in the strict sense, defence and the police/judiciary. Available data were insufficient to show employment figures for individual services like tax collection and the administration of social security schemes separately.

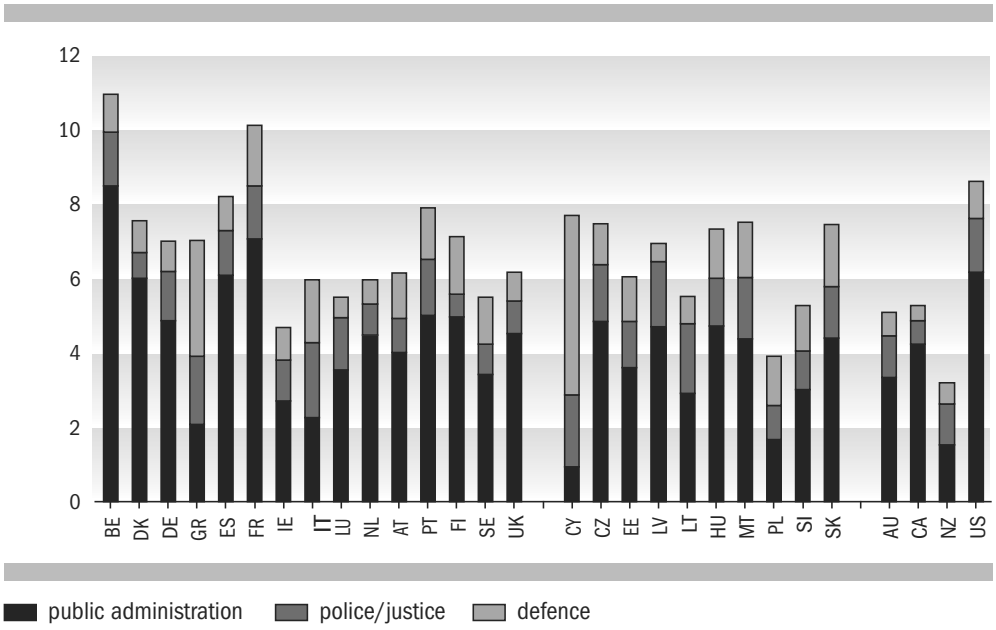
Employment in the public administration and defence sector, expressed as a percentage of total employment, ranges from 11% in Belgium to 3% in New Zealand.

France, Portugal and the US also score fairly high (8% or more). At 6%, the Netherlands are positioned somewhere in the middle. Ireland and Poland bring up the rear, with some 4%.

Employment in the public administration in the strict sense also varies strongly: from 8.5% in Belgium to 1.5% in New Zealand. Again, the US (6%) is near the top of the table, while the Netherlands (4.5%) takes a middle position.

Greece (3%) and Cyprus (5%) in particular devote significant resources to national defence – due in part, to the tensions with neighbouring Turkey. In terms of personnel, employment in the armed forces of the US (0.8%) is not exceptionally high.[9] Employment in the police service and the judiciary is examined at greater length in Chapter 5.

Figure 2.12 Public administration and defence as percentage of total employment, 2000



Source: OECD, ILO, NATO (European Sourcebook, US Sourcebook, AIV) SCP revision

2.4 *Macro-economic performance*

This section looks at a number of macro-economic indicators: economic growth, income inequality, the poverty rate, unemployment, labour market participation, inflation and the budget deficit. These indicators indirectly reflect the macro-economic performance of governments. The literature distinguishes three economic functions of government: allocation, stabilisation and distribution (Musgrave and Musgrave, 1984).

9 This is no longer the case, however, if we also look at expenditure. Military expenditure as a percentage of GDP for the US is far above average with 3,1 percent.

Specific objectives for economic policies have been set out in key European Union documents: the Stability and Growth Pact (EC 1997) and the Lisbon Agenda (EC 2000). The Stability and Growth Pact, for example, specifies a target of 2% or less for inflation, and for the budget deficit which should not exceed 3% of GDP. The Lisbon Agenda reflects the European Union's desire to become the most dynamic and competitive economy in the world. Besides targets associated with establishing a knowledge-based economy, the Agenda also identifies a number of socio-economic goals. The target labour market participation rate is 70% or more of the potential labour force. The Lisbon Agenda also stresses the desirability of reducing unemployment from on average 10% to 4%, and reduce the number of poor households from 18% to no more than 10% of all households. Most of these goals are in the domain of the government's stabilisation function, whereas the poverty target is explicitly associated with its distribution function.

Performance of national governments in terms of allocation is evaluated in the chapters on education (3), health care (4), the police/judiciary (5) and public administration (6).[10]

Stability and growth

Figure 2.13 shows real growth of Gross Domestic Product, that is nominal growth corrected for inflation.

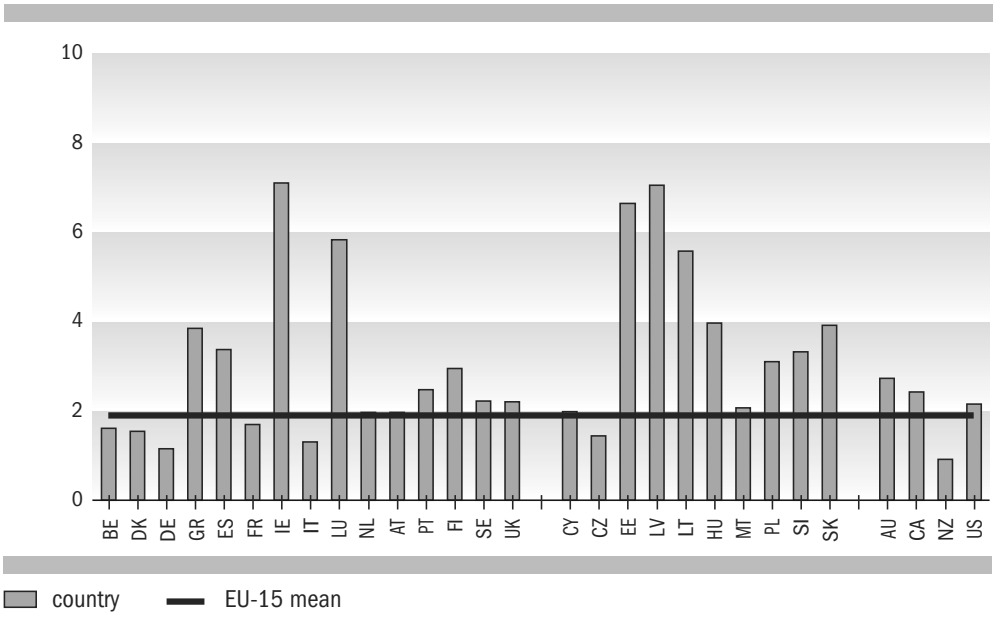
The EU has set out no specific targets for economic growth. This indicator is strongly influenced by exogenous factors such as the state of the global economy.

The performance indicators reviewed in this section include economic growth, but not GDP per capita. This choice is based on the fact that the absolute prosperity of a country is mainly determined by events in the past, and not by recent government policy. Other measures such as unemployment, inflation and public the sector deficit fluctuate much more rapidly and are influenced fairly immediately by recent policy action and developments.

Average economic growth in the EU-15 from 1995 to 2003 was around 2%. It was significantly higher (4% or more) in Ireland, Luxembourg, the Baltic states and Hungary. A number of Southern European countries (Greece, Spain and Portugal), Finland and most of the other new member states score relatively high (over 2%). Like the Netherlands, most Anglo-Saxon countries have a fairly average score. Belgium, Denmark, Germany, France, Italy and the Czech Republic saw slow growth, and New Zealand's economy grew by only 1% over this period.

[10] More in general, the allocation function of government deals with the provision of collective or semi-collective goods and services such as infrastructure and public safety, promoting consumption of goods and services with positive externalities (education and health care) and curbing consumption of goods and services with negative externalities (environmental pollution).

Figure 2.13 Average annual growth rate of real GDP per capita, 1995-2003



Source: OECD, Eurostat (Estonia, Latvia, Lithuania), World Bank (Czech Republic, Malta, Poland, price indices) SCP revision

Comparing Figures 2.4 and 2.13, it is clear that in Europe GDP per capita has converged to a certain level. Countries with a relatively low GDP per capita have generally witnessed relatively strong economic growth. This applies both to a number of Southern European countries and to many of the new member states as well. In the countries of Central and Eastern Europe, the recent expansion follows a period of sharp decline after the fall of the Iron Curtain.[11]

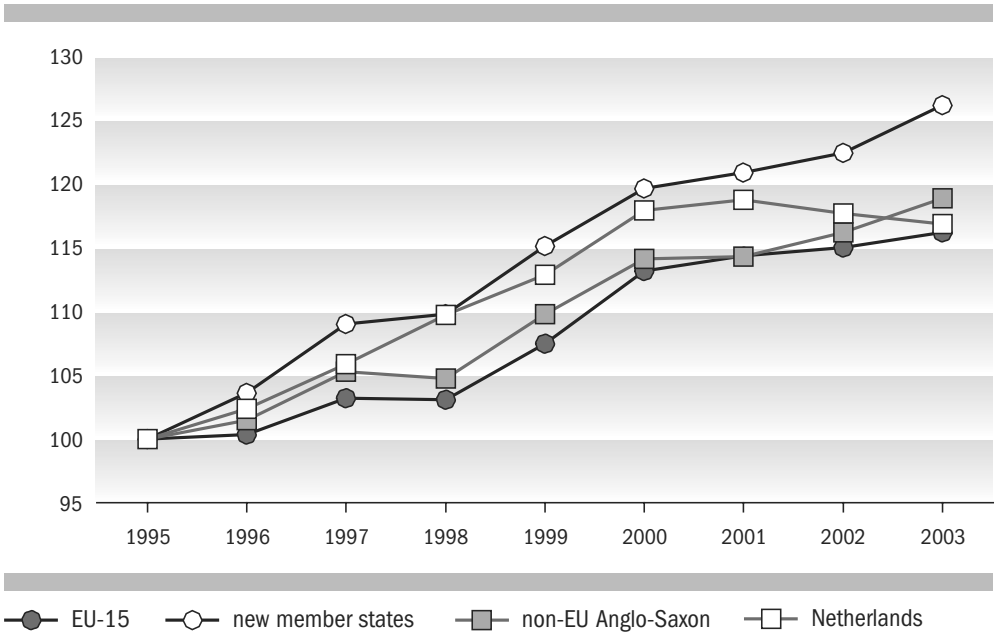
Some of this growth will be down to rationalisation in the public sector, the privatisation of former state industries, the introduction of market forces and fewer restrictions on movements of capital and persons. The favourable investment climate resulting from relatively low wage costs and a well-educated workforce has undoubtedly also helped. In its *Four Futures of Europe*, the Netherlands Bureau for Economic Policy Analysis (CPB) assumes that the new member states and the other countries of Eastern Europe will continue to see relatively strong economic growth.

Figure 2.14 shows the average economic growth rate for groups of countries over the period 1995-2003. It illustrates once more the relatively rapid economic growth in (most of) the new member states and in the Netherlands, sometimes ascribed to the virtues of the 'polder model'. The initial euphoria over 'the Dutch miracle' has by now vanished since as from 2001 the Netherlands has lost a lot of the ground it gained during the second half of the 1990s.

[11] The Czech Republic is the exception here, with relatively low growth associated with a monetary crisis in 1997 (GVG 2003). Other reasons proffered include badly organised privatisation processes and the loss of heavy industry.

This is not the place to speculate about the background and causes of this portentous development. However, European countries often seem to go through a cycle of relatively strong growth followed and/or preceded by periods of strong decline. This has happened in Germany, Sweden and the United Kingdom in the past.

Figure 2.14 Development of real GDP per capita in indices (1995 = 100)



Source: OECD, Eurostat (Estonia, Latvia, Lithuania), World Bank (Czech Republic, Malta, Poland, price indices) SCP revision.

The unemployment rate is considered to be an important indicator of economic performance (Figure 2.15). It tends to rise during economic downturns and fall in periods of economic recovery, and is therefore linked to economic growth (albeit with some delay). In 2003, Poland and Slovakia had the highest unemployment rate, at over 15%. The Baltic states also had 10% unemployment or more. Spain heads the EU-15, at around 11%. The average for the EU was some 8% in 2003. The Anglo-Saxon countries had unemployment running at 5% to 7%, while Ireland, the Netherlands, Luxembourg and Cyprus had less than 5% unemployment. At around 3%, the Netherlands was still doing quite well in 2003.[12]

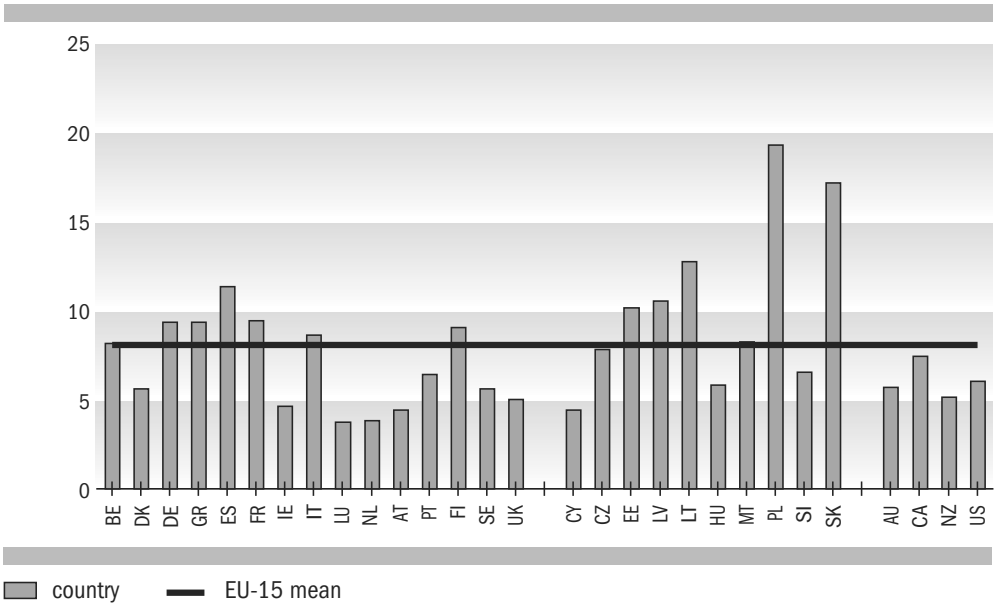
The Netherlands' relatively favourable position is reaffirmed in Figure 2.16, which shows trends in unemployment rates. In the non-EU Anglo-Saxon countries the situation deteriorated slightly in 2000-2002. In the Netherlands, the turnaround in the economy can be seen most clearly in the years 2002-2003.

[12] However, the Netherlands applies a rather strict definition of unemployment. Only people who are actively seeking work for more than 12 hours a week are counted. The percentage of people on unemployment benefit or social assistance is significantly higher.

The most striking development is the sharp rise in unemployment in the new member states, which began in 1999. This contrasts starkly with strong economic growth (Figure 2.14) and decreasing inflation (Figure 2.19) in these countries. The shift to a market economy in these countries apparently led to the loss of jobs in less viable sectors.

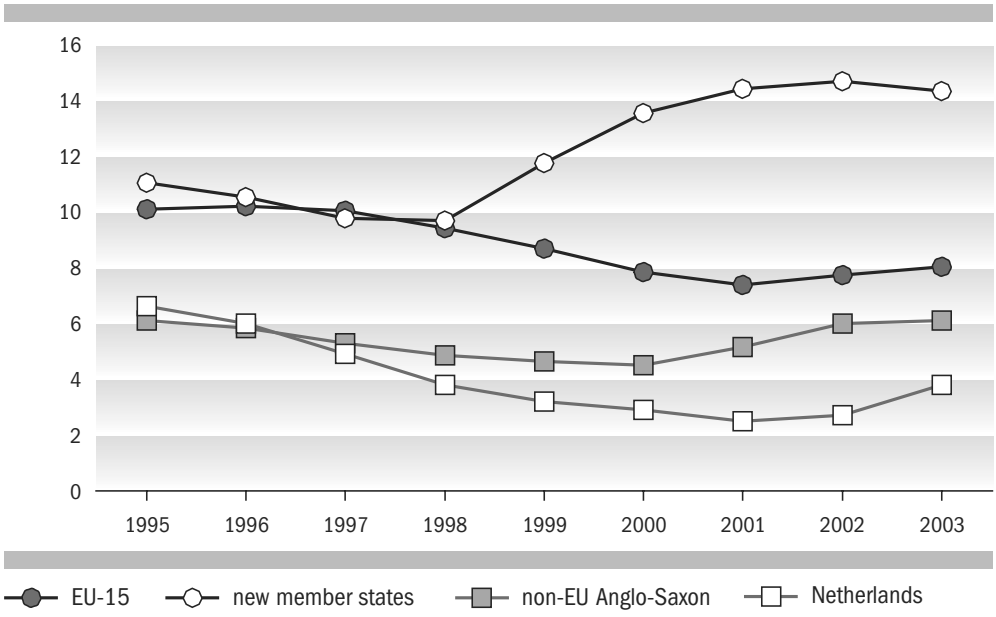
In the period 1995-2001 the average rate of unemployment in the EU fell from around 10% to 7%. However, progress towards the Lisbon Agenda target of 4% has been severely hampered by the current economic downturn.

Figure 2.15 Unemployment rate, 2003



Source: Eurostat, OECD (Australia, Canada, New Zealand) SCP revision

Figure 2.16 Development of unemployment rate,1995-2003

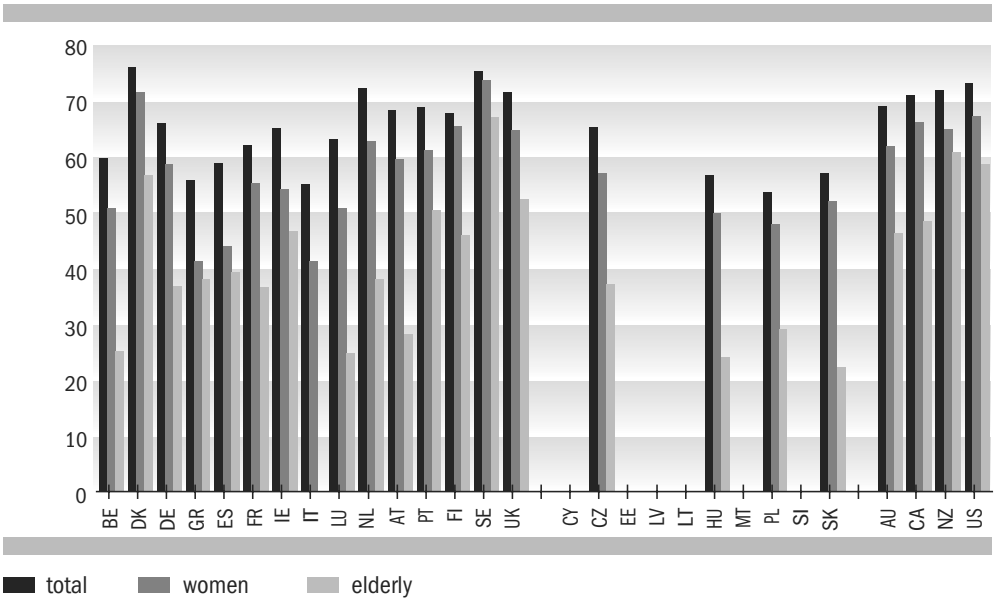


Source: Eurostat, OECD (Australia, Canada, New Zealand) SCP revision

An indicator like the unemployment rate has its limitations. There are other reasons why people withdraw from the labour market, such as a reduced chance of finding work ('discouraged worker effect'), disability and early retirement. Over the past quarter century, in the Netherlands the disability programme of social security has been used on a massive scale as an exit-route for less productive workers. Employers benefited, because it allowed them to shed excess staff. Employees benefited, because disability benefits are rather more generous than unemployment benefits.

The labour market participation rate is therefore a more comprehensive economic indicator. Figure 2.17 shows the number of working persons as a percentage of the potential labour force.

Figure 2.17 Labour participation, 2002 (percentages)



Source: OECD

The Lisbon Agenda stipulates that the average labour market participation rate in the EU should be raised to 70%. Separate targets of 60% and 50% have been set for women and the elderly (here defined as 55- to 64-year-olds) respectively.

Only the Anglo-Saxon countries (including the United Kingdom), the Scandinavian countries and the Netherlands are currently on target with respect to the average participation rate. Most Southern European countries (Greece, Italy and Spain) and a number of new European Union member states (Poland, Hungary, the Slovak Republic) are below 60%. When it comes to labour market participation among women, the Scandinavian and Anglo-Saxon countries have the highest rates. The Netherlands and Portugal have also made the 60% target. In this respect, the Netherlands has made a remarkable advance: in 1985 the labour market participation rate of Dutch women was still only 35%, putting the country somewhere near the bottom of the table. The rate in Southern European countries is still low (40% to 45%). In terms of

labour market participation among the elderly, Sweden is well ahead of the rest of the field, on 67%. Its Scandinavian neighbours and the Anglo-Saxon countries are also among the leaders. At 38%, the Netherlands falls in the middle, while Belgium, Luxembourg, Austria and three of the new member states post a score below 30%.

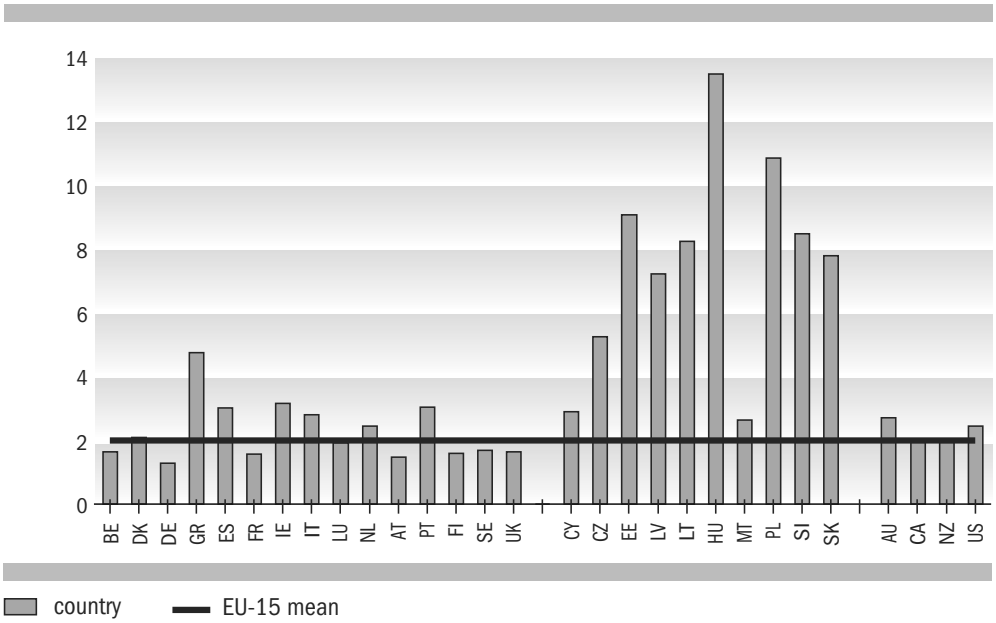
So the Netherlands does fairly well in terms of the general and women's labour market participation rates. In this sense, it has already met the Lisbon targets. However, the country compares less well if one also takes into account the number of hours worked. Figures from Eurostat (NewCronos) and the OECD (2004ba) show that the average number of hours per worker per week in the new member states is around 40, and between 36 and 40 in the EU-15. The number of hours worked in Denmark and Sweden stands at about 35. The Netherlands lags well behind, on 31 hours. This is due particularly to the small number of hours worked by female employees (24, as opposed to 30 to 40 in other European countries). The number of hours worked in the US is substantially higher than in Europe (in the order of 42 hours per week), and the difference is even greater after corrections for annual leave entitlement and compulsory holidays (Osberg 2001).

From the perspective of social participation, to participate in the labour market seems more important than the exact number of hours one works. Economic performance depends much more on the total number of hours workers put in. And in this sense the Netherlands lag far behind.

Figures 2.18 and 2.19 concern a very important criterion of economic stability: inflation. High inflation undermines confidence of economic agents and can cause a problematic decline in income for pensioners and individuals of independent means. Deflation or a very low or rate of inflation can also hamper economic growth, as households are less inclined to buy consumer durables and entrepreneurs hesitate to order investment goods.

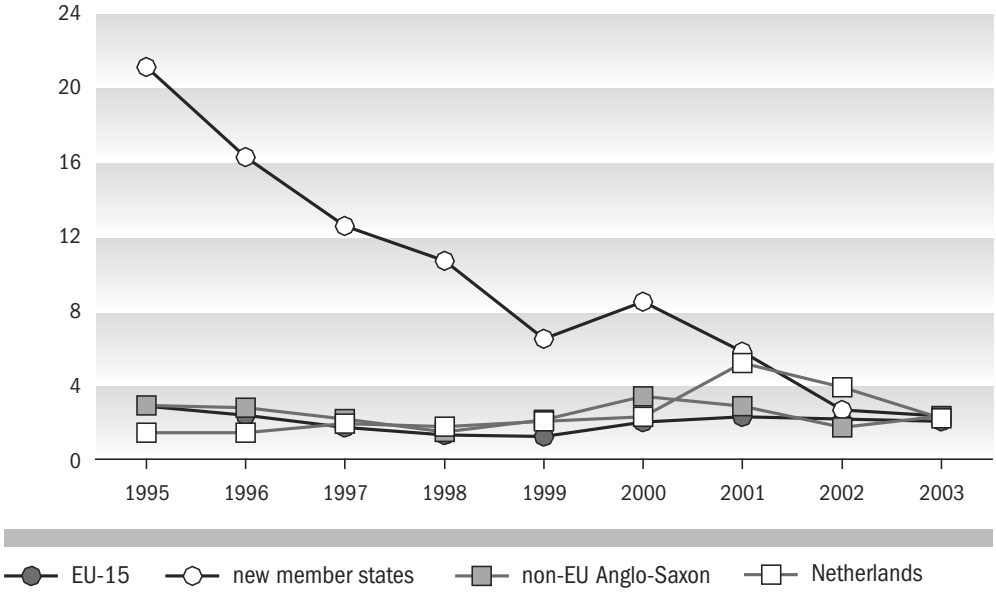
Most EU-15 countries score reasonably well on this criterion, with inflation rates of around 1.5% to 3%. Greece is the only country with a notable higher inflation of about 5%. The non European Anglo-Saxon countries all find themselves around the EU-15 average of 2%. Excluding Cyprus and Malta, all new member states display a far more unfavourable average inflation rate, with Hungary as far up as 13%. In Figure 2.19 however it is showed that all countries are converging over time towards the European average.

Figure 2.18 Mean annual inflation in consumer prices, 2003 (percentages)



Source: OECD, Eurostat (Australia, Canada, New Zealand), World Bank (Cyprus, Latvia, Malta) SCP revision

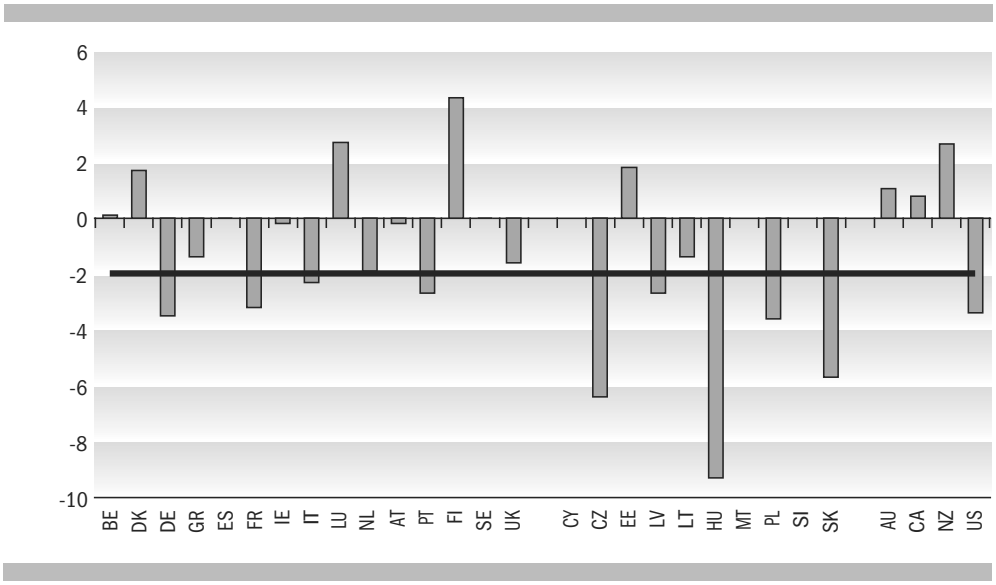
Figure 2.19 Mean annual inflation in consumer prices, 1995-2003 (percentages)



Source: OECD, Eurostat (Australia, Canada, New Zealand), World Bank (Cyprus, Latvia, Malta); SCP revision

Figures 2.20 and 2.21 look at another criterion of economic stability: the balance of the government budget. This is calculated as the difference between receipts and expenditures of the public sector.

Figure 2.20 General government surplus/deficit, 2002 (percentages)

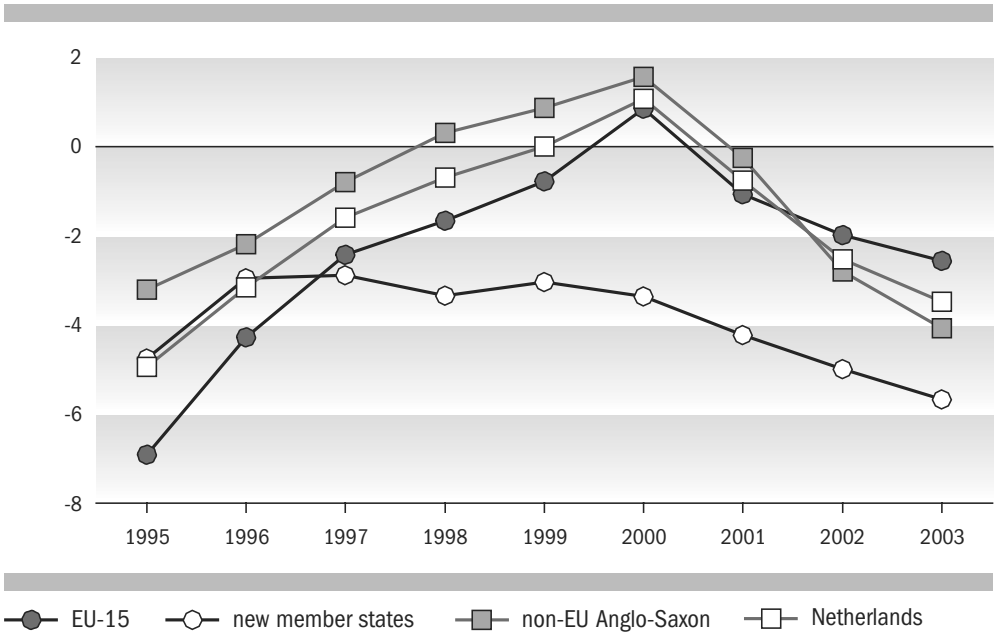


Source: Eurostat, OECD (non-EU Anglo-Saxon) SCP revision

In 2002, ten countries report a budget surplus, whereas sixteen had a deficit. No figures were available for the other three countries. The Stability and Growth Pact imposes a cap: the deficit should not exceed 3% of GDP. The average deficit in the EU-15 is 2%. Germany and France have a deficit higher than 3%. The Northern European countries and Luxembourg typically have a substantial surplus. Some of the new member states, particularly the Czech Republic, Hungary and Slovakia have relatively high deficits (7% to 10% of GDP). Most Anglo-Saxon countries are in surplus, although in 2002 the US had a deficit of over 3%, now approaching 5% of GDP.

Changes in the budget balance after 2000 are striking (Figure 2.21) Before the turn of the century deficits fell and were sometimes even turned into surpluses, but after that the economic downturn took its toll. It now appears that in 2003 the Netherlands may also have exceeded the critical 3% limit to the budget deficit. The average deficit of the new member states fluctuated around 3% to 4% of GDP over the entire period.

Figure 2.21 General government financial balance, 1995-2003 (percentages)



Source: Eurostat, OECD (Estonia, Latvia, Lithuania) SCP revision

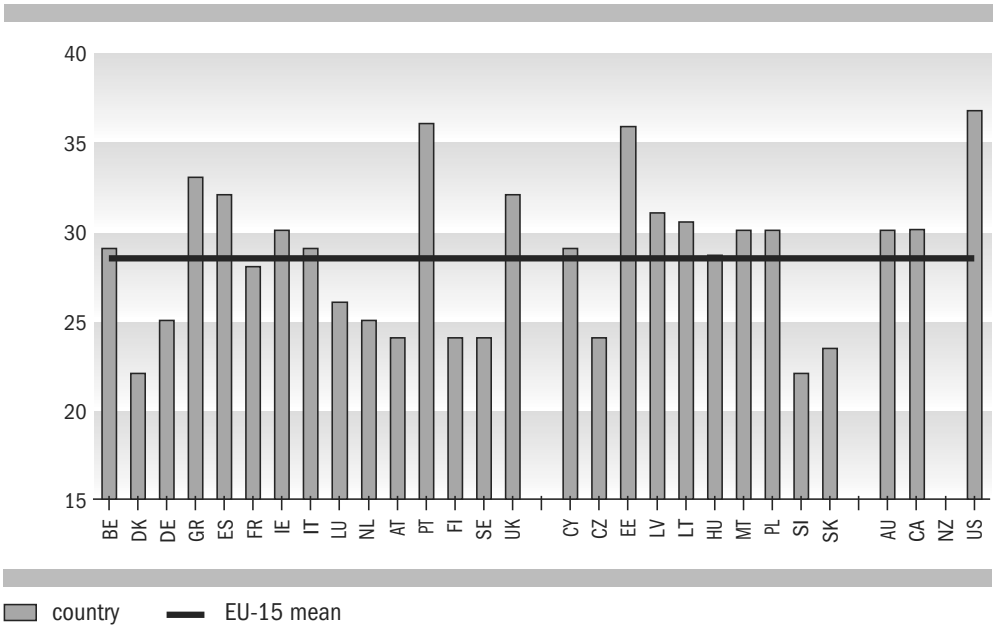
Income distribution

The indicators discussed in the preceding paragraphs are associated with government targets for stabilisation and growth. This paragraph reviews government targets for (personal income) distribution. Two criteria will be examined: income inequality and poverty.

Income inequality is measured using the 'GINI coefficient'.[13] A high GINI coefficient implies that incomes are distributed very unequal, while a low score indicates relatively small income differences. The US has by far the greatest level of inequality (Figure 2.22). The non-EU Anglo-Saxon countries, the United Kingdom, several Southern European countries and several new member states also have high GINI-scores. The Northern European countries, the Netherlands, Germany, Austria, the Czech Republic and Slovenia have relatively small income differences. Denmark has the smallest GINI.

[13] The GINI coefficient lies between 0 (no inequality) and 1 (total inequality) and can be defined as half the relative mean difference between all incomes.

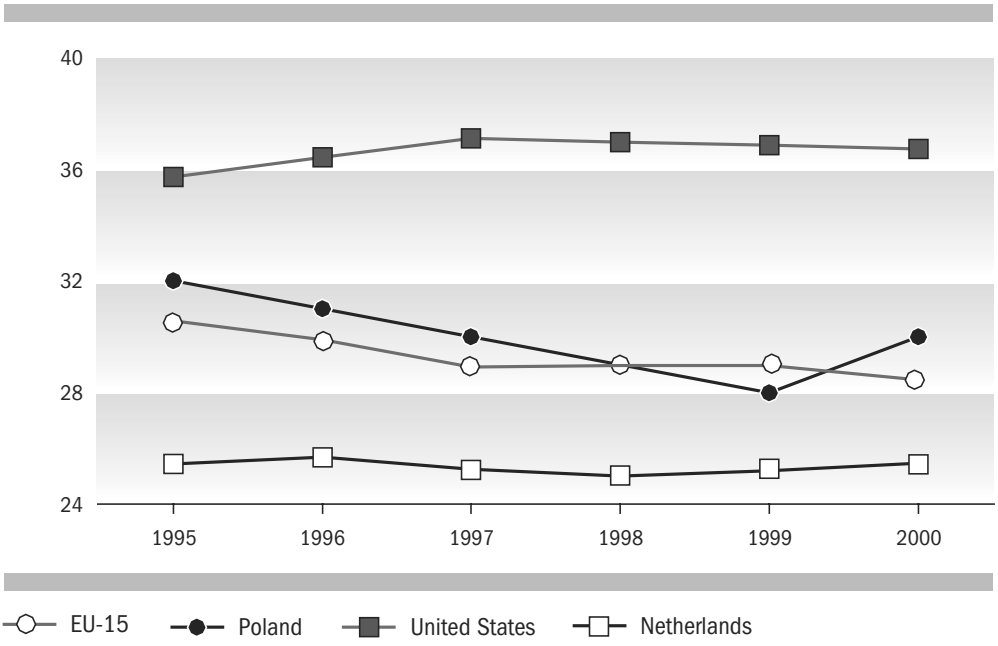
Figure 2.22 Income inequality, 2000 (GINI coefficients x 100)



Source: Eurostat, Luxembourg Income Study (Hungary, Poland, Slovak Republic, Non-EU Anglo-Saxon) SCP revision

Over the period of 1995 to 2000 (Figure 2.23), income inequality has declined slightly in the EU-15. In the US, it appears to be still increasing (this has been the case ever since income inequality in the country was first measured in 1967). Income inequality seems to have stabilized in the Netherlands in recent years.

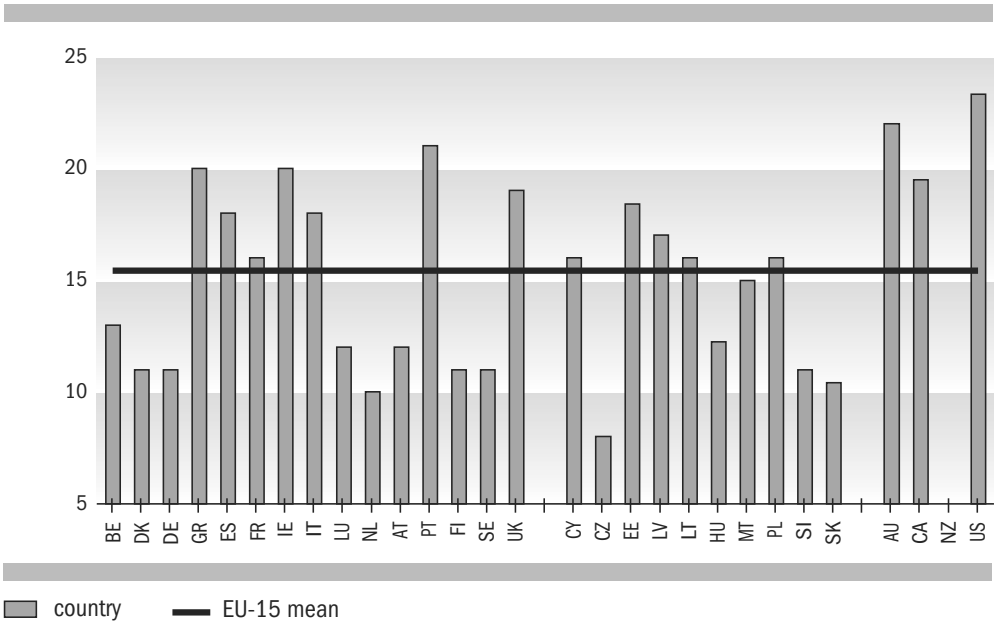
Figure 2.23 Developments in income inequality, 1995-2000 (GINI coefficients x 100)



Source: Eurostat, Luxembourg Income Study (Hungary, Poland, Slovak Republic, Non-EU Anglo-Saxon), SCP (Netherlands) SCP revision

One phenomenon closely linked with income inequality is the number of households living in poverty. To determine the number of poor, policy analysts can use an absolute poverty line based in some way or other on identification of basic human needs, or a relative poverty line which takes into account the level of prosperity in the country concerned (see Vrooman and Snel 1999 for an in-depth discussion). Here, we have decided to use the poverty definition included in the Lisbon Agenda: a household is poor if its income is less than 60% of the median equivalized household income. The poverty rate indicates the percentage of households with an income below this limit (see Figure 2.24). The idea behind the relative poverty line is that 'a person must be able to appear in public without shame', an ideal first expressed by Adam Smith.

Figure 2.24 Poverty rate, 2000 (percentage of incomes less then 60% of median equivalized income)



Source: Eurostat, Luxembourg Income Study (Hungary, Poland, Slovak Republic, Non-EU Anglo-Saxon) SCP revision

The EU-15 average for the poverty rate is around 15.5%, as against an agreed Lisbon target of 10%. Only the Scandinavian countries, Germany, the Netherlands, the Czech Republic, Slovakia and Slovenia more or less make the target. Belgium, Luxembourg and Austria also have a fairly low poverty rate. A number of Southern European countries, Estonia and the Anglo-Saxon countries record a poverty rate in excess of 18%.

It is striking that, although the Netherlands has a rather equal distribution of personal incomes and a low percentage of poor households, it spends no more on social security than the US, the country at the other end of the spectrum, with its notoriously high level of income inequality and its high poverty rate. Apparently, the inequality in the US can be explained to a large extent by differences in earned income. Possibly the progressiveness of the tax system plays a role here, as do the incomes of the self-employed and minimum wage schemes.

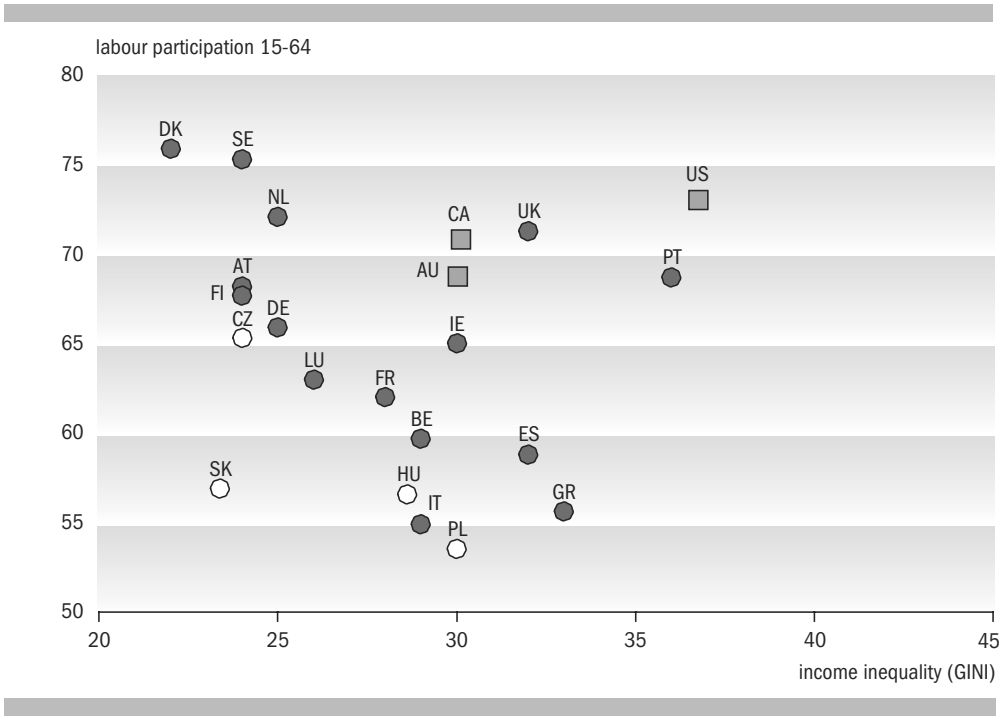
Conflicting aims?

The Lisbon agenda seems to formulate targets that are difficult to combine. It is generally assumed that government objectives concerning efficiency and equity are in conflict (Okun 1975). At the micro level, generous benefits aimed at combating poverty and thus contributing to reduce income inequality, are believed to discourage individuals from providing for themselves by participating in the labour market. At the macro level, a system with generous social security benefits pushes up the general tax burden, which may undermine the competitiveness of the economy.

This widely shared view may be due to revision, at least to some modification. An analysis of the performance of EU countries (CPB/SCP 2003) found that countries with small income inequality, such as Denmark, Sweden, Finland, and also the Netherlands, have a high rate of labour market participation. The reverse was found to apply to the countries of Southern Europe.

When the non-EU Anglo-Saxon countries are included, the picture becomes more complex (see Figure 2.25). We find that labour market participation is high in countries with high income inequality like the US, the United Kingdom and the other Anglo-Saxon countries. The same applies to Portugal, the Southern European country with the greatest income inequality. At the other end of the spectrum, labour market participation is also high in a number of Scandinavian countries and in the Netherlands, which are notable for their fairly equal distribution of income. It is no coincidence that these are precisely the countries that have a relatively high proportion of part-time workers and a relatively short official working week. These countries deliberately pursued a policy of reducing the working week in order to combat unemployment and relative high tax levels may have influenced the choice of workers between (taxed) work and (untaxed) leisure time.

Figure 2.25 Scatterplot of labour participation versus income inequality, 2000



Source: OECD (labour participation); Eurostat, Luxembourg Income Study (GINI) SCP revision

This section has reviewed several indicators for economic performance. Although some of these indicators are interrelated to a certain degree (for example, GDP growth and unemployment), the resulting picture still shows significant variation. For example, countries with strong economic growth do not always have low inflation or low unemployment. So is it possible to rank countries by economic success, based on a composite performance criterion? Five criteria have been selected here:

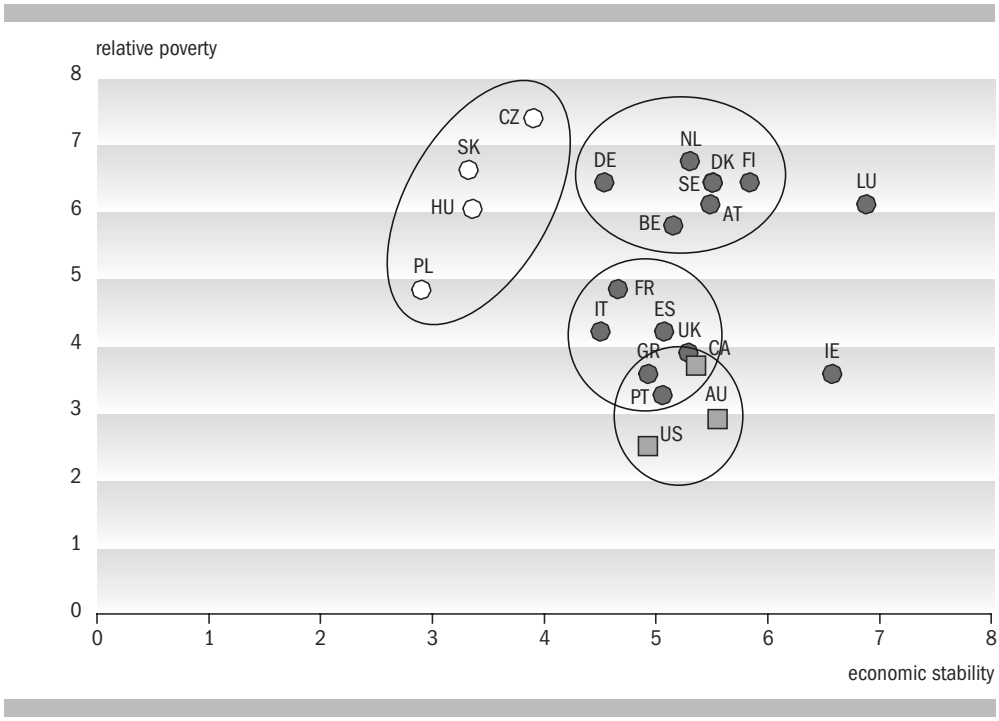
– the growth rate of GDP (g)
– the unemployment rate (u)
– the rate of inflation (i)
– the budget deficit/surplus as a percentage of GDP (d)
– the poverty rate (p)

The first four are concerned with economic stability, the fifth with distribution. We have excluded a number of indicators strongly related to the criteria already selected (labour market participation, income inequality). An initial analysis shows that the correlations between the five characteristics listed between the 29 countries are rather low. To do a multivariate analysis would therefore be rather pointless. It is also difficult to establish the relative importance of each criterion, on the basis of economic theory. We have therefore simply calculated total scores for all five criteria. To correct for differences in scale and the variability of variables, we have used

normalised scores.[14] The idea here is that variables with a high relative standard deviation are either more difficult to control (for the government) or that there is less consensus over their desired value. To give an example: hyperinflation happens more commonly worldwide than a sharp fall in GDP, and is certainly less harmful.

The scatterplot in Figure 2.26 confronts the score for the four stability criteria and the score on the fight against poverty. In this figure, a high mark corresponds to low poverty. The figures for inflation and economic growth are not based on 2000, but on the average for the period 1995-2002.

Figure 2.26 Economic performance, 2000



Source: US Bureau of Census; OECD; Eurostat; World Bank (SCP revision)

The Central European countries show moderate economic stability (particularly in terms of inflation, unemployment and the budget deficit), but also a low poverty rate. The Western and Northern European countries are generally characterised by a fairly positive score for both criteria. The Southern European countries as a rule score fairly negatively on both criteria. The Anglo-Saxon countries, including the United Kingdom, have moderate economic stability and a high poverty rate. The Netherlands posts a reasonable

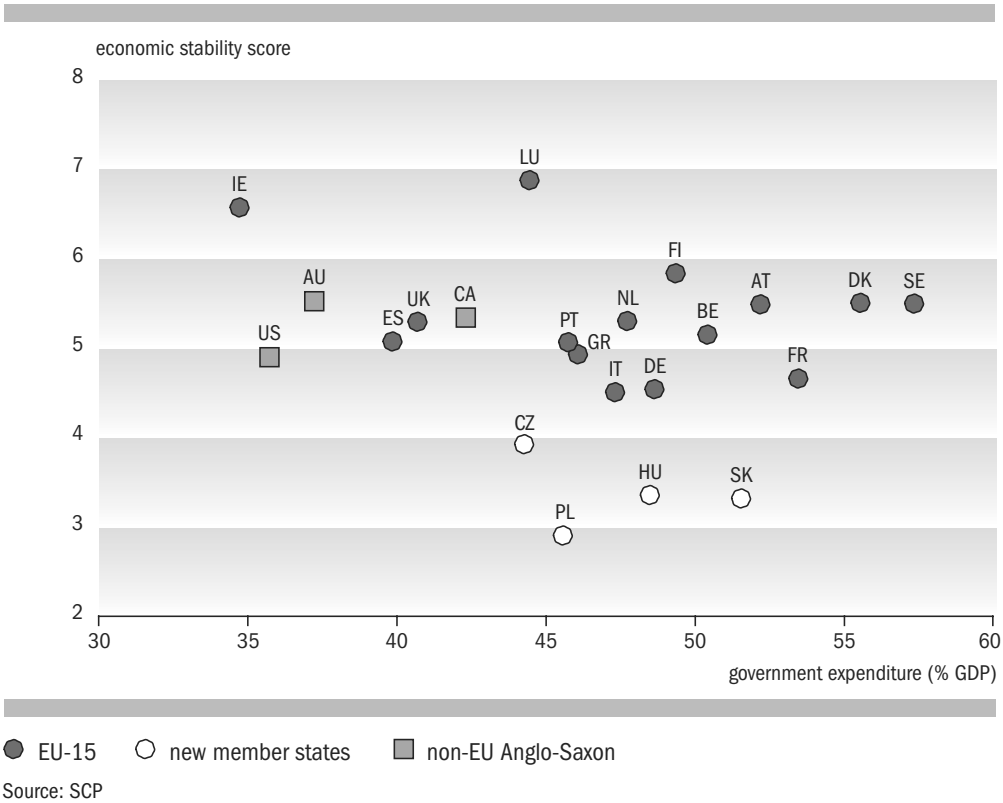
[14] Calculated as $z^* = 5 + 1{,}5^*(x\text{-}m)/s$, where m is the mean and s the standard deviation of x. See Annex B.3 for further details.

score for economic stability and has a good score for its poverty rate. Again, Luxembourg and Ireland stand out for their extremely good economic performance.

It would be interesting to transform the poverty rate and the four stability criteria to a single measure of economic performance, so the countries could be ranked in one list. However, we would then have to weight the importance of the stabilisation function and the distribution function. This is a political rather than an economic matter. Figure 2.26 confirms the proposition that equity and efficiency are not necessarily incompatible.

Although a certain level of resources has to be put into education, health care, public safety and the infrastructure to enable economic development, a high level of public spending (above a certain threshold) can in fact reduce the potential for economic growth. This has been shown in both theoretical and empirical analyses (see for example 'Four Futures of Europe' by the Netherlands Bureau for Economic Policy Analysis, and Gwartney et al. 1998).
Our data also show a weak negative correlation between resources used and the weighted score for growth and stability. This is illustrated in Figure 2.27.

Figure 2.27 Relationship between government expenditure and economic stability, 2000

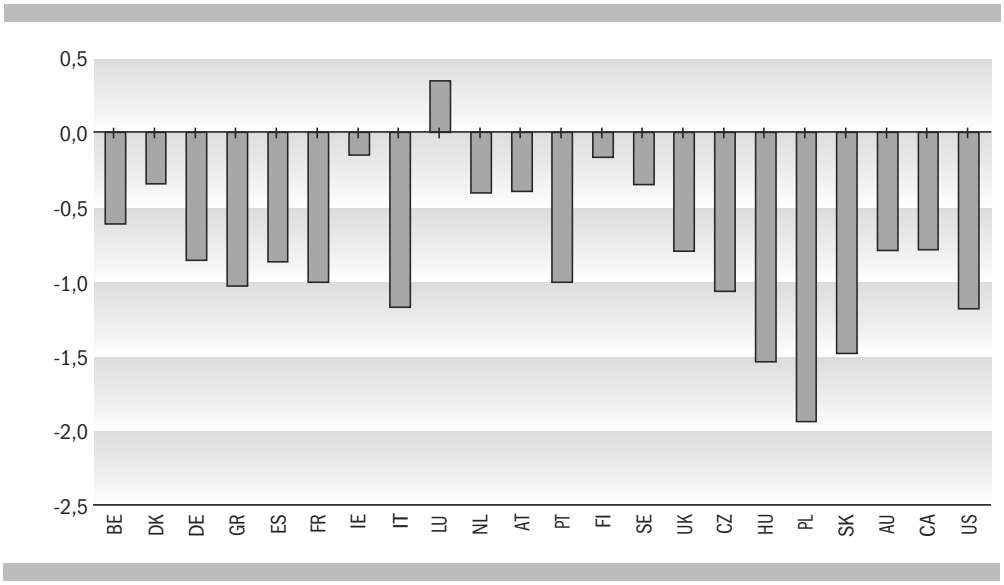


Source: SCP

Figure 2.28 shows the results for the economic indicators in relation to the criteria in the Lisbon Agenda and the European Stability and Growth Pact. Where no clear

criterion emerges, we have applied the general approach adopted in these two agreements: take the best (or next best) situation as a target for all countries[15]. By that measure, only Luxembourg has a positive score. The Scandinavian countries, the Netherlands and Austria do reasonably well. Some of the Southern European countries (Greece, Italy and Portugal), a number of new member states (Hungary, Poland and Slovakia), and also the US and France are a long way off target.

Figure 2.28 Performance of countries with respect to Lisbon targets and European Stability and Growth Pact (average unscaled z-scores)



Source: SCP

[15] The criteria employed are: 3 percent economic growth, 2 percent inflation, 4 percent unemployment, budget balance, poverty rate 10.

3 Education

Bob Kuhry, Lex Herweijer and Rolph Heesakker

3.1 Introduction

Education plays a key role in society. As former Dutch Minister of Education and Science Jos van Kemenade (1981: 1) put it: 'Education is a natural thing in our society. It is seen almost unanimously as an essential prerequisite for the continuation and development of our society. It has become one of the key means by which knowledge, power and work are distributed in a modern society, and for individual citizens it is an essential ... means of access to participation in that society...'.

Education is above all an individual good. Its benefits can be regarded from the point of view either of consumption, or of investment. The former concerns the pleasure derived from the learning process itself, the latter regards education as an investment in our own human capital (see Blaug 1970, Becker 1975 and Hartog and Ritzen 1986). This investment produces skills that give the individual a better chance of finding more interesting and better paid work. Besides these individual benefits, however, education also has important external effects: it helps socialise and inform people, provides a skilled labour force and fosters social cohesion. The benefit to society is therefore more than the sum of the benefit to individuals. Therefore, Individuals would not be prompted to invest enough in education from the point of view of society (see also CPB 2002: 64-71 and OECD 2003a: 156-167).

Another argument for government intervention concerns social justice. People on a low or average income cannot be expected to pay the cost price of primary and secondary education for their children, or to incur debt for that purpose. Social justice implies that all children must have the most equal opportunities possible, irrespective of their parents' income.

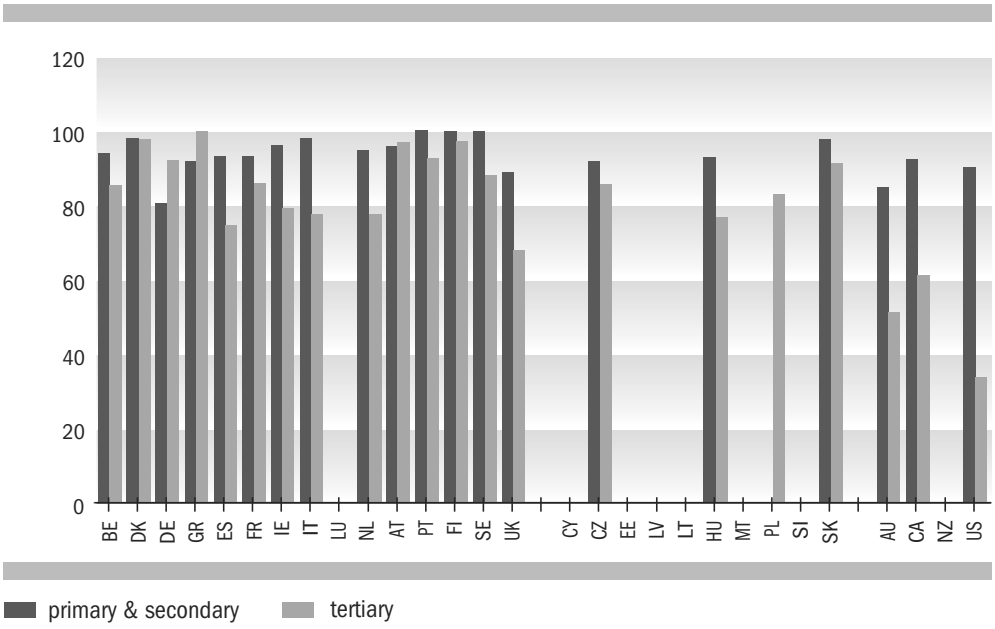
A third and very timely reason for government intervention, which by the way is not directly related to market imperfections, is the country's position internationally. Progressive European integration and the increasing globalisation of economic processes has caused a lot of attention to be focused on the implications of education and educational attainment for a country's competitiveness. Although it seems obvious that a well-educated population is essential for economic growth, it is in fact no easy matter to find empirical evidence to back this up. OECD (2000b) presents an interesting analysis that would seem to confirm that, alongside trade exposure, human capital can go a long way towards explaining differences in economic growth.

There are not only many reasons why government should intervene, there are also many ways in which the government can do so: regulation, funding the activities of third parties, or service provision by government organisations, for example. One

important means of intervention is the establishment of a statutory school age. In most countries children are obliged to attend school between the ages of six and fifteen. In some, including the Netherlands, children reach statutory school age at five, while in others, like Sweden, they are not obliged to start school until they are seven. In most countries, 16-year-olds are obliged to attend school, and sometimes 17- and 18-year-olds still have a partial obligation. Some governments encourage older children to stay in education by offering means-tested exemptions from school fees, or by putting in place a student financing system. Primary and secondary education are usually largely paid for from the public purse, and in many countries higher education is also publicly funded. Education can be produced either privately (for-profit or non-profit) or publicly. In both public and private production, quality is assured by means of minimum standards concerning the subjects offered and teachers' qualifications, and by the certification of schools and establishment of school inspection services.

Figure 3.1 looks at an important indicator of government intervention – the share of public financing in total education expenditure. It distinguishes between primary and secondary education on the one hand, and tertiary education on the other.

Figure 3.1 Education: share of public expenditure, 2000 (percentages)



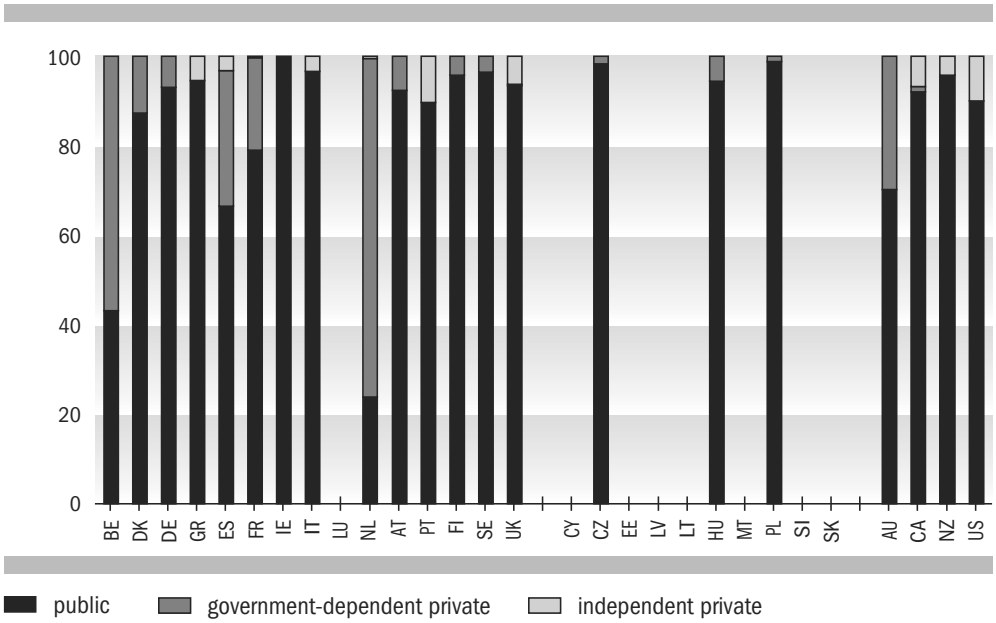
Source: OECD (Education at a Glance 2003)

In primary and secondary education the share of public financing generally lies somewhere between 90% and 100%. The Netherlands takes an average position in this respect. Germany takes an exceptionally low position in the case of primary and secondary education, with a collective share of only 80%. This is connected with the major role German industry plays in the country's dual system of vocational education, which it also helps to fund (OECD 2003ca: 214). The variation is much greater in the case of tertiary education, ranging from 34% to 100%. The Scandina-

vian countries, Germany, Austria, Greece, Portugal and Slovakia lead the field, with scores above 90%. The United Kingdom and the other Anglo-Saxon countries come bottom, and the Netherlands somewhere in the middle, on around 80%, along with three of the former Eastern bloc countries (Poland, the Czech Republic and Hungary).

Figures 3.2 and 3.3 look at the legal and financial status of educational institutions. They distinguish between public institutions, private institutions funded to a major extent by the government and independent private institutions. This is roughly compatible with the commonly used classification of legal status: public, private non-profit and commercial (see for example Salamon et al. 1999). It should be noted that commercial institutions may also receive government subsidies. There are also many non-profit institutions that do not depend on subsidies, although they are fairly rare in the compulsory education sector.

Figure 3.2 Lower secondary education: students by legal status of schools, 2001

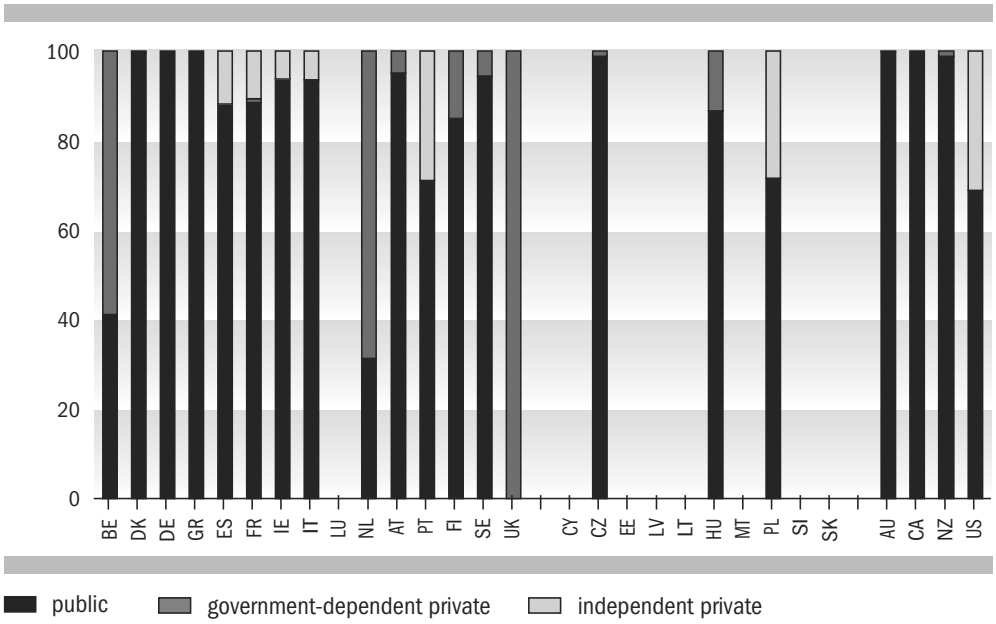


Source: OECD (Education at a Glance 2003)

In most countries, public institutions set the tone in lower secondary education. The main exceptions are the Netherlands and Belgium, where government-funded private education dominates. The same applies – albeit to a lesser extent – in Denmark, Spain, France and Australia. The leading role of private non-profit institutions in the Netherlands is connected with the division of civil society along religious and ideological lines in the past, which resulted in the emergence of Catholic and Protestant schools. Partly as a result of this, the Netherlands has the largest non-profit sector in the world (Burger and Dekker 2001). Private schools that do not receive government funding account for a significant share of lower secondary education in Portugal and most of the Anglo-Saxon countries. *Education at a Glance* includes similar figures for primary and upper secondary education. They are not examined here, however, as they barely differ from the figures presented in Figure 3.2.

As we see in Figure 3.3, the characteristics of tertiary education are different.[1] Here, too, public institutions tend to be the norm and the Netherlands and Belgium are again an exception, with private non-profit institutions dominating the tertiary sector. The same applies to the United Kingdom, where all higher education institutions have been designated private non-profit since the early 1990s. However, they are largely dependent on public funding. Private, financially independent institutions are found only in the United States, Poland, Portugal and – to a lesser extent – in a number of Mediterranean countries. In the United States, this is down to the long tradition of privately funding non-profit universities through legacies and endowments and relatively high fees.

Figure 3.3 Tertiary education: students by legal status of institution, 2001



Source: OECD (Education at a Glance 2003)

Kwong (2000) points out that there is a global trend towards more market forces in education. This involves cutting production costs, phasing out products for which there is no demand, producing only popular products, advertising education products and services, outsourcing activities such as administration and canteen facilities, even the governing board in some cases, obtaining subsidies from private companies (such as computers from Apple or IBM) and engaging in non-education market activities. These developments are not being imposed from above; this is a bottom-up process. However, decentralisation and education budget cuts have prompted many

[1] Strictly speaking, we are talking here about tertiary type A education. In other words, relatively long, theoretically oriented courses.

institutions to take this course. Private commercial institutions have also been established, most of them for-profit universities. Initiatives have also been introduced in the Netherlands to allow more market forces into education, but this has been driven more by a desire to offer the public more choice. Kalma (2002) refers to this as 'quasi-market forces'. One important factor in this trend has been the publication of information on the quality of institutions, to which the Education Inspectorate has devoted a great deal of time and effort in recent years (SCP 2000; Inspectie van het Onderwijs 2002).

Which produce the best results: public schools or private schools? This is a pertinent question, because if private schools systematically produce better results, one might consider privatising all public schools and introducing a voucher system (Milton Friedman 1955, 1962; Coleman and Hoffer 1987; Cohn 1997). Vouchers give pupils the right to attend the private school of their choice, using funding provided from the public purse. Countries like the Netherlands and Belgium have in fact had such a system since the early 20th century.

Witte (1997) attempts to answer the question of which type of school produces the best results using research based on a large-scale American study : the *High School and Beyond Study*, which includes data on over 1000 public and private schools, following 72 pupils in each school. He concludes that the study allows no definitive conclusions to be drawn, once one has corrected for variables such as parents' education and social class. Levin (2002) presents a broad-ranging review of largely American research into the difference in performance between Protestant and, more especially, Catholic schools on the one hand, and state schools on the other. Pupils at Protestant schools appear to achieve better results at school, and the debate now focuses on the question of whether this is down to the schools themselves, or to differences in the attributes of their pupil populations. Different authors draw different conclusions. Levin analysed Dutch primary education himself, taking great care to correct for differences in the composition of the pupil population and other relevant background characteristics. Catholic schools, in particular, would appear to produce significantly better educational performances than state schools. The differences between Protestant and state schools point in a similar direction, but are not generally significant.

Dronkers and Robert (2003) studied differences in performance between public and private secondary schools in 19 OECD member states. They analysed differences in reading and maths skills at age 15. They divide private schools into largely publicly-funded and largely privately-funded. This distinction would appear to be significant. Largely publicly-funded private schools would seem to be more effective in terms of teaching reading skills than public schools, even after correction for differences in social background and the composition of the pupil population.[2]

[2] Besides the background of individual pupils, this study also takes account of the composition of the pupil population by social background. Both affect the performance of individual pupils. In terms of maths skills, this study found no difference between public and private schools after correction for the background and composition of the pupil population.

The higher level of performance in largely privately-funded private schools can be correlated with the privileged social status of their pupil populations. In this sense, therefore, they are no more effective than public schools.

3.2 Education systems[3]

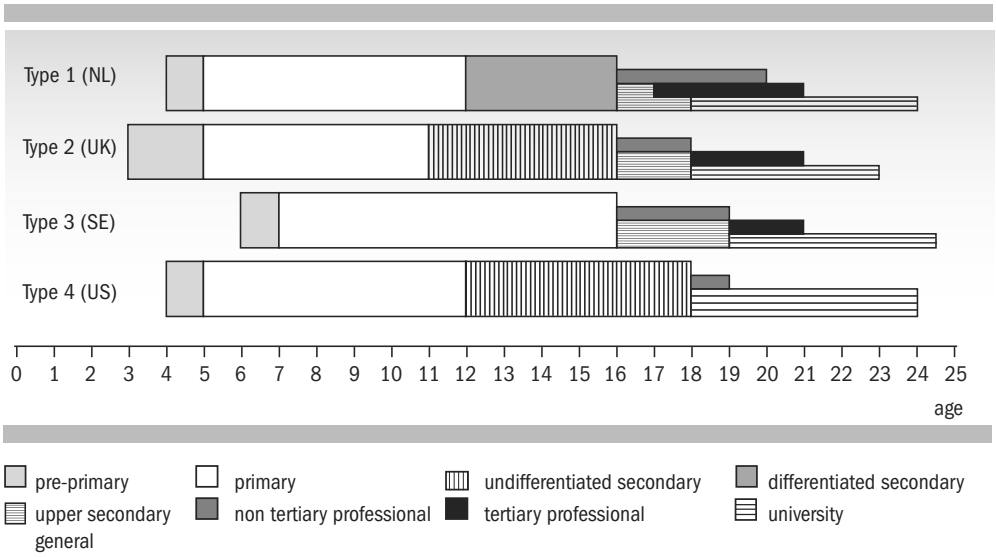
Transitions and selection: integrated and 'categorical' systems

There are three phases in education: a primary phase, a secondary phase and a higher or tertiary phase. Primary education focuses on basic skills and is a common system; apart from special provision for children with disabilities, there is no differentiation between types of school. In the secondary phase, differences are introduced between higher and lower forms, and between general and vocational education. The age at which this differentiation occurs varies (see Figure 3.4). In some countries, it happens at a relatively late stage, because the transition to secondary education as such is fairly late. In other countries the transition occurs at a younger age, but there is still common, more or less uniform, provision for all children during the first phase of secondary education. Finally, there are countries where children choose between various types of secondary school at a relatively early age (European Commission 2000; see also the INCA website (www.inca.org.uk)).

The distinction here is between more integrated and more categorical, stratified systems. The issue of the desirability of integrated secondary education has long dominated the education debate in many countries, including the Netherlands. One important argument in favour has been the assumed positive effect of integrated secondary schooling in terms of creating equal opportunities for children from different social backgrounds.

3 This section is based partly on the education chapter in the *Social and Cultural Report 2000* (SCP 2000).

Figure 3.4 System types



Source: Eurydice, INCA; SCP revision

The Netherlands, Germany, Austria, Luxembourg, the Czech Republic, Hungary and Slovakia are in the category where children make the transition to secondary education somewhere between the ages of ten and twelve, at which point they also have to choose between several levels. German children can choose from the *Hauptschule*, the *Realschule* and the *Gymnasium*, Austrian children from the *Hauptschule* and the *allgemeinbildende höhere Schule*. The Netherlands offers VMBO, HAVO and VWO at this age (which prepare pupils for secondary vocational education, higher professional education and university respectively).

There is a trend towards integration in these countries. Broad-based community schools in the Netherlands have transitional classes where the selection of pupils can be postponed, and a common curriculum – known as *basisvorming* (basic secondary education) – was introduced for the first three years of secondary education in the early 1990s. Nevertheless, it would be going too far to characterise the first phase of Dutch secondary education as integrated. The transitional period, in which pupils are in fact already grouped according to ability, is too short, and the different levels of *basisvorming* offered too various (see Bronneman-Helmers et al. 2002). Furthermore, some elements of the new system are already being withdrawn. Problems including overloaded curricula and the fact that the subject matter has proved too theoretical for weaker pupils (Inspectie van het onderwijs 1999) led to temporary measures in 2001 to withdraw some elements of *basisvorming*. Work is currently in progress on a final review of the new system, which will see less time devoted to the common part of the curriculum and the period of *basisvorming* reduced from three to two years (TK 2001). The merger of VBO and MAVO (junior vocational education with a more practical or theoretical focus respectively) to form VMBO with a range of different learning pathways has been labelled a failure by many of those involved in the

public debate. This is because of the negative impact of weak, unmotivated pupils and of pupils with extra needs on the atmosphere in VMBO schools.

In Germany the choice between various forms of secondary education is preceded by an *Orientierungsstufe* (orientation stage), but this ends at around the age of twelve. Germany also has a form of integrated secondary education in the shape of the *Gesamtschule*, which has a market share of almost 10% (OECD 1998a: 200).

The organisation of secondary education in Flanders falls midway between the first and second categories. The first two years of secondary school are integrated, after which pupils choose between a vocationally oriented or more general form of education. One important detail, however, is that both pathways last six years and give access to all forms of follow-up education.

In the second group of countries children make the transition to secondary education around the age of eleven, but the first phase of secondary education is (largely) integrated.[4] Pupils do not choose between a higher or lower form of education. However, schools are more free to select pupils than in group three. France, Italy, Spain, Greece, Ireland and the United Kingdom fall in this group, as do Australia and the new member states Lithuania, Cyprus and Malta.

In France children move at the age of around eleven to a *collège*, where they remain for four years. In Greece and Italy they move to a *gymnasion* or a *scuola media* (for three years).

In the United Kingdom, too, the first phase of secondary education is largely integrated. Although there are selective grammar schools and privately-funded 'public schools', the majority of children move to an integrated comprehensive school at age eleven.

In the third group of countries, youngsters do not move to secondary education until they are fifteen or sixteen. The entire compulsory period of schooling – primary education and in fact the first phase of secondary education – takes the form of a single type of education for all children between the ages of six and 15 or 16, lasting nine or ten years. Only once they have completed compulsory schooling do pupils move on to another phase of education. Besides the Scandinavian countries (Sweden with its *Grundskolan*, Denmark with *Folkeskole,* Finland with *Peruskoula*, Norway with *Grunnskole* and Iceland with *Grunskoli*), Portugal, Poland, Estonia, Latvia and Slovenia also have this system.

The choice of uniform provision for all youngsters was prompted largely by a desire to provide equal opportunities and education of a high standard for as many children as possible. Until recently, Spain had a system of integrated education for all children aged six to 14, but it reformed its education system in the 1990s. Spanish children now move to the first phase of integrated secondary education at age twelve, putting Spain in the second group.

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4 In France, pupils can opt for a vocational programme in the last two years of the four-year *collège* course.

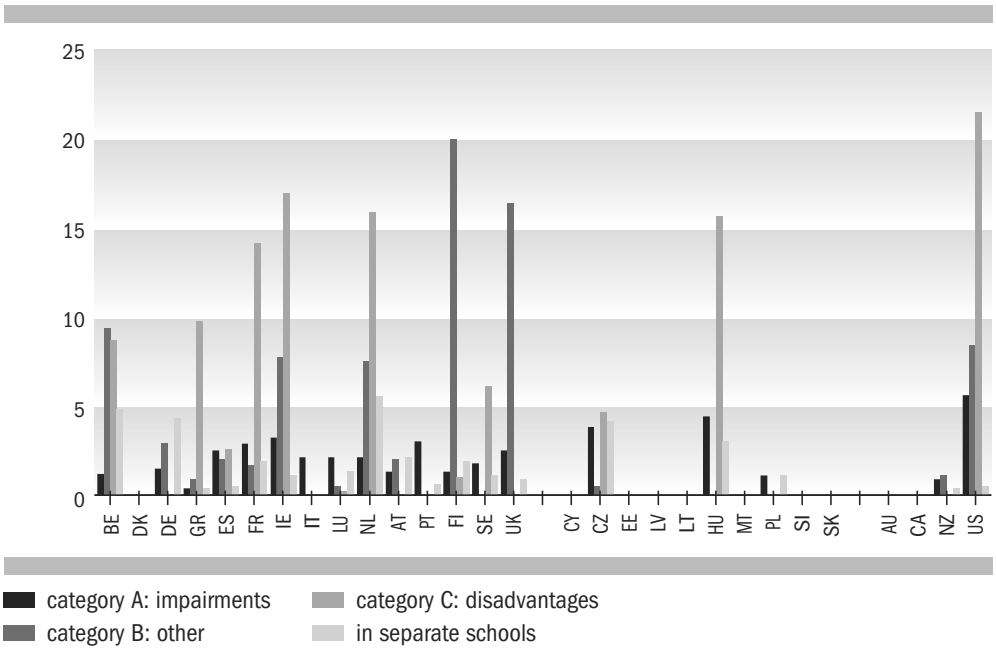
The fourth group comprises a number of Anglo-Saxon countries: the United States, Canada and New Zealand. These countries have integrated lower and upper secondary education. Elementary school is followed by junior and senior high school. Only at about the age of 18 do youngsters choose between vocational or theoretical (tertiary) education (NCES 2001).

Education for children with special needs

Many countries make special provision for children with health problems or learning difficulties. Many countries distinguish between three categories in allocating extra funding for this purpose: pupils with impairments (A), pupils with learning difficulties and behavioural problems (B) and children who are at a disadvantage because of their social or cultural background (C) (OECD 2001).

A comparison reveals that the size of the different categories that qualify for extra support varies from country to country. The proportion of pupils in primary and secondary schools who qualify for special education varies sharply. Figure 3.5 shows the percentage of special needs children in a number of European countries and the US. The figures are broken down into the three categories mentioned above.

Figure 3.5 Percentage of pupils in primary and secondary education receiving additional resources, by category of need, 1999



Source: OECD (2000a: 191; 2001: 179)

The figure shows that the proportion of pupils in compulsory education receiving special provision in the countries concerned varies from 2% to 35%, with the US leading the field, followed at some distance by Ireland, the Netherlands, Finland and Hungary.

The high percentages of special needs pupils in those countries (with the exception of Finland) can be explained mainly by the existence of special schemes for pupils from a different social or cultural background. In the Netherlands, primary schools receive extra staff funding for some one in four pupils because their parents are poorly educated and/or come from an ethnic minority (this is known as 'weighted funding'). In secondary education there is a scheme for pupils from a number of cultural minorities and for non-native Dutch speakers. In 1999, secondary schools received extra facilities under this scheme for almost 9% of their pupils. In almost all countries 1% to 3% of pupils receive special provision because of a disability; this figure is higher only in the US, the Czech Republic and Hungary. The proportion of pupils qualifying for special provision in connection with behavioural problems and learning difficulties – the pupils on which this section focuses – varies sharply.

In all countries, extra provision is linked to extra resources over and above those available for regular education. Special provision takes various forms: extra staff (smaller classes), specialised staff (e.g. peripatetic counsellors, special needs teachers, psychologists), special materials or alterations to the school building.

The last bar in the figure shows the great differences between countries in terms of the way they provide for special needs pupils. Some attend special schools, others special classes in normal schools, while others are provided for entirely within the regular education system. In some countries two different education systems exist in parallel. In the Netherlands, Belgium, Germany and the Czech Republic, 4% to 5% of pupils go to a special school. In other countries integration is almost complete, so that virtually all children attend regular schools which have the necessary expertise in-house. Spain, Greece, Italy, Portugal, Sweden, New Zealand and the USA operate on the basis of this principle. A third group of countries has a wide range of provision, from separate schools or special classes to cooperation and exchange between schools. In countries in this category – Denmark, Finland, France, Germany, the United Kingdom and Ireland – a considerable proportion of pupils qualify for extra support.

In many European countries, there is a trend towards sending pupils with slight disabilities or with learning difficulties and behavioural problems to regular schools. Countries like the Netherlands which, until recently, had pursued a two-track policy, are switching to a multi-track policy like that in the third group. In the fully integrated systems, there is a trend whereby a number of schools function as expert centres, a development which is also occurring in the third group.

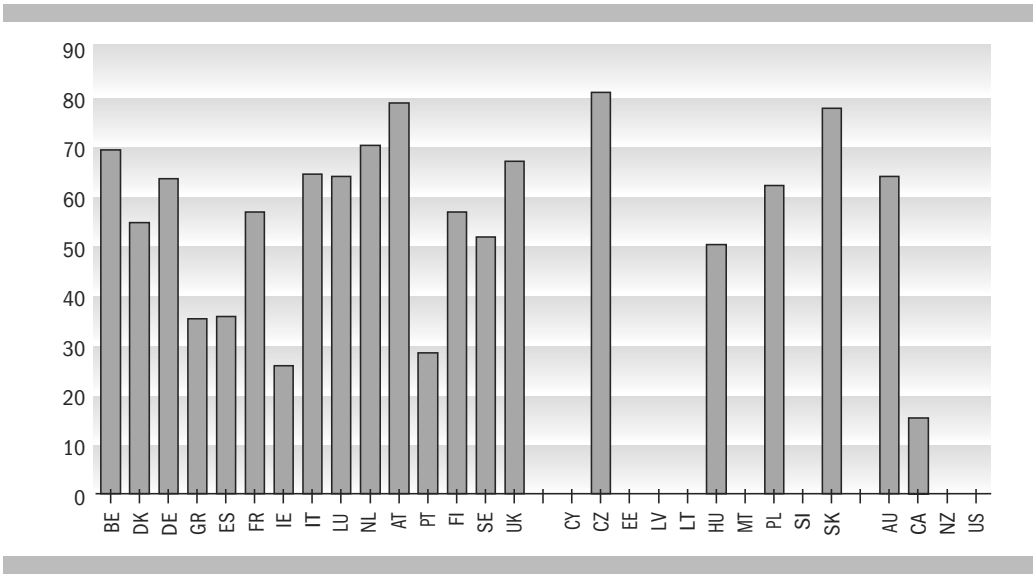
The position of vocational education in the system

All European countries offer some kind of vocational secondary education for youngsters who either do not aspire to or do not have the capacity or opportunity to progress to higher education via general secondary education. The choice between general and vocational secondary education is commonly made in the second phase of secondary school.

For many years the Netherlands offered vocational education in the first phase of secondary school. This used to be known as *lbo* (junior vocational secondary education). With the introduction of *basisvorming* and *vbo* (pre-vocational education), the vocational nature of that type of education was watered down so that here, too, the focus of vocational education has shifted to the second phase of secondary school.

The diversity and size of the vocational education system at secondary level varies from country to country. The proportion of pupils in upper secondary education taking a vocational course is an indication of the size of the system. It ranges from 15% to 80% (see Figure 3.6).

Figure 3.6 Share of vocational education in upper secondary enrolment, 2001 (percentages)



Source: OECD (Education at a glance 2003)

Leading the field in 2000 were the Czech Republic, Slovakia and Austria (on around 80%). The share of vocational education is also fairly high, at around 65%, in Australia, Germany, the Netherlands, Belgium, Italy, Luxembourg, the United Kingdom and Poland. In the Scandinavian countries and France it is some 50%, and substantially lower in Spain, Portugal, Ireland and Greece, at around 30%. Canada comes bottom, on 15%. Precise figures are not available for the US, but it seems they are likely to differ little from those in Canada (around 8% of the population has an 'associate' degree (NCES 2001)). In at least two countries, Australia and Sweden, general and vocational education are taught in the same institutes.

The strong position of vocational education in Germany and Austria is related to the extensive dual system there, which combines study with work experience in a company. In both countries, this system has traditionally dominated the secondary education system in terms of numbers (the same applies to non-EU member Switzerland).[5] In Denmark, too, the dual system is important. The Dutch apprenticeship system is fairly well-developed, but still lags behind its full-time counterpart. In

countries like Italy, France and the United Kingdom, the dual system is much less advanced (OECD 1998a).

The relatively low youth unemployment figures in Germany and Austria suggest that training in the dual system is a good way of integrating youngsters into the labour market (OECD 1998b: 53). The system depends on the willingness of employers to offer work experience places and on young people's interest in work experience. This depends heavily on the economy. In times of recession, companies are less keen to offer work experience places, and many youngsters have to make do with less attractive and less suitable positions, often with smaller companies. Many will be forced to settle for classroom-based vocational education (Van Lieshout 1996). When the economy recovers, less attractive positions become more difficult to fill. This sensitivity to economic trends is a drawback of the dual system.

Higher education

University is the traditional form of higher education. As a result of pressure from the growing demand for higher education and for a highly-educated workforce, many countries now also offer non-university forms of higher education. Initially, the supply was fragmented, but it has become gradually more structured over the years. Most countries have followed one of two paths. In some countries, the two forms of higher education – academic and professional – exist in parallel, while in others the two systems are more integrated (Scott 1995). Binary systems in which academic and professional higher education exist more or less in parallel are found in Germany (with its universities and *Fachhochschulen*), the Netherlands (with research universities and universities of professional education, or *hogescholen*), Denmark and, until recently, Austria (Müller and Wolbers 1999). France is a unique case. Alongside academic degrees, the French higher education system also offers professionally-oriented degrees, but they are awarded by prestigious grandes ecoles which select the most talented students and train them for top jobs.

Other countries have opted to integrate academic and professional courses, which are taught in the same institutions. Sweden and the United Kingdom have had such a system since 1992 (Scott 1995). There is a wide degree of variation within the integrated systems of both these countries.

Non-university higher education is poorly developed in the Mediterranean countries, particularly Italy (Müller and Wolbers 1999, Scott 1995). The same applies to Canada and the United States (NCES 2001).

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5 Almost half of the 16- or 17-year-olds in Austria are in the dual system (OECD 1998a: 89-91) while in Germany some 40% of pupils opt to continue in the dual system after completing the lower phase of secondary education (OECD 1998a: 201).

In accordance with the ISCED-97 classification, OECD publications distinguish between type A and type B tertiary education. The first involves long theoretically-oriented courses, the second shorter skills-oriented courses (lasting three years or less). In practice, however, there is a great deal of variation and the differences between countries are difficult to encapsulate in such a classification system. One consequence of this classification system has been to disregard the distinction between Dutch academic higher education and higher professional education, despite the fact that the former is largely theoretical and the latter largely focused on the acquisition of skills. This is because of the fairly long duration of professional courses and the (at least theoretical) possibility of moving on to 'advanced studies'. As a result, both forms are classified as 'tertiary type A', which would give an outsider the mistaken impression that there was no professionally-oriented higher education in the Netherlands, and that this country differed in this respect from most of its neighbours. We prefer to distinguish between academic and professional tertiary education. This distinction exists in all countries, although the professional version is offered on only a limited scale in a number of Anglo-Saxon countries (the US, Canada and Australia).

Using the characteristics mentioned in this section, six groups can be identified, ranging from strongly differentiated (1A) to virtually uniform (4B).

Table 3.1 System types ranked by degree of differentiation

system type	countries
Type 1A (differentiated lower secondary education, separate special needs education and separate secondary and tertiary vocational/professional education)	Belgium, Germany, Netherlands, Czech Republic, Hungary
Type 1B (differentiated lower secondary education, followed by separate secondary and tertiary vocational/professional education)	Luxembourg, Austria, Slovakia
Type 2 (uniform lower secondary education, followed by separate secondary and tertiary vocational/professional education)	France, Greece, Spain, UK, Ireland, ,Italy, Cyprus, Lithuania, Malta, Australia
Type 3 (integrated primary and lower secondary education, followed by separate secondary and tertiary vocational/professional education)	Denmark, Finland, Sweden, Portugal, Estonia, Latvia, Poland, Slovenia
Type 4A (uniform secondary education, tertiary professional education)	New Zealand
Type 4B (uniform secondary education, barely any specific vocational/professional education)	Canada, US

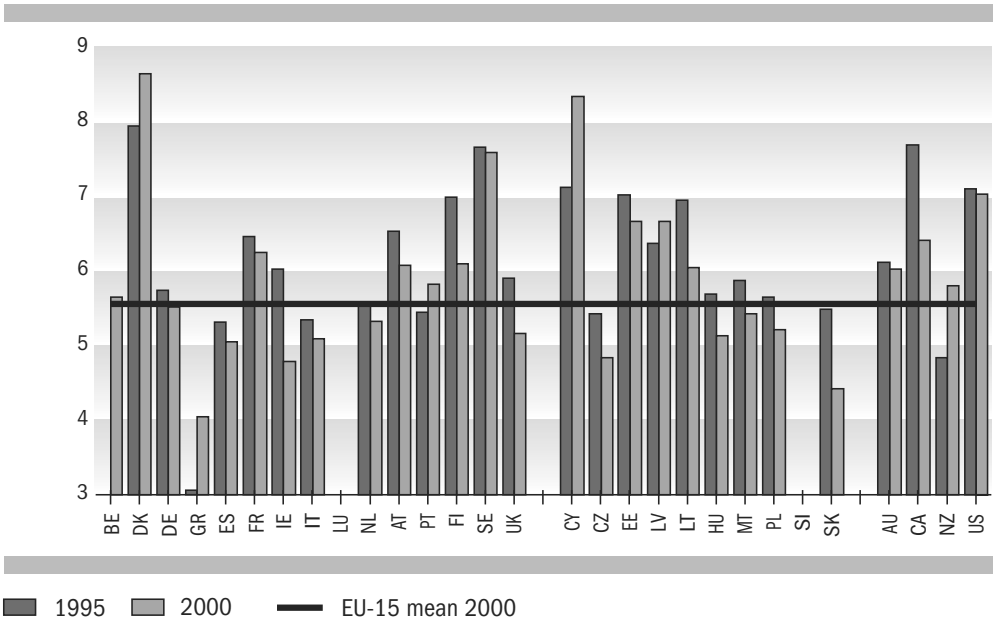
Source: SCP

The classification into four groups was discussed above. The first group can be divided into two, on the basis of whether the country has an extensive special schools system. The countries in group 1A, which includes the Netherlands, have the most differentiated education systems. The fourth group can be further divided into whether or not they have an extensive separate system of higher professional education. The countries in group 4B, which includes the US, have the least differentiated education systems. However, the US, in particular, is known for the major differences in quality between schools, a form of differentiation that is not considered here.

3.3 Use of resources

Figure 3.7 looks at total education expenditure expressed as a proportion of GDP. It refers to 1995 and 2000. The OECD has not yet published more recent figures.

Figure 3.7 Total expenditure on education as a percentage of GDP

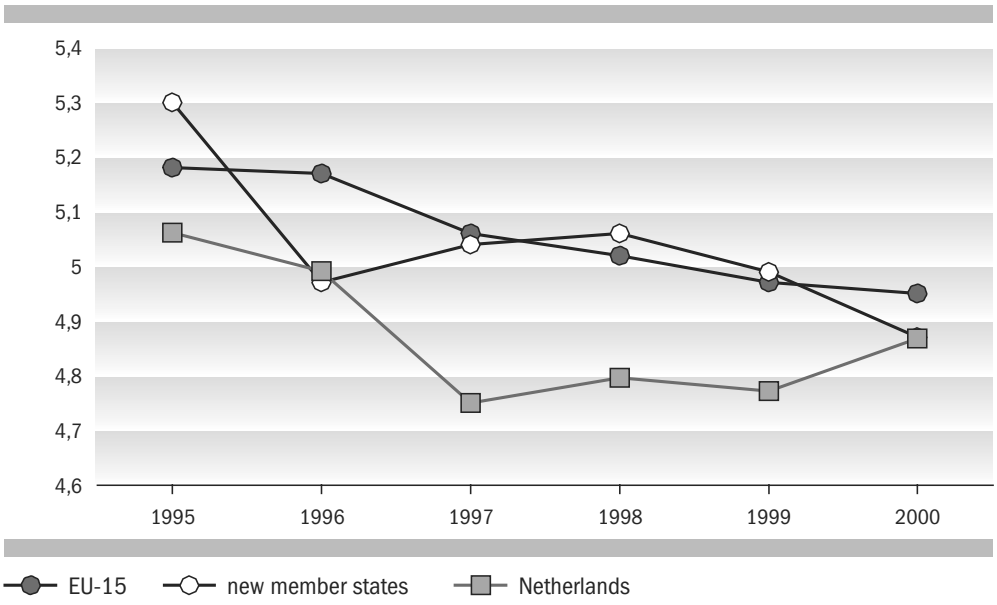


Source: Eurostat (New Cronos) with additional data from the OECD (Education at a glance 2003)

In 2000, Denmark, Sweden and Cyprus had the highest figures (around 8%). Next followed Sweden, the United States, Canada, Lithuania and Estonia. The Netherlands came just up to average. Greece, Luxembourg and the Slovak Republic spent only 4%. Education spending as a share of GDP fell quite sharply between 1995 and 2000 in Slovakia, Ireland, Lithuania and Finland, while it rose sharply in the United States, Cyprus and New Zealand. We should note, however, that this was a period of rapid economic growth. There is in fact no country where education spending fell in real terms.

Figure 3.8 shows developments in public expenditure over time. Private spending is not taken into account because reliable figures on this are available only for 1999 and 2000. The average share fell both in the EU-15 and in the accession countries. Given the strong growth in GDP over this period, this does not in fact indicate a fall in education expenditure, although it did not keep pace with the rise in GDP. Over the entire 1995-1999 period the Netherlands fell below both the EU-15 average and the average for the accession countries. There was a relatively rapid fall in Dutch spending at the beginning of this period. However, in 1999, a rise set in, while the EU-15 and new member states' averages continued their downward trend. Although the figures for 2001 are incomplete, it would appear that the Netherlands has now caught up in terms of education expenditure.

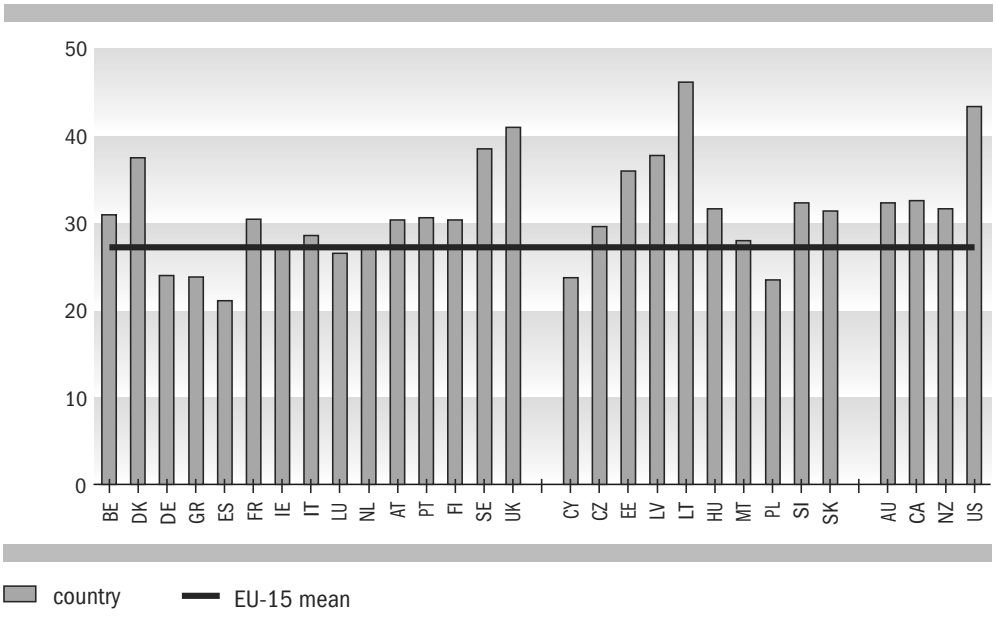
Figure 3.8 Public expenditure on education as percentage of GDP, 1995-2001



Source: Eurostat (New Cronos) SCP revision

Figure 3.9 shows the number of teachers in the different countries. The EU-15 average is 27 per 1000 inhabitants. The figure ranges from 21 in Spain to 47 in Lithuania. The Northern European countries, the other Baltic states, the United Kingdom and the US also have particularly high numbers of teachers. The Netherlands falls in the middle. Spain, Greece, Germany, Cyprus and Poland come bottom of the table.

Figure 3.9 Employment in education (persons per 1000 population), 2001

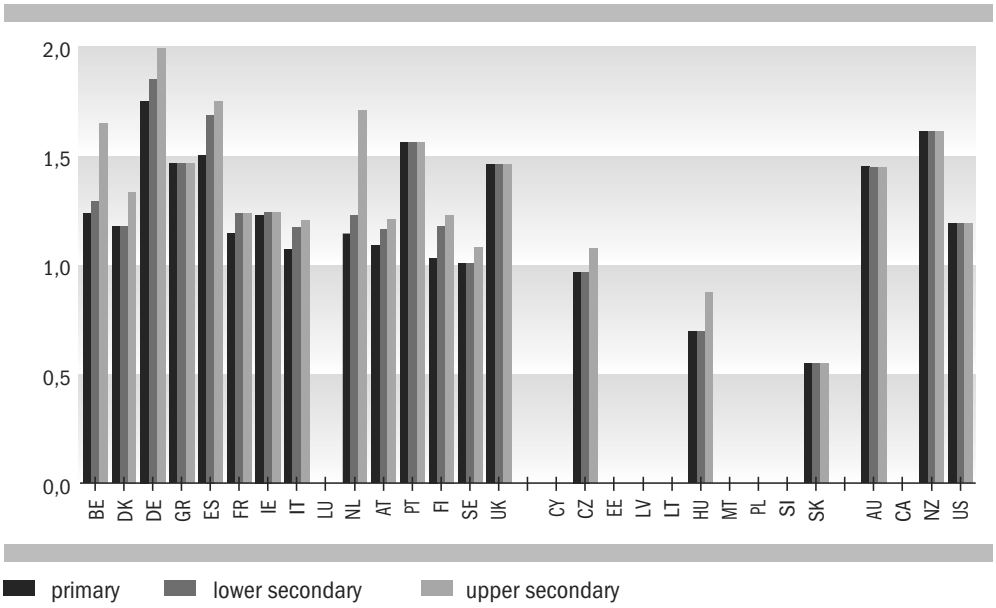


Source: OECD, ILO (Sweden, new member states excluding Hungary and Poland) SCP revision

Figure 3.10 looks at teachers' pay, expressed as a ratio of GDP per capita. This both explains differences in the cost of education and gives an indication of how attractive the teaching profession is and also perhaps – indirectly – gives some idea of the quality of teachers.

In some countries there appears to be no difference in salary between the three levels of education (primary, lower secondary and upper secondary). However, this may just imply that the figures are not differentiated. The Netherlands stands out for the major disparity between the salaries in upper secondary education and those in the other sectors. In terms of upper secondary education salaries, the Netherlands is among the leaders, alongside Belgium, Germany, Spain and New Zealand. Its score is fairly average for the other levels. Hungary and Slovakia are the only countries where teachers' salaries are clearly lower than GDP per capita. In Slovakia it is in fact only just over half of GDP per capita. The fact that GDP per capita is also low in these countries puts teachers in a particularly weak position in terms of purchasing power.

Figure 3.10 Ratio of teachers' salaries (2001) to GDP per capita (after 15 years' experience)



Source: OECD (Education at a glance 2003)

We have attempted to find an explanation for education expenditure per capita, using prosperity (GDP per capita), percentage of young people (aged 4-19), number of expected school years (see Figure 3.12) and teachers' salaries (based on the data in Figure 3.10) as independent variables. The variance explained is in the order of 90%. Prosperity has the highest share and is highly significant. It is followed by number of expected school years with an almost equal, but barely significant share. Surprisingly, the other two variables hardly make a contribution. These results can be partly explained by the fact that GDP per capita represents the volume effect as

well as the price effect of prosperity. Apparently, this variable reflects the salary effect much better than the salary variable itself.

3.4 Enrolment and graduation

Although pupils are not the actual product of education, they are a fairly good proxy. This is because schools generally have to meet fairly strict conditions in terms of the nature, amount and depth of teaching they provide. Progress at school and, in particular, exam passes are a better measure of educational performance, although they have to be corrected for the initial abilities of the pupils concerned. Theoretically, the sum of the knowledge and skills acquired by the individual pupils would be the best measure. However, no data are available on this, and such information is unlikely to be made available nationally or internationally in the future.

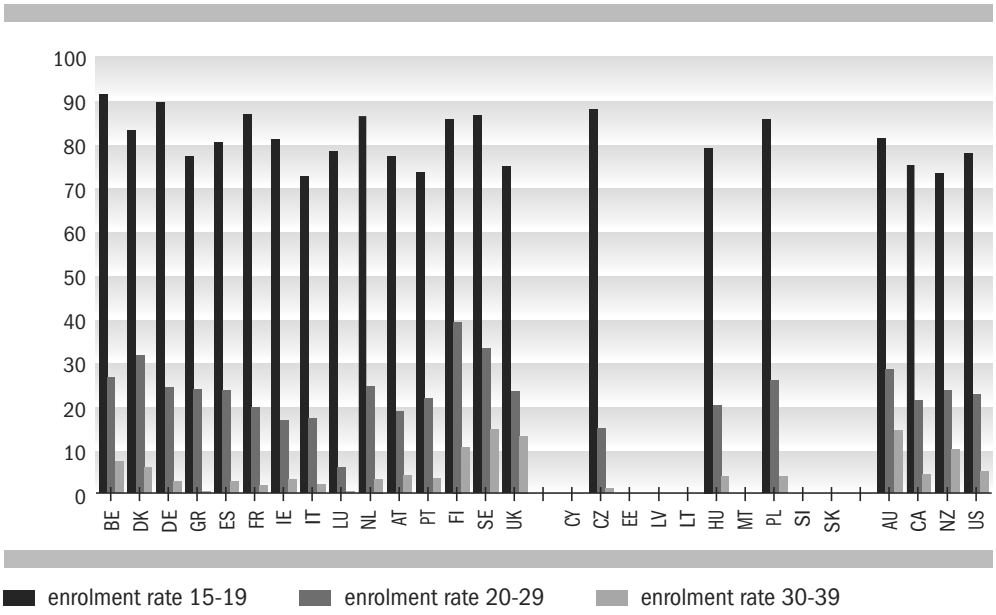
It has been suggested that the number of hours of lessons be used as a measure of production (UN 2003). However, we consider this to be more a measure of input than of output. Education is not always provided according to the traditional model of classroom teaching. Furthermore, no data are yet available on this indicator.

International data that have been tested for comparability are scarce. Such data are however presented in *Education at a Glance* (see for example OECD 2003ca). This chapter therefore draws frequently on this source both for data and for analysis.

In our analysis of performance in education, we consider only pupil numbers (enrolment) and number of qualifications awarded (graduation). Both are related to the size of the group in question (e.g. 5- to 11-year-olds, 12- to 17-year-olds or 18- to 24-year-olds in primary, secondary and tertiary education respectively). This gives an indication not so much of absolute production as of the reach of education. However, one cannot compare absolute numbers for enrolment and graduation in countries with vastly differing population sizes.

Figure 3.11 looks at enrolment rates by age group, distinguishing between ages 15-19, 20-29 and 30-39. Data refer to full time education as well as part time education leading to equivalent certificates. Below the age of 15 children are obliged to attend school, so enrolment should in theory be 100%. The percentages were calculated by dividing the number of enrolled students in the age category in question by the size of that age group in the population.

Figure 3.11 Enrolment rates in full-time plus part-time education, by age category, 2001



Source: OECD (Education at a Glance 2003)

In the 15 to 19 age group, enrolment varies from 72% (Italy) to 91% (Belgium). The Netherlands comes near the top, as do France and Germany. The relatively high score of the three new EU member states for which figures are available (the Czech Republic, Hungary and Poland) and the rather low score in most Anglo-Saxon countries (including the US), Austria and Luxembourg are particularly striking. In the 20-29 age group the Scandinavian countries (Finland, Sweden and Denmark) score highest, with over 30% enrolment. The mid-section includes the Netherlands, Belgium, Germany, Spain and Poland. Interestingly, the Anglo-Saxon countries also fall in this band. The other countries have enrolment rates between 10% and 20%. Luxembourg has a very low score, at only 6%. In the 30-39 age group Finland, Sweden, New Zealand, the United Kingdom and Australia lead the field on 10% or more. The central band includes Belgium, Denmark and the other Anglo-Saxon countries (5% to 7%). Enrolment among the over-30s is very low in the other countries, including the Netherlands.

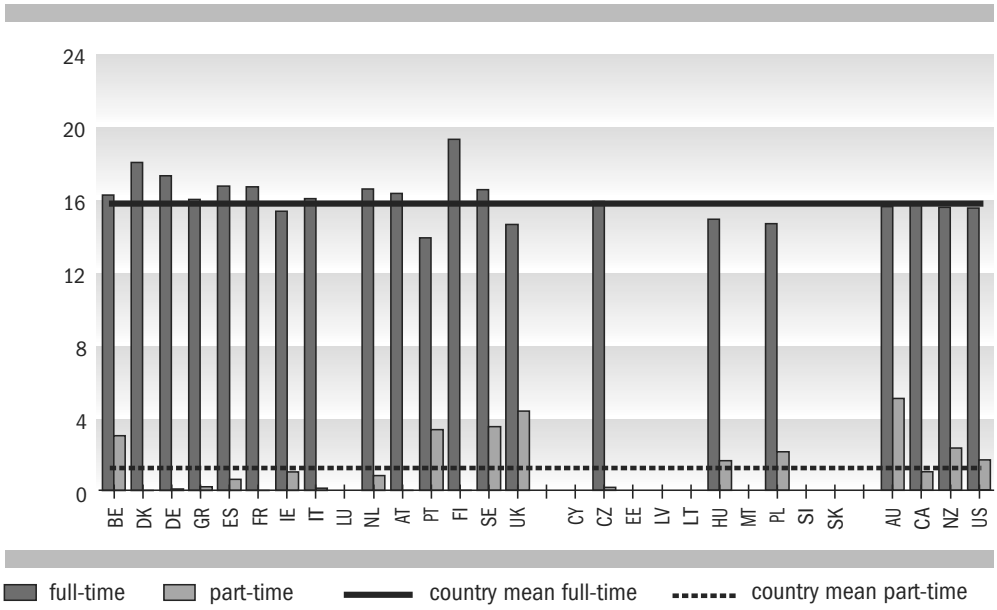
Generally speaking, we can say that Belgium, the Scandinavian countries and Australia score high for both full-time and part-time education. In the other Anglo-Saxon countries, relatively low enrolment in the lower age groups is compensated for later.

Enrolment rates can be measured against another benchmark: the number of years people spend in education during their lives. The OECD has calculated this by adding up the enrolment rates in each individual year of life in the year 2000. The organisation refers to the result as 'school expectancy' (see Figure 3.12).[6] Enrolment among the under-5s has been disregarded in this process.

6 Like the 'entry rates' discussed below, this is a transversal measure, which is converted into an expectancy figure for a single cohort. Although distortions can occur in this process, it does provide an illustrative example.

As a result of the occurrence of non-compulsory nursery education and the strong increase in the enrolment of young adults, school expectancy substantially exceeds the period of compulsory education, which in most countries lasts from age five, six or seven to age 15 or 16 (EC 2000c).

Figure 3.12 Expected school years all levels, 2001



Source: OECD (Education at a Glance 2003)

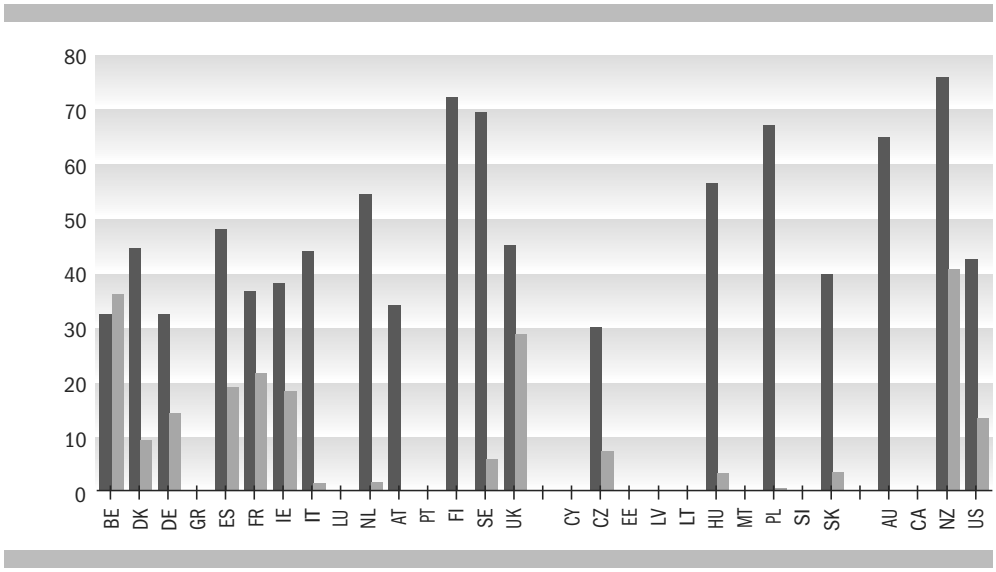
The figure distinguishes between full-time and part-time education. In full-time education, expectancy ranges from 14 years (in Portugal) to 19 years (in Finland). It is below average in the United Kingdom, Portugal, Poland and Hungary. In the other countries, including the Netherlands, school expectancy lies between 15 and 17 years. Denmark and Germany come just behind the leaders, on 17-18 years.

Part-time education relates to schooling with similar qualifications as full-time education. Part-time education plays a major role in Belgium, Portugal, Sweden, the United Kingdom and, most especially, Australia. The same is true to a lesser extent in Poland, New Zealand and the United States. In Portugal, the United Kingdom and Australia in particular, the relatively short time spent in full-time education is compensated for (indeed more than compensated for in some cases) by enrolment in part-time education. In the other countries, including the Netherlands, part-time education plays a much less important role. There is a certain correlation between Figures 3.11 and 3.12, in the sense that high enrolment in the older age groups (according to Figure 3.11) would appear to correlate with a relatively major role for part-time education (according to Figure 3.12).

Figure 3.13 looks at entry rates for tertiary education. They have been calculated by the OECD in a manner similar to the school expectancy figures in Figure 3.12, as the sum for all ages of the proportion of each age group entering tertiary education

in the year in question. Here, too, a certain degree of distortion can occur, because transversal data for a single calendar year have been converted to the probability of entry in a single cohort. Furthermore, it is important to avoid duplications, by ensuring that people who temporarily suspend their studies, or who move to another course or institution are not counted twice. In the Netherlands, the rules applied provide a reasonable guarantee that there will be no duplication in the separate figures for university and professional education. However, people who start out in one form of higher education and then move to the other are counted twice.

Figure 3.13 Net entry rates tertiary education, 2001



Source: OECD (Education at a Glance 2003)

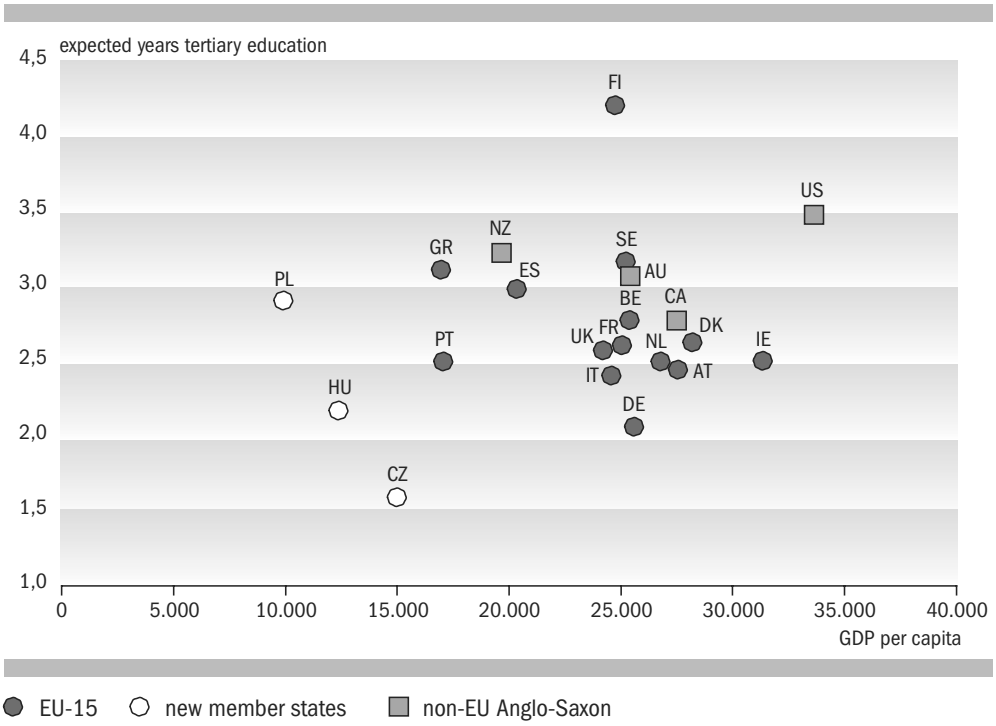
In accordance with the ISCED-97 classification, this figure distinguishes between two forms of tertiary education (A and B). The first involves relatively long, theoretically-based programme and the second relatively short skills-based programmes. As stated in section 3.2, higher professional education in the Netherlands is classified as type A because of the length of the programme.

Figure 3.13 shows that slightly more than 50% of young adults in the Netherlands have entered or will at some time enter tertiary education. Thirty per cent of them come from pre-university education (VWO), another thirty per cent from senior general secondary education (HAVO) and twenty per cent directly from senior secondary vocational education (MBO). The rest are individuals who had not been in full-time education in the previous year (Biemans and Kuhry 2002).

With an entry rate of 50% for tertiary type A education, the Netherlands comes somewhere in the middle of the ranks. Heading the field are Finland, Sweden, Poland, Australia and New Zealand, with entry rates of 65% or more. A number of other countries – Belgium, Spain, the United Kingdom, Hungary and the United States – do

better than the Netherlands in terms of their totals for types A and B. However, people who start both tertiary type A and tertiary type B education will have been counted twice. This is particularly clear in the case of New Zealand, whose total entry rate exceeds 100%. On this basis, only Germany, Austria, Italy, the Czech Republic and Slovakia have a worse score than the Netherlands.

Figure 3.14 Expected years in tertiary education versus GDP per capita, 2001



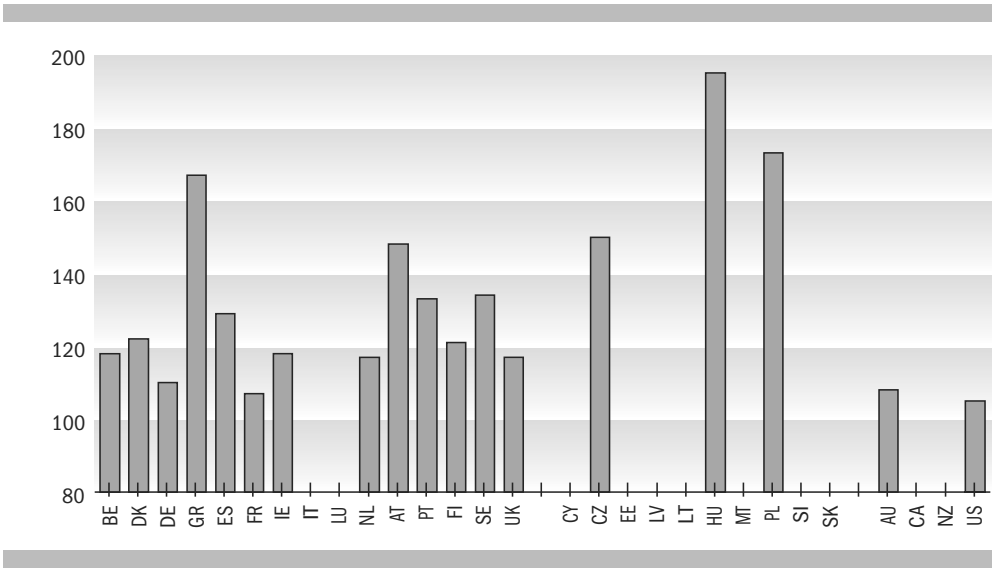
Source: OECD (Education at a Glance 2003)

As Figure 3.14 shows, there is a weak positive correlation between GDP per capita and the number of years young people are likely to spend in tertiary education. This last indicator is a weighted average of the expectancy figures for people who will enter tertiary education at some stage and people who will not (and therefore score zero for expected years in tertiary education). The US and the new member states (and, to a lesser extent, a number of Mediterranean countries) represent the two extremes. The Netherlands falls in the middle. There is in fact a chicken-and-egg situation here. The more people have higher qualifications, the greater the boost to economic growth (see Section 3.1), but people in poor countries have less money to spend on higher education.

Differences between countries in the rates of change also have an impact (see Figure 3.15). With a growth in its higher education enrolment rate of 17% over the period 1995-2000, the Netherlands falls in the middle. Growth has been most rapid in a number of countries that started from a relatively disadvantaged position: the

new member states, Greece and Austria[7]. Germany, France and Australia had a growth rate below 10%. According to NCES, the growth figure for the US was around 5%.

Figure 3.15 Change in enrolment rates all tertiary education, 2001 (1995 = 100)



Source: OECD (Education at a Glance 2003); CBS (Netherlands) and NCES 2001 (US) SCP revision

One explanation of the rapid growth in enrolment in tertiary education over the past few decades lies in the fact that women have caught up with men. According to *Education at a Glance 2003* women are now in fact ahead in all countries. Their lead is most pronounced in New Zealand, the Scandinavian countries and the United Kingdom.

A more concrete performance indicator for education than enrolment is the results students attain, which can for example be measured via the number of final qualifications awarded. To allow comparison between countries, these figures need to be standardised – divided by the size of the relevant age group. Given the variety of courses a single individual can accumulate, we look here only at the percentage of the population acquiring a qualification at upper secondary or tertiary level.

The indicators obtained are hybrid, because they can be seen either as a measure of the performance of the education system or as a measure of system quality: the proportion of youngsters able to attain a certain level of education.

The Dutch education system includes four upper secondary qualifications: the HAVO diploma (senior general secondary education), the VWO diploma (pre-university education), the secondary vocational diploma and the apprenticeship diploma.

7 According to Kaiser and Wach (2003) the enrolment in tertiary education quadrupled since 1990 and more than tripled in the period since 1995.

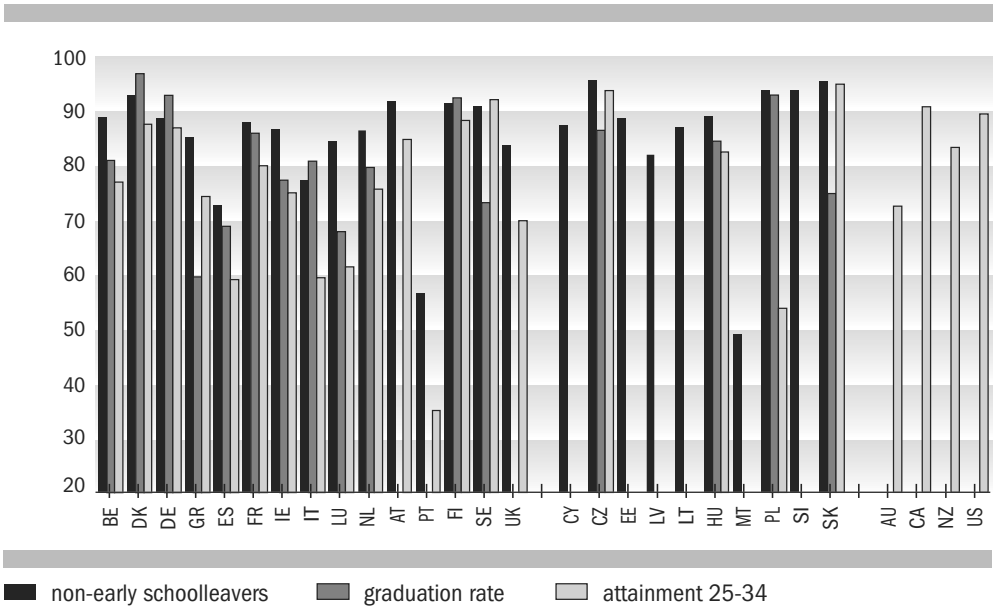
Three series of international figures are available on this, but unfortunately they do not produce an unambiguous outcome, and they are not available for all countries.

1 In the Lisbon Agenda, the EU specified a target for reducing the number of *early school leavers*. All school leavers are to have at least a *basic qualification*; in other words they must have competed a general or vocational course at upper secondary level. Since this was agreed, the EU has been keeping track of the proportion of school leavers who do not meet this objective. This indicator is defined as the percentage of people aged 18-24 who are no longer in education and have no upper secondary qualification. The complement to this (the number of young people who are still in education or have an upper secondary qualification) in 2002 is shown in the first bar in Figure 3.16.
2 The second bar refers to a graduation indicator calculated by the OECD. It is calculated by converting the number of graduates into a graduation *rate* by dividing it by the size of the age group in question.[8] In this process, duplication in the form of people who accumulate several qualifications one after the other (e.g. a *HAVO* diploma then a *VWO* diploma) was corrected for as much as possible.
3 The third bar refers to an entirely different statistic: the percentage of the population aged 25-34 with an upper secondary or tertiary qualification. This figure also comes from the OECD.

The three indicators are not equal. In theory, the first should produce a higher outcome, because some people who are still in education will fail to complete the programme. The third indicator should be lowest, because general educational attainment in all countries is gradually rising; educational attainment among 25- to 34-year-olds will therefore be lower than that eventually reached by the present 18- to 24-year-olds.

8 This can be approximated fairly well by dividing the total number of qualified school leavers by the average size of the most affected age groups. However, the OECD managed to gather data on qualifications by age, which allowed it to perform a precise calculation.

Figure 3.16 Upper secondary graduates (2001) as a percentage of population



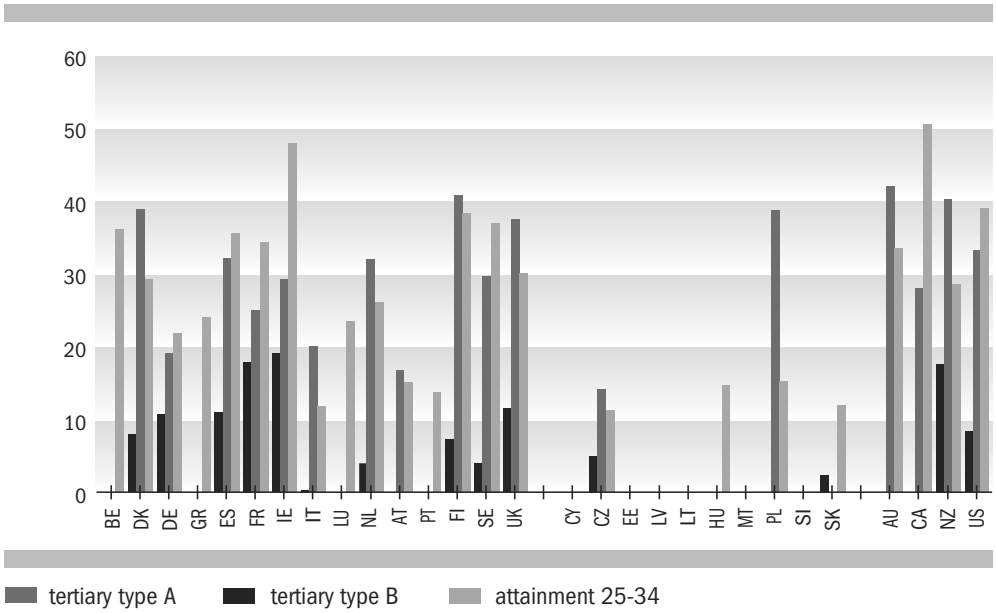
Source: OECD (Education at a glance 2003); Eurostat (Non-early school leavers); CBS (Netherlands) SCP revision

Since the information on the three indicators is rather inconsistent for a number of countries, it is difficult to draw any definitive conclusions on the basis of the figure. The differences in Poland and Portugal can be explained by the rapid growth in enrolment over the past ten years. In other cases, including the relatively low graduation rates in Greece, Sweden and Slovakia, they must be caused by statistical anomalies.

Nevertheless, we can draw some conclusions. In countries like Malta and Portugal, no more than half of youngsters graduate with an upper secondary qualification. Spain also has a fairly low score. In countries as diverse as Denmark, Germany and the Czech Republic the proportion is around the 90% mark. On around 70% to 80%, the Netherlands falls somewhere in the middle. Most of the new member states and the Anglo-Saxon countries score reasonably well to well on this criterion.

Graduation rates for tertiary education calculated in a similar way are shown in Figure 3.17. Again, a distinction is drawn between type A and B tertiary education. The figure also includes information on the percentage of the population aged 25-34 with a tertiary qualification.

Figure 3.17 Graduation rates for tertiary education, 2001



Source: OECD (Education at a glance 2003); CBS (Netherlands) SCP revision

Since some students acquire a type B qualification before acquiring a type A qualification, the percentages cannot simply be added. If we look only at type A courses, we find that Finland, Australia and New Zealand have graduation rates above 40%. The Netherlands, Denmark, Spain, Poland and the US have graduation rates of 30% to 40%. Germany, Italy, Austria and the Czech Republic are at the other end of the spectrum, with rates of between 10% and 20%. Many countries have a much larger tertiary type B sector. Although they cannot simply be added to the type A courses because of the risk of duplication, it is likely that this would put the Netherlands further behind countries like Finland, the United Kingdom and New Zealand and allow a number of other countries (France, Ireland and Sweden) to overtake us. If we correct for this, the Netherlands falls to a position in the middle of the table. Data on educational attainment among 25- to 34-year-olds confirm this, albeit that Poland (along with the other new member states, Italy, Portugal and Austria) still lags far behind in this comparison. However, most of the countries near the bottom of the table have seen strong growth in enrolment in tertiary education (see for example Figure 3.15), so in this sense too there has been a considerable degree of convergence.

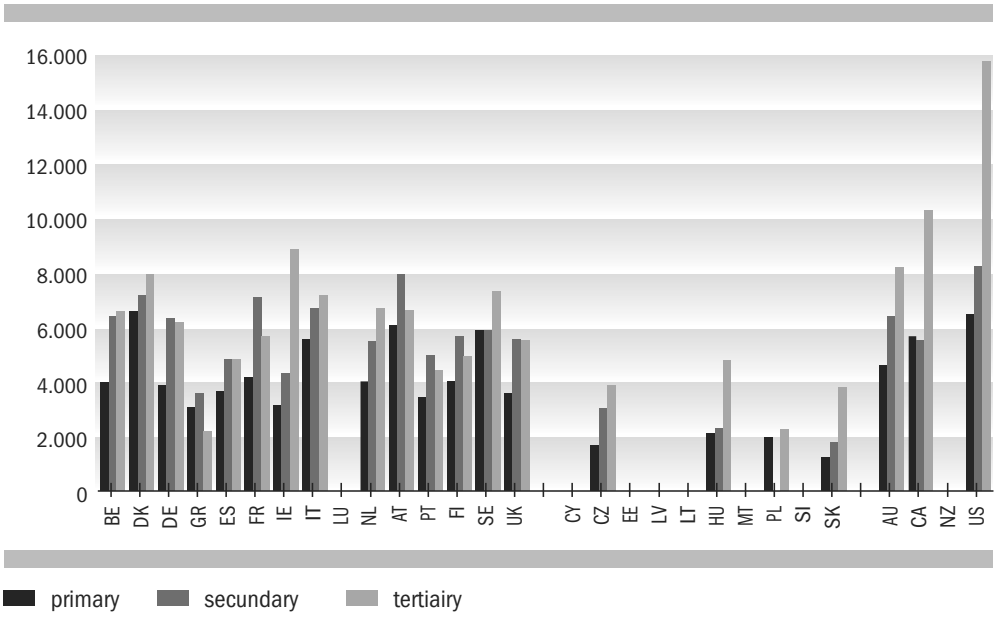
In the Lisbon Agenda another target is specified: the desirability of raising enrolment in technical disciplines, mathematics and natural sciences. The number of people with such qualifications would be a measure of a country's capacity for technical and industrial innovation. As Table A3.1 in *Education at a Glance 2003* shows, the Netherlands with a share of 18% score well below the OECD average of 26%.

3.5 *Cost price and productivity*

The previous have examined various aspects of service provision in education: the resources used (costs and staff) and performance (enrolment and graduation rates). This section looks at these two aspects in conjunction.

Total education expenditure per capita (see Figure 3.7) is a fairly coarse indicator, as it takes no account of the size of the relevant age group (5- to 24-year-olds, say) in relation to the rest of the population. The cost price per student tells us a lot more (see Figure 3.18). The figure shows separate data for primary, secondary and tertiary education.

Figure 3.18 Total expenditure per student, 2000 (in NL euro, purchasing power parities)



Source: OECD (Education at a Glance 2003) excluding R&D expenditure

In terms of its spending per pupil in primary education (NL€ 4000) the Netherlands comes behind only the non-European Anglo-Saxon countries, Sweden, Denmark, Austria and Italy. The level of spending in Greece, Ireland and in the new member states, in particular, is substantially lower than in the Netherlands.

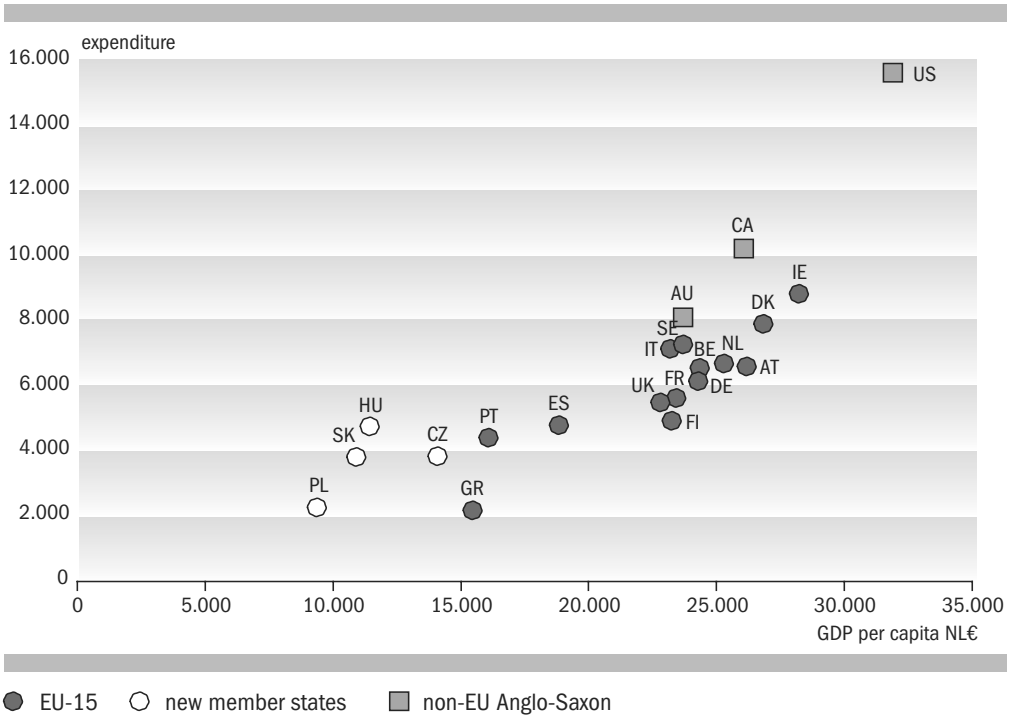
As far as spending per secondary pupil is concerned, the Netherlands falls somewhere in the middle, on around 5500 euros. Spending in Austria, France and the United States is much higher, while in Greece, Ireland and the new member states it is considerably lower.

Higher education expenditure ranges from 2000 to 16,000 euros per student. Heading the field is the United States, followed at a distance by Canada, Australia and Ireland on 8000 to 10,000 euros per student. With a cost price of 7000 euros, the Netherlands comes about tenth. The lowest expenditure per student is found in Greece and Poland. Educational expenditure in the Netherlands in fact rose substantially in

2001 (see Figure 3.8). This suggests that the Netherlands is likely to rise further in the rankings.

The relationship between expenditure per student and GDP per capita is also interesting. There is a positive correlation in all types of education, but it is most pronounced in the tertiary phase (see Figure 3.19).

Figure 3.19 Tertiary education: expenditure per student versus GDP per capita, 2000



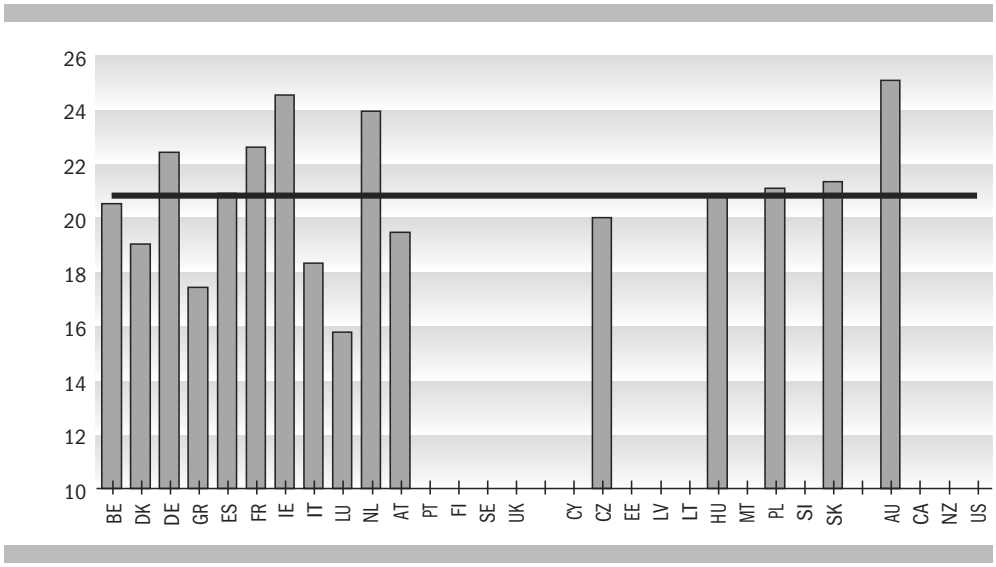
Source: OECD (expenditure); Eurostat (GDP per capita) SCP revision

The more prosperous a country, the more it spends on each student in tertiary education. The United States heads the table, and two groups come bottom: a number of Mediterranean countries and the new member states. The explanation for a major proportion of the correlation observed is in fact quite trivial: in countries with a lower GDP per capita, lecturers' salaries are lower and standards for facilities and premises are lower. This might be a reflection of lower quality, though this is not necessarily the case. Figure 3.14 illustrates the relationship between GDP per capita and higher education in a more unambiguous way.

In terms of spending per pupil/student, the Netherlands occupies an average position. Not so long ago, the Netherlands scored below the EU-15 average for education spending as a proportion of GDP (see Figure 3.7). This led a number of Dutch institutions to conclude that the country was at a disadvantage, and urgent measures were needed to address the situation. However, the Netherlands has more or less caught up since, largely thanks to the rise in expenditure in 2000 and 2001 (see also Figure 3.8). Nowadays the Netherlands' spending is slightly on the low side only in the secondary education sector.

Figures 3.20 and 3.21 examine student/teacher ratios. The former shows the class size in primary schools, the second the student/teacher ratio in secondary schools. The way secondary education is organised makes the term 'class size' less appropriate in some countries, including the Netherlands.

Figure 3.20 Average class size in primary education, 2001



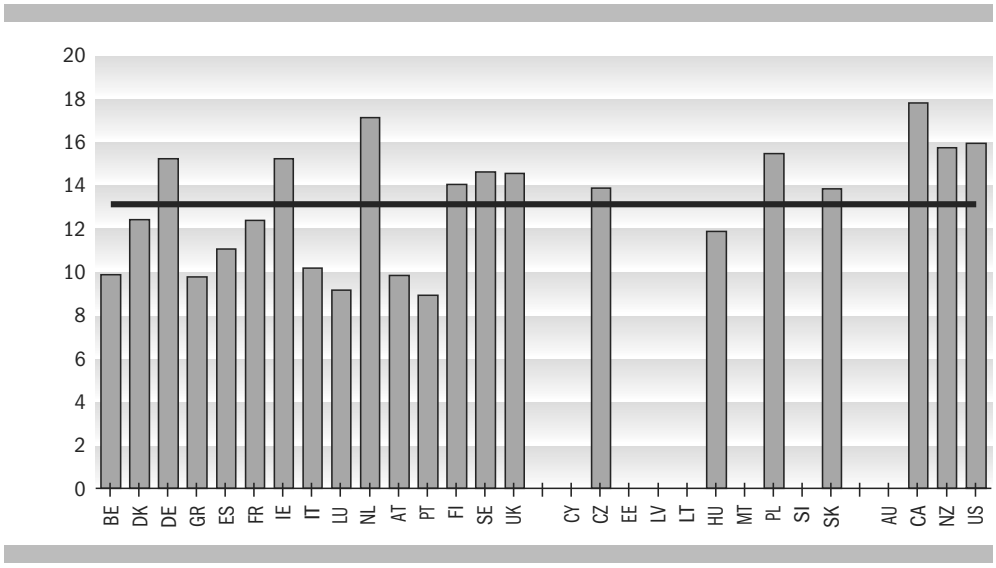
Source: OECD (Education at a Glance 2003)

The figures show that the Netherlands has an exceptionally high student/teacher ratio in both primary and secondary education, at 24:1 and 17:1 respectively. In primary education, only Ireland and Australia have larger classes sizes, and in secondary education only Canada has a higher student/teacher ratio. Luxembourg is at the other end of the spectrum, with scores of 16:1 and 9:1.

The Netherlands has in fact recently taken steps to reduce primary school class sizes, raising spending per pupil substantially over the period 1998-2002. The extra money is intended to enhance the quality of the education provided. Evidently, the first-order effect has been to raise costs per pupil and reduce the student/teacher ratio. Whether the intended improvement in quality will also be achieved is less certain. The policy was inspired partly by the positive results of the STAR experiment in the US, which found that better results are achieved in classes of 12-15 than in classes of 22-25. In comparison with this, the Netherlands' target of reducing class sizes from 23 to 20 is very modest. Research into the link between class size and educational attainment in Dutch primary education has not in fact found positive effects in smaller classes (Levin 2002). On the contrary: in some years *large* class sizes have a positive impact on attainment. According to findings by the Dutch Education Inspectorate (Inspectie van het Onderwijs 2003), there is more to be gained from using resources to make sure there are 'more hands on deck' in the classroom rather

than to reduce class sizes. However, the STAR experiment found no effect of class assistants. The common sense on the reduction of class size is that it has a small impact at a high price (Webbink and Hassink 2002).

Figure 3.21 Student/teacher ratio in secondary education, 2001



Source: OECD (Education at a Glance 2003)

To a certain extent, data on costs per pupil/student (Figure 3.18) and on the student/teacher ratio (Figures 3.20 and 3.21) are rough measures of the productivity of the different countries' education systems. Against this yardstick, the Netherlands does fairly well: in secondary education, in particular, costs per student are low and the Netherlands comes near the top in terms of class size in both primary and secondary education. However, low spending per pupil and large class sizes are said to be symptomatic of poor quality. Measures of quality and effectiveness therefore also have to be taken into account, and these are examined in the next section.

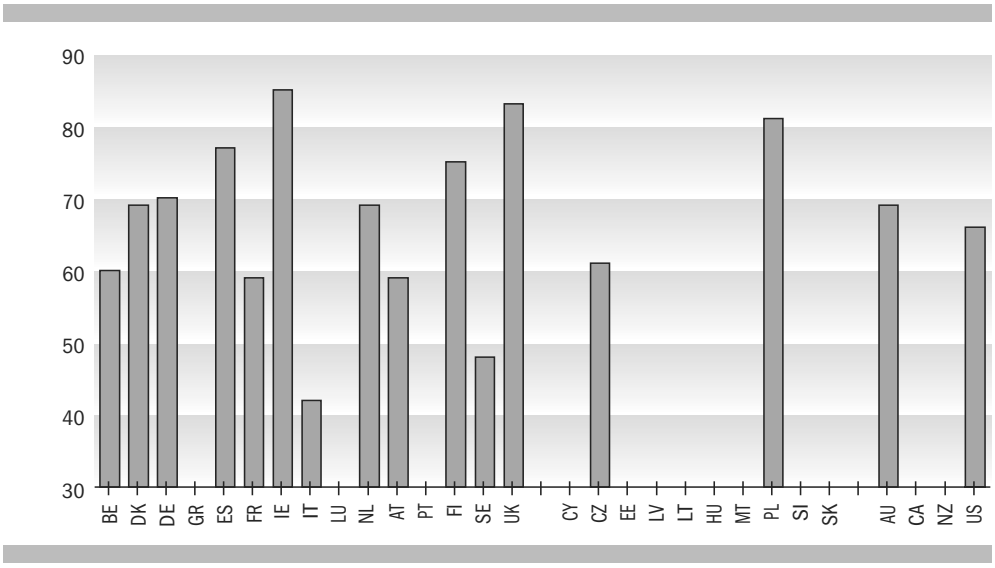
3.6 Quality and effectiveness

The performance indicators in Section 3.4 (enrolment and graduation) provide a quantitative impression of production. However two important factors – the quality of the production process and the product itself – have been largely overlooked so far.

One possible measure of the quality of the production process is the extent to which teachers meet the qualification requirements. *Education at a Glance 2003* (Chart D7.2) gives information on this subject for a few countries. Ireland, the Netherlands and Denmark do best, with over 90% of full-time teachers holding all the necessary qualifications. Countries like Portugal, Sweden and Italy do much worse.

Another quality indicator is the probability that students will complete their course successfully. Conversely, the percentage of students who leave secondary school without taking the upper secondary-level final examination is a negative indicator. This subject has already been examined in connection with Figure 3.16. Figure 3.22 shows the percentage of the intake into tertiary type A education that make the finishing post. This is referred to as the 'survival rate'. The country average is 67%, and the Netherlands comes close to this, with 69%. Spain, Ireland, Finland, the United Kingdom and Poland score relatively high (75% or over), while Belgium, France and Austria score relatively low (around 60%) and Sweden and Italy very low (between 40% and 50%). This is the price Sweden pays for its very high intake into higher education. Belgium's relatively low survival rate may also be associated with its flexible admissions policy.

Figure 3.22 Survival rates in tertiary type A education, 2000

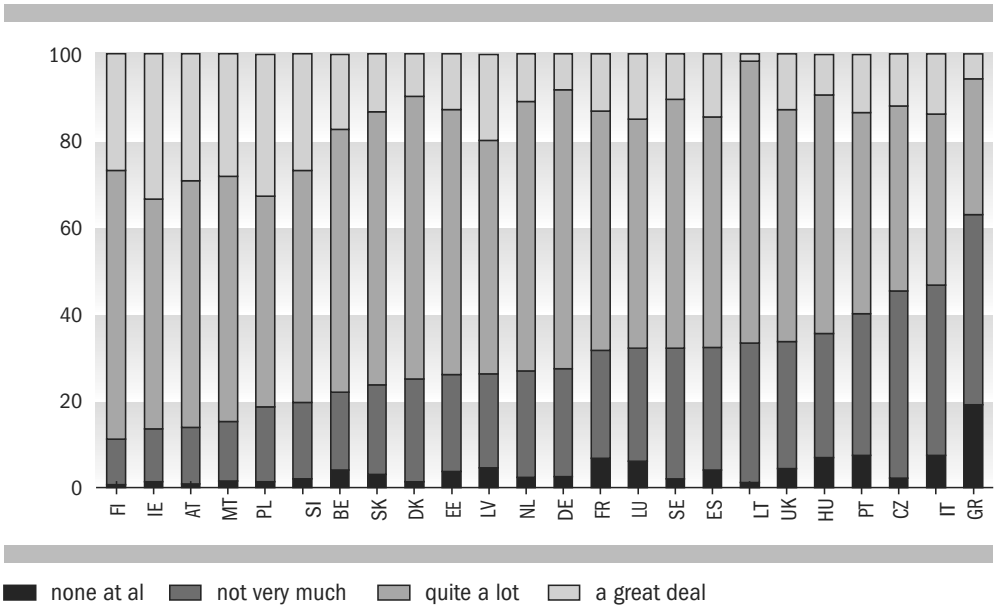


Source: OECD (Education at a Glance 2003)

Figure 3.23 looks at a subjective measure of quality: public confidence in the education system. The figure refers to opinions in all European countries. Confidence is high in Finland, Malta, Ireland, Austria, Poland and Slovenia. It is low in Greece, Italy, the Czech Republic and Portugal. In this respect, the Netherlands falls in the middle. Notably, confidence in the education systems shows very little, if any, correlation with the type of system, the level of education spending or the achievement of pupils.

NCES 2001 presents similar data for the US. Here, public confidence is measured on the scale 'a great deal/quite a lot/some/very little', and the outcomes are 16%, 21%, 40% and 20%. Although the first two categories are identical to those in the European data, it is likely that only the score for the first answer is applicable. Furthermore, the response 'very little' can probably be interpreted as the sum of 'none at all' and 'not very much'. On this basis, the US would appear to have a fairly average score, albeit higher than the Netherlands.

Figure 3.23 Confidence in the education system, 2000



Source: European Values Study

It might be useful to look here at some Dutch data on public opinions on the quality of education presented in SCP 2002b. In the Netherlands, around 65% of respondents said they thought the quality of education was either good or very good. There was very little difference between the scores for the different types of education.

Notably, parents with children in primary school gave a significantly more positive response than other members of the public (79% as opposed to 64%). So quality judgments are affected not only by one's own experience, but also by hearsay. There was little difference when it came to secondary education (65% and 63%). In addition, 20% to 40% of respondents felt that the quality of education had declined over the past five years, while a much smaller group felt it had improved. These opinions would appear to be at odds with actual developments, given the fact that substantial extra resources have been invested in education in recent years, including for class-size reduction in primary schools and IT facilities in secondary schools.

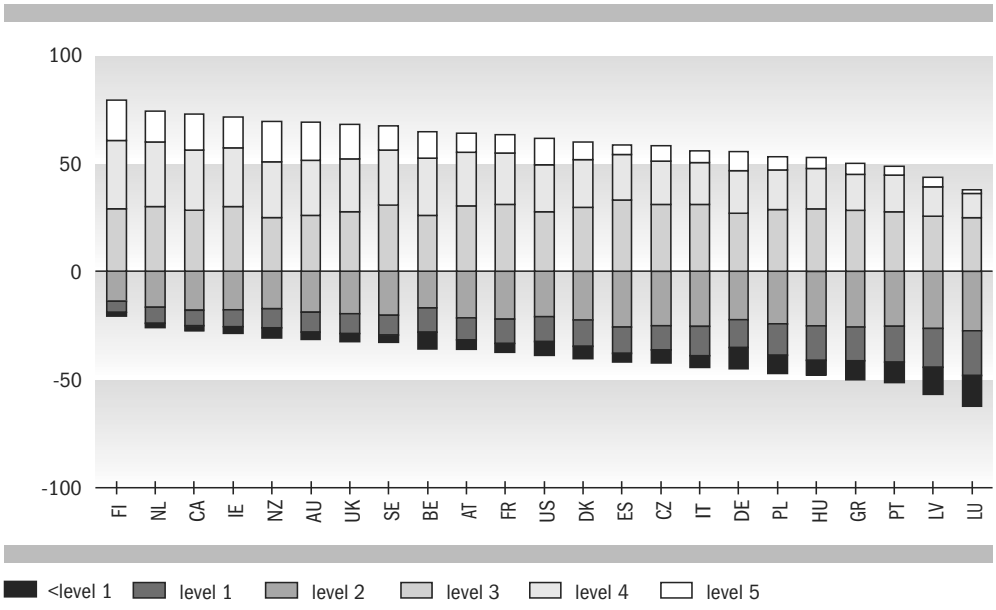
Other figures for the US (NCES 2001, Table 22) would not, incidentally, appear to confirm our earlier conclusions. People were asked to rate primary and secondary schools on a scale of 0 to 4. The average score nationally was 2. People were a little kinder in their judgment of schools in their local area (2.5). So it would seem that the grass is not always greener on the other side. At any rate, Americans would seem to be much less positive about the quality of their schools than the Dutch (though it should be pointed out that they were asked in an entirely different way). This is not consistent with the confidence data, where the US seems to do better than the Netherlands. There is no difference to speak of between the parents of school-age children and other citizens in the US.

The results of international comparative tests of educational achievement – the OECD's PISA indicators – are also highly informative.[9] They can be seen as an indicator of the effectiveness of education and as such they complement the information on educational attainment discussed below.

The tests examine reading skills, mathematical skills and scientific literacy in 15-year-olds (Figures 3.24 to 3.26). The Netherlands is not included in OECD reporting on this subject, incidentally (*Education at a Glance 2003*: 62-90), because the sample size is said to be too small. However, the National Institute for Educational Measurement (CITO, Wijnstra 2000), which has examined the data for the Netherlands, concludes that they are representative. These data have therefore been added to the three figures.

According to these tests, the Netherlands scores high on all three skills examined. Finland and Canada also have high scores. The United States falls in the middle, while Luxembourg, a number of Mediterranean countries and the new member states have relatively low scores.

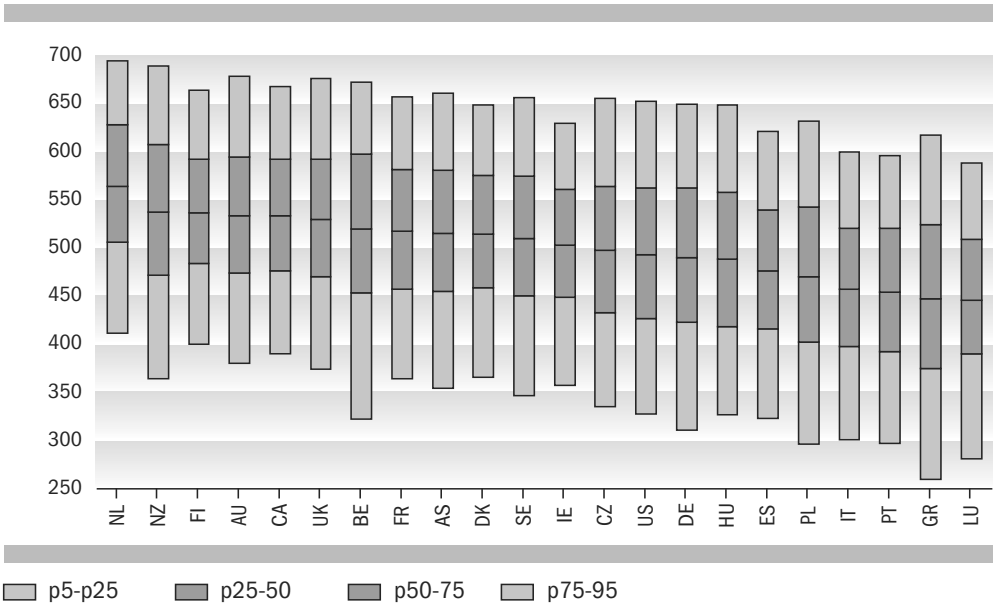
Figure 3.24 Reading skills, 15-year-olds, 2001



Sources: OECD (Education at a Glance 2003); CITO (Netherlands)

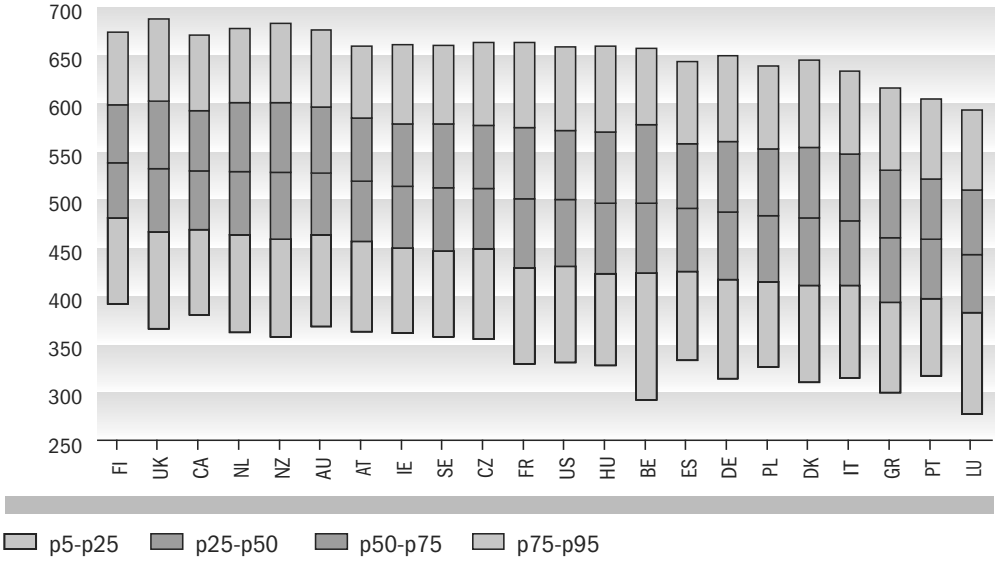
9 PISA stands for Programme for International Student Assessment.

Figure 3.25 Mathematical skills, 15-year-olds, 2000



Source: OECD (Education at a Glance 2003); CITO (Netherlands)

Figure 3.26 Percentiles for scientific literacy, 15-year-olds, 2000



Source: OECD (Education at a Glance 2003); CITO (Netherlands)

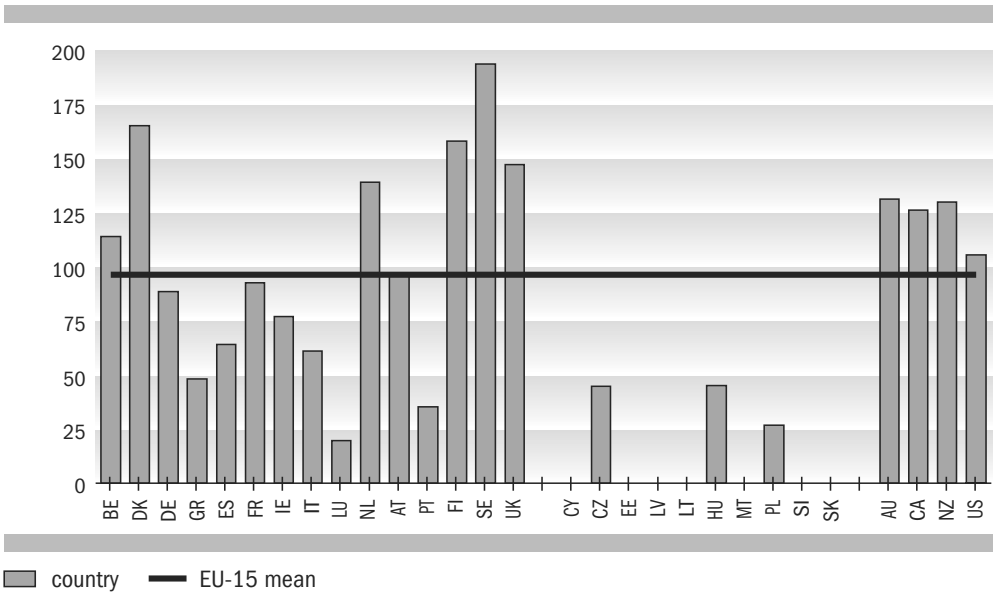
The Netherlands' relatively high score is confirmed by a reading skills study conducted among 10-year-olds (fourth-grade students). The source is the PIRLS survey, which is also reported in OECD 2003ca (p. 138). Sweden comes top, followed by the Netherlands and the United Kingdom. The Slovak Republic, Greece and France trail the rest of the field.

Information is also available on the quantity and quality of academic research conducted in the countries concerned. These figures indirectly give some indication of the quality and effectiveness of university education.

Figure 3.27 refers to the number of academic papers published per 100,000 inhabitants. The average for the EU-15 is about 100. The Netherlands is among the leaders, on 140, alongside the Scandinavian countries and the United Kingdom. Sweden tops the table, incidentally, with 190. The US comes close to the EU-15 average. Luxembourg, a number of Mediterranean countries and the new member states for which information is available have low scores. Luxembourg scores below, and Poland around, the 25 mark.[10]

One way of measuring the quality of academic papers is to look at the number of citations by other academics. Figure 3.28 presents figures on this subject. Roughly speaking, the picture (albeit far from complete) is consistent with that in the previous figure: the countries that publish the most articles also have the most citations. Here, too, the Netherlands cuts a good figure, as do the Scandinavian countries and the United Kingdom. The US would not appear to dominate (despite its size). This contrasts somewhat with the image of stimulating environments and high performance drive at American universities, and of top-quality research institutions (see for example NRC *Handelsblad*'s magazine supplement M of September 2003). In the US there are apparently major differences in quality, with many mediocre universities existing alongside the country's renowned 'centres of excellence'.

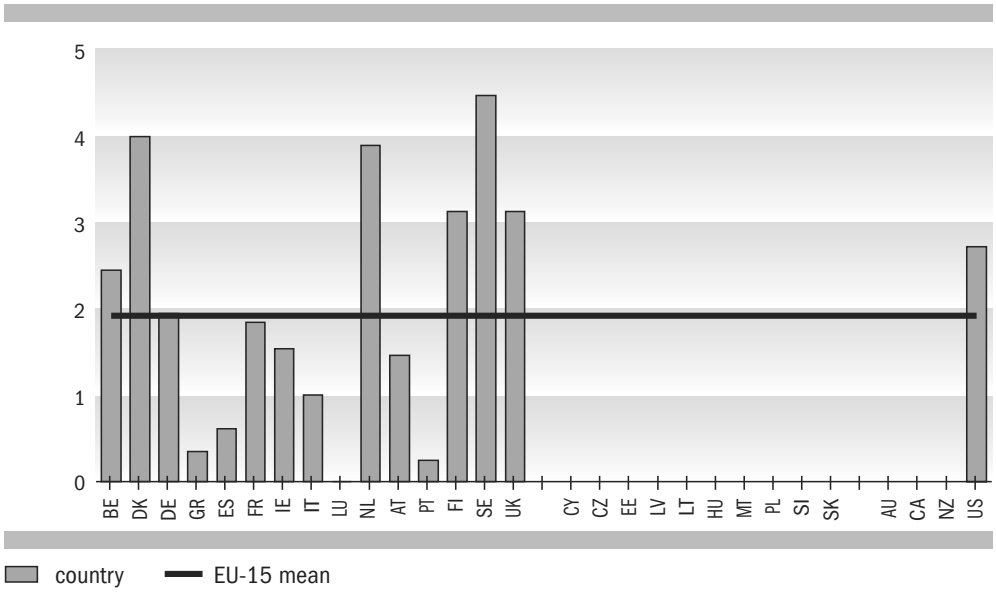
Figure 3.27 Scientific papers, 1999 (per 100,000 inhabitants)



Source: CWTS 2000

[10] In the case of Luxembourg, it can probably be assumed that many academics work in one of the neighbouring countries.

Figure 3.28 Highly cited papers, 2000 (per 100,000 inhabitants)

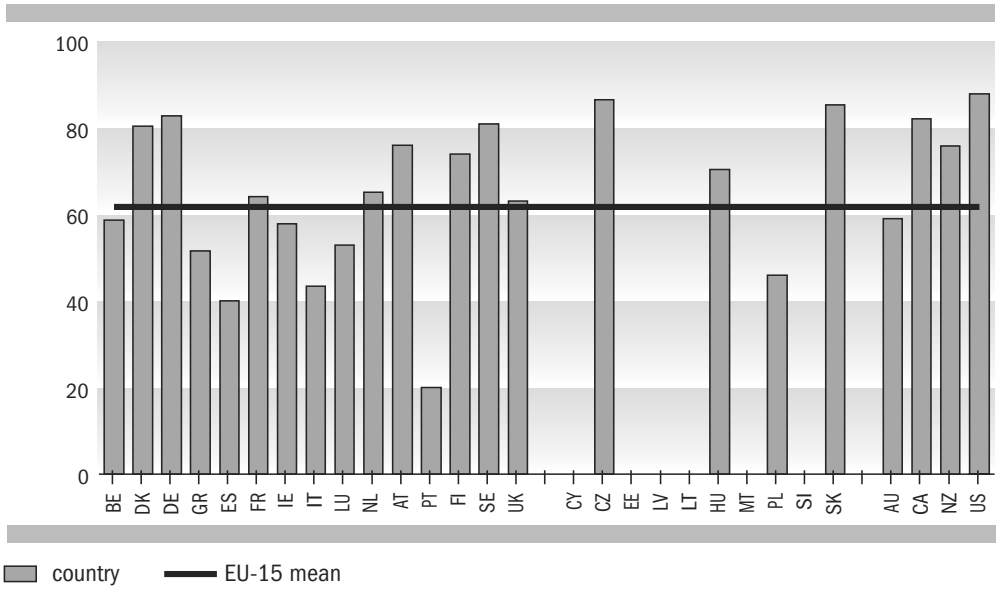


Source: Eurostat (NewCronos)

One important outcome of the education process is educational attainment in the potential labour force. Since a substantial proportion of people below the age of 25 are in education, the OECD compiles figures only on the 25 to 64 age group.

Figures 3.29 and 3.30 refer to the percentage of the population that have completed a course at upper secondary or tertiary level. The former shows that the country average is around 62%. The Netherlands has an above-average figure (65%), although it still comes in twelfth position, behind the Scandinavian countries, Germany, Austria, the Czech Republic, Hungary, Slovakia, Canada, New Zealand and the United States. This last country leads the field, on 88%. Low scores, between 40% and 50% are found in Poland, Greece, Italy and Spain. Portugal is a lonely straggler, on only 20%.

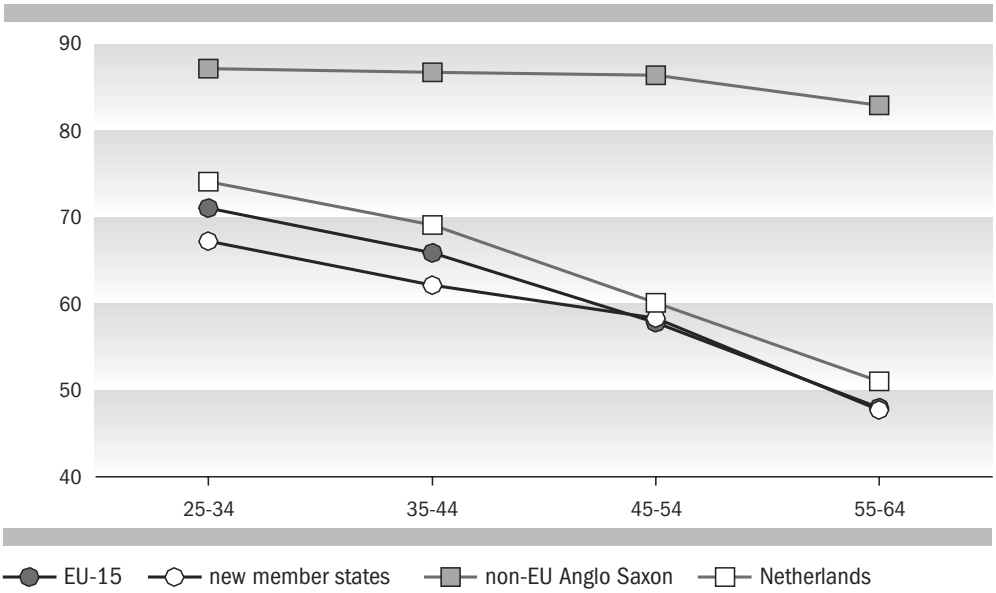
Figure 3.29 Percentage of population (25-64) that has attained upper secondary or tertiary education, 2001



Source: OECD (Education at a Glance 2002)

Figure 3.30 shows that educational attainment is relatively high among young people, and that it gradually declines in older age groups. This is of course associated with the educational expansion that occurred in the second half of the 20th century. The proportion of 25- to 34-year-olds with at least an upper secondary qualification is 71% on average. The figure also shows that the Netherlands scores slightly above the EU-15 average and the average of the new member states (which is reduced quite substantially by Poland's low score), but considerably lower than the non-EU Anglo-Saxon countries.

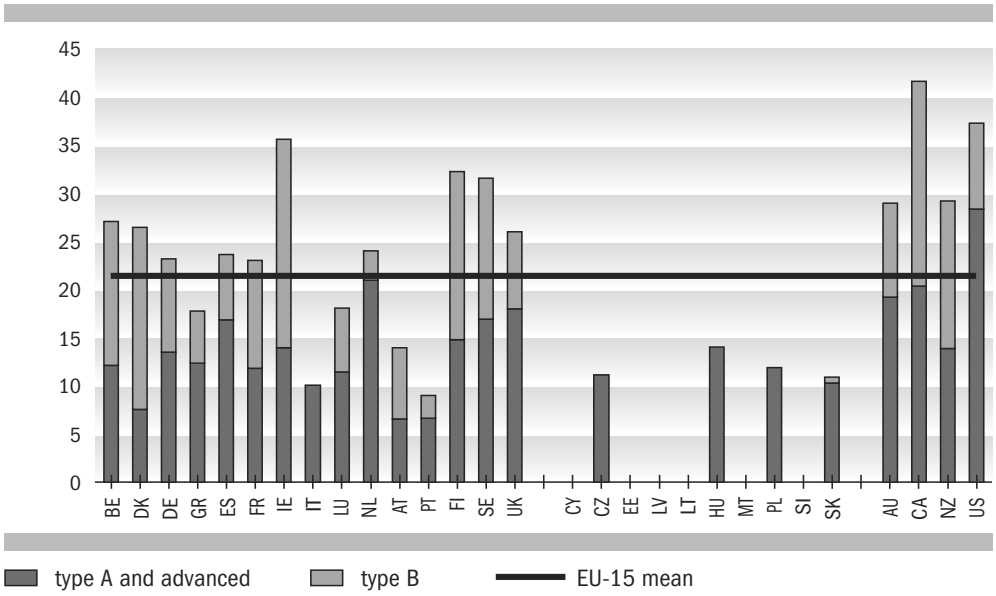
Figure 3.30 Percentage of population that has attained upper secondary or tertiary education by age group, 2001



Source: OECD (Education at a Glance 2003)

Figure 3.31 shows the percentage of the population with a tertiary qualification. The figures are broken down into type A and B courses.

Figure 3.31 Percentage of population (25-64-year-olds) that has attained tertiary education, 2001

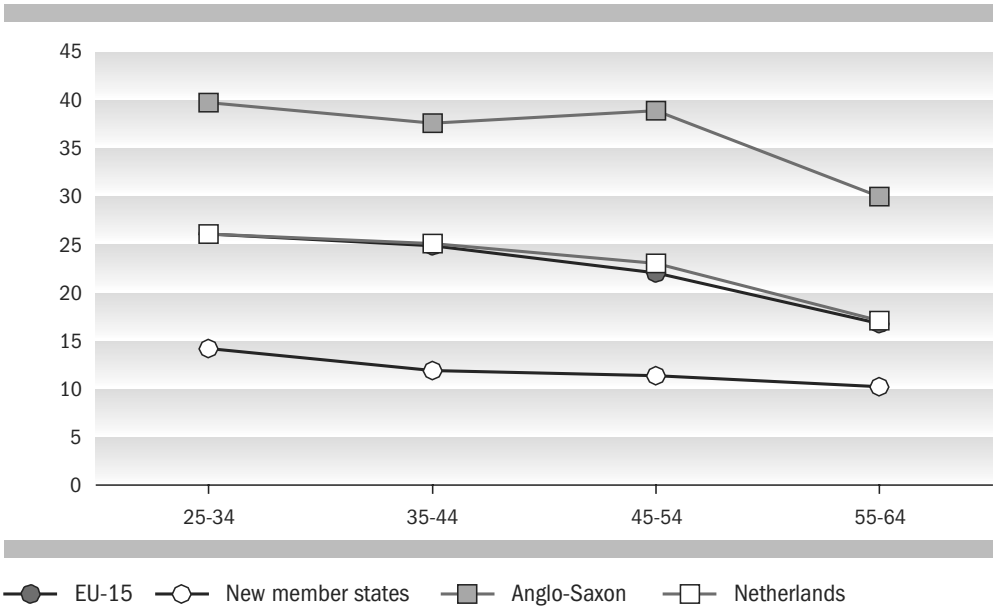


Source: OECD (Education at a Glance 2003)

The Netherlands has the second highest score (21%) for tertiary type A education, behind the United States (28%). However, as we have already discussed in conjunction with Figure 3.13, the picture is somewhat flattering, for two reasons: firstly, Dutch higher professional education rates as tertiary type A, and secondly the Netherlands has few courses that are classed as tertiary type B (shorter skills-oriented courses). If we add people with type B qualifications to those with type A, an entirely different picture emerges. Now, on 24%, the Netherlands ranks in the middle of the table, well behind leaders Ireland, the US and Canada, on 35% to 40%. Belgium, the Scandinavian countries and Australia and the Netherlands also do better than the Netherlands. Greece (17%), Austria (14%), the new member states (10% to 15%), Italy (10%) and Portugal (9%) do substantially worse.

Figure 3.32 looks at the relationship between educational attainment and age group. Like Figure 3.30, it shows that, as a result of the expansion in education, the population has become rapidly better educated over the past half century. It also shows that the non-EU Anglo-Saxon countries have always been ahead, while the Netherlands is more or less at the EU-15 average. In contrast to their performance in terms of upper secondary qualifications, the new member states lag behind here. There is also little progression (i.e. relatively little difference between age groups) there, although Figure 3.15 shows that they have caught up to a considerable extent over the past few years. The effects of this are not yet visible in Figure 3.32. According to Figure 3.15, the Netherlands can also expect to see some more growth (leading to an attainment rate in excess of 30%).

Figure 3.32 Percentage of population (25-64-year-olds) that has attained tertiary type A or B education, 2001



Source: OECD (Education at a Glance 2003)

One of the problems associated with comparing educational attainment in different countries is uncertainty about the actual level of programmes which are officially regarded as equivalent.

Data on functional literacy among adults, gathered in an international comparative study of twelve countries (the IALS project) give us more interesting information. Unfortunately, the figures date from the mid-1990s. Dutch adults score fairly high on the various scales of functional literacy, though not so high as Swedish adults, who top all three rankings (Houtkoop 1999). Canada and Germany also come near the top. The United States, Australia, New Zealand and Flanders form the mid-section. The US score is lower than one might expect on the basis of the high level of educational attainment in its population, mainly as a result of the poor scores of those with primary and secondary qualifications. In Canada, too, there are major differences in skills.

The United Kingdom, Ireland and Poland come last. As in Sweden, the differences between those with lower and higher educational attainment in the Netherlands are small. This is due not so much to high scores among the less well educated as to the relatively poor scores of the highly educated.

3.7 Further analysis of effectiveness

As in the other chapters, we have attempted to encapsulate the overall effectiveness of education systems in a single measure, comprising the elements listed in Box 3.1.

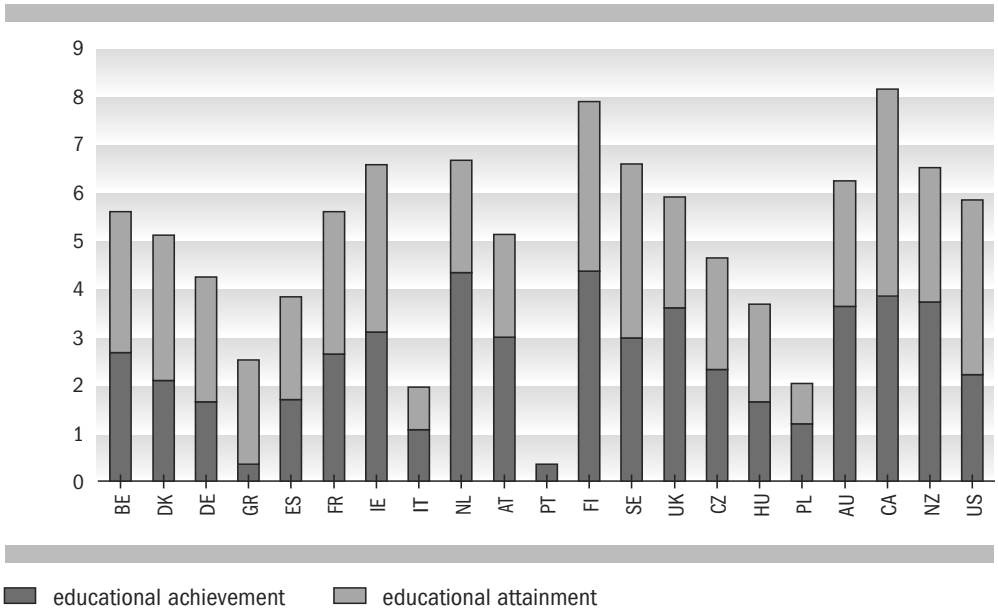
Box 3.1

A) Achievement tests
   - Reading skills
   - Mathematical skills
   - Scientific literacy

B) Educational attainment, 25-34 age group
   - Lower secondary or none (negative weight)
   - Higher

To correct for differences in scale and the variability of variables, we took normalised scores[11]. The normalised scores for the indicators were then rescaled and added, with the indicators in group A being weighted one-sixth, and those in group B by a quarter. This leads to equal weights for both groups. The composite scores are shown in Figure 3.33.

Figure 3.33 Composite effectiveness score



Source: SCP

[11] Calculated as z = 5+1.5*(x-m)/s, where z is the normalized score, m the average and s the standard deviation from original score x. See Annex B.3 for a more detailed explanation of the procedure.

The leaders are Canada and Finland, which have high scores both for the test results (achievement) and for educational attainment. They are followed by the other Anglo-Saxon countries, Ireland and the Netherlands. The Dutch are in a somewhat exceptional position, in that they combine a high score for achievement with a fairly mediocre score for attainment. The Southern European countries, particularly Greece, Italy and Portugal, and also Poland, have low scores. Both the high achievement score and mediocre attainment score for the Netherlands can be put into perspective.

To begin with the former: the OECD excluded some of the Dutch outcomes from *Education at a Glance*, and included others only with reservations. This is because of the low response rate. Further analyses in the Netherlands would appear to suggest that the sample, although small, is reasonably representative (Wijnstra 2000). Furthermore, the Netherlands' good results are confirmed by two other surveys discussed here: PIRLS and IALS. We will return to the attainment score later.

The OECD's analysis of the variation in scores on the reading skills test among 15-year-olds (Education at a Glance 2003: 91-98) provides more insight into the effects of school systems. It distinguishes between variation within schools and variation and between schools. Unfortunately, the Netherlands is not included in this analysis.

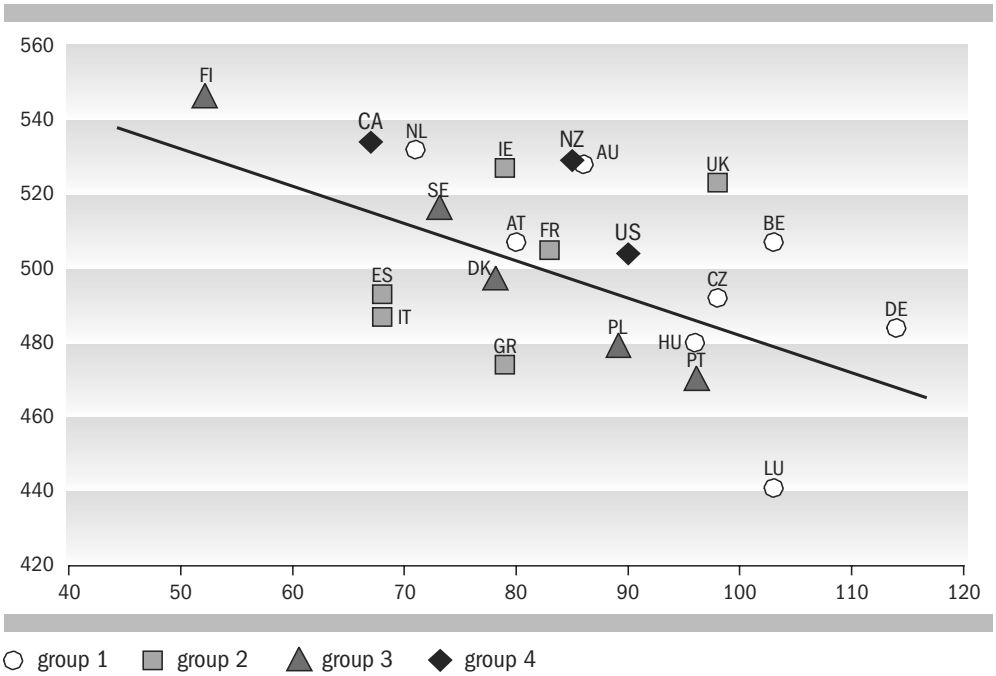
As is to be expected in an undifferentiated school system, between-school variation is very low in Sweden and Finland, and fairly low in Spain, Canada, Ireland, Denmark, New Zealand, Australia and the United Kingdom. It is very high in countries with a highly differentiated school system such as Belgium, Germany, Hungary, Austria and Poland. The Netherlands presumably also belongs in this group. The US is in the middle group. The absence of official differentiation in the US education system is offset by differences in quality between schools. Within-school variation is the complement of between-school variation, and is highest in the countries with an undifferentiated school system (the Anglo-Saxon and Northern European countries) and lowest in the countries of group 1 (Hungary, Poland, Italy, the Czech Republic, Austria, Germany and Belgium). The Netherlands undoubtedly belongs in the latter group.

These scores are closely related to the types of system distinguished in Section 3.2: the countries in group 1 (highly differentiated system: the Netherlands, Germany, Austria, Belgium, and also the Czech Republic, Hungary and Slovakia) are characterised by high between-school and low within-school variation. The reverse applies to the countries in the other groups, particularly group 3 (the Northern European countries).

However, these outcomes represent no more than a quantification of the formal differences between education systems. An analysis of inequality of opportunity in the different systems provides more insight into the effectiveness of education in different countries. Reducing inequality of educational opportunity for children from different social and ethnic backgrounds is one of the main aims of Dutch education policy. This is presumably also true of other countries. Ideally, not only should the average literacy score be high, there should also be few differences

between pupils according to their socioeconomic status. The reading skills figures suggest that these two aims are not mutually exclusive (Figure 3.34).

Figure 3.34 Average level of reading skills (vertical axis) versus difference in reading skills, by socioeconomic status, (horizontal axis)[a]



a Difference in reading skills between children from the highest and lowest quartile of the distribution by socioeconomic status.

Source: OECD (2002)

In fact, the reverse is more likely to be the case: in countries like Finland, Canada, and also the Netherlands, reading skills are not only good, the differences between children from different social backgrounds are relatively small. On the other hand, a low score is often associated with fairly large differences between children that correlate with socioeconomic status. This applies, for example, to Luxembourg, Germany and several Central European countries. The United Kingdom and Belgium are characterised by fairly high inequality of opportunity (combined with a good to fairly average literacy score) and Spain and Italy by fairly low inequality of opportunity (and an average literacy score). There would therefore appear to be no trade-off between equality of opportunity and quality. Well-functioning education systems are also better at reducing differences associated with social background. This is confirmed by the significant negative correlation between the two elements, reflected in the estimated regression line.

It is interesting to consider whether we can link the characteristics of education systems to average test scores and inequality of opportunity. By way of illustration, Figure 3.34 categorises countries not in the usual groups (EU-15, new member states and non-EU countries) but according to the classification of four main types of education system, in accordance with Table 3.1. The results of this analysis are clearly ambiguous. Group 1 (countries with maximum differentiation) includes both the Nether-

lands, with a high average score and low inequality of opportunity, and countries where the reverse applies (Germany and Luxembourg). Group 3, which is characterised by minimal differentiation, includes countries that do well on both (Sweden and, more especially, Finland) and one country with fairly bad scores, Portugal. On balance, however, a pattern does emerge: most countries in group 1 do badly in terms of educational opportunity and fairly badly to badly in terms of educational achievement. The countries in groups 3 and 4 generally have reasonable to good results for both characteristics, and those in group 2 are distributed widely around the average for both.

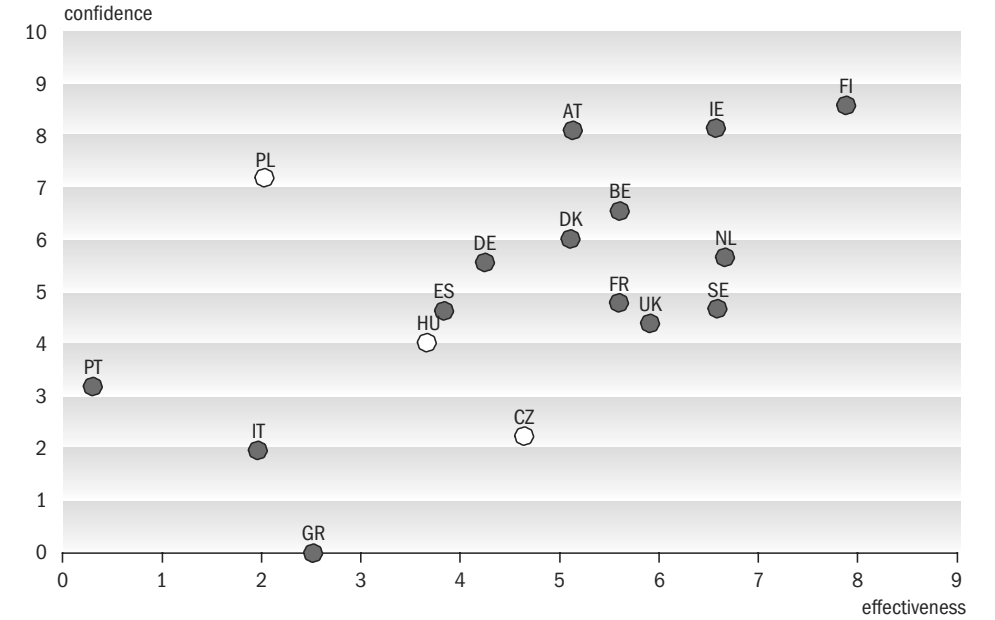
Although further research is needed in order to draw definite conclusions, these results indicate that broad-based, undifferentiated educational systems generally perform better. However, the Netherlands is the exception that proves the rule with a strongly differentiated educational system and reasonable to good results.

Figure 3.35 links the composite effectiveness score to a subjective measure of quality: public confidence in the education system. There are no data for the non-EU Anglo-Saxon countries. It will come as no surprise that there is a pronounced positive correlation between these two characteristics, with Finland and Ireland (and, to a slightly lesser degree, the Netherlands) at the positive end of the spectrum and a group of Southern European countries at the other end. The positions of the Czech Republic and Poland are striking: the Czech education system is reasonably effective, but the Czechs have very little confidence in it, while the reverse applies to Poland.

There is very little connection between system characteristics and confidence: group 1 contains countries with both high (Austria) and low confidence (Czech Republic). The same applies to groups 2 (Ireland versus Italy) and 3 (Finland versus Portugal).

Figure 3.36 looks at the relationship between effectiveness and education spending (in euros).

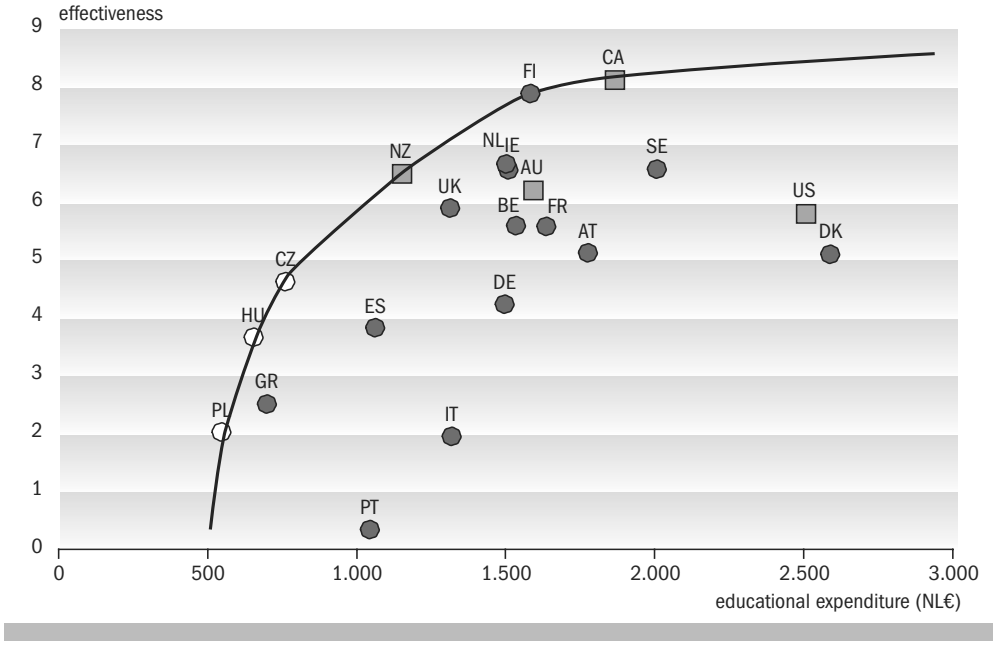
Figure 3.35 Education: confidence versus effectiveness



EU-15 ○ new member states

Source: OECD (European Values Survey)

Figure 3.36 Cost-effectiveness of education



EU-15 ○ new member states □ non-EU Anglo-Saxon

Source: SCP

On the curve (frontier) we find Poland, with very low costs and poor results, Hungary and the Czech Republic with moderate costs and moderate effects, New Zealand which achieves good results at relatively low costs, and Finland and Canada with fairly high costs but very good results. The Netherlands, the United Kingdom and Ireland also strike a good balance between costs and effects. The US, Sweden and Denmark also achieve reasonable effects, but at relatively high costs. Portugal, Greece and Italy have fairly low expenditure, but produce very poor results. Education expenditure can also be expressed in relative terms, as a percentage of GDP. This does not affect the figure very much. Poland, the Czech Republic and Hungary shift to the right and Ireland and the US to the left. This is partly due to the higher salary level in more wealthy countries.

As we have said, the Netherlands has only a mediocre score for educational attainment. There are two reasons for this:

– Firstly, the proportion of people aged 25-34 year with no basic qualification is fairly high, at 25%. A number of countries have a rate around 10%: Denmark, Germany, Finland, Sweden, the Czech Republic, Poland, Slovakia, Canada and the US.
– Secondly, the number of people with a tertiary level qualification is around the average, at 30% to 35%. The Scandinavian and Anglo-Saxon countries do better in this respect. The Netherlands' mediocre performance is partly due to the low numbers of short (type B) tertiary courses and to the relatively low enrolment rate in higher education among people over the age of 30.

It was agreed in the Lisbon Agenda that the number of early school leavers should be reduced to 10% by 2010. By then, 80% of 25- to 64-year-olds should have attained at least upper secondary education.[12] It is doubtful whether either of these targets will actually be achieved. Despite the rise in overall educational attainment over the past half century, there are signs that many countries are reaching saturation point. The Netherlands, for example, has a persistent problem group of around 17% – a figure that is rising, if anything – comprising unqualified school leavers and problem pupils for whom upper secondary education is simply an unattainable goal (see Herweijer and Kuhry 2003). A further 8% begin upper secondary education but fail to complete it. Against this background, it is difficult to understand why some other countries do not face these problems on this scale. Maybe it is because they have less stringent standards for final qualifications. But it might also be down to the unfavourable impact of some features of the Dutch system: the early radical differentiation that might lead to stigmatisation and the bad timing of the lower secondary phase. This can lead to undesirable behavioural effects and give those with a final qualification of this type a bad image. If lower secondary education were to last three years or –as is the case in some countries- would start at the age of eleven, pupils would have the opportunity to make the switch to secondary vocational education earlier, and

[12] Other objectives, such as those connected with lifelong learning and the reduction of differences in higher education enrolment rates between men and women do not fall within the scope of this chapter.

would experience a greater incentive to complete it.

The moral of this story is that the Netherlands will not succeed in bringing about a substantial reduction in the number of early school leavers without either changing its system or setting more flexible attainment targets.

The Netherlands is also unlikely to achieve the target for secondary and higher qualifications (80% of 25- to 64-year-olds). In 2001, the figure still fell well short of the target, at 65%. To a large extent, the educational attainment of 25- to 64-year-olds in 2010 has already been determined. From about the age of 35, educational attainment among Dutch adults increases very little, if at all. In theory, enrolment in adult education should lead to a further rise in educational attainment, but in practice it is mainly the highly educated who take adult education courses, despite all the efforts to attract adults with no qualifications or skills. Generally speaking, adult education tends to enhance educational differences between adults rather than reduce them. This means that any rise in educational attainment in the population aged 25 to 64 will have to be achieved as younger birth cohorts gradually replace older ones. This takes decades, and certainly cannot be achieved within 10 years. Furthermore, even the youngest generation does not meet the 80% target. Add to that doubts about the continuation of educational expansion, and this target begins to look highly unfeasible.

Another point of debate is the extent to which the term 'basic qualification' is appropriate. If we look at the Dutch unemployment figures (CBS 2003b), we find that unemployment is high among the unqualified, low among people with a secondary vocational or tertiary qualification, and average among those with a lower secondary or upper secondary general qualification. Among the younger generations, many of those with secondary general education began a professional or tertiary course but failed to complete it. Figure 3.22 shows that this applies to a third of all entrants in tertiary education. A sharp division between the lower and upper secondary level is somewhat artificial. Priority should be given to the reduction of the number of people who drop out of professional and tertiary education. This can be achieved by a close monitoring and early referal of students. Attempts to achieve 'continuous learning pathways' have received a great deal of attention in the Netherlands in recent years (see for example TH&MA 2003). However, one might also question the value to society of pushing the majority of people with a secondary vocational qualification through to a tertiary professional course: a country needs skilled workers as well as managers. Much higher enrolment in higher education might ultimately lead to declining standards.

4 Health care

Evert Pommer, Ab van der Torre and Bob Kuhry

4.1 Introduction

In modern welfare states, health care is an essential public service. Public opinion surveys in the Netherlands reveal that respondents now attach greater importance to good health than ever before, and over time health care spending has risen sharply. In tandem, over the past fifty years the average life expectancy has risen enormously. At the same time, increasing costs (as a percentage of GDP) threatened the financial sustainability of the health care system. Managing rising costs of health care is the greatest challenge currently facing EU member states. Countries of the EU meet the demand for health care in a variety of ways. National systems differ in terms of the extent to which services are provided publicly or privately, the degree to which the costs are covered by taxes, social insurance contributions or private payments, and the extent to which markets for cure and care are driven by supply or demand. This chapter assesses how the organisation of health care systems and present spending levels impact on services provided and the health of the population.

4.1.1 Policy goals

Government goals of health care policies are not always clearly and unambiguously defined in various OECD reports on the subject. An EC report on trends and challenges in health care (Council of the EU 2003) makes an important initial attempt at defining key objectives. The primary objective of health care services is of course to maintain and improve the population's health. In addition, the EC report identifies universal accessibility, high levels of quality and a financially sustainable system as key policy objectives. Nowadays, managing financial stability is one of the biggest challenges facing governments. Several trends threaten to undermine the financial basis of health care systems. Firstly, individuals cherish higher expectations and are more and more aware of the possibilities offered by medical technology. Also, as a result of rising incomes clients are better able to buy medical services. Secondly, medical technology is progressing rapidly, making existing treatments not only more efficient, but also making new and better treatments available. The net effect is to push up costs. Thirdly, the population of the EU is ageing. Demographic projections forecast a 30% rise in the proportion of GDP spent on health care for the EU-15 (OECD 2003da). Finally, there is a strong correlation between the level of prosperity

and health expenditure at country level.[1] As the population at large grows richer, consumers are willing to spend a greater part of their income on health.

EU countries are pursuing various strategies in an attempt to keep their health systems financially stable. Strategies include promoting greater efficiency and introducing a greater role for market forces in health care. One important instrument wielded by many countries is to introduce financial incentives for consumers, both directly, in the form of out-of-pocket payments, and indirectly, in the form of restrictions on insurance coverage. Strengthening financial incentives for consumers can jeopardise the universal accessibility of health care services, if there is no adequate compensation for certain low-income, vulnerable groups. Income solidarity and risk solidarity remain therefore important in guaranteeing universal accessibility to health care services.

Universal accessibility is largely secured in all OECD countries, with the exception of the United States. As part of its policy on social inclusion (council of the EU 2001), one of the European Union's main objectives is to maintain accessibility for vulnerable groups.[2] OECD countries meet the principle of 'equal treatment for equal need' to a high degree in primary health care (general practice). However, there are indications that there is a tendency towards 'pro-rich distribution' in secondary health care (specialists). The 'unequal treatment' of income groups in secondary health care would appear to be associated not so much with the characteristics of the health care system per se, as with greater demand from those better educated. This means that steps to guarantee universal accessibility must be taken not only within the health care system and in terms of financial incentives, but also in enabling various population groups to articulate their demand for health and health care. This would give accessibility a broader significance, whereby the term would refer not only to the 'equal treatment of equal need' but also to the degree to which people can make their demands known.

Quality issues have recently come to the forefront. Both the public and governments want to see high-quality care.[3] However, the term 'quality' is open to interpretation. Roughly speaking, product quality, process quality and system quality may be distinguished. Product quality is related to treatment (micro level), process quality is linked to producers and institutions (meso level) and system quality to the level of a region or a country (macro level). The quality of a care product concerns the degree to which a treatment solves a health problem. The OECD is currently compiling a set

1 At country level, income elasticity is around 1; see for an overview and more detailed explanation of differences in micro and macro relations between income and health expenditure Gerdtham and Jönsson (2000).

2 This objective is somewhat problematic, as there are strong indications that vulnerable groups are more likely than average to have risky lifestyles and, therefore, are themselves partially responsible for their health problems (Council of the EU 2003).

3 The standard of services provided by institutions can be guaranteed by means of internal quality control and external supervision.

of indicators to break down product quality into more specific components, such as the time patients with certain forms of cancer live in good health after treatment. Besides the quality of the treatment, process quality – the way in which the treatment is applied and the quality of the resources used – is also important.[4] Finally, system quality – the way in which the health care system meets the demand of the population – is of paramount importance. Long waiting lists and large travel distances to the nearest hospital can for instance be seen as negative characteristics of a country's health care system.

The joined demands of financial sustainability, accessibility and quality can be incompatible, making some kind of trade-off necessary. For instance, public demand for higher quality health care can conflict with the financial sustainability of the system. However, if quality demands are not sufficiently met by the public system, this can cause clients to seek the quality they require in the private sector, thus jeopardising universal accessibility. This dilemma requires subtle use of pricing – in terms of out-of-pocket payments or waiting times – to distinguish between essential and non-essential medical care. However, if the main concern is the financial sustainability of the system, higher quality health care will have to be provided outside the public sector, which again threatens to undermine the principle of universal accessibility. For instance, stronger price incentives can put risk and income solidarity – and therefore also accessibility – under pressure, inducing individuals with insufficient income or great health risks to consume less care than similar groups of people who are better off. This dilemma will present major policy challenges over the coming years.

One current issue is the extent to which the government should leave the allocation of resources to the market, safeguarding the public interest via regulation. Fairness can also be guaranteed in a system of private health insurance for cure and a public insurance system for care, with income-dependent subsidies and/or out-of-pocket payments. Risk selection by insurance companies can be combated by adequate regulation, and consumption can be curbed by stimulating price incentives on the demand side (out-of-pocket payments) and removing income incentives on the supply side (by putting doctors on the payroll or paying them a fixed amount per patient rather than per visit or operation). Of course these 'solutions' also have their downside, which can hamper progress towards other objectives, such as accessibility (particularly among vulnerable groups) and quality (through the growth of waiting lists).

4 Process quality is not always easy to measure. For instance, 'more nursing staff' can be regarded either as a gain in quality or as a loss of productivity. It is of course difficult to determine whether higher staffing levels benefit patients (better care) or staff (less pressure of work) more.

4.1.2 *Health care and the public interest*

Health care is linked to the public interest in two ways. Firstly, some properties of health care as an economic good imply that several standard conditions for a free market are not met. Secondly, fairness issues are involved in terms of equal access to the health care system for all sectors of the population.

Health care is a unique economic good for a number of reasons (Hurley, 2000; Barr, 1993). Firstly, the demand for health care is a derived demand. The demand is not actually for medical care in itself – people would rather avoid it. What they want is good health. Health care is one means of maintaining or improving health. The person demanding care is not only uncertain about his condition (diagnosis), but also about the resources that should be deployed (treatment) to maintain or improve his health. He has to trust medical experts to determine what he needs. Finally, health care has positive externalities. A healthy population is important not only for the individuals concerned but also for society as a whole, because healthy individuals can be employed to greatest effect in the production process, and diseases are easier to control in a healthy population. Leaving health care entirely in the realm of the free market would therefore lead to major individual and societal inefficiencies.

Fairness in health care concerns the right to equal treatment of equal need. This means that differences in income and in health risks may have no direct impact on a person's chances of being treated and on the method of treatment. The degree to which equal treatment of equal need can be achieved depends on the link between payments and health risk (risk solidarity) and the financial capacity of patients (income solidarity).

Equal opportunity of receiving treatment is an important objective in EU countries. Generally speaking, countries seem to have achieved this policy goal fairly well (OECD 2003df). As far as unequal access to the system is observed, there is often an individual explanation and an institutional background. In institutional terms, a greater role for private insurance and relatively large own payments for policyholders would seem to work to the disadvantage of lower income groups. Education and an individual's labour market status are also found to have an effect on the chance of equal treatment in equal circumstances, though the impact of these individual factors also depends on the type of insurance system.

In principle, uncertainty associated with future demand for health care, its high costs and the demand for fairness will tend to foster a system of health care insurance. A public insurance system allows more fairness and redistribution than a regulated private system. Through adverse selection, a privately-oriented insurance system can jeopardise fairness by causing risk selection on the part of insurance companies. They will of course be keen to select only low-risk clients. Ultimately, without extra regulation, this can lead to price differentiation or even the exclusion of certain risk groups.[5]

5 It can also mean that, if employers pay the insurance premium, those offering the most comprehensive health insurance package attract employees with the most health problems.

Any insurance system has inherent problems that are referred to as 'moral hazard'. This concerns two responses on the part of consumers and producers that drive up the cost of health care. The first problem is the possible increase in risky behaviour, the second the possible unnecessary consumption of health care because of the absence of price incentives. Risky behaviour involves consciously running health risks in the knowledge that one is well insured. Unnecessary consumption of health care occurs when the price to consumers falls to zero (because the insurer reimburses all costs), or when there is no financial limit on the production of care services (the so-called 'third party payment problem'). If a consumer is fully insured, medical care will cost him nothing. If, furthermore, doctors are paid a rate per visit or procedure, neither of them benefits by avoiding extra – possibly unnecessary – treatment.

An insurance system cannot solve the problem of incomplete information of patients. However, information asymmetry can be reduced. The Internet, for example, provides access to a growing body of information on health care and health care institutions, patient associations offer much information and consumers have become much more critical of the performance of doctors and hospitals. Although the US and a number of EU countries have taken steps towards monitoring and benchmarking health care institutions, this form of information provision is still in its infancy.

4.1.3 Challenges and solutions[6]

The main problem in terms of health care which the countries under review face at the beginning of this century is the financial sustainability of their system. Of the EU-15, only Denmark, Spain and Luxembourg indicate cost containment is no major policy concern. Most of the new member states are also most concerned about problems other than financial sustainability of the system, such as the efficiency of care and universal accessibility. Only the Czech Republic, Slovakia, Poland and Slovenia see the costs of health care as a problem. Efficiency is a problem in a number of new member states as a result of their traditionally strong orientation towards inpatient care, which has produced overcapacity in the number of hospital beds and medical specialists, and a shortage of primary health care. These problems are felt particularly in the Czech Republic, Hungary, Lithuania, Malta and Cyprus. Universal accessibility is also under pressure in a number of new member states because the regional availability of health care services is unevenly distributed (this is largely an urban-rural issue). It would also seem that in some new member states patients have better access to care by making informal payments, which is incompatible with the principle of universal accessibility. The system of 'gift giving' is so widespread that almost all doctors accept 'gratitude money'. Many people saw these payments as a way to ensure supply and also to establish longer-term relations with their doctors

6 This section is based largely on the country reports produced by the European Observatory on Health Care Systems and the Gesellschaft für Versicherungswissenschaft und –Gestaltung e.V.

(Uslaner& Badescu 2003). Another problem in the new member states is low pay in the health care sector (as in the Czech Republic, Slovenia and Hungary). This means the costs of health care are presently not rising too rapidly, but it is doubtful whether this low level of pay can be maintained in the long term.

Although developments in the cost of health care are the main problem in the EU-15, there are other problems, though these differ strongly from country to country. Some nations, for example, want to give more priority to the quality of care (the United Kingdom, Ireland), some have long waiting lists (Finland, Italy and Denmark), some have a considerable shortage of primary health care provision (Greece), while others have problems with policy implementation (Portugal).

The attempted solutions vary even more widely than the problems. Most countries try to address their problems by intervening directly in the supply or by bringing more market forces into the health care system. There are also many countries that want to improve the quality of their health care system. Finally, some are attempting to solve the problem of rising costs by directly influencing the demand for health care, or by changing the funding system.

Supply-side interventions most often involve introducing more outpatient services. Countries with a relatively weak primary health care sector tend to opt for this solution (several of the new member states, plus Greece), but countries like Denmark, France, Italy and Austria also see this as a way of organising their health care more efficiently and restricting costs. Many of the EU-15 believe that better coordination between health care providers would raise efficiency. It is not always clear how policy makers intend to achieve better coordination on the supply side, although many countries are considering introducing a new type of management or organisation of health care. Only a few countries regard stricter budget restrictions as a way of curbing rising costs. Although Belgium, Germany, France, Austria and the Czech Republic are tightening their budgetary belts, they also acknowledge that other instruments will be needed in order not to introduce excessive restrictions on their populations' demand for health care. Many countries are opting to introduce market forces to health care, for example, by decentralising the system (many new member states, and the Netherlands, are currently doing so) and by giving health care insurers and suppliers more freedom in the contracts they conclude. Sometimes, the entire funding system is under fundamental review. Austria, France and Greece, for example, have recently switched to a more universalistic funding system, and the Netherlands plans to do so in the near future. Few countries are attempting to influence the demand for health care through out-of-pocket payments towards the cost of care. Austria and Germany have opted for higher out-of-pocket payments and Austria hopes to raise cost awareness by having insurers reimburse health care bills via the consumers.

Most countries are attempting to improve people's health by encouraging them to adopt a more healthy lifestyle (less smoking, alcohol consumption and unhealthy eating) and by improving the living environment (clean water and air). Some are also making explicit investments in health care in general (the United Kingdom, Ireland)

or in the reduction of their waiting lists (Finland, Ireland and recently also the Netherlands).

It is striking, how many attempts to modernise health care have encountered political and social opposition. Radical proposals in Germany, the Netherlands, Portugal and Greece have been nipped in the bud. Reform of the health care system involves many parties, major interests and complex problems, and it is not always clear what the benefits will be. It also takes a long time to reform an entire system. In the meantime, the political or social climate will often change, new problems will arise in the system, or new insights will emerge into possible solutions to the problems. The Netherlands, for example, has made numerous attempts to integrate public and private health insurance systems into a new system with a stronger focus on market forces.

The Council of the European Union has on several recent occasions emphasised the need for high quality and financial sustainability in health care in the EU. The organisation of the internal market plays a role here, because increasing variety among health care systems might induce people to travel between countries in search of health care services, putting key health care objectives at risk. It is therefore very important to analyse the different systems and their implications for the achievement of those objectives more closely.

4.2 *Health care systems*

In describing and analysing health care systems, a distinction should be made between how care is financed and how it is provided. In both cases, there is tension between public and private forms of organisation. Virtually all countries have a public-private mix of arrangements.

On funding the system, the options are payment from taxation, social insurance, employee insurance, private insurance or out-of-pocket payment by the consumer. The provision of care can be public, private non-profit or private for-profit. Arrangements can differ from one product area to another: inpatient medical care (hospital care), outpatient medical care (doctors and nursing) and long-term care (nursing homes). Public welfare provisions, a category including homes for the elderly and institutions for the handicapped, are not regarded a part of the health care system. Medical care of the chronically ill and disabled is regarded as health care, however. As a result, the nursing elements of home care are regarded as health care but help with domestic chores is not.

4.2.1 *Mix of public and private arrangements*

As Uplekar (2000) shows, a mixed system of health care arrangements has evolved in most countries. The system of all Western countries lies somewhere between the two extremes of the US, with its largely privately funded health care, and Sweden, with its virtually exclusively publicly funded system. The debate in a number of countries has moved on from the pros and cons of public and private care to the issue of how

and to what extent health care should be regulated to ensure accessibility for special population groups (Bartlett and Phillips 1995). This can be attempted in either a public or a private setting.

Relative costs of public and private providers of health care has been studies in an extensive literature on efficiency and productivity at micro level. Many studies have compared the costs of public and private hospitals in the United States, where such hospitals exist alongside each other. However, the results are not unambiguous. Some studies show that public hospitals are more efficient than either for-profit or non-profit private hospitals (e.g. Granneman et al. 1986; Grosskopf and Valdmanis 1987; Valdmanis 1990; see also Mark 1996 for psychiatric hospitals). Other studies have found precisely the opposite (e.g. Wilson and Jadlow 1982; Ferrier and Valdmanis 1996; Burgess and Wilson 1995; Staat and Hammerschmidt 2000), or find no significant differences between the two types of hospital (e.g. Register and Bruning 1987; Burgess and Wilson 1995). Various reasons have been suggested for costdifferences found. Valdmanis (1990), for example, suggests that the quality of private hospitals (non-profit) might be better than that of public hospitals. Ferrier and Valdmanis (1996) ascribe different cost levels to the fact that private hospitals concentrate on the most profitable types of treatment.

There is also an extensive body of literature on nursing homes, but again, the results are not unambiguous. Some researchers find commercial nursing to be more cost efficient than non-commercial homes (Nyman and Bricker 1989; Gertler 1992; Vitaliano and Toren 1994). Dor (1989) finds no significant differences, while Hawes and Phillips (1986) and Hofler and Rungeling (1994) attribute the differences largely to differences in quality or the care burden.

In short, the literature offers arguments both for and against privatisation. So it can by no means be taken for granted that privatisation of health care provision will produce efficiency gains. One explanation for this is that private insurers compete mainly for the insured population and the insured risks. Given institutional restrictions, private insurers are often less keen to negotiate costs of health care providers. The private sector is also characterised by higher administration costs (Woolhandler et al. 2003). In practice, this means that the privatisation of health care often does not produce what some hope for and expect: more and better value for money (OECD 2003dg). Allowing greater scope for market forces in the health care system often leads to problems. The trend towards segmentation and monopolisation among care suppliers and insurance companies in particular leads to stagnation in the market, with few incentives for greater efficiency. Furthermore, allowing more market forces to influence the demand side of the market, generally causes costs to rise because instruments used to regulate costs in the public sector – budget restrictions, cost control and capacity restrictions – are difficult or impossible to apply (OECD 2003dg). Finally, the government's potential for public accountability is also reduced. If greater market forces are introduced on the demand side – by raising out-of-pocket payments, for example – there is a danger that essential care or the

principle of equal access will be jeopardised (OECD 2003de). Finally, it becomes more difficult to make the government accountable to the public for the functioning of the health care system.

4.2.2 *Empirical characterisation of health care systems*

Few attempts have been made in the international literature to produce an empirical characterisation of health care systems. This is partly due to the heterogeneity of existing systems. Many system typologies have a dual nature: more privately-oriented versus more publicly-oriented systems, or systems based on the ideas of Bismarck or Beveridge. Attempts have also been made at more detailed characterisation. Hughes Tuohy et al. (2001), for example, distinguish four basic models: (1) parallel public and private systems; (2) co-payment, whereby consumers make substantial out-of-pocket payments for the use of health care services; (3) group-based (or corporatist), whereby access to public or private coverage depends on being a member of a certain population group or professional group and (4) sectoral, whereby public or private coverage is tied to the type of service. In many countries these basic models exist in parallel or are interwoven with each other. In practice, a wide variety of health care systems exists, in which theoretical classifications are difficult to identify. The various theoretical characteristics are present to varying degrees, and differ between care sectors and population groups. It would appear that countries with roughly the same goal of providing good-quality affordable health care have tried rather different ways to achieve it. Therefore, the present study focuses on the actual organisation of the health care system. A cluster analysis of several important institutional characteristics will be used to determine which countries' systems are most similar.

The most important institutional characteristics concern the financing of health care and the role of market regulation. These characteristics are regarded as important determinants of the costs of care, and thus also of the financial sustainability of the system, via the price per product (p), the quantity of health care products (q), the quality of production (k) and the number of users (n). One of the financing characteristics is the nature of funding:

- via universal taxation (universalistic, Beveridge model);
- via contributions from employees (corporatist, Bismarck model);
- via private finance through insurance and/or out-of-pocket payments (privately-oriented).

All countries have a mixed system. However, we are concerned with the method by which the majority of health spending is financed. Another, related characteristic is the share of public funding, i.e. the proportion of the financing that comes from taxation or social security contributions.

A number of system properties have been identified and quantified for the purpose of this study. Properties have been classified into financing characteristics and market characteristics:

- the overall nature of financing;
- the specific nature of the financing of family doctors (GPs) and medicines;

– the level of out-of-pocket payments required;
– the share of public financing;
– the legal status of hospitals;
– consumers' freedom to choose a family doctor (GP), specialist or hospital;
– the degree to which GPs act as 'gatekeepers'.

Table 4.1 shows results for the various countries. Other characteristics than those contained in Table 4.1 are difficult to measure (see Box 4.1). For instance, it is hard to determine the extent to which quasi-markets exist for contracts between insurance companies (or public authorities) and care suppliers and the degree to which policyholders are free to change insurance company. Other problems arise in connection with differences between theory and practice, particularly in terms of the extent to which hospitals are subject to a budget ceiling. For instance, there are countries where, though budget restrictions officially apply, hospitals exceed their budgets by large amounts every year. There are also countries where budget agreements are made, but where in practice demand largely determines the costs incurred.

Box 4.1 Market characteristics in detail

Three parties play a key role in health care: consumers, insurance companies and suppliers. The way the system works is determined to a large degree by the positions of these three parties and the institutional setting in which they operate. This setting is determined by the government. Given the particular position of these parties and the relationships between them, we can distinguish the following market characteristics (factors potentially affected by the characteristic are shown in brackets):

– the degree to which policyholders can change insurance company (q, n);
– whether insurance companies are obliged to accept all potential clients (q, n);
– consumers' freedom to choose a health care supplier (q);
– the extent to which insurance companies can conclude contracts with health care suppliers (p, q, k);
– the legal status of the health care supplier: public, private non-profit or private for-profit (p, q, k);
– health care suppliers' freedom of access to the health care market (p, q, k);
– the existence of free competition between doctors and between institutions: do cartels or price agreements exist? (p);
– whether family doctors act as gatekeepers (q);
– the nature of the remuneration system for doctors or institutions: rate per procedure, per patient or per registered policyholder (p);
– the existence of price regulation (for medicines, bed days or procedures, for example) p);
– the existence of out-of-pocket payments (q);
– the extent of budget restrictions for institutions or medicines (q).

Table 4.1 Characteristics of health care, 2001

		financing characteristics			
country	overall nature of funding	nature of GP funding by prescr.: 1 by pat/pol: 2 salary: 3	nature of medicine funding free pricing: 1 price reg.: 2 budget: 3	share of public finance (%)	out-of pocket payments for curative care none: 0 medicines: 1 + hospital: 2 + GP: 3
EU-15					
Belgium	Bismarck	1	2	71	3
Denmark	Beveridge	2	2	82	1
Germany	Bismarck	2	2	75	2
Greece	Beveridge	3	2	56	1.5
Spain	Beveridge	3	2	71	1
France	Bismarck	1	2	76	3
Ireland	Beveridge	2	2	76	0
Italy	Beveridge	2	2	75	1.5
Luxembourg	Bismarck	1	2	89	1
Netherlands	Bismarck	2	2	63	0
Austria	Bismarck	2	2	70	3
Portugal	Beveridge	3	1	69	3
Finland	Beveridge	3	2	76	3
Sweden	Beveridge	2	1	85	3
United Kingdom	Beveridge	2.5	1	82	1
New entrants					
Cyprus	Bismarck	1	1.5	33	1
Czech Republic	Bismarck	1.5	2	91	1
Estonia	Bismarck	2	1	81	2
Latvia	Beveridge	2	2	58	3
Lithuania	Bismarck	1.5	2	73	0
Hungary	Bismarck	2	1	75	1
Malta	Bismarck	3	2	69	0
Poland	Bismarck	1.5	1	67	1
Slovenia	Bismarck	2	2	86	2
Slovak Republic	Bismarck	1.5	1.5	89	1
Anglo-Saxon					
Australia	Beveridge	1.5	2	73	2
Canada	Beveridge	1	1.5	71	1
New Zealand	Beveridge	1	2	77	2.5
United States	private	2	1	44	3

NB: fractions refer to mixed systems. Many countries have mixed systems; the most adequate characterisation has been chosen here.

Source: Bertels and Cocquyt (1995a), Bertels et al (1995b), Bertels et al (1995c), Bocken, Kunstman and Butzlaff (2002), Brettenthaler (2003), GVG (2003), ECHP (a), Kreier (2001), EC (a), OECD (2003di), Sogaard and Kjellberg (2003).

market characteristics				
legal status of hospitals private for-prof: 1 partly publ: 2 priv non-prof: 3 strongly public: 4	free choice of GP yes: 1 partly: 2 no: 3	free choice of specialist yes: 1 partly: 2 no:3	free choice of hospital yes: 1 partly: 2 no:3	GP as gate-keeper no: 1 partly: 2 yes: 3
3.5	1	1	1	1
4	1	3	2	3
2	1	1	1	1
2	3	2	2	1
2	2	1	3	3
2	1	1	1	1
2	2	1	3	3
2	1	2	1	3
1	1	1	1	1
3	1	1	1	3
3	1	1	1	1
2	1	2	1	3
4	2	1	2	3
2	1	1	2	1
3	1	3	3	3
2	3	1	1	3
4	1	1	1	1
4	1	2	1	3
4	1	2	2	2.5
3	1	1	1	1
4	1	2	2	2
4	3	1	1	3
4	1	1	1	2.5
4	1	1	1	3
4	1	3	3	3
2	1	1	1	3
3	1	2	2	3
4	1	1	1	3
3	2	2	2	2

Many of the EU-15 me mber States follow the Beveridge model of health care funding. All the Anglo-Saxon countries, with the exception of the US, have opted for this model. Many countries in this group have also a system of private insurance in place. Private insurance can either run parallel to or supplement the public insurance system. Private insurance exists where public insurance fails to provide sufficient coverage or adequate quality, or when it is available only to certain groups. The almost unanimous choice of the Bismarck model in the new member states is striking. Latvia is the only exception here.

The financing of the health care system gives no clues as to how individual doctors are paid. General practitioners (GP) are sometimes on the payroll of the government, and if self-employed are sometimes paid by the health insurer per patient (fixed amount per year) or per patient visit. The exception here is the Beveridge model that never has payment per visit. Another notable finding is that drugs prices are almost always tied to price agreements. No system includes a strict budget for all drugs (medicines), and free pricing occurs in only a small number of countries.

The share of public financing ranges from 44% in the United States to 91% in the Czech Republic. Ireland, the Netherlands, Lithuania and Malta are the only countries that have no form of out-of-pocket payments in the public sector of the regular health care system. However, as in other countries, the public make out-of-pocket payments towards long-term care (nursing homes), as this also includes a housing component. In the other countries patients at any rate contribute towards the costs of drugs. In half the countries, users are also expected to pay towards consulting a specialist and/or for hospital care. Only in Belgium, France, Austria, Portugal, Finland, Sweden, Latvia and the US do they also have to pay out-of-pocket when visiting a doctor. Germany has introduced such payments as from this year. Such payments do not occur significantly more often in either of the models.

There is no fixed pattern as regards the legal status of hospitals, either per group of countries or per health care system. Private for-profit hospitals dominate only in Luxembourg's Bismarck system. In most countries, various forms of ownership occur, from fully private to fully public. The ranking in Table 4.1 is based on the most dominant or the most characteristic hospital type in each country.

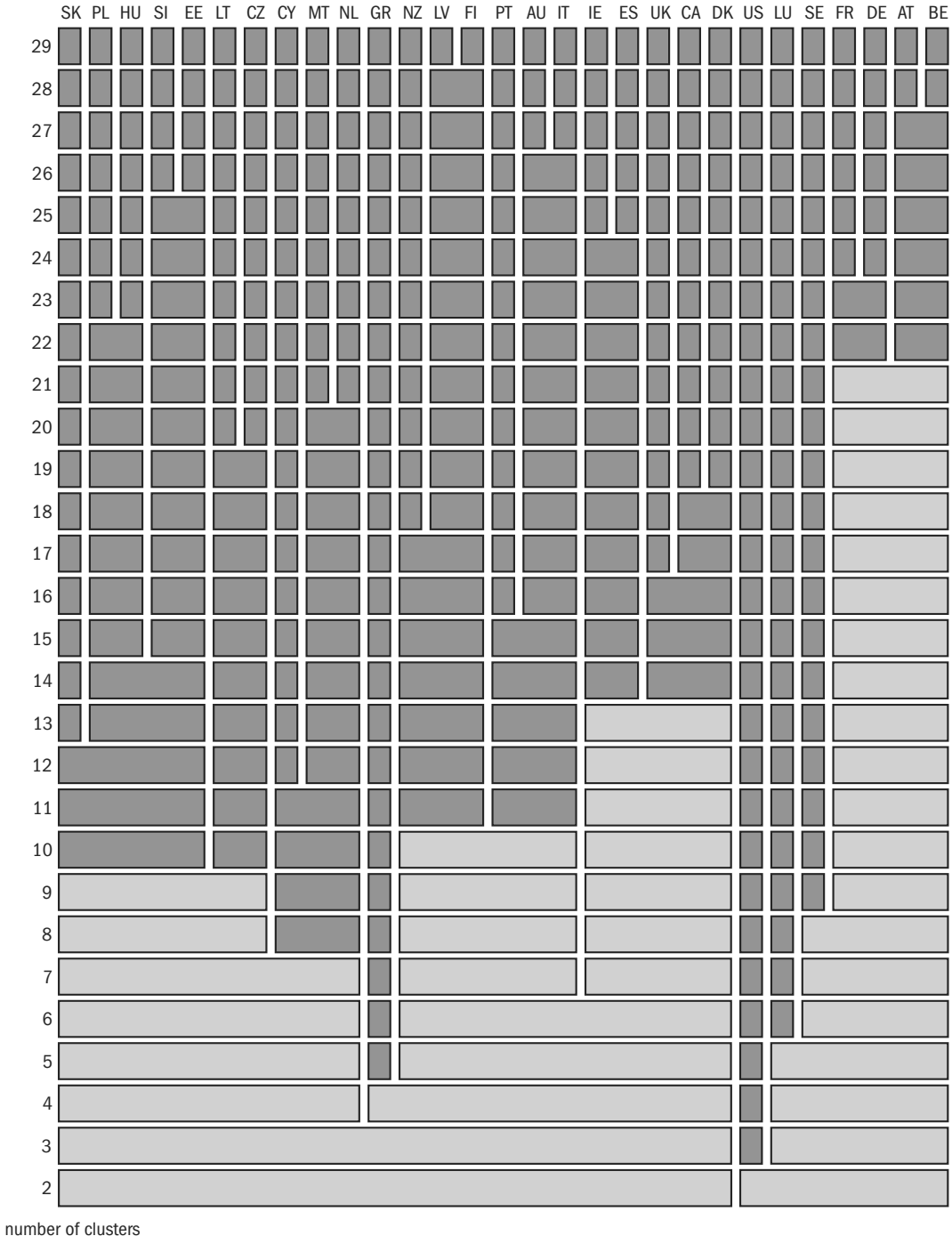
Free choice of GP, specialist or hospital is more common in Bismarck systems than in Beveridge systems. There is little difference between groups of countries. Family doctors are more likely to function as gatekeepers in the Beveridge system than in the Bismarck system. They are most often gatekeepers in the Anglo-Saxon countries, and least often in the EU-15.

The data in Table 4.1 have been used to cluster countries that are similar. Figure 4.1 shows the result of the cluster analysis for the eight dimensions mentioned.[7]

7 The market characteristics that indicate freedom of choice for consumers have been combined into a single measure of consumer freedom. This makes eight characteristics available for the cluster analysis. They have been ranked in ascending order of restrictiveness on a scale of 0 to 4, whereby 0 tends towards a very free system, 2 towards a mixed system and 4 towards a highly restrictive system.

The horizontal bars indicate which countries are most similar in a particular number of clusters. The graph should be read from the bottom up in order to determine the method of clustering.

Figure 4.1 Cluster diagram of health care system characteristics (contiguous shaded areas are countries that resemble each other)



The analysis produces neither a unique nor an optimum solution, but does suggest possible clusters of countries. The number of country clusters is determined by the degree to which the clusters can be regarded as homogeneous from a particular perspective. The US and Greece clearly take a unique position. The health care system in the US is strongly market-oriented and therefore differs substantially from the systems on the European continent. The unique position of Greece is not unexpected, as several systems operate simultaneously there: a public system, a corporatist system and a private system. These systems offer both basic and supplementary packages (particularly the private system).

Which cluster best typifies the countries identified? Assuming that an individual country may not constitute a group, and that the number of country groups should remain limited, it is possible to identify four fairly homogeneous groups and an 'other' group of seven heterogeneous countries. Two of the four country groups sport the Beveridge model, and two the Bismarck model. The groups are:

1 Easter European cluster, with low out-of-pocket payments: Czech Republic, Slovakia, Slovenia, Hungary, Estonia, Poland and Lithuania;
2 Public cluster, with high out-of-pocket payments: Finland, Latvia, Portugal, Italy, Australia and New Zealand;
3 Public cluster, with low out-of-pocket payments: Denmark, Ireland, Spain, Canada and the United Kingdom;
4 Corporatist cluster, with high out-of-pocket payments: France, Germany, Belgium and Austria;
5 A heterogeneous 'other' group consisting of the US, Greece, Cyprus, Malta, Luxembourg, the Netherlands and Sweden.

The five country groups can be combined with the eight system properties (Table 4.2). A higher score for a given property indicates a higher degree of government regulation.

Table 4.2 Country groups by system characteristics

	health expenditure per capita	**(1)**	**(2)**	**(3)**	**(4)**	**(5)**	**(6)**	**(7)**	**(8)**
		type of financing	GP funding	funding of medicines	public funding	out-of-pocket payments	legal status of hospitals	freedom of choice	GP gatekeeper
country group	2001		free> budget	free> budget	low> high	low> high	private> public	low> high	low> high
(1) Czech et al.	830	Bismarck	1.7	1.5	2.3	1.1	3.9	1.4	2.2
(2) Finland et al.	1.630	Beveridge	2.1	1.9	1.7	2.5	3.0	1.3	2.9
(3) Denmark et al.	2.080	Beveridge	2.1	1.7	2.4	0.8	2.8	2.2	3.0
(4) France et al.	2,440	Bismarck	1.5	2.0	2.0	2.8	2.6	1.0	1.0
(5) Other	2.530	various	2.0	1.6	1.6	1.4	2.3	1.7	2.0

Source: SCP

The two Beveridge groups (2 and 3) stand out in terms of the role of out-of-pocket payments. They are fairly high in group 2 and fairly low in group 3. Partly as a result of this, the share of public financing is slightly lower in group 2. Another difference lies in the freedom of choice of care providers. The two Bismarck groups (1 and 4) stand out in terms of the role of out-of-pocket payments and the role of family doctors (GPs) as gatekeepers for inpatient care. The countries in group 1 use GPs as gatekeepers. Those in group 4 require relatively high out-of-pocket payments for the use of health care services. The first group of countries is notable for the sometimes restrictive choice of care supplier (particularly in Slovakia). The Netherlands could also be included in the fourth group, but differs strongly in terms of its low level of out-of-pocket payments and the important role of GPs as gatekeepers. The fourth country group can be regarded as 'corporatist', and also constitutes a separate group in a typology of welfare states based on the means by which social security and the labour market are regulated (Wildeboer Schut et al. 2001; SCP/CPB 2003). Health expenditure per capita is highest in groups 3 and 4, with a moderate spread of amounts. In contrast, countries in the first two groups show a wide spread in health spending per capita.

In the final part of this chapter we shall relate the health performance of countries to the group in which they are found.

4.3 Use of resources

Roughly speaking, total expenditure on a service breaks down into material expenditure, staff expenditure and capital costs. This section looks at current expenditure, the number of beds available in inpatient care and employment in inpatient and

outpatient health care services. This means that only a part of the material and staff resources used are placed in a comparative perspective. The use of capital - except for hospital beds - is disregarded entirely.

4.3.1 Expenditure

Total expenditure on health care as a proportion of GDP came to around 8% in the EU-15 in 2000 (Figure 4.2).[8] Germany and France, on a respective 10% and 9%, had higher than average health spending. The Netherlands spent just around the average, on 8.2%. This ratio will have moved up, as health spending has sharply increased in recent years. Dutch sources often refer to a spending ratio of some 10% of GDP, but this figure includes public welfare provisions, such as care homes and domestic help, which is disregarded in this study.

OECD data: definitions and limitations

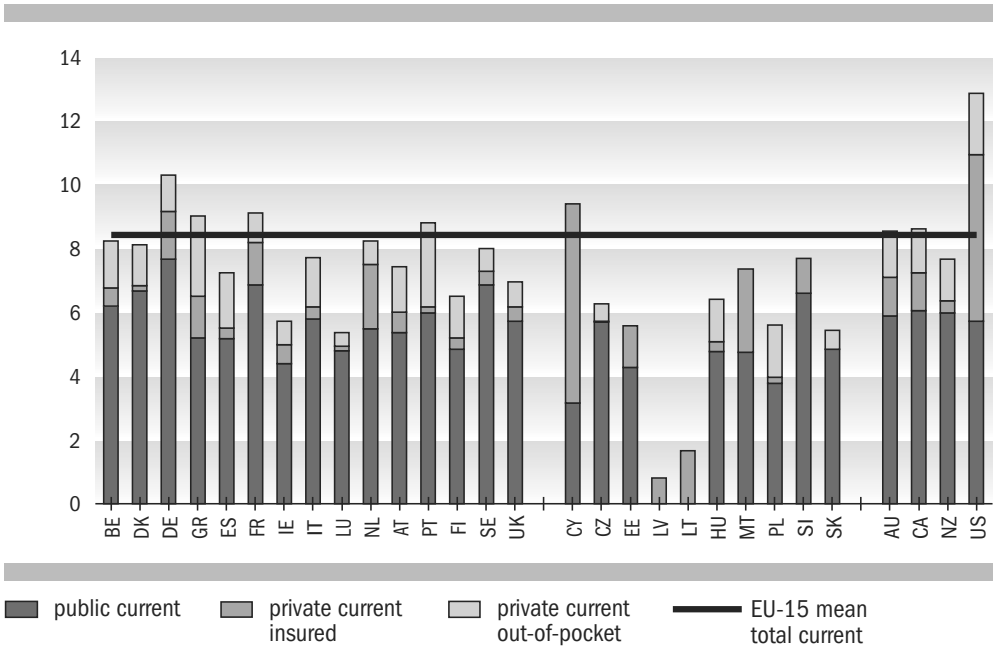
Total expenditure on health includes spending by both public and private sources on personal medical services and goods, public health and prevention programmes and administration. Individual health care includes curative and rehabilitative care (inpatient, outpatient and home care), long-term nursing care (inpatient and home care), ancillary services to health care and medical goods dispensed to outpatients.
OECD countries are at varying stages of reporting total expenditure on health according to the boundary of health care defined in the System of Health Accounts (SHA). The comparability of the functional breakdown of health expenditure data in OECD Health Data has gradually improved over the past few years, but is still limited, due to the fact that data reporting is connected to administrative records of financing systems. Different practices in including long-term care in health or social expenditure also affect data comparability. Luxembourg's close social and economic integration with neighbouring countries results in severe estimation problems with all kinds of indicators.

Compared with their GDP, Luxembourg and Ireland spend little on health care. In Luxembourg this reflects to a large extent a denominator effect, as this prosperous country has the highest income per capita. In fact, Luxembourg actually spends a larger amount per capita on health care than all other countries included in this report, apart from the US. Only four of the new member states have comparable spending figures. Health spending as a proportion of GDP varies from 5% to 7%, considerably below that of the EU-15.

8 The EU-15 average is always a weighted average; in the case of expenditure, it is weighted by BBP, for production, it is weighted by number of inhabitants.

Figure 4.2 also distinguishes between private and public funding.[9] The former includes out-of-pocket payments by individual consumers and health insurance premiums; the latter includes funding from the government and contributions to compulsory social insurance schemes. The share of public expenditure differs considerable from country to country (Table 4.1). It is highest in the Czech Republic, Sweden, Denmark and the United Kingdom (between 80% and 90%). The Netherlands falls in the large middle group whose public expenditure share ranges from 65% to 80%. Next comes Greece, on 57%. On 44%, the US is the only country where the majority of health spending comes directly from private payments (including premiums paid to private insurance companies).

Figure 4.2 Total current expenditure on health care: percentage of GDP, 2000



Source: OECD (Health Data), Eurostat (New Cronos, World Bank (WDI Online), GVG (2003), ECHP (a)

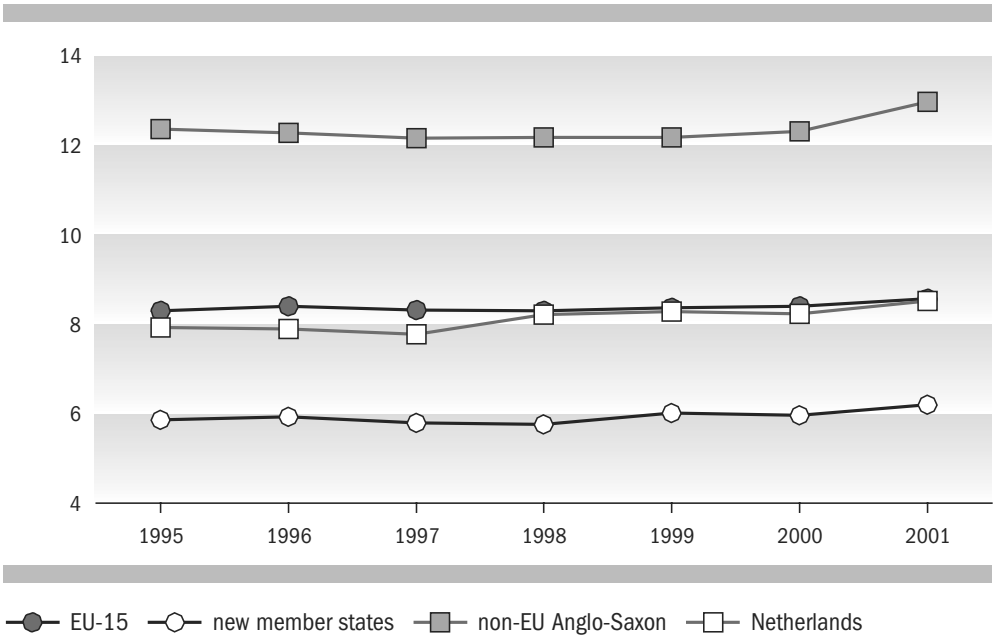
The proportion of private financing accounted for by out-of-pocket payments and by insurance premiums differs sharply from one country to another. The Netherlands has a relatively high share of private financing, but this is accounted for largely by insurance premiums. The proportion that comes from out-of-pocket payments is extremely limited. Furthermore, some of the private insurance is regulated by government.[10] In countries like Portugal, Finland, Spain, Greece, Poland and New Zealand, on the other hand, private financing consists largely of out-of-pocket payments. The share of private financing is negligible in Luxembourg, the Czech Republic and Slovakia.

9 Absent values in this and subsequent figures indicates that underlying data are unavailable.

10 Through a standard insurance package, which is used mainly by high-risk groups (particularly the elderly and chronically ill); a maximum premium applies and any extra costs are borne by other private health insurance policyholders.

Figure 4.3 shows developments in expenditure on health care as a proportion of GDP. Spending ratios have been relatively stable in all groups of countries. The slight upward trend in the ratio for the Netherlands will continue due to a sharp increase of spending on health in 2000-2002. To illustrate, the volume of care grew by 2.7% annually from 1995 to 2000, and by an annual 7.2% from 2000 to 2002[11]. This is due to a large extent to measures taken to tackle waiting lists; extra resources were also committed to reduce pressure of work and improve the terms and conditions of health care workers (TK 2004).

Figure 4.3 Development of total current health expenditure, 1995-2001 (% GDP)



Source: OECD (Health Data), Eurostat (New Cronos, World Bank (WDI Online), GVG (2003), ECHP (a)

Figure 4.4 shows that the Netherlands' average health expenditure per capita of around NL€ 2,220 in 2001 was slightly above the EU-15 average (NL€ 2,030). The figure for the US was twice as high. Part of the explanation for the high costs of the health care system in the US are high wages of medical staff, the low occupancy rate of beds, relatively high administration costs, high insurance premiums resulting from many and large claims, the performance of large numbers of tests for fear of litigation and the highly sophisticated equipment used (see for example Mobley and Magnussen 1998).

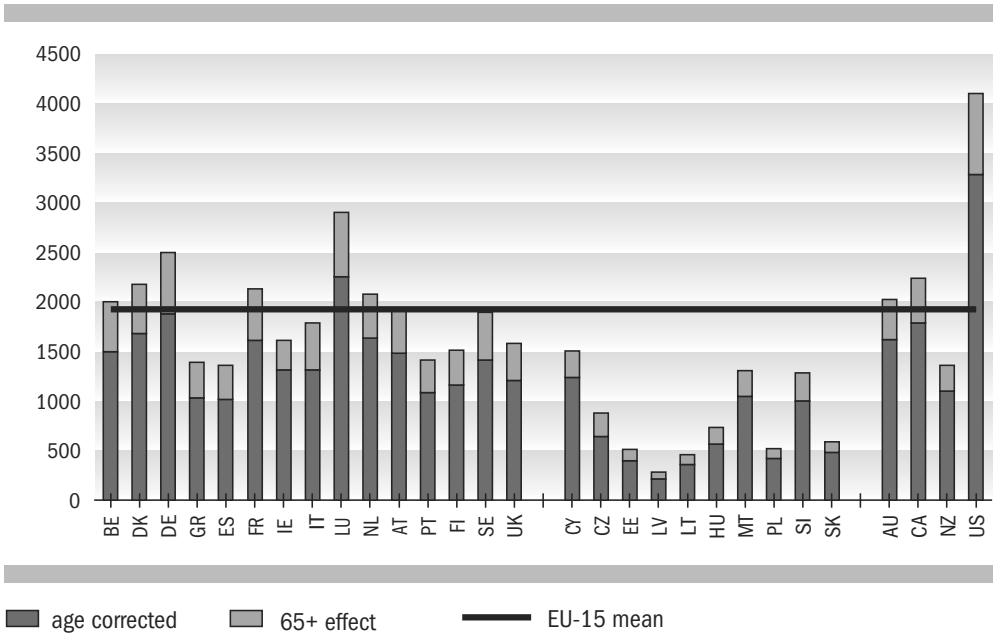
Expenditure per capita in a number of Southern European countries (Greece, Spain and Portugal) was between NL€ 1,400 and 1,500. Spending in the new member states is much lower (NL€ 680 on average). The figure also attempts to correct for the

[11] According to Van Hilten (2004) this growth of volume of care is overestimated because some volume components should be considered price components.

age effect on health care costs. Using OECD data (OECD 2003db: 165), it may be concluded that health spending on people aged over 65 is two to four times higher than that on people under the age of 65. This is partly the result of the higher number of admissions and doctor's consultations in this age group, and partly the result of the higher cost price of each treatment. The figure shows the 'extra' costs for over-65s, on the assumption that they consume health care three times more than other members of the population. This refinement of the figures barely affects the ranking of countries in terms of health spending per capita. The proportion of over-65s which, as Figure 2.3 shows, ranges from 11% to 19% of the total population, can explain to only a limited extent differences in spending.

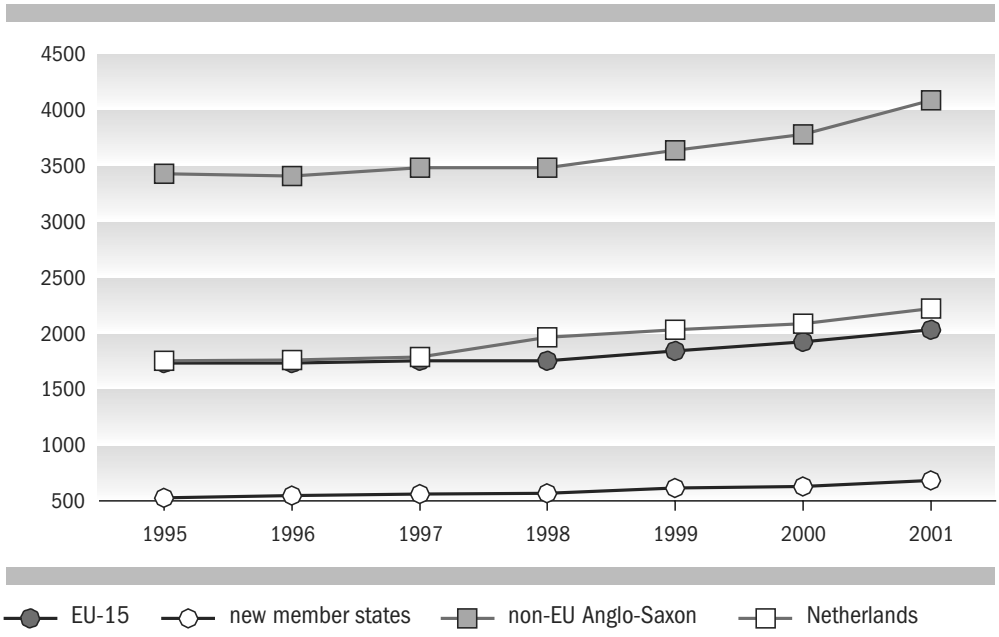
Health expenditure per capita in constant NL€ of 2000 shows a slight increase in spending in all country groups over the period 1995-2000 (Figure 4.4). Besides the effect of demographic ageing, the rising cost price of health care services relative to the average cost price of domestic production has presumably also had an impact. This point will be taken up again in the section on cost prices and productivity .

Figure 4.4 Total current health expenditure per capita, 2000 (NL€)



Source: OECD (Health Data), Eurostat (New Cronos, World Bank (WDI Online), GVG (2003), ECHP (a); SCP revision

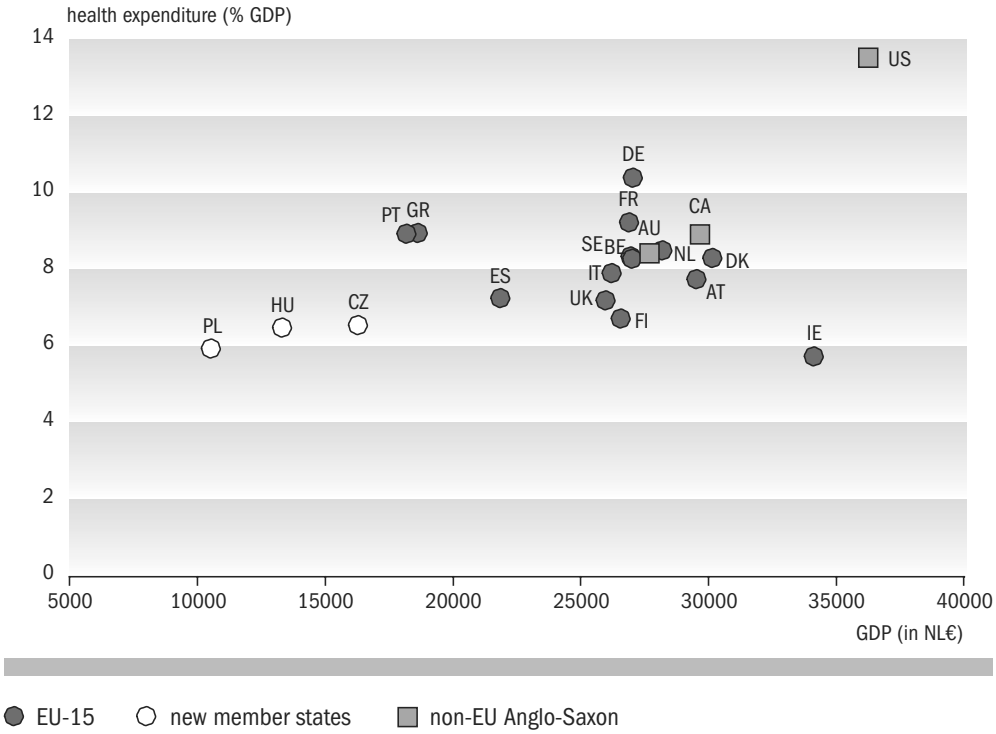
Figure 4.5 Total current health expenditure per capita, 1995-2001 (NL€)



Source: OECD (Health Data), Eurostat (New Cronos, World Bank (WDI Online), GVG (2003), ECHP (a)

Figure 4.6 shows that national health expenditure increases with GDP per capita. From bottom left to top right we find first a number of new member states, followed by a number of Southern European countries, then a large group of EU countries and Anglo-Saxon countries, and finally the US. In the middle group of EU and Anglo-Saxon countries, incidentally, no relationship is found between GDP and health expenditure: the difference in health spending between Germany at the one extreme and Ireland at the other is considerable.

Figure 4.6 Relationship between share of health expenditure and GDP per capita, 2000



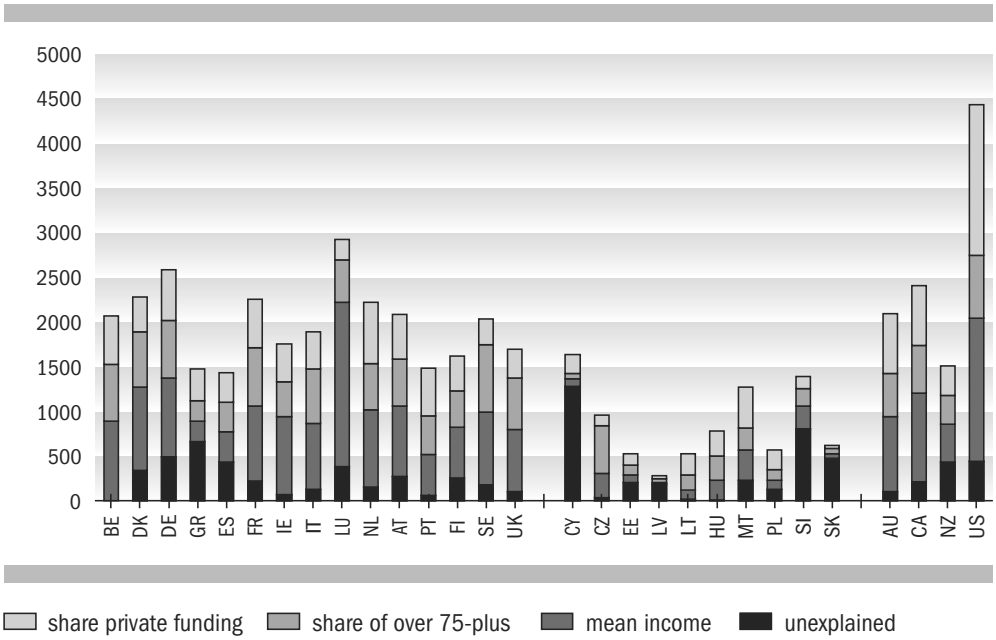
Source: OECD (Health Data), Eurostat (New Cronos, World Bank (WDI Online), GVG (2003), ECHP (a)

Many attempts have been made to systematically identify factors responsible for differences in per capita health expenditure. In theory, they could be linked either to characteristics of the population or to properties of the health care system. Relevant population characteristics include demographic profile, prevalence of unhealthy lifestyles and level of prosperity. Relevant system characteristics would include access, funding and technology. A recent overview of research in this are can be found in Gerdtham and Jönsson (2000), who conclude that all attempted explanations are founded on a fairly weak theoretical and empirical basis. Income appears to be a very robust explanatory factor. The degree to which it plays a role varies, however, although most studies point to an income elasticity of around 1, which suggests that health care lies halfway between a basic necessity and a luxury good. The impact of other population characteristics and properties of the health care system itself appears to be quite modest. One notable point is that the demographic profile of the population, such as the proportion of elderly people, cannot generally explain the differences found. Figure 4.7 gives an indication of the possible causes of differences in health spending per capita, showing results of a model with three variables explaining 85% of spending differences.[12] Factors like lifestyle (alcohol consumption, smoking, obesity) and technical equipment (scanners) were not found to have

[12] Based on a simple one year regression model of countries; explanatory factors are hardly correlated.

sufficient explanatory value at country level. The degree to which family doctors act as gatekeepers to specialist care also appears to have no significant impact on expenditure levels, although the literature suggests it reduces spending.

Figure 4.7 Health expenditure per capita, related to some explanatory variables, 2001



Source: OECD (Health Data), Eurostat (New Cronos, World Bank (WDI Online), GVG (2003), ECHP (a); SCP analysis

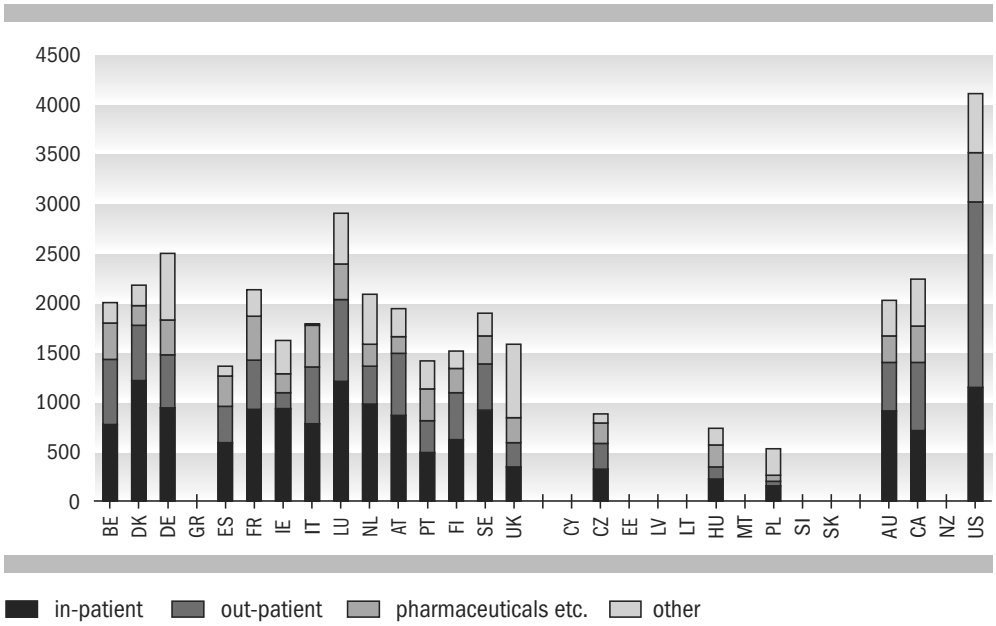
In the end, differences between countries appear to be related mainly to differences in the average income.[13] There is fairly little correlation with the share of private financing and the proportion of over-75s. The cost-raising effect of the share of private financing shown in Figure 4.7 is not generally substantiated in the literature (Gerdtham and Jönsson 2000), although some research does confirm our result (Gil and Gracia 2002). Nor are there any indications that private health care institutions operate at lower costs than do publicly-run institutions (Mobley and Magnussen, 1998). Countries restricting supply for budgetary reasons, incur lower health expenditure in relative terms. In practice, these are often countries with a strongly publicly-oriented system, which partly explains the outcomes in Figure 4.7.

Figure 4.8 shows spending per capita for some important products: inpatient care, outpatient care, medicine and 'other'. Along with Ireland and Denmark, the Netherlands devotes more than half its spending to inpatient care. This figure is below 30% in Sweden and the United Kingdom. The share of outpatient care is high in Luxembourg (almost 50%). In the majority of countries it is somewhere between 20% and 35%. The Netherlands (on 15%), Sweden, the United Kingdom, Ireland,

[13] One of the explanations is the 'Baumol effect'. In essence, this means that it is difficult to raise labour productivity in a labour-intensive sector like health care, while the prices of the resources used, particularly staff, follow more general trends.

Poland and Hungary devote the lowest proportion of their health expenditure to outpatient care. The proportion spent on pharmaceuticals[14] is above 20% in France, Italy, Portugal, the Czech Republic and Hungary. On 12%, the Netherlands comes somewhere near the bottom of the mid-section, while Denmark, Austria and Poland score below 10%. No clear link can be made with the type of system. It is however clear that the Mediterranean countries, in particular, devote a relatively large proportion of their health spending to medicine. This could be related to cultural factors (Kooiker and Van der Wijst 2003).

Figure 4.8 Health expenditure per capita by type of care, 2000

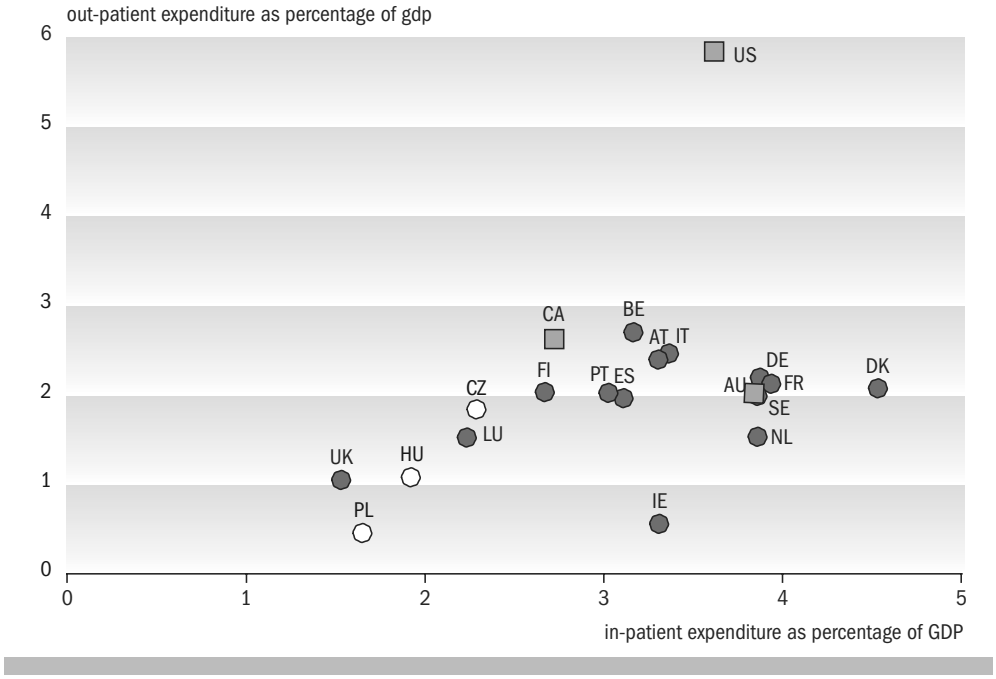


Source: OECD (Health Data), Eurostat (New Cronos, World Bank (WDI Online), GVG (2003), ECHP (a)

Figure 4.9 illustrates the relationship between expenditure on inpatient and outpatient care, corrected for differences in prosperity between countries. A slightly positive, though barely significant, correlation was found between the two. It would appear that this is more a matter of complementarity than of substitution. Pacolet (1999) has observed this in the past in connection with inpatient and outpatient care of the elderly. The US is exceptional, with its very high spending on outpatient care, while Ireland, the Netherlands and Denmark emphasise inpatient care. These last three countries offer relatively intensive nursing home care for the elderly and disabled (see also Figure 4.10).

[14] In a broad sense, including 'non-durables'.

Figure 4.9 Outpatient and inpatient expenditure, 2000 (% of GDP)

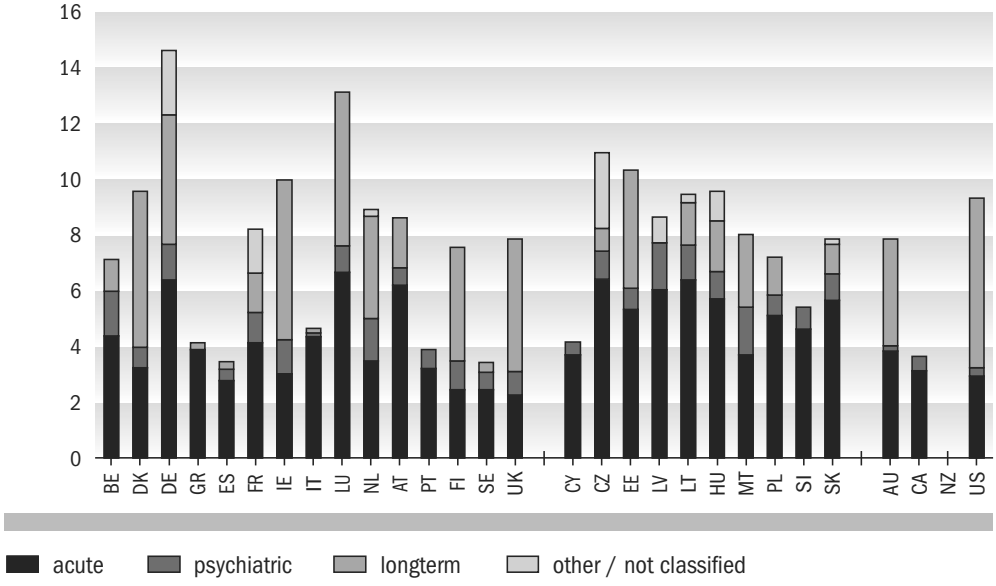


Source: OECD (Health Data), Eurostat (New Cronos, World Bank (WDI Online), GVG (2003), ECHP (a)

4.3.2 *Beds*

The number of beds in relation to the size of the population is an important indicator of the availability of inpatient care.

Figure 4.10 Inpatient care: beds per 1000 inhabitants, 2000



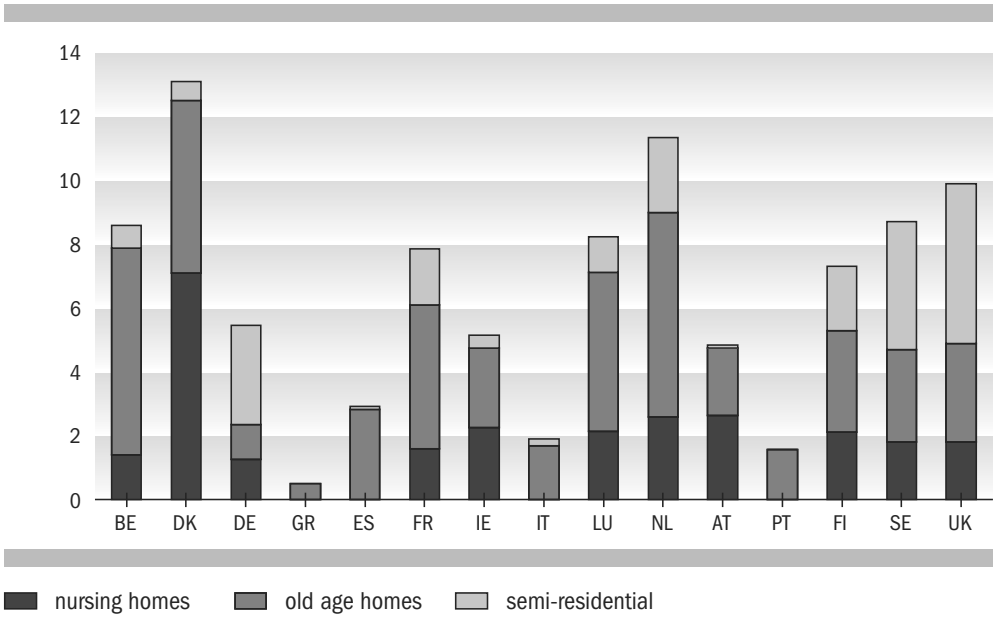
Source: OECD (Health Data) SCP revision

The average number of beds in acute inpatient care is roughly four per 1000 population in the EU-15 (Figure 4.10). Finland, Sweden and the UK have substantially lower scores, while Luxembourg, Germany and Austria score substantially higher. The new member states have slightly higher bed availability for acute care (more than five per 1000), whereas the Anglo-Saxon post slightly lower bed availability (just over three per 1000). There are distinct differences between admission figures and bed capacity in Finland (high admissions, low bed capacity). The Fins achieve this thanks to a low average number of days per patient and a very high occupancy rate in hospitals. In Sweden and Malta, too, there are differences between admission figures and bed capacity (average admissions, low bed capacity in the former, low admissions, average bed capacity in the latter), but they are significantly smaller than in Finland.

Various forms of non-acute inpatient care are much larger in terms of beds than in terms of admissions. In the Netherlands, Germany, Denmark, Ireland, the United Kingdom and Finland, the number of beds available in non-acute care is greater than in acute hospital care. In the Southern European countries and in Canada and New Zealand the share of other beds is fairly low. The biggest differences are found in long-term care. The availability of long-term care is quite generous on the whole in the Northern European countries, moderate in Central and Eastern Europe and fairly sparse in Southern Europe. It is at any rate clear that in Southern Europe the elderly are still often cared for by their family (Giarchi 1996). This could turn out to be problematic not only because family ties are slowly eroding and relatives are less likely to feel it is their duty to help family members, but also because some of the necessary long-term care would then have to be provided in hospital, which would make it relatively expensive. The capacity of non-acute inpatient care also differs strongly between countries. Several Southern European countries, Australia and the US have very few psychiatric hospitals, for instance. In Greece and Italy, in particular, there is minimal availability of psychiatric beds.

Earlier on, it was mentioned that nursing homes and residential care for the mentally handicapped are not included here, because according to international definitions they do not form part of health care but part of welfare work. Pacolet et al. (1999) give a picture of inpatient services for the elderly, which also includes care homes and sheltered living (Figure 4.11).

Figuur 4.11 Inpatient care of the elderly, beds per 100 elderly 65+ (about 1995)



Source: Pacolet et al. (1999)

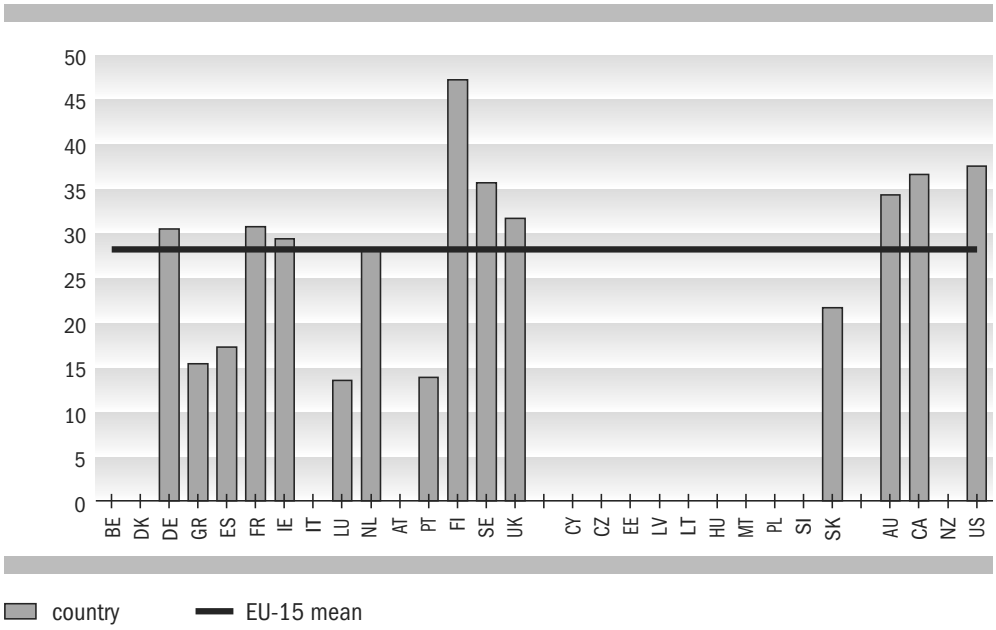
The data in Figure 4.11 refer to the EU-15 in the last year prior to 1998 for which information was available. In many cases this was around 1995, but in some the data refer to an earlier year, making it difficult to compare this figure with Figure 4.10. It illustrates the wide variability both in the number and type of places available. The picture for non-acute care is largely consistent with that in Figure 4.10: relatively high availability in the Northern European countries (and the Netherlands), moderate availability in Central Europe and low availability in Southern Europe.

4.3.3 Staff

The figures for total employment in the health care sector (Figure 4.12) are unfortunately rather incomplete. Finland leads, with 45 full-time equivalents (FTE) per 1000 inhabitants, followed by Sweden, France, Germany, the United Kingdom and a number of Anglo-Saxon countries on 30 to 35 FTE. With 26 and 27 FTE the Netherlands and Ireland score just below the EU-15 average, followed by Slovakia on 22. Several Southern European countries and Luxembourg have much lower figures (around 15).

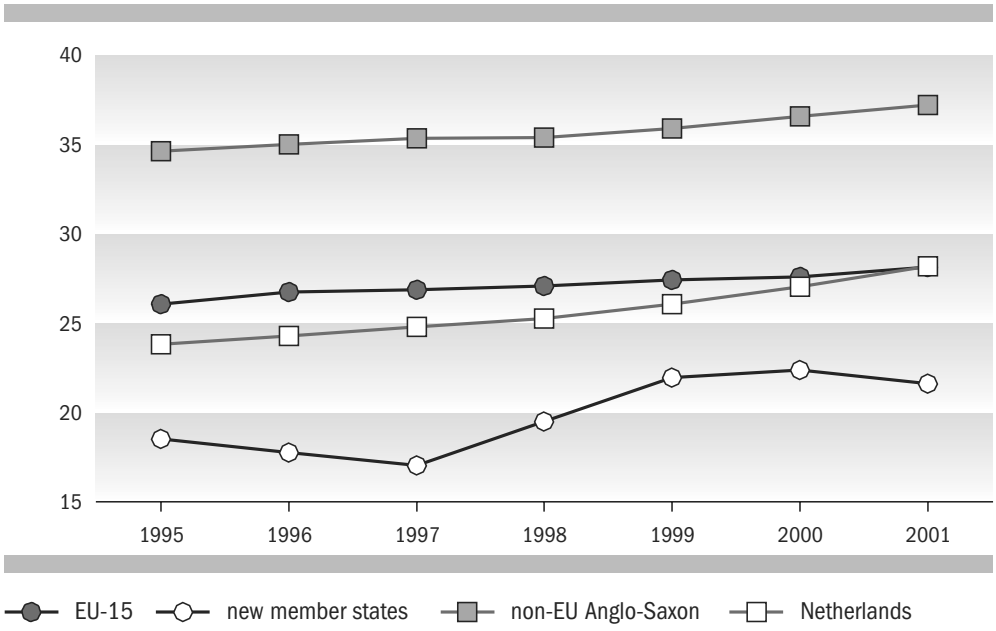
Figure 4.13 shows employment trends in the health care sector per head of population. As with real spending per capita (Figure 4.3), employment numbers show a slight upward trend in all country groups. The Netherlands is moving towards the EU-15 average.

Figure 4.12 Total health employment per 1000 inhabitants, 2001 (FTE)



Source: OECD (Health Data)

Figure 4.13 Total health employment per 1000 inhabitants, 1995-2001 (FTE)



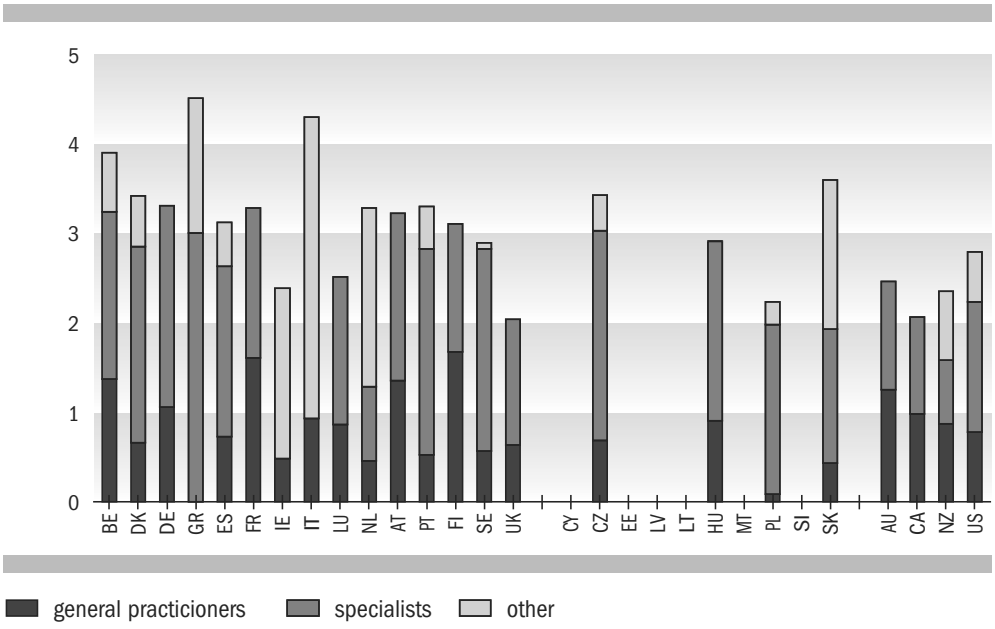
Source: OECD (Health Data)

Figures 4.14 and 4.15 present the number of doctors. For some countries (Ireland, Italy, the Netherlands and Portugal), the figures include retired doctors. In the Netherlands, 10% of all doctors are aged 65 or over. Doctors can be divided into general practitioners, specialists and other. However, such a breakdown is not available for all countries. In some countries, including the Netherlands, the 'other' category

includes the majority of doctors. According to figures compiled under the Individual Health Care Professions Act (BIG) there were over 52,000 qualified doctors in the Netherlands in 2001, including over 7,000 practising GPs and 14,000 specialists. This means that 60% of Dutch doctors are not classified as GPs or specialists. Many of them will be employed otherwise, for example by occupational health organisations or insurance companies, some will be newly qualified doctors training to become specialists or working as interns, others will be working in unregistered professions (such as homeopathy), have ceased practising or retired.

The total number of doctors per 1000 population ranges from 2 (Ireland, the United Kingdom, Poland and several Anglo-Saxon countries) to 4.5 (Greece and Italy). Belgium also scores high, with 3.9. The Netherlands falls somewhere in the middle, with 3.3, as does the US, on 2.8. The proportion of general practitioners varies sharply from country to country. Though Greece has many doctors, very few of them are GPs. Most patients' first port of call will therefore be one of the hospital outpatient consultation services, which are relatively expensive. The relatively large number of specialists does not, therefore, indicate a high level of service provision. It in fact suggest relatively inefficient service provision in primary care. Poland is also struggling with a chronic shortage of GPs. Its temporary solution is to have a large number of specialists work in general practice.

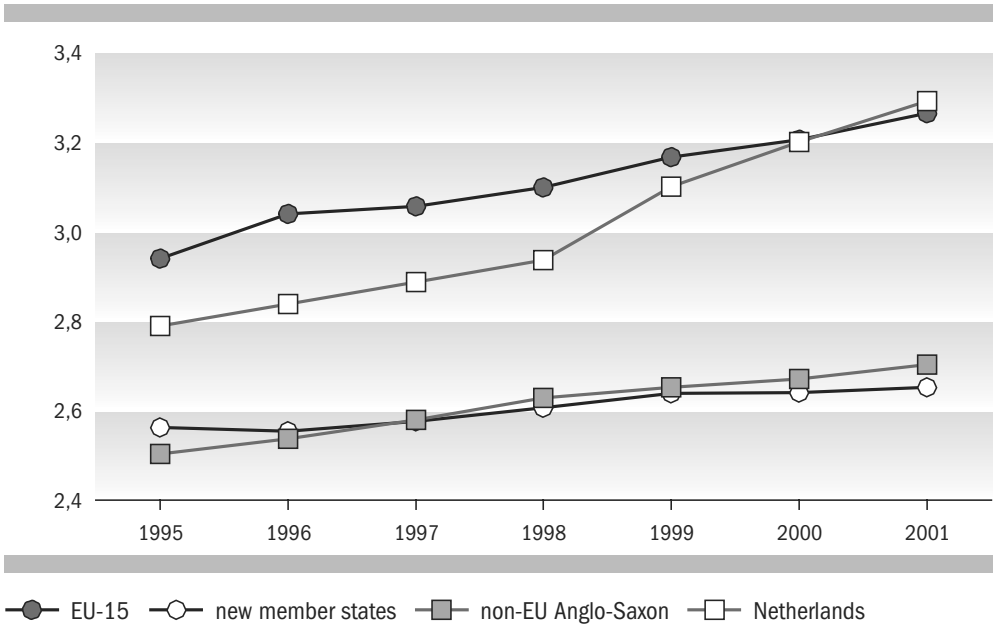
Figure 4.14 Physicians: number per 1000 inhabitants, 2001



Source: OECD (Health Data)

The number of doctors per capita (Figure 4.15) shows an upward trend, with the Netherlands coming above the EU-15 average only in the final year considered.

Figure 4.15 Physicians: number per 1000 inhabitants, 1995-2001

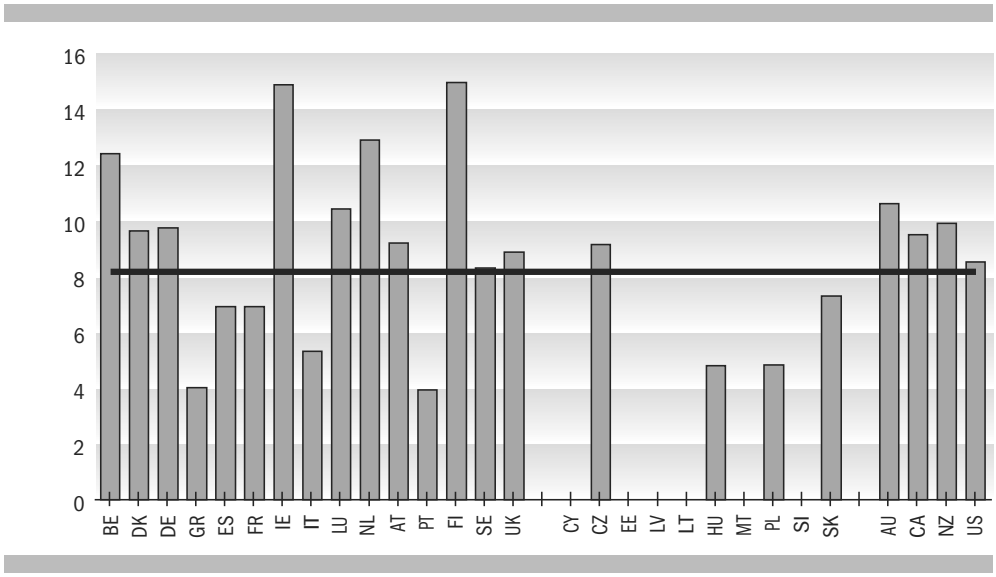


Source: OECD (Health Data)

The last two figures in this section refer to the number of nurses. As can be seen in Figure 4.16, Finland and Ireland lead the field, with some 15 FTE per 1000 inhabitants, followed at a slight distance by the Netherlands (13 FTE) and Belgium (12 FTE). Many countries – including Germany, Luxembourg, Sweden, the United Kingdom and the Anglo-Saxon countries – have a score somewhere between 8 and 10. France, the Southern European countries and a number of new member states all score lower, with Greece and Portugal closing the field on around 4 FTE per 1000 population.

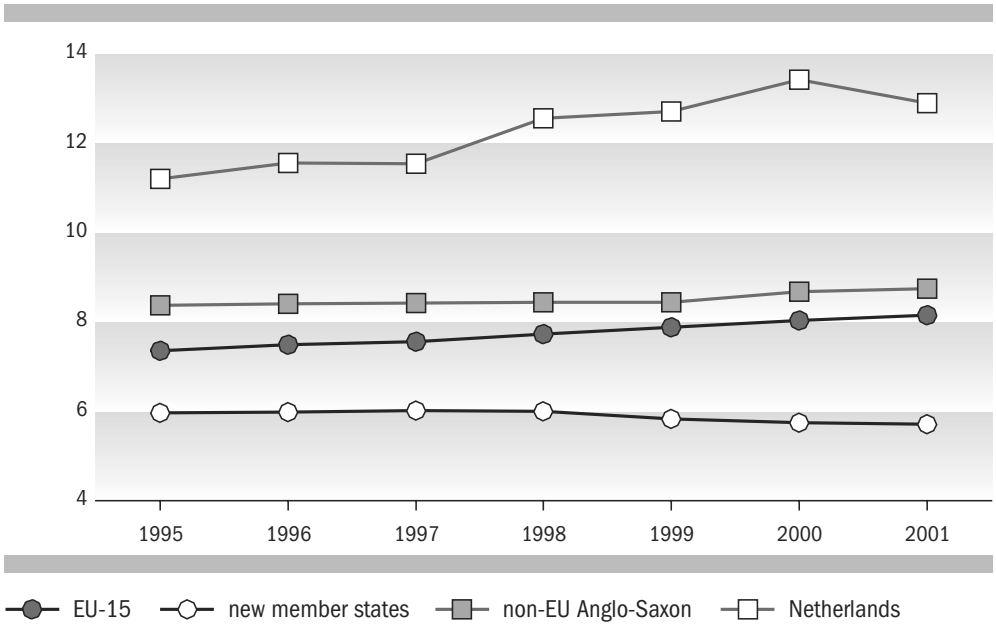
Over the period 1995-2001 the average number of nurses per 1000 inhabitants in the EU-15 and the Anglo-Saxon countries rose steadily (Figure 4.17). The new member states witnessed a slight decline. According to this source (OECD Health Data 2003), the number of nurses in the Netherlands is not only high, but is also increasing rapidly (from 11 per 1000 in 1995 to around 13 in 2001).

Figure 4.16 Nurses: number per 1000 inhabitants, 2001



Source: OECD (Health Data)

Figure 4.17 Nurses: number per 1000 inhabitants, 1995-2001



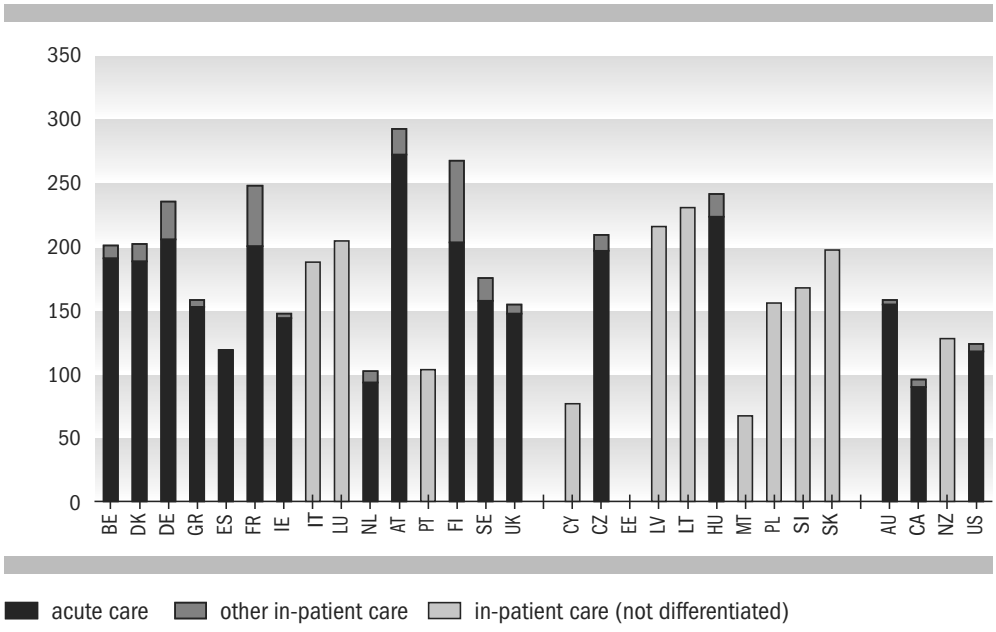
Source: OECD (Heakth Data)

4.4 *Patient care*

4.4.1 *Inpatient care*

Most countries break their data on inpatient care down into hospital admissions (acute care) and other inpatient care (non-acute care). Where they do not, we can assume that the majority of admissions are to hospitals. Figure 4.18 looks at inpatient admissions.

Figure 4.18 Inpatient care: admissions per 1000 inhabitants, 2000



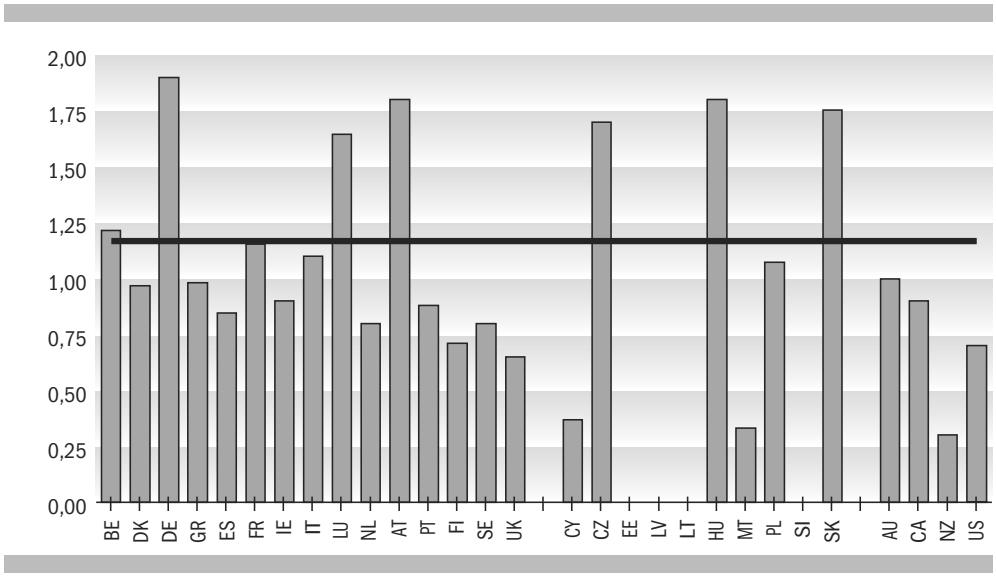
Source: OECD (Health Data)

Austria is notable for its relatively high number of hospital admissions (270 per 1000 inhabitants). It belongs to the corporatist cluster, which is generally characterised by high admission rates (this applies particularly to Germany and France). The number of hospital admissions is high in Eastern Europe and Finland, too. Cyprus and Malta have the lowest hospital admission rates (around 75 per 1000 inhabitants). Spain, Portugal, the Netherlands, Canada and the US have fairly low rates, too, at around 100 per 1000 population.

In many countries, the number of admissions to other inpatient care represents only 10% or less of hospital admissions. On 8%, the Netherlands comes behind the leaders – Germany (13%), France (19%) and Finland (24%).

The number of patient days in hospitals (Figure 4.19) correlates with the number of beds, via the occupancy rate (Figure 4.29) and with the number of admissions, via the average length of stay per patient (Figure 4.12).

Figure 4.19 Acute care: number of patient days per capita, 2000

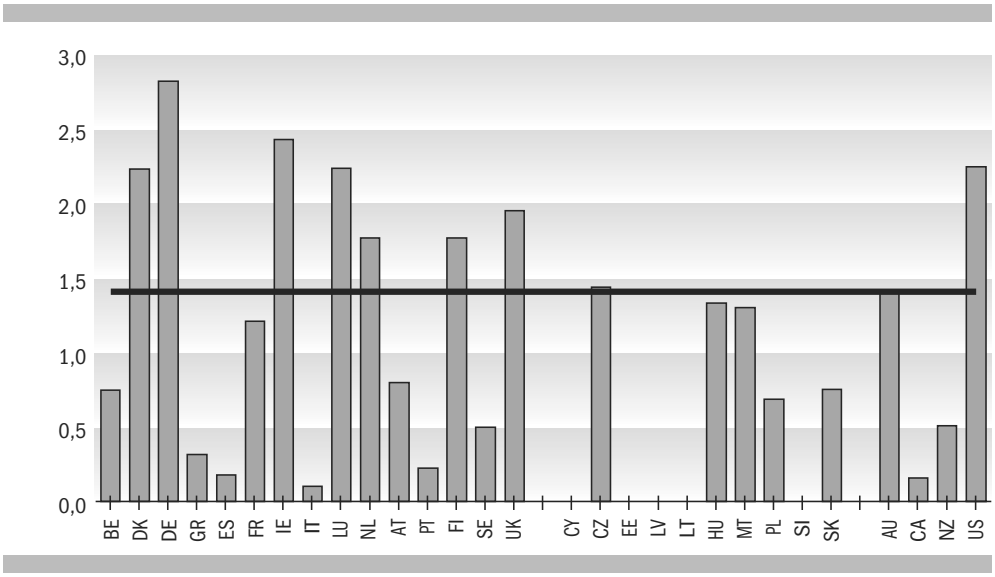


Source: OECD (Health Data)

The number of patient days per capita in hospitals ranges from 0.3 (New Zealand) to 1.9 (Germany). Austria, Luxembourg and several new member states also have high scores. On 0.8, the Netherlands is in the lower regions, just above the US, Sweden and New Zealand.

Figure 4.20 shows the number of patient days per capita in other inpatient care. Unfortunately there is no data for many of the new member states. The variation here is even greater than in acute care. Germany leads the field, but Ireland, Luxembourg, Denmark and the US also post high scores. The Southern European countries and Canada record the lowest scores.

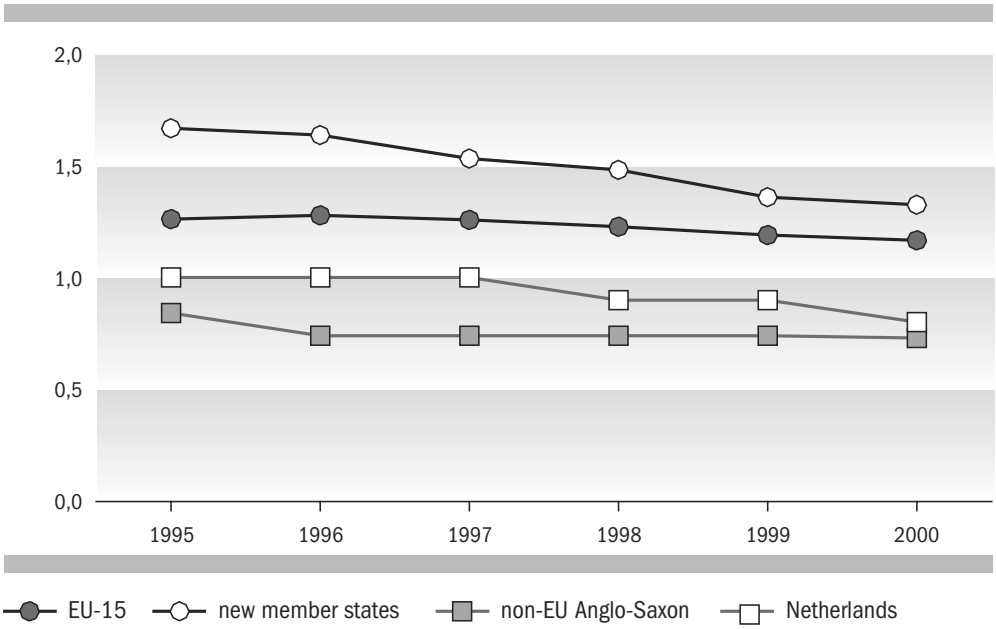
Figure 4.20 Non-acute inpatient care: number of patient days per capita, 2000



Source: OECD (Health Data); Eurostat (SCP revision)

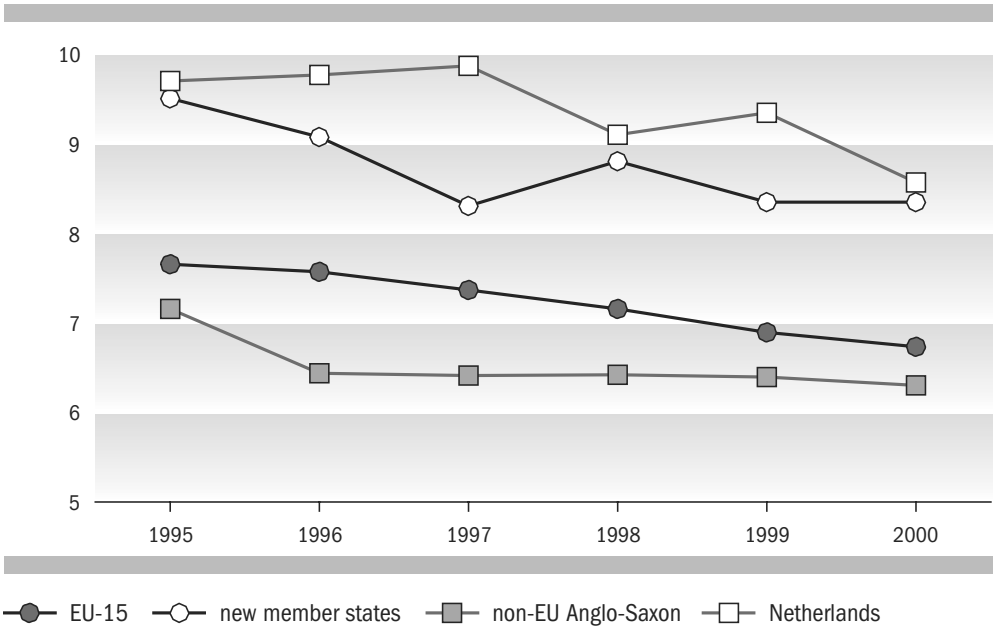
There is a downward trend in all country groups in the number of beds and patient days in hospital care. This trend is slightly less pronounced in the case of patient days than of beds (Figure 4.21), and the fall in the Netherlands is greater than in other countries. The downward trend is related to the faster completion of medical treatment, which has reduced the length of time patients remain in hospital. This corresponds to a similar development in the length of stay (Figure 4.22), which is still relatively high in the Netherlands.

Figure 4.21 Acute care: number of patient days per capita, 1995-2000



Source: OECD (Health Data)

Figure 4.22 Acute care: average length of stay, 1995-2000 (in days)



Source: OECD (Health Data)

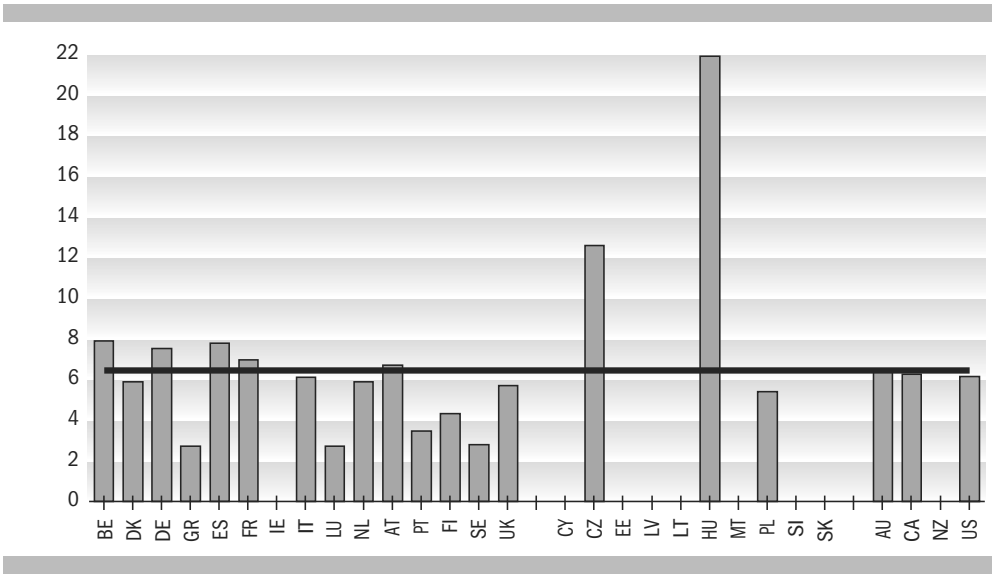
4.4.2 *Outpatient care*

There are not many indicators of production in outpatient care. Figure 4.23 shows one of the few indicators available: the annual number of doctors' consultations per capita. This includes visits both to GPs and to specialists. Two countries have a particularly high score: Hungary (22) and the Czech Republic (12). Both countries

have an extensive system of polyclinics, which are regarded here as outpatient care. The physicians associated with these clinics also carry out procedures that are often performed by nurses in the other countries. The score in most countries is between 4 and 8, and on 6, the Netherlands is just slightly below the EU-15 average. The number of doctors' consultations is below 4 in countries as diverse as Greece, Portugal, Luxembourg and Sweden. Looking only at the number of general practitioners (Figure 4.24), there is a weak correlation with the number of admissions for acute care in hospitals. Where GPs act as gatekeepers, one would rather expect to find a negative correlation, because of the substitution between outpatient and inpatient care. However, no such correlation would appear to exist at country level. There is in fact a *positive* correlation, which suggests complementarity between the two types of care (more visits to the doctor leading to more use of inpatient care). Alternatively, the results might indicate a higher overall demand for health care.

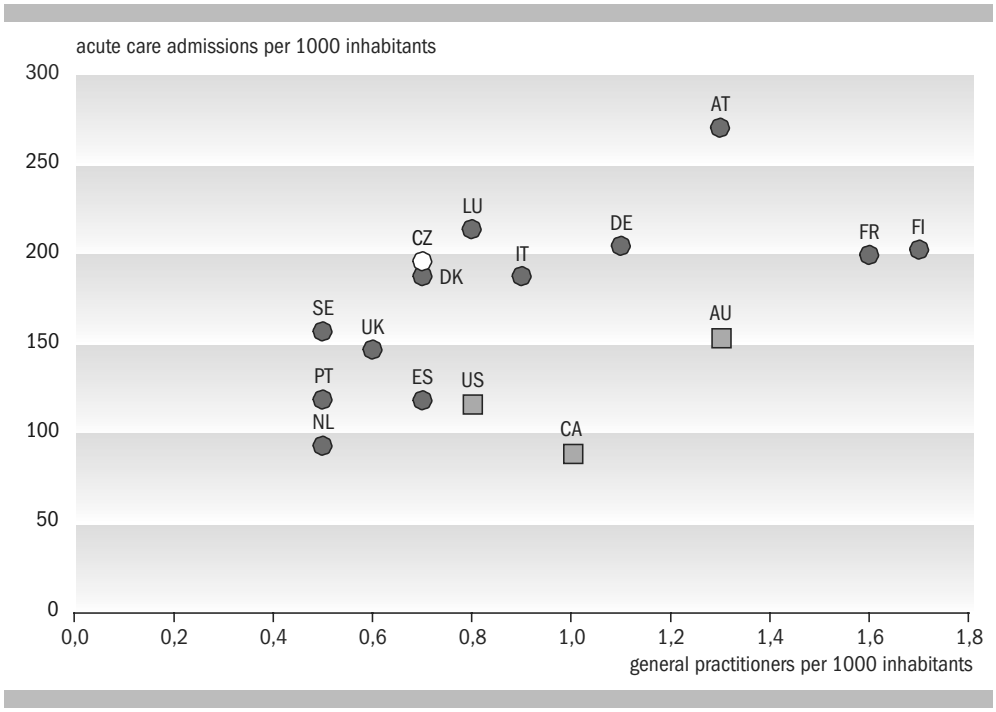
Trends over time are in Figure 4.25. The number of doctors' consultations per capita saw a slight upward trend in most countries between 1995 and 2000, a development which might be related to population ageing. The numbers for the Netherlands are fairly stable over the entire period.

Figure 4.23 Outpatient consultations of physicians: number per capita, 2001



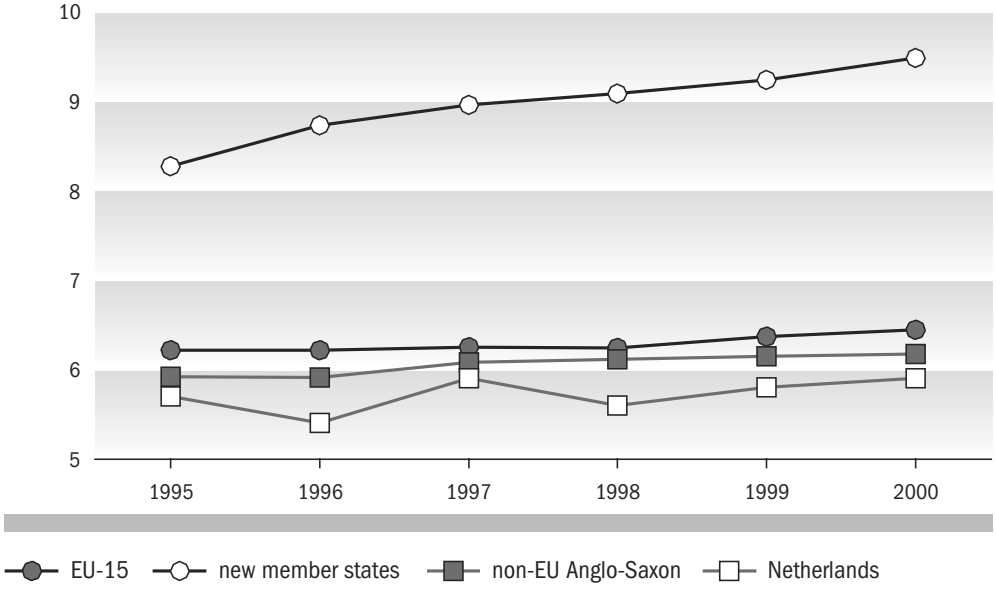
Source: OECD (Health Data)

Figure 4.24 General practitioners and acute care admissions, 2000



Source: OECD (Health Data)Figure

Figure 4.25 Doctors' consultations: number per capita, 1995-2000



Source: OECD (Health Data)

The numbers for visits to the dentist are fairly incomplete. Here, too, a wide range is found: from 0.4 in Luxembourg to 2.6 in the Netherlands. The Czech Republic and Belgium also score fairly high. The EU-15 average is 1.2. One explanation for the high number of visits to the dentist in the Netherlands might be that the Dutch guideline is two routine check-ups a year, which in the period under review were still paid for by the public insurance system.

4.5 *Cost price and productivity*

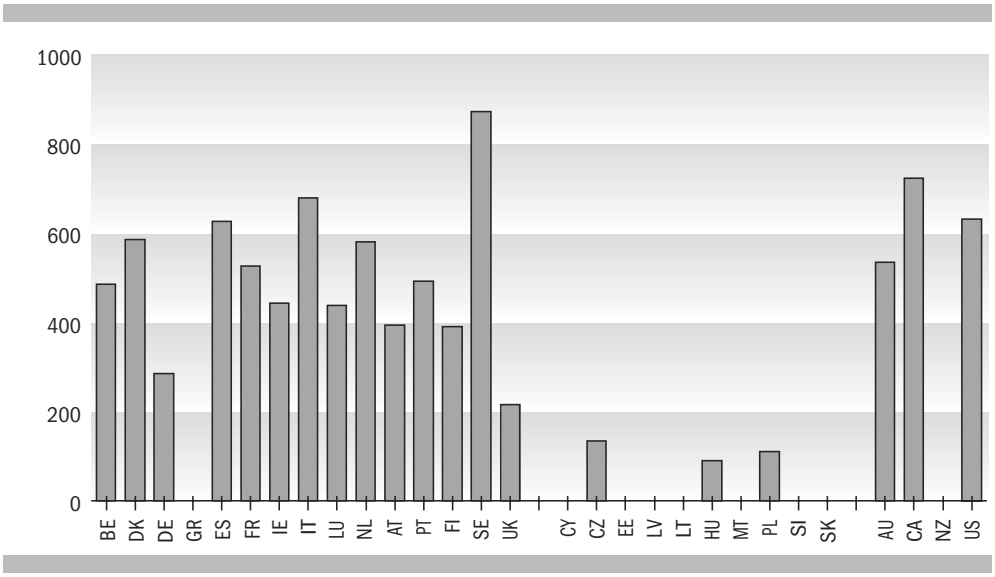
Productivity reflects the relationship between production (Section 4.4) and the resources used (Section 4.3), either monetary or staff. By relating resources to total production, we obtain insight into cost price, total productivity and labour productivity.

Figures 4.26 and 4.27 attempt to give an overall picture of productivity differences in health care, based on the use of financial resources. These are rough measures, as the institutional classification used in the case of production and consumption differs from the one used in the case of staff numbers and costs.

Figure 4.26 refers to inpatient care. Patient days in hospitals and other institutions offering inpatient care have been weighted at a ratio of 1:0.5, based on a rough estimate of the difference in costs per product in the Netherlands. The costs per patient day are highest in Sweden, at NL€ 870. These costs are around NL€ 700 per patient day in Canada and Italy and well over NL€ 600 in the US and Spain. At the other end of the spectrum are Hungary and Poland, on around NL€ 100 per patient day, followed by the Czech Republic. Germany, Austria, Finland, the United Kingdom and Australia also have costs below NL€ 300. On NL€ 580, the Netherlands is found somewhere in the mid range.

Results indicate a negative association between the number of patient days per capita and the costs per patient day. A lower number of patient days per capita is associated with higher costs per patient day. This can probably be explained to some extent by more intensive treatment, combined with a shorter length of stay.

Figure 4.26 Inpatient care: cost per corrected patient day, 2000 (NL€)

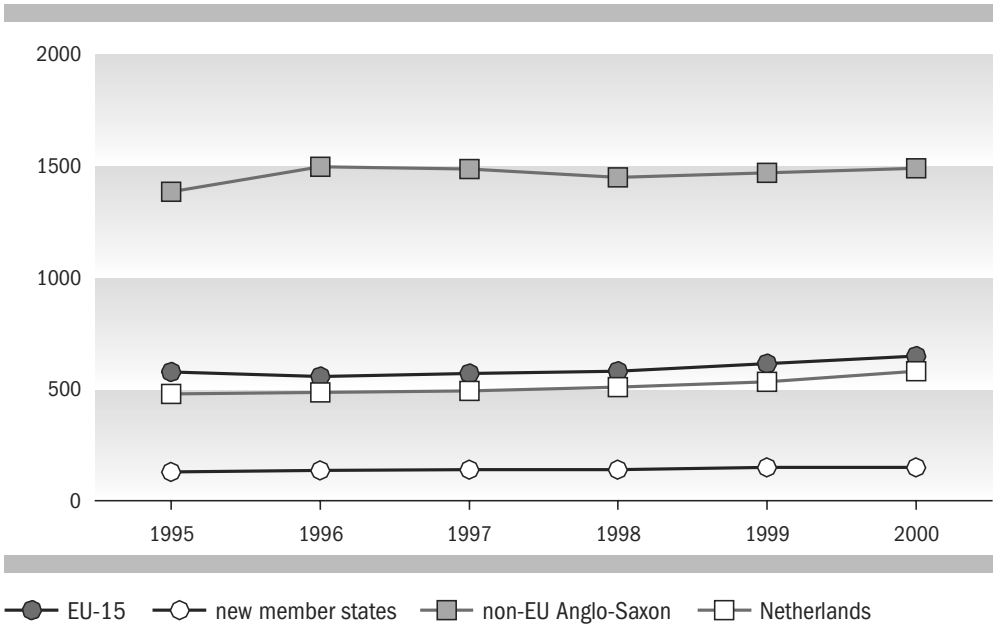


Source: OECD (Health Data) SCP revision

Figure 4.27 shows trends in costs per patient day in 2000 prices. In the EU-15 these costs have been rising by an average 2.5% a year, and in the Anglo-Saxon countries by 3.6%. The rate of increase in the Netherlands is 4.4%. The background material shows that costs were more or less stable in only three countries: the United Kingdom, New Zealand and Hungary.

Analyses for the Netherlands suggest that three factors cause a rapid rise in costs per patient day. The first is more intensive treatment in hospital, where a growing number of medical procedures can be performed in a shorter time. Second is the increase in the care patients on average need ('care burden'), not only in nursing homes, but also in hospitals, as a result of demographic ageing. The third factor is the rising relative cost price of labour-intensive services, like health care. As Baumol (1967) famously pointed out, it is much more difficult to achieve an increase in labour productivity through mechanisation and automation in personal services, while the cost price of the resources deployed – particularly of labour – generally follows the overall market trend (Kuhry and Van der Torre 2002: 22).

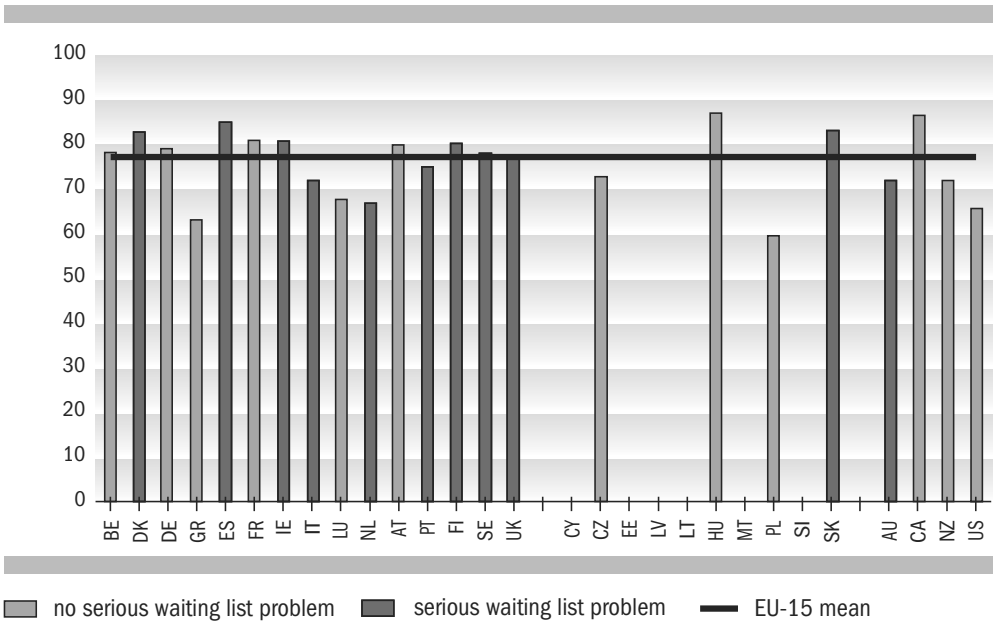
Figure 4.27 Inpatient care: costs per corrected patient day, 1995-2000 (NL€)



Source: OECD (Health Data) SCP revision

The occupancy rate is an important indicator of productivity in inpatient care, based on the use of beds. The average occupancy rate of hospital beds for acute care is 78% in the EU-15 (Figure 4.28). Greece clearly falls well below the European average. A high occupancy rate need not necessarily lead to waiting list problems.

Figure 4.28 Acute care: occupancy rate (about 2000)



Source: OECD (Health Data) SCP revision; dark grey: with waiting list problems

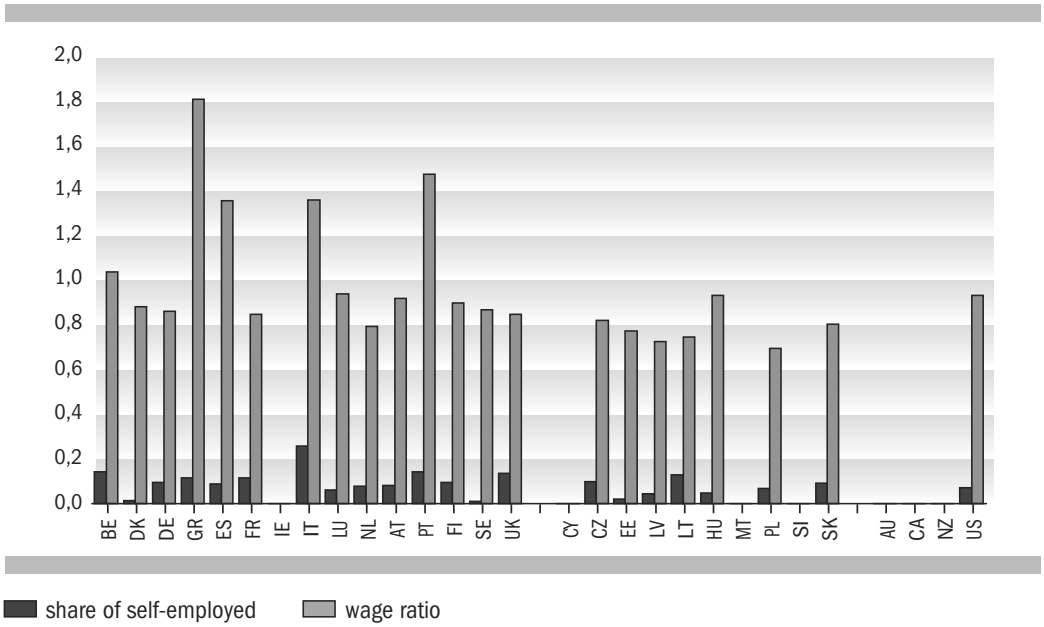
In Figure 4.28 countries that are known to have long waiting times for non-acute hospital care are shaded dark grey. The low occupancy rate in Greece is linked to the inflexible allocation of hospital beds to certain specialists or specialisms, which leads to waiting lists for some kinds of specialist care, and none for others.

Labour productivity is an important aspect of overall productivity. However, in relating staff (number of nurses) to production (number of patient days), it is difficult to distinguish between quality and production dimensions. More staff can lead either to higher quality care for patients or to more comfortable working conditions for staff members. In so far as extra staff benefits patients, this should statistically be measured as additional production, not as productivity loss. Unfortunately, the figures available do not enable to identify when this is the case.

Comparing the number of nurses (Figure 4.17) with the number of patient days (Figure 4.21), it emerges that the ratio between staff and production increased by an average of 18% in the EU-15 over the period 1995-2000. On 32%, the Netherlands comes in well above average. The new member states and the Anglo-Saxon countries have scores around the EU-15 average (21% and 19% respectively). As noted, it is not clear whether this is an indication of better quality or lower productivity. Another explanation for the increase of staff per patient day might be the growing care burden, which is not reflected in the yardstick used to measure production (number of patient days). Figure 4.22 shows that there has been a decline in the average length of stay in hospital, which might imply an increased care burden. Since the average stay in the Netherlands has not fallen faster than in other countries, this factor fails to explain the particularly sharp increase in nurses per patient day here. Analyses suggest that 55% of expenditure growth in the period 1995-2001 in the Netherlands is connected with more production of health care services, 20% with improved working conditions for nursing staff and just over 25% with other factors not directly related either to production or to working conditions (TK 2004).

The wages bill accounts for a significant proportion of health care spending. Differences in the relative cost price of staff might affect the level of health spending between countries. Figure 4.29 shows the relationship between average pay in the health care and welfare sector and average pay of all workers.

Figure 4.29 Ratio between wages in health care & welfare sector and all wages



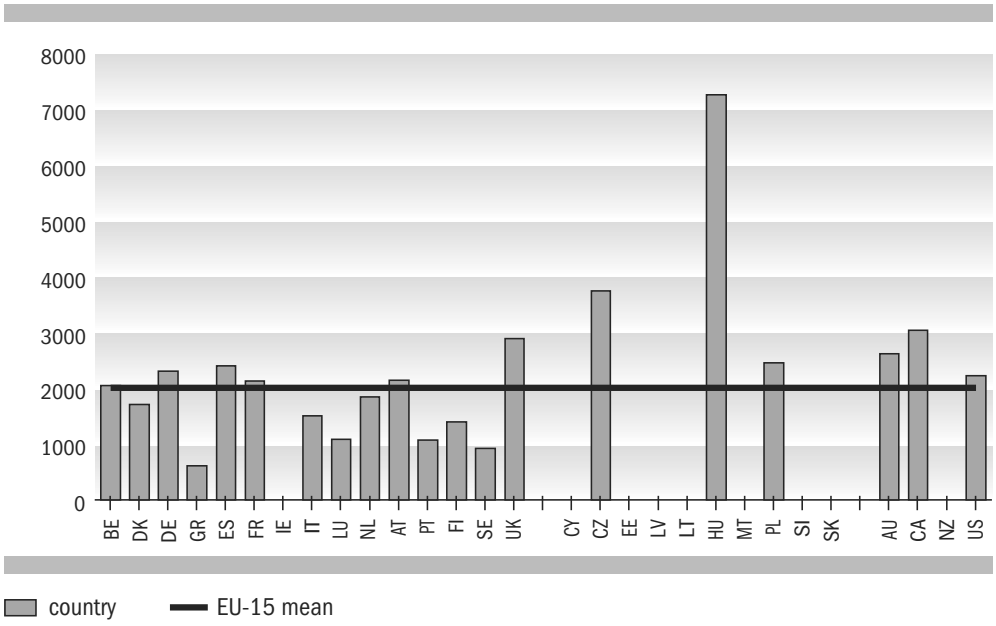
Source: Eurostat, National Accounts (latest available year)

However, the comparison of data for different countries is hampered by two important factors: the inclusion of the welfare sector (including childcare, and services for the disabled and the elderly) and the absence of self-employed health professionals. This last factor can be particularly distorting in countries where doctors are salaried, which is largely the case in Greece, Spain, Portugal, Finland and Malta. Greece's high score can also be explained by the low number of nurses and high number of doctors (see Figures 4.14 and 4.16). Italy and Portugal also have relatively few nurses and a relatively large number of doctors. Taking this background data into account, and leaving out Greece, Portugal and Spain, we find that cost price differences between countries are in fact rather small, ranging from 69% (Poland) to 103% (Belgium).

Data on productivity in outpatient care are even more scarce than those on inpatient care. The only production indicator available is doctors' consultations. They can be related to staff resources – the number of doctors – to give some measure of labour productivity. However, quite apart from the fact that this in no way reflects the heterogeneity and quality of services provided, the indicators are problematic in terms of both the numerator and the denominator. The problem associated with the numerator is that there also exist inpatient doctors' consultations. In the Netherlands, for example, polyclinic treatment by a specialist is also regarded as a doctors' consultation. In terms of the denominator, the problem is that all practising doctors have been counted in, irrespective of whether they contribute to the total number of consultations.

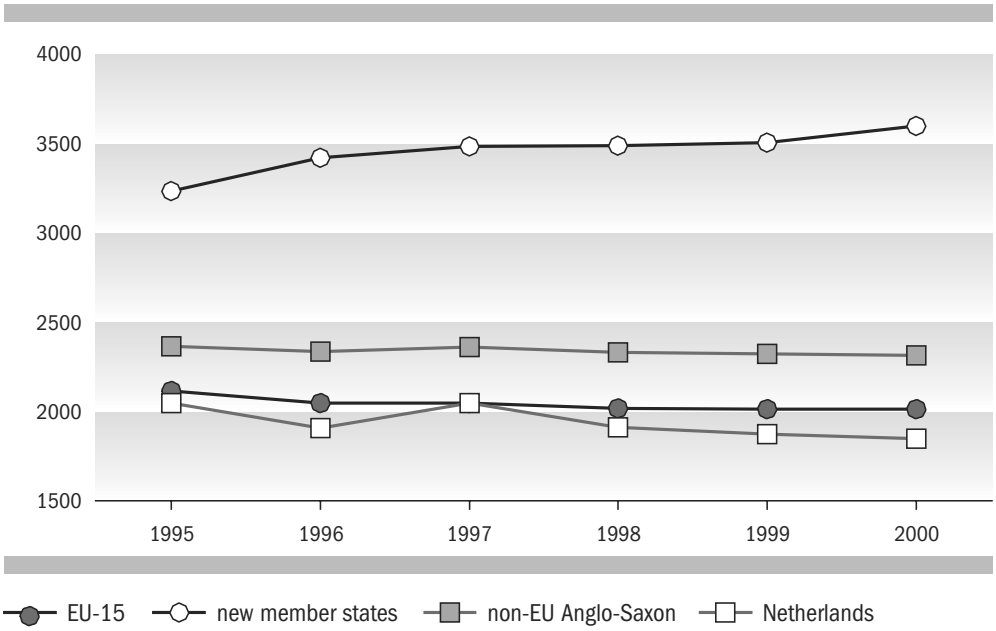
That said, statistics compiled show the annual number of consultations per doctor to range from 600 in Greece to over 7,000 in Hungary (Figure 4.30). In most countries, the figure is between 1,500 and 2,500, with the Netherlands somewhere in the middle range on 1,900. The same applies to the US, which has a figure of 2,000 consultations. High figures are found in the Czech Republic (3,700), Canada (3,000), the United Kingdom (2,800) and Australia (2,600), while the figures in Sweden, Portugal and Luxembourg are low, at around 1,000. As Figure 4.31 shows, the number of consultations per doctor has slightly fallen in most country groups. This does not, however, apply to two of the three new member states for which figures are available (Hungary and Poland), nor to France and Germany.

Figure 4.30 Number of consultations per practising physician, 2000



Source: OECD (Health Data) SCP revision

Figure 4.31 Number of consultations per practising physician, 1995-2000



Source: OECD (Health Data) SCP revision

4.6 *Quality of care*

Quality is has both subjective and objective dimensions. This section examines two aspects of quality: waiting lists as an indicator of objective quality of the health care system and public confidence in the system as an indicator of its subjective quality.

4.6.1 *Waiting lists for non-acute care*

At the level of the health care system as a whole, the government has the task of matching supply and demand. Waiting lists for health care services are thus an indication of the quality of the system. There should, of course, be no waiting lists for acute and urgent treatments, and there are few waiting list problems in this area, if any. The limits to the capacity of the system are thus felt mainly in the field of non-urgent care. An international comparative study has looked at waiting times for non-acute curative care (OECD 2003dc).[15] The treatments include some for which new technology has recently become available, thus sharply increasing demand and creating an imbalance in the health care market. Eight of the 15 OECD countries in the study report substantial to long waiting times for non-urgent surgery, and five report no waiting times worth speaking of. In some of the eight countries with waiting list problems the waiting times are long (the UK and Finland), in others they are moderate (Spain, Denmark,

[15] The study looks at ten surgical procedures: hip replacement, knee replacement, cataract surgery, varicose veins, hysterectomy, prostatectomy, cholecystectomy, inguinal and femoral hernia, coronary artery bypass graft surgery and percutaneous coronary angioplasty.

the Netherlands and Sweden), while in others little information is available about actual waiting times (Italy, Ireland). Five OECD countries (Belgium, Austria, France, Germany and Luxembourg) have virtually no waiting times and in two countries (Greece and Portugal), little information is available. Of the four Anglo-Saxon countries included in this report, only the US reports no waiting times to speak of, and hardly any information is available on the ten new EU entrants.

Generally speaking, it would appear that the likelihood of waiting lists decreases as more medical capacity is available, as more financial resources are put to work and consumers contribute more to cover costs. Thus, waiting list problems occur mainly in health care systems with a small role for market forces, where the trade-off between benefits (in terms of improved health) and cost (in terms of financial sustainability) made at the level of society differs from that at the individual level.

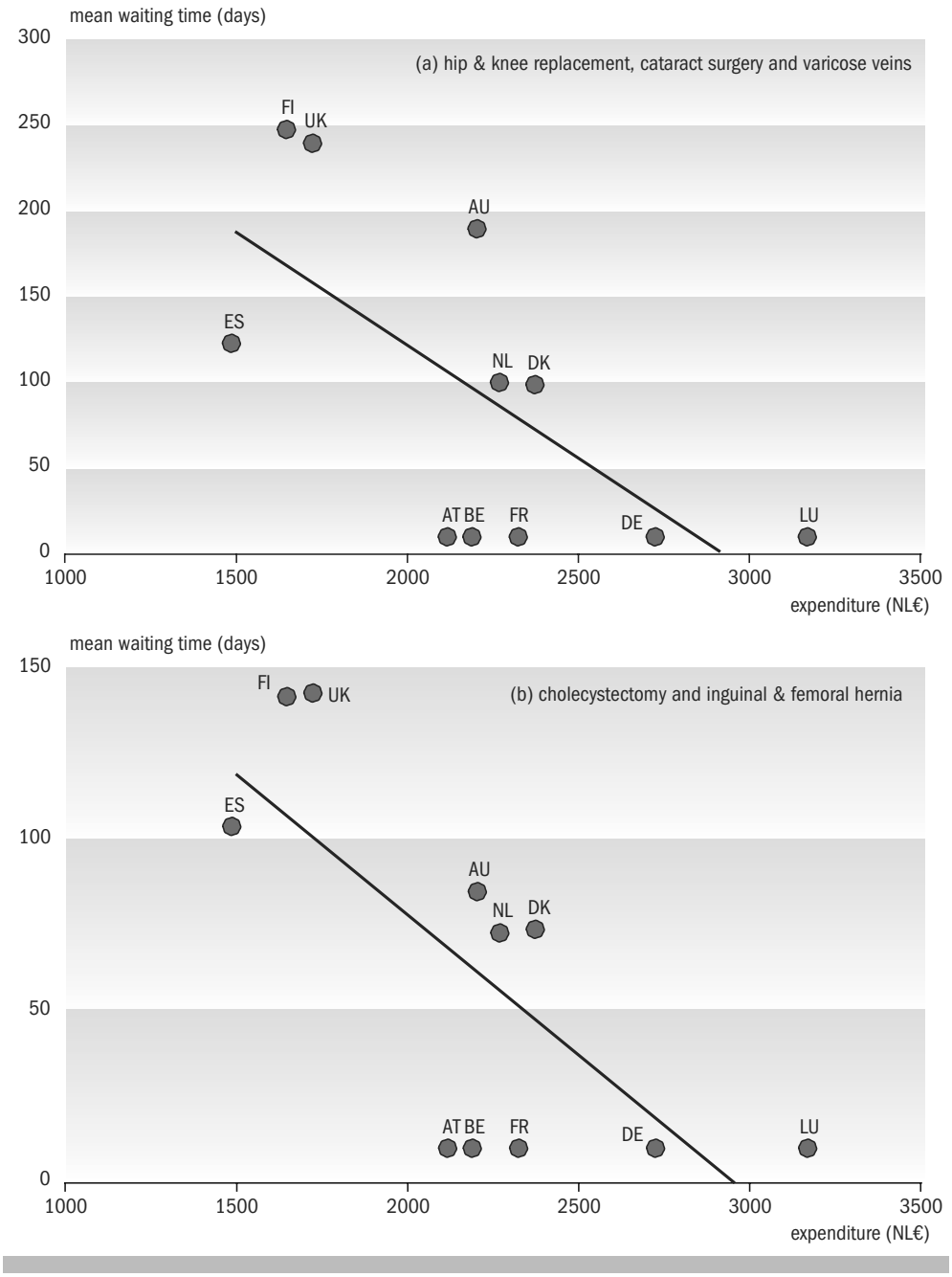
The optimum outcome of this trade-off for non-urgent curative care will be a waiting time somewhere between zero and a few months. Research has shown that short waiting times for this type of care cause very little deterioration in health, while the costs of care increase sharply if such treatments have to be performed without waiting time. Furthermore, it appears that patients do not strongly object to waiting a short time for non-urgent treatment (SCP 2003: 123). However, waiting times are still regarded as unpleasant and spark public debate.

Figure 4.32 shows the link between the average waiting time for non-urgent surgery and health expenditure per capita. There seems to be a clear correlation between the resources deployed (health expenditure) and the quality of the health care system (waiting times). This suggests that more input of resources can help reduce waiting times. But this is not necessarily the case. In practice, it has been found that an unconditional increase in supply can lead to higher demand, so that waiting lists do not shrink in proportion to the extra resources committed (OECD 2003dd). Furthermore, unconditional linking of extra resources to the length of waiting times can produce a perverse incentive for providers to maintain long waiting times. If the only condition is to produce additional care, there is a risk that suppliers will cause a shift from regular to extra care. If the aim is to reduce waiting lists, extra resources will therefore have to be linked to measures that ensure that no extra demand for care is created, through re-indication of patients on waiting lists or enhancement of price mechanisms on the supply side (specialists) or demand side (patients), and that there is no shift from regular to extra care. Stronger price mechanisms can have a negative impact on financial sustainability (if remuneration for medical specialists linked to activities performed is introduced or enhanced) or universal accessibility (if out-of-pocket payments are introduced or raised).

One way of reducing waiting times that is attractive from the cost point of view is to enhance efficiency. Gains in efficiency have proved difficult to achieve at the level of individual health care units (surgical teams or wards), but it has proved possible in terms of the way in which the provision of care is organised. Better care management, more efficient planning of various procedures and prevention of cancellations can reduce waiting times. One factor that is relevant in many countries, though not

in the Netherlands, is 'dual practice', which allows medical specialists to provide treatment both publicly and privately. There are strong indications that the higher remuneration for private treatment in dual practices causes public health service waiting times to increase (OECD 2003dc).

Figure 4.32 Mean waiting time for patients admitted to elective surgery, 2000



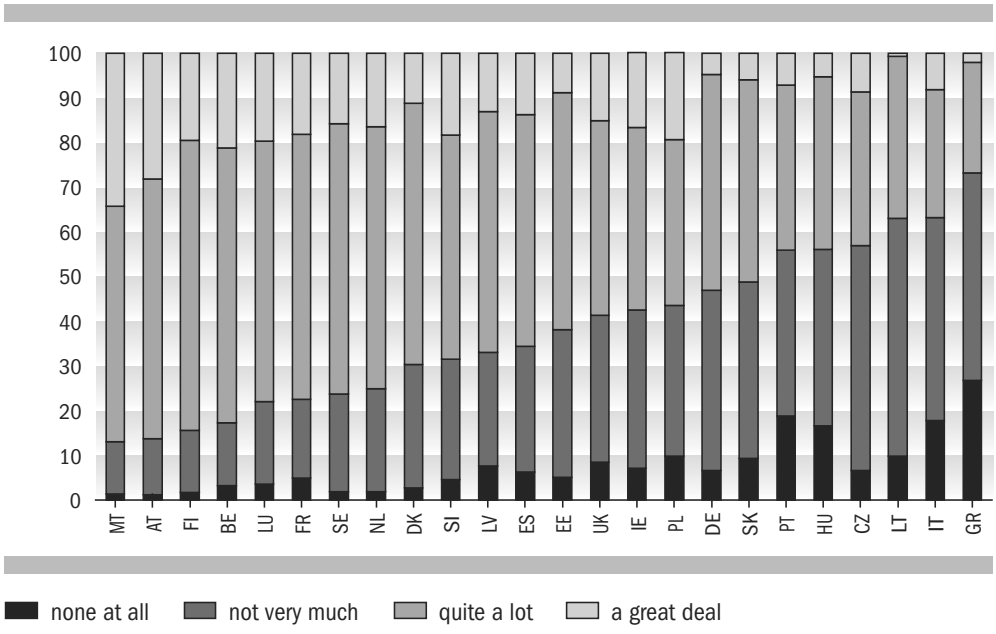
Source: OECD (2003dc)

4.6.2 *Confidence in the health care system*

The confidence that the public places in the health care system is an important indicator of quality. In this respect, Malta, Austria and Finland lead the field, while a number of Mediterranean countries, including Greece and Italy, bring up the rear (Figure 4.33). The public in the new EU member states generally also have little confidence in their health care system. In 2000, the Netherlands came just behind the leaders, although confidence has been dented somewhat in recent years, partly in response to the public uproar about waiting lists.[16]

One would expect some connection to exist between the institutional set-up of the system and the public's confidence in it. Countries in group 4, in particular, with the exception of Germany, enjoy high public confidence. These countries (Austria, Belgium and France) have a premium-financed demand-driven health care system with a large degree of free choice for consumers. But this comes at a price: health spending per capita is relatively high, although not as high as under the strongly market-oriented system in the US. Several countries in groups 1 and 2 (except for Finland) score rather badly. Countries in group 3 enjoy more public confidence, except for Canada. The population of the Netherlands, Luxembourg and Sweden have a fairly good opinion of their health care systems, while the population of the US and Greece enjoy little public confidence.

Figure 4.33 Confidence in health care system by country, 2000



Source: European Values Survey

16 In 2002 just over 30% of the adult population in the Netherlands thought that the quality of medical care had declined in the past five years, while fewer than 20% felt it had risen. The public's views on the quality of mental health care (confidence down 30%), care of the disabled (down 35%) and care of the elderly (down 50%) were even less positive (SCP 2002b: 294).

4.7 *Effectiveness*

Effectiveness may be defined as the relationship between production (and the quality of production) and objectives achieved. A number of measures are available to assess the effectiveness of health care systems. However, the scope of these measures is too limited to allow health care production to be related directly to the objectives achieved. This section, therefore, relates the input of resources (health spending) to the health status of the population. The primary objective of any health care system is good health. Good health is indicated by a long life expectancy, a healthy life and low infant mortality. Subjective health status – how healthy people actually feel – also gives an idea of a nation's state of health.

Indicators of life expectancy and health suffer from the well-known problem that always dogs effect indicators: they measure not only the results of the service in question (in this case the health care system) but also the effect of other social trends, including lifestyle factors such as diet, smoking and alcohol consumption, and environmental factors like drinking water quality and environmental pollution. The health care system is therefore only one of the factors influencing the general health of the population.

Health care aims not only to produce a healthy population, it also includes objectives related to the system itself: universal accessibility, high quality and financial sustainability. Along with the primary objective of good public health these secondary objectives can be correlated with the input of resources, to assess how effective the system is in terms of its aims.

4.7.1 *Measures of health status*

The publication of the World Health Report 2000 constituted a major boost to measuring the effectiveness of health care systems. The WHO-report presents a composite measure of both the 'goodness and fairness' of health care in different countries. The measure comprises two indicators related to the standard achieved and three indicators related to distribution among the population. In theory, there are good reasons to include a measure of health inequality in such a composite measure. However, this measure causes problems in practice, because distribution has to be assessed in relation to a standard of health. Moreover, in assessing inequalities one must take into account only those factors that are relevant to health differences (and which are not, therefore, caused by differences in other relevant factors such as age and hereditary conditions). This report does not, therefore, adopt the WHO approach.

The five indicators in the World Health Report 2000 are disability-adjusted life expectancy (weighted 25%), social inequality in infant mortality (25%), the level and inequality of responsiveness in terms of basic values such as respect for persons and client orientation (together 25%) and the equal distribution of financial risk according to capacity (25%). This report uses only the first indicator to help measure the effectiveness of health care systems. The indicator of social inequality in infant

mortality shows virtually no differences in Europe and the Anglo-Saxon countries. Though there are differences in the new EU member states, they are hard to interpret.[17] No other measures of inequality in health differences are available. Responsiveness – in terms of basic values such as respect of persons and client orientation of the health care system – has been assessed by country experts and cannot be viewed directly as an indicator of the state of health care in a particular country.[18] Finally, the distribution of financial risk according to capacity is seen here as a property of health care systems that might explain differences in performance.

Figure 4.34 shows life expectancy at birth. It is highest in Australia and New Zealand (80 years). The Netherlands is at the EU-15 average of 78.2 years, a fraction above Belgium, Greece, Finland and Malta. The UK, Cyprus, the US, Ireland and Portugal score slightly below average. Most of the new entrants(with the exception of Malta and Cyprus, of course) have significantly lower life expectancy, with the lowest in Latvia (71 years). However, life expectancy in the new member states is moving towards the EU-15 average (Figure 4.35). In 1995 the difference was still 5.3 years, but a gradual rise in life expectancy had reduced it to 4.5 years by 2001. Average life expectancy has in fact risen in all countries, with the biggest rise in Hungary (2.5 years) and the smallest in Greece (0.5 years).

Figure 4.34 does not reflect the considerable difference in life expectancy between men and women, which is generally around five years. In some Eastern and Central European countries, however, men live on average ten years shorter than women. There is some convergence in the life expectancy of men and women, also in the Netherlands, which is related to some extent to convergence in (un)healthy lifestyles (CBS 2003a). At country level there are no indications of convergence in unhealthy lifestyles. The variation coefficient in the percentage of regular smokers was around 18% in the period 1993-2000; for alcohol consumption it was around 20% (OECD Health Data 2003).

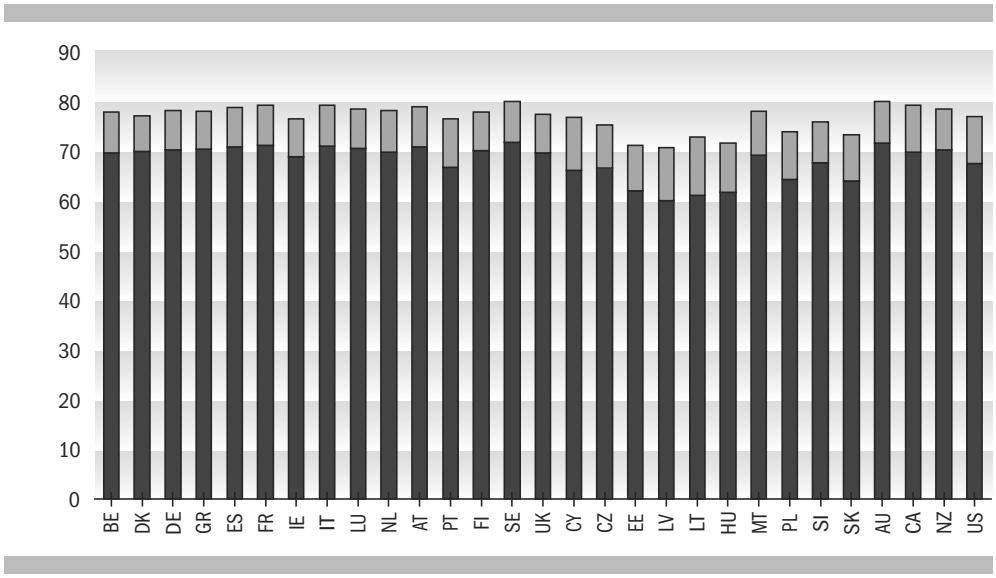
Disability-adjusted life expectancy – the number of healthy years of life – is a better indicator of health. This measure combines the probability of death with the probability of illness. The probability of illness is weighted according to severity of illness in such a way that it can be broken down into healthy and 'lost' years of life (Mathers et al. 2000). In Europe, the average number of 'lost' years is 8.0, Denmark

[17] The calculation of infant mortality inequality is based on the assumption that differences in the probability of death within families are purely coincidental, but that differences between families are not. Inter-group inequality is thus an indicator of socially unequal probability of infant mortality (see Gakidou and King, 2000).

[18] Responsiveness comprises seven sub-indicators: respect for the dignity of persons, respect for the autonomy of persons, respect for confidentiality, prompt attention to health needs, the availability of basic amenities, access to social support networks and free choice of institutions.

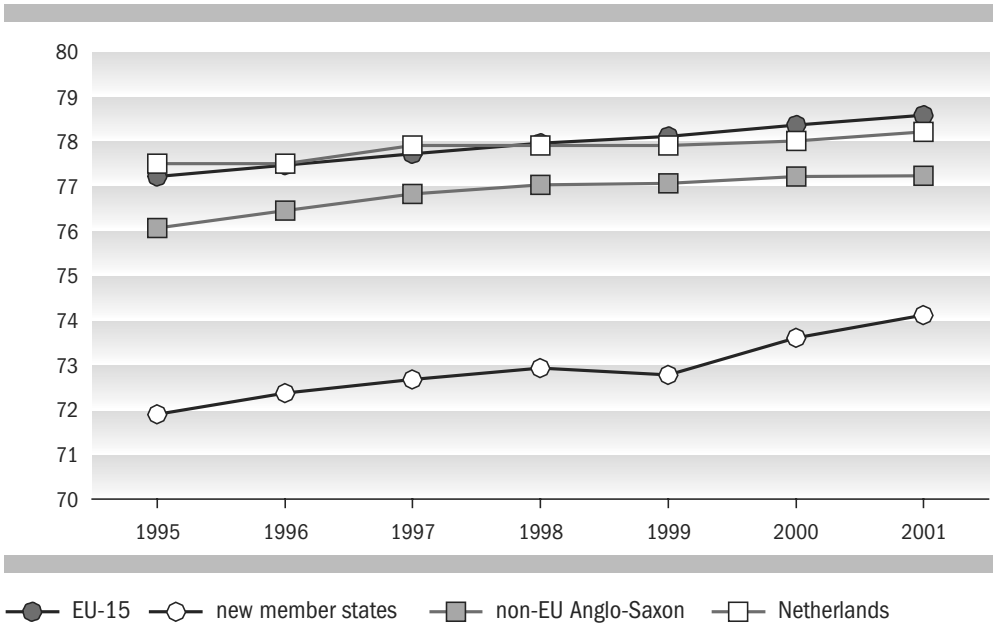
has a relatively good score (7.1) and Portugal a relatively poor score (9.7). The average number of 'lost' years is slightly higher in the Anglo-Saxon countries (8.8) and is higher still in the new EU member states (9.7), with Slovenia doing well in comparison (8.2) and Lithuania doing exceptionally badly in this respect (11.8).

Figure 4.34 Life expectancy at birth, 2001



Source: OECD (Health Data)

Figure 4.35 Life expectancy at birth, 1995-2001

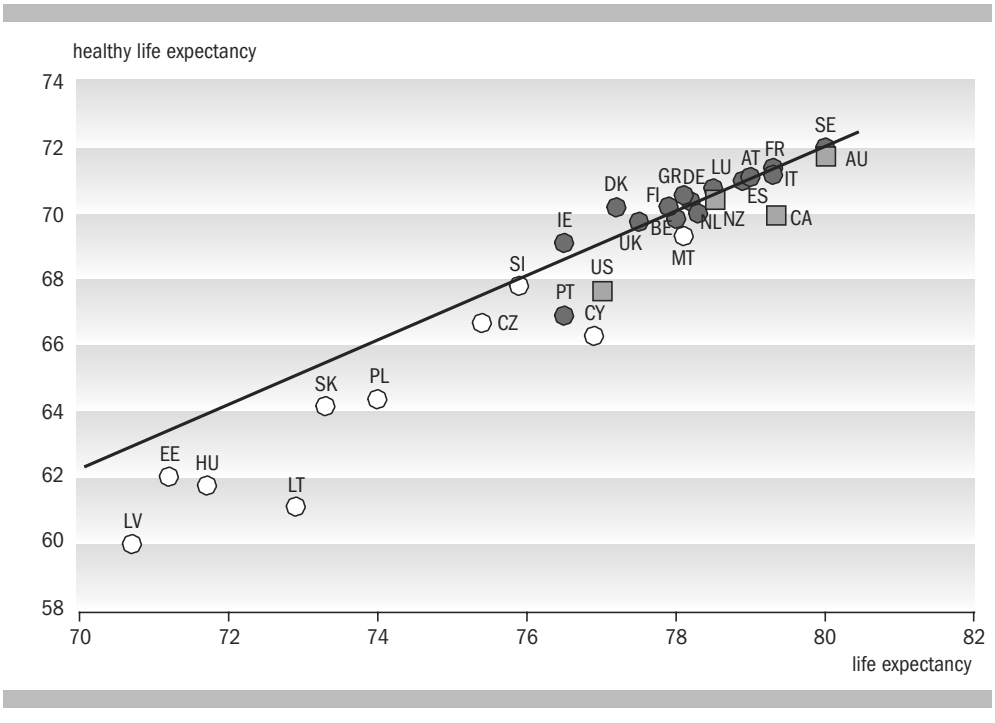


Source: OECD (Health Data)

Figure 4.36 shows the relationship between life expectancy and disability-adjusted life expectancy. The line on the graph corresponds with the mean EU-15 difference between actual and healthy life expectancy (8,0 years). In the Baltic and Central European states, life expectancy is not only 8 to 12 years lower than in the lead country, Sweden, the difference between total and disability-adjusted life expectancy is also greater, in the order of ten years. Portugal, Cyprus and the US also have a fairly large difference between both measures of life expectancy.

Figure 4.36 reveals an important fact: population ageing resulting from increased life expectancy does not necessarily lead to higher per capita health spending, because most of the costs are incurred at the end of a person's life. This point has been made repeatedly in the policy debate on the ageing issue (OECD 2003da). Another cause of demographic ageing does however push up costs per capita: the fall in the fertility rate in Western countries, which led first to a dejuvenation of the population, and then to an increase in the proportion of over-65s.

Figure 4.36 Scatter diagram showing life expectancy versus healthy life expectancy, 2001



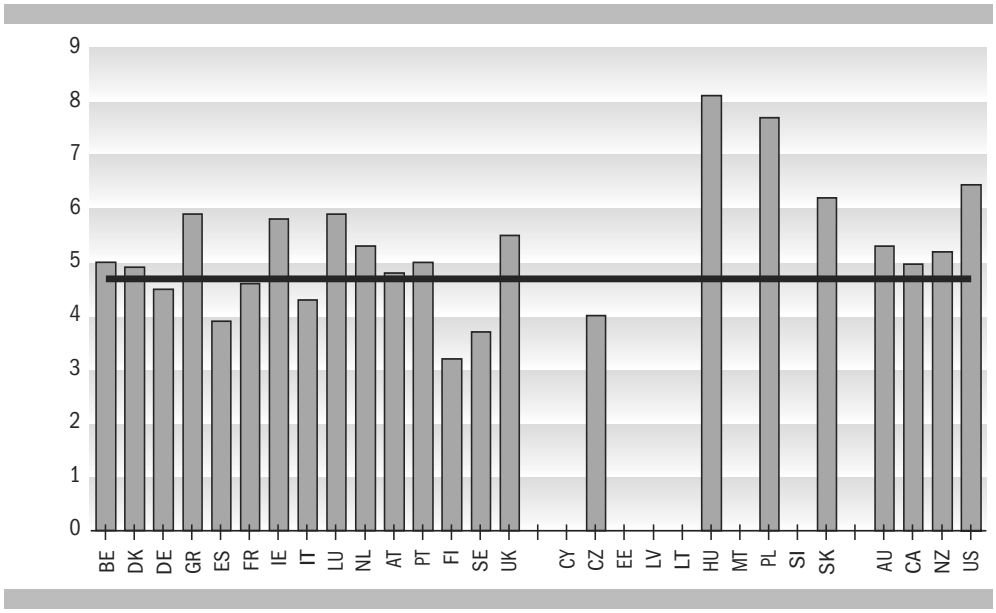
Source: OECD (Health Data)

Figure 4.37 pictures infant mortality.[19] In 2001 it ranged from 3 per 1000 births in Finland to 8 per 1000 in Hungary. The EU-15 average was around 4.8 in that year. Sweden, Spain and the Czech Republic also have good figures, while Poland, the US, Greece, Ireland, Luxembourg and the United Kingdom score rather badly. The Netherlands also belongs to this group, with 5.2 deaths per 1000 live births.

[19] Defined as the number of children who live no longer than a year in every 1000 live births.

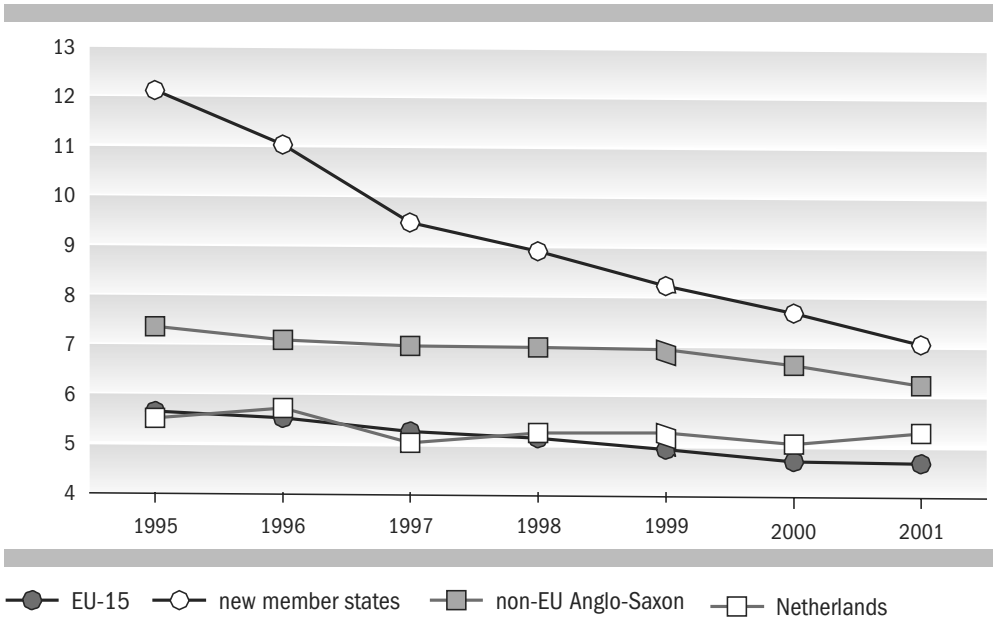
Figure 4.38 shows that the new EU member states are gradually making up ground, and that the average in the EU-15 and the Anglo-Saxon countries is gradually improving. The small deterioration in the Netherlands is due partly to the fact that more and more women are postponing motherhood, the fairly early stage at which treatment is terminated if the prospects of survival are very poor, the relatively high number of multiple births and relatively limited use of prenatal testing (RIVM 2002: 10).

Figure 4.37 Infant mortality in deaths per 1000 live births, 2001



Source: OECD (Health Data)

Figure 4.38 Infant mortality in deaths per 1000 live births, 1995-2001

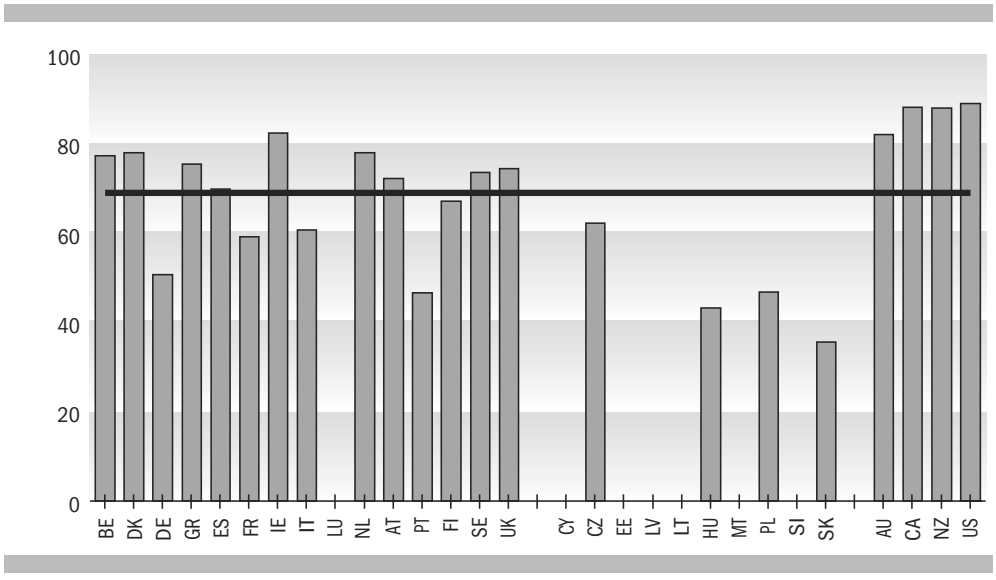


Source: OECD (Health Data)

The most general subjective measure of the health of the population is subjective health status. General public surveys sometimes include questions about people's state of health as they perceive it, with a choice of five answers, including good and very good. The reliability and international comparability of this subjective measure is the subject of much debate (see WHO 2002: 369-447). In particular, there are doubts about the degree to which this yardstick reflects objective health and the degree to which it in fact reflects aspirations and wishes. There is evidence to suggest that differences in aspiration are associated with socio-economic status. The more prosperous and educated people are, the higher their aspirations are said to be, and the more likely they are to have a negative image of their own health. These differences might explain the relatively positive views people in developing countries have of their own state of health (WHO 2000: 378-383). This particular problem would appear to be less significant in the countries reviewed in the present report. There is a fairly strong correlation between objectively defined and subjectively perceived health status. Denmark, for example, scores well on both the objective and subjective health indicators, and Portugal has the worst score on both accounts. One exception is Ireland, where the objective state of health is rather poor, while perceived health status is very good. This might have to do with the fact that the Irish are relatively healthy in terms of 'lost' years of life, despite the fact that life expectancy at birth is on the low side (Figure 4.34).

People's assessment of their own health differs between country groups (Figure 4.39). The Anglo-Saxon countries lead the field, with more than 80% of their populations saying they feel healthy. The EU countries score 75% on average, with Portugal and Germany on low scores, and Ireland on a high score. The new entrants score well below the EU-15 average.

Figure 4.39 Percentage of persons in good health



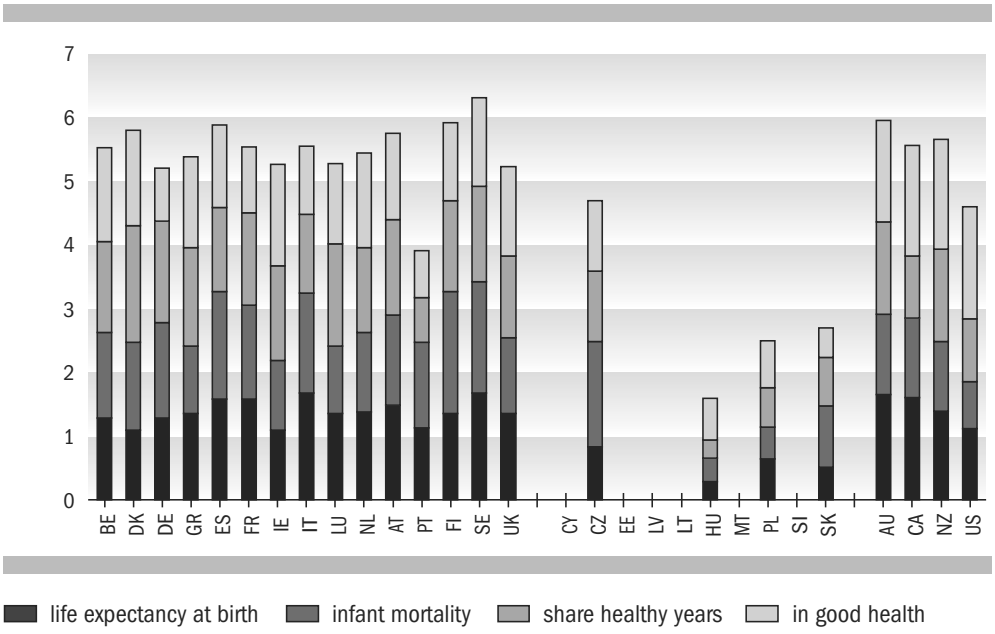
Source: SCP

The measures of life expectancy and health can be combined to form an index of health status, in which (1) life expectancy at birth, (2) infant mortality, (3) disability-adjusted life years as a proportion of total life expectancy, and (4) subjective health status have been standardised, totalled and transformed into a 10-point scale (Figure 4.40). See Annex B.3 for methodological details. This index meets the general requirements of composite measures: that they must reflect the probability of life and health throughout life (WHO 2003). One major problem encountered in compiling such an index is how to weight the constituent indicators. Sometimes the weighting is presented to a random sample of the population, sometimes to a panel of experts. As in the WHO report (2000), the four indicators are equally weighted here. This means that life expectancy and health during life are each weighted 50%, as are state of health during life (objective indicator) and perceived health status (subjective indicator).

Although the four components of the index are moderately to strongly correlated and more than comply with the scalability criterion (Cronbach's alpha is 0.83), there are countries where separate components produce markedly different ranking positions. Life expectancy, for instance, is relatively low in Denmark, infant mortality is relatively high in Greece and New Zealand and relatively low in Finland and the Czech Republic, and subjective health status is worse than average in Portugal, Germany, Italy and France, but better in the US. Outlying scores can usually be explained, however. While life expectancy in Denmark and Ireland is not among the highest in the EU-15, both countries do have among the highest percentage of healthy life years in Europe, which also gives them a relatively high score for subjective health status. The reverse applies to Portugal and Italy, with Portugal scoring particularly low for the ratio of healthy life years to total life expectancy, meaning that respondents do not have a positive view of their state of health.

The health status index ranges from 1.6 for Hungary to 6.3 for Sweden. The Netherlands comes towards the top of the middle section. Most countries have a score between 5 and 6. Only Portugal, the US and the new entrants do not achieve this score. The new entrants score fairly badly on the whole, apart from the Czech Republic, which has a low rate of infant mortality. Within the EU, Portugal clearly scores below average, and Spain, Finland, Denmark and Austria are only just behind leader Sweden.

Figure 4.40 Health status index, 2001



a Subjective health status is not known for Luxembourg; the other three factors have been given extra weight.

Source: SCP

4.7.2 *Cost-effectiveness of health care*

The health of a population can be set against resources put into the health care system. The greater health benefits and the fewer resources used, the greater the cost-effectiveness of the system as a whole. Figure 4.41 shows the cost-effectiveness of health care systems. Total (public and private) spending on health care is confronted with the composite effectiveness score: the health status index presented in Figure 4.40. The correlation between spending levels and index scores would barely appear to be affected by differences in demographic profile and lifestyles.[20]

The US combines a relatively low score on health with extremely high health care spending. There are three reasons. Firstly, a figure like life expectancy is determined not only by the scale and quality of the health care system, but also by risky lifestyles (diet, alcohol and tobacco consumption), social risks (traffic) and industrial risks (mining). Secondly, despite the high levels of expenditure, a relatively large proportion of US residents (15%) have no access to health insurance, and will therefore demand expensive health care services at a late stage. Thirdly, the health care system in the US is characterised by high prices and inefficiency, partly as a result of frequent litigation in connection with medical treatment (US/HHS 2003).

The Czech Republic manages to achieve a reasonable effectiveness score with relatively low input of resources. Although Figure 4.28 suggests that relative payment

[20] Cost-effectiveness has been corrected for differences in demographic profile and lifestyle on the basis of a cost function.

of staff employed in health care (and public welfare work) is not far behind the EU-15 mean, this low input is partly linked to low pay in the Czech health care sector, which is the source of much dissatisfaction in the profession.[21] It is therefore doubtful whether the country will be able to maintain this favourable ratio of outcome to inputs, or whether a substantial increase in input prices will in fact shift it to the 'right', towards Greece and Portugal in Figure 4.28. Its leading position would then be at risk. Hungary, Slovakia and Poland have a slightly lower level of expenditure, but also score substantially lower on the health status index. The positions of Poland and Slovakia look favourable in Figure 4.41, but the key measure of effectiveness is the vertical distance from the projected curve. If they were to introduce a fairly small increase in their spending, they would have to make a large gain in health terms to maintain their position relative to the curve.

Portugal's relatively poor position is striking. According to Figure 4.41, it should be able to achieve Spain's level of effectiveness with the same input of resources. Life expectancy (healthy or otherwise) and subjective health status (Figure 4.40) are well behind those of Spain, however. One possible explanation is socio-economic health differences and the limited access to primary health care for lower socio-economic groups and the rural population (Santana 2002). This concerns large segments of the population in Portugal.

In the group led by Sweden, the Netherlands is in a slightly unfavourable position, partly as a result of its somewhat higher infant mortality rate. As discussed earlier on, this is partly due to the relatively late age at which Dutch women have children, limited prenatal testing and higher cessation of perinatal treatment when prospects are poor.

Figure 4.41 shows that the correlation between health expenditure and effectiveness, though significant, is rather weak. A country's vertical distance from the curve in Figure 4.41 indicates the potential gains in effectiveness it might in principle realise at the current spending level. Further analysis reveals that the correlation shown can be attributed to some extent to the country's level of prosperity. Average income explains the level of health care effectiveness in a similar way to health spending per capita. This is not strange, given the fairly strong correlation between income levels and health spending (see Figure 4.7).

However, the health of the population is not only determined by income and health spending. It also depends on factors associated with people's lifestyle and living environment. Analysis shows that the influence of lifestyle characteristics is modest at country level. Although a negative correlation between alcohol and tobacco consumption and the health of the population can be identified at country level, it is not significant. Obesity does appear to have a significant negative impact on health, although again this effect is modest. Air quality – in terms of smog-inducing emissions per square kilometre – bears a negative but insignificant relationship to the health index used here. One striking fact is the strong negative

[21] See statement in European Observatory report on health care systems in transition: Czech Republic 2000.

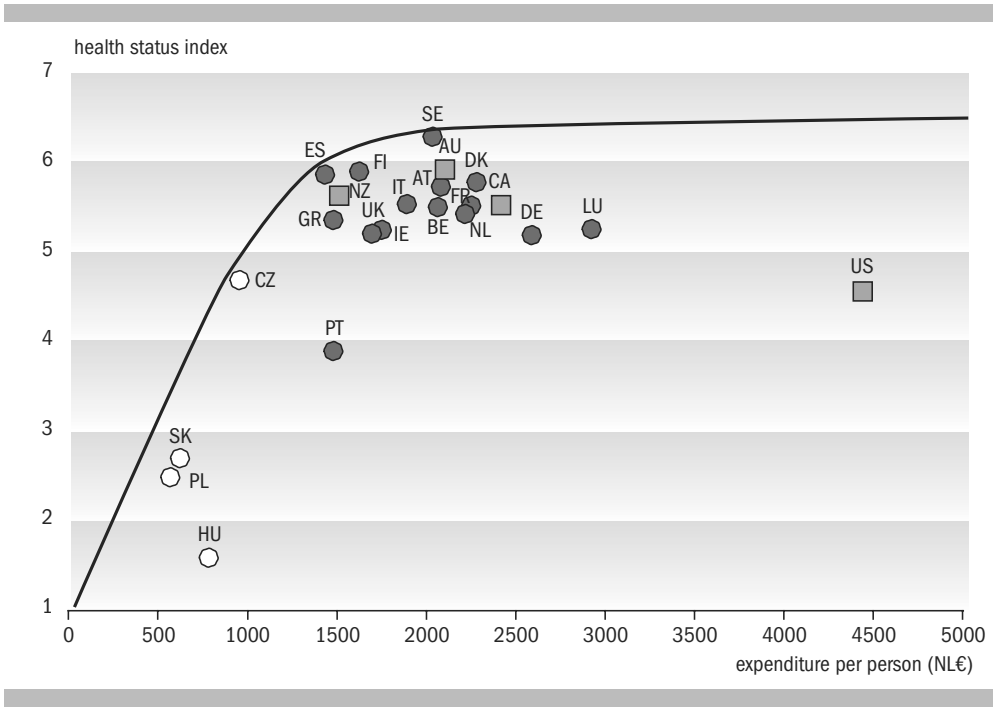
correlation between the proportion of mineworkers in the population and health. It is difficult to incorporate these factors into a model to explain differences in health between countries because of the strong correlation between the explanatory factors. For instance, there is strong correlation between health spending, the proportion of mineworkers, the proportion of obese people and average income. This makes it impossible to identify which factor best explains national differences in health. Furthermore, their joint explanatory capacity is limited. The health of a population apparently also depends on factors not considered here.

The health of the population also depends on performance in the health care sector. This is reflected in the extent to which treatments are successful in solving health problems. The limited comparative research available shows that the success rate of certain treatments for certain diseases and disorders differs considerably between OECD countries (OECD 2004da). For instance, in Canada and Australia, only 6% of men aged 40-64 died within a year (1996) of admission and treatment for acute myocardial infarction, whereas in Denmark, Finland and the UK the figure was double that. The differences are even greater in the case of stroke: in Italy and Finland in 1998, only 3% of men in the age group in question were found to have died within a week, as against 9% in the UK. The differences can be considerable for women, too. In 1995, for example, a woman in the US with breast cancer had a greater chance of survival than a woman in the UK (OECD 2003db). Only a few explanations could be traced, but alongside differences in the technology used, treatment methods and procedures followed, it is also possible that the difference is associated with quality characteristics at the higher level of institutions and the health care system as a whole.[22]

Health expenditure can also be expressed in relative terms, as percentage of GDP, and related to effectiveness. This does not affect the picture presented in figure 4.41 very much. Only Luxemburg moves to the left side and takes a frontier position. Furthermore Finland and Spain change positions. But the favourable positions of Spain, Finland, Sweden and Australia are preserved, as are the unfavourable positions of the new member states, Portugal and the US.

[22] There are considerable differences in the rate at which countries introduce and distribute new medical technologies. The US is generally fast, while the UK and Scandinavia are usually slow in this. Both rapid and slow introduction would appear to be bad in terms of cost-effectiveness, as the costs do not match the benefits.

Figure 4.41 Cost-effectiveness of health care, 2001

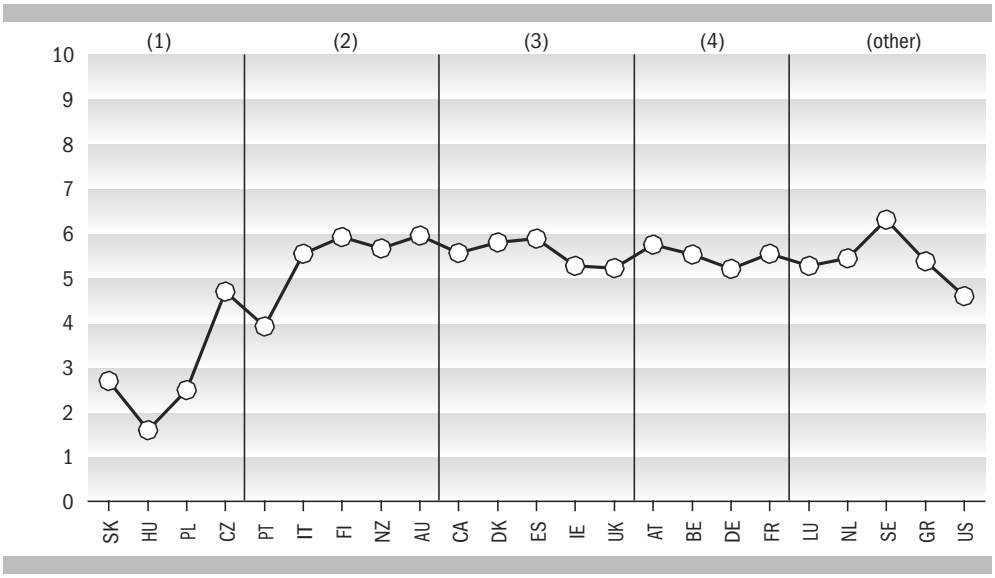


Source: SCP

Though cost-effectiveness is an important objective, it should not be achieved at the expense of health. The cost-effectiveness scores of countries like Slovakia and Poland, though interesting, do not therefore set the standard, because the health status score of the population is around half that achieved in most of the EU-15. In this respect, the Czech Republic presents the most interesting case, as health there approaches the level in the EU-15. However, the favourable position of the Czech Republic is in part achieved with low input prices, which is no viable policy option for the EU-15 countries.

There is barely any relationship between health and the institutional set-up of the health care system, according to the clustering in Figure 4.42. With the exception of the first group, countries in the other four groups all achieve scores between 5 and 6. Only Portugal (in group 2) and the US (in the 'other' group) do not make 7. Scores in the first group have a fairly wide range, with Hungary scoring relatively low and the Czech Republic relatively high.

Figure 4.42 Health status related to type of country, 2001



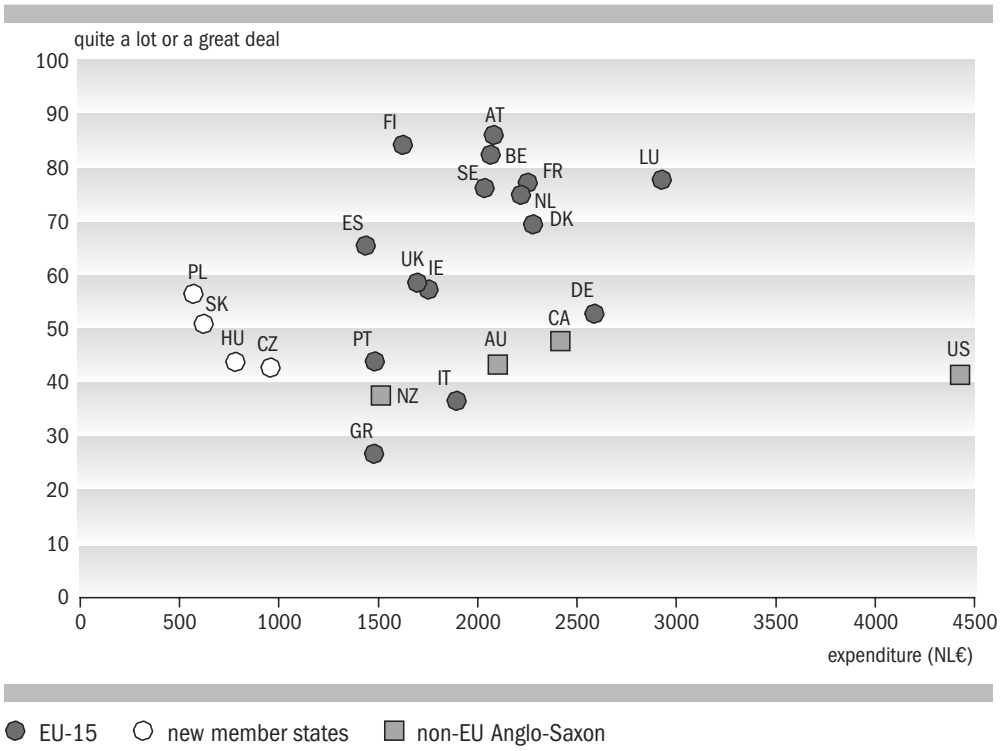
Source: SCP

4.7.3 Objectives and effectiveness

The primary objective of health care is to maintain and improve the health of the population. Financial sustainability, quality and accessibility are also seen as important objectives. It is therefore important to look at the health of the population in relation to the quality and accessibility of health care on the one hand, and health spending on the other.

Public confidence in the health care system is an important indicator of the quality of the system. Figure 4.43 shows public confidence in 2000. It would appear to have a weak but significant correlation with spending per capita. The scores of a number of Mediterranean countries (Greece, Portugal and Italy) and Germany and Canada clearly deviate from the general picture. Respondents in the US also have rather little confidence in their health care system. We might expect them to have greater confidence on the basis of their spending levels. One initial explanation to consider is the low level of cost-effectiveness: consumers get relatively little services for their money. However, as Figure 4.44 shows, there is only a very weak connection between the effectiveness of a health care system and public confidence. Although this could be attributed to failings in the measurement of effectiveness, it is also possible that factors other than cost-effectiveness have dented public confidence in the countries concerned. Out-of-pocket payments generate a great deal of dissatisfaction, for example. According to Figure 4.2, such payments are high in Portugal, Greece, Poland, Hungary and Italy, all countries where confidence in the system is not terribly high.

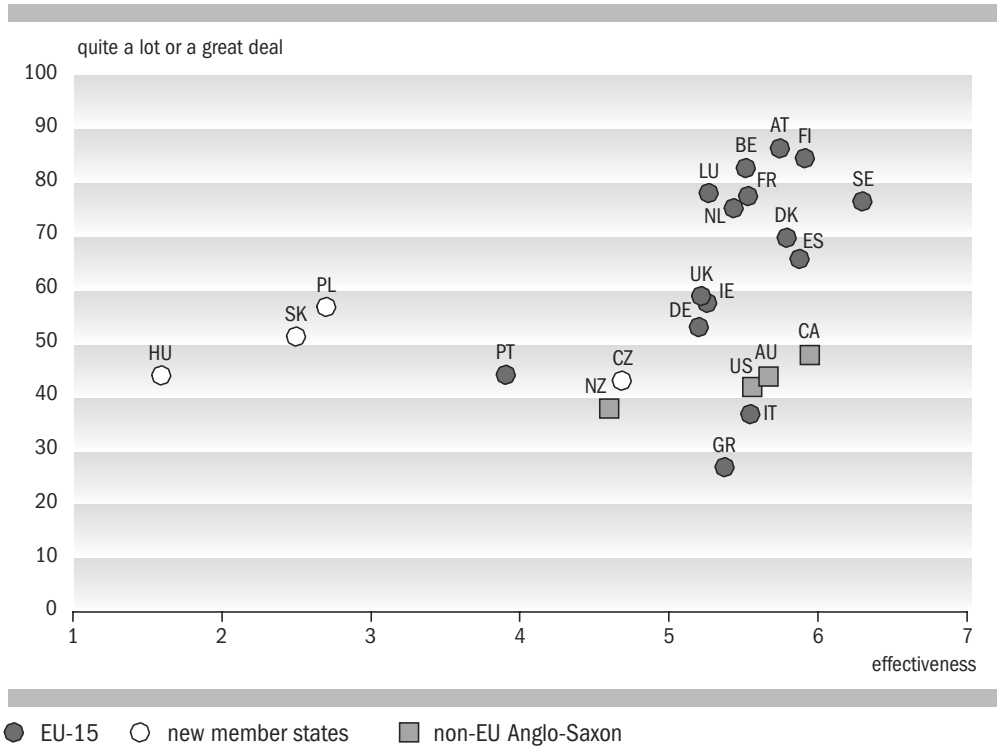
Figure 4.43 Confidence in health care by expenditure, 2001



Source: OECD Health Data; European Values Survey; values for non-European countries are estimated

In Germany there is currently a debate about the financial sustainability of the health care system and efforts are being made to relieve the pressure on the system by increasing the role of out-of-pocket payments (for medicines, rehabilitation and medical devices) and limitations on insurance coverage (dental treatment). Such measures do nothing to improve the public's confidence in the system, certainly not among lower income groups. Furthermore, in the late 1990s private insurance companies emerged offering coverage for these services, particularly for expensive dental treatment. The dissatisfaction with the public part of the health care system has always been fairly high in Greece, Italy and Portugal. In all three countries, especially in Italy, local health centres score badly (European Observatory). Rural areas get a particularly bad deal. In Italy, inhabitants of the southern provinces also indicate they are dissatisfied with the supply of health care. In Greece and Portugal the public system is under pressure, which has had implications for the quality of care and the size of out-of-pocket payments. In both countries, the private sector is expected to compensate for the loss of quality in the public system, which presents accessibility problems for lower income groups. They have to rely on the poorer-quality public system, with longer waiting lists and medical facilities and staff of a lower standard.

Figure 4.44 Confidence in health care system by effectiveness, 2000



Source: European Values Survey; SCP

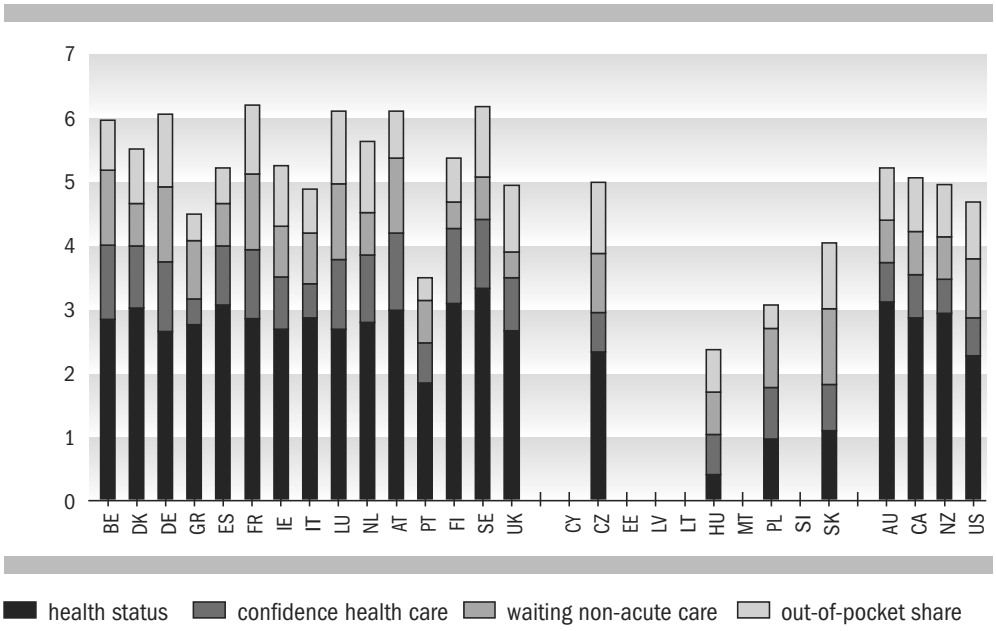
The introduction to this chapter mentioned financial sustainability, accessibility and quality as the most important objectives of health care policy. By linking these objectives using empirical data, it is possible to obtain an impression of the performances of the various countries in terms of the extent to which they achieve them. We have chosen four indicators of quality and accessibility that can be linked to spending per capita: (1) health status of the population, (2) confidence in the health care system, (3) the existence of waiting lists for non-acute hospital care and (4) out-of-pocket payments as a proportion of total health care expenditure. These indicators are not scalable (Cronbach's alpha is 0.26). This suggests that it is difficult to achieve all the objectives simultaneously, confirming the assumption made in Section 4.1.1 that the policy objectives are incompatible to a certain degree, which means some kind of trade-off is unavoidable.

Figure 4.45 gives national scores on this index, on a scale of 0-10. The four component factors have been normalized, weighted and totalled. In accordance with WHO methods, the health status of the population has been given the same weight as the state of the health care system. This means that health status has been weighted half and the three health care system characteristics each one-sixth.

Sweden, France and Austria lead the index, while Portugal, Poland and Hungary come bottom. The three leaders owe their position to the fact that they score fairly well on all four components, although Sweden scores only moderately on waiting lists. The low position of the final three is down to a very poor score on one of the

indicators: Hungary for health status, and Portugal and Poland for high out-of-pocket payments. The fairly poor results of the Anglo-Saxon countries are notable. They are caused mainly by poor public confidence in the system. Waiting list problems (Commonwealth countries) and the poor health status of the population (US) also exert downward pressure on index values.

Figure 4.45 Composition of the index of health status and health care system, 2001



Weighting: health status 1/2 and other factors 1/6

Source: SCP

Adding the extent to which health care systems achieve objectives to the health index, does change country rankings (Table 4.3). France, Germany and Luxembourg move up the ladder, due to minimal waiting list problems and high levels of public confidence in France and Luxembourg. Belgium and Austria also move up, largely for the same reasons. However, some of the leaders by health status index drop considerably on the composite index. Poor public confidence in the system, waiting list problems or higher out-of-pocket payments lose Australia, Finland and Spain their leading positions. New Zealand loses out because of its poorer score on all three indicators of objectives achieved.

The composite index of (1) health status and (2) the state of the health care system is conceptually similar to the WHO index of overall health system performance (WHO 2000). Despite the fact that it is based on almost entirely different indicators, the ranking in the present report is remarkably consistent with the WHO ranking of 1997. Three of the top five presented here would be in the WHO top five, among the selection of 23 countries considered here. Half of the top ten countries in both rankings are identical. Nevertheless, there are notable differences too. For instance, Germany and Finland do considerably worse on the WHO index, and Canada, the

UK and Italy do considerably better. In the WHO index, Germany's poor score on the health status index is not offset by a better score for the responsiveness and fairness of the system. In the composite index presented here, Germany does relatively well in terms of the three indicators for the health care system: (1) confidence, (2) waiting lists and (3) out-of-pocket payments. The lower position of Finland on the WHO index is explained by a slightly lower position on the health status index. Finland does better on the health status index used here, mainly because of its low infant mortality rate. Canada's lower position on our composite index is caused by its lower score for public confidence, while the WHO gives it a higher score for responsiveness and fairness. This puts Canada several places lower on our composite index in comparison with its position on the health status index, but it actually gains a few places on the WHO index. The UK scores very well for equal probability on the WHO index. This includes both the probability of infant mortality and probability of health care consumption as a result of the fairness of financial contributions from policyholders. This largely compensates for the UK's poor score on our health status index. The performance of the UK health care system is less impressive here, mainly because of the substantial waiting lists for non-acute treatment. The deterioration in Italy's position on our composite index can be attributed to Italians' low level of confidence in their health care system and the relatively large share of out-of-pocket payments in health care expenditure.

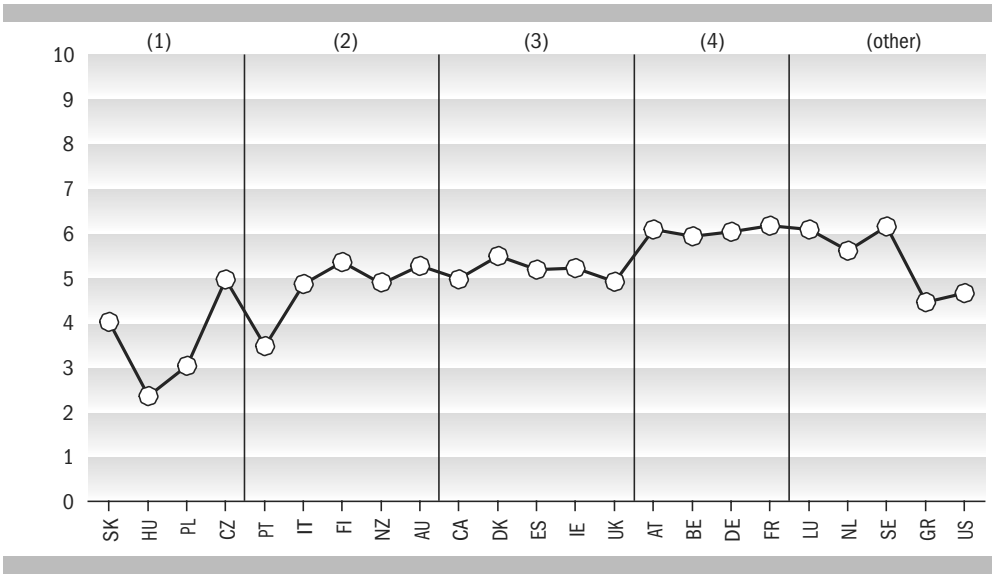
Table 4.3 Rankings of countries by type of health index

	health status index 2001	SCP composite index 2001	WHO composite index 1997	highest health expenditure 2001 (NL €)
Sweden	1	2	1	11
France	10	1	3	6
Austria	6	3	7	9
Luxembourg	17	4	2	3
Germany	14	5	11	2
Belgium	11	6	10	10
Netherlands	12	7	5	7
Australia	2	12	9	8
Finland	3	9	15	15
Spain	4	11	13	19
Canada	8	13	4	4
Denmark	5	8	14	5
Ireland	15	10	17	13
Italy	9	17	8	12
United Kingdom	16	16	6	14
Czech Republic	18	14	19	20
New Zealand	7	15	18	16
United States	19	18	12	1
Greece	13	19	16	18
Slovak Republic	21	20	22	22
Portugal	20	21	20	17
Poland	22	22	21	23
Hungary	23	23	23	21

Source: SCP

Higher health spending per capita might be expected to produce a higher score on the various indices. This proves to be only partially the case, however. The rank correlations are significant, though not particularly strong. The poor performance of the US is again striking, given its high spending on health. By contrast, Sweden scores high on the performance indices with not particularly high spending levels. In terms of spending, the Netherlands is comparable to Sweden and France, but fails to achieve their score on the composite index. The main cause of its lower score is waiting lists for non-acute care which in 2001 were substantial. A reduction in the waiting lists would bring the Netherlands closer to the high positions of Sweden and France, but it would presumably also shift up a few places in terms of spending.

Figure 4.46 Composite index of health status and health system by type of country, 2001



Source: SCP

The correlation between the type of health care system and performance on the composite index is weak (Figure 4.46). One striking feature is the virtually equal score of all countries within the third and within the fourth cluster. The fourth cluster scores systematically higher than the third. The score in the fourth cluster is comparable only with a few countries in the 'other' group, with Luxembourg and Sweden bearing most similarity to the fourth, corporatist cluster of countries according to the cluster analysis in Figure 4.1. The Netherlands also achieves the same level as the countries in cluster 4. Country group 4 is characterised by a corporatist health care system, out-of-pocket payments for the consumption of health care and free choice of suppliers. This set-up apparently gives countries like France, Germany, Austria and Belgium the ability to perform well, although they do not attain the level of Sweden, except for France. However, the countries in cluster 4 spend more on health care than Sweden, albeit considerably less than the US.

If the aim is to achieve good health and health care at not too great a cost, one could select Sweden and France as benchmark countries. Austria and Belgium come only just behind Sweden and France. Although Germany and Luxembourg achieve a similar standard of health and health care, it is at considerably higher cost. The Netherlands, Australia, Canada and Denmark achieve a slightly lower standard of health and health care at similar costs to Sweden and France. Countries like Spain and Finland and – to a slightly lesser degree – Ireland, New Zealand and Greece achieve similar standards, but at considerably lower cost. Portugal clearly falls short in this respect, achieving a substantially lower standard of health and health care than Spain, at the same cost. The same applies to Hungary, which compared with Slovakia and the Czech Republic could do considerably better. The US is again the odd man out: poor performance in terms of health and health care, at very high cost.

5 *Law and order*

Bob Kuhry[1], *Paul Smit*[2], *Esther Backbier*[3] *and Ab van der Torre*[1]

5.1 *Introduction*

5.1.1 *Background and structure*

The Netherlands is not an island, isolated from the rest of the world. As with macroeconomic developments, any changes in the scale and nature of crime rates can be prompted either by domestic factors (such as new legislation or demographic trends) or reflect broader international trends (erosion of traditional values and social networks, flows of migrants, political and economic developments in Eastern Europe, and so on). Comparing trends in crime rates in the Netherlands with those in other countries can help pinpoint the causes of changes observed. For instance, over the past ten years violent crime has risen at roughly the same rate in the Netherlands and its neighbour countries. Clearly, then, the causes of more violent crime are not specific to the Netherlands.

The way in which law enforcement is organised and put into practice differs from country to country, hampering the production of comparative statistics. On the other hand, institutional variety offers an opportunity to examine the likely effects of certain policy measures, by drawing on other countries' experience.

This chapter compares crime in the EU-15, the new member states and a few non-European countries (Australia, Canada, the United States and New Zealand).[4] Unfortunately, however, data are not available for all countries on all relevant aspects of crime and law enforcement.

Section 5.1.2 looks at the determinants of crime, while Section 5.1.3 considers some of the limitations inherent to international comparisons. Section 5.2 describes the organisation of the police and criminal justice apparatus in countries covered in the report and attempts to define where systems differ. Section 5.3 examines the financial and staff resources absorbed by the police, public prosecutions department, courts and prison service. Section 5.4 ('From crime to punishment') considers the products of the criminal justice system: crime registration, detection, prosecution, and punishment.

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1 Social and Cultural Planning Office

2 Research and Documentation Centre of the Dutch Ministry of Justice

3 Ministry of Justice

4 It is based partly on a previous publication by P. Smit (2003) and on forthcoming publications by the Dutch Ministry of Justice (of which E. Backbier is co-author).

Section 5.5 then examines productivity and the quality and effectiveness of law and order services provided. Finally, Section 5.6 addresses the experiences and views of the general public, considering victimisation, fear of crime and public confidence in the police and the administration of justice.

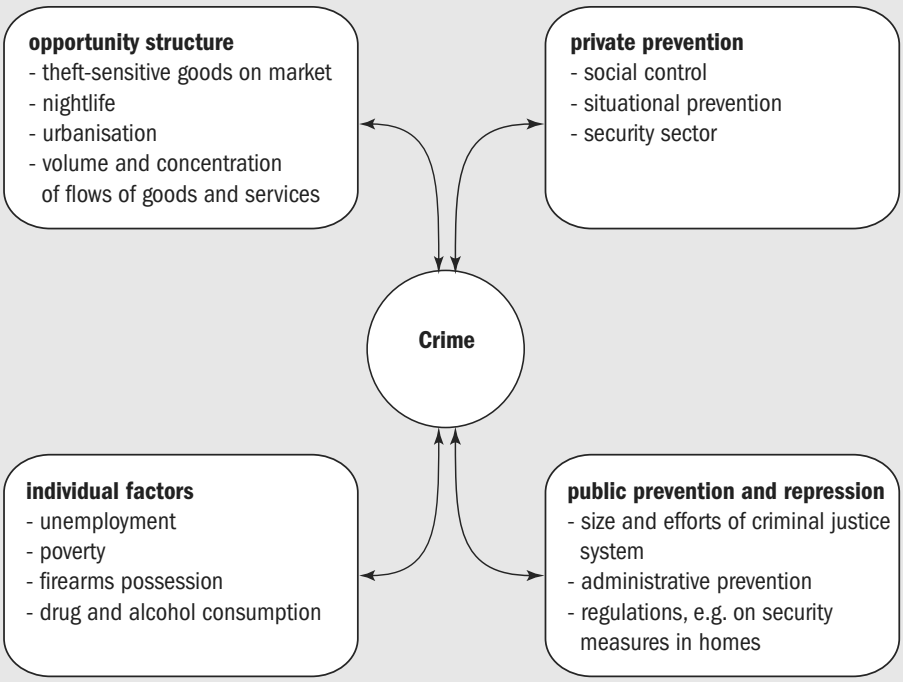
5.1.2 *Determinants of crime*

Broadly speaking, crime can be seen as the result of opportunity, individual factors and private and public attempts at prevention (see Box 5.1). For the public sector, these elements (with the exception of the last) constitute autonomous or semi-autonomous environmental factors. It is therefore too simplistic, in an international comparison of public sector performance, to suggest any direct link between crime levels and efforts of the government.

Both private prevention and public prevention and repression can be seen as factors inhibiting crime. There are two reasons to make the distinction between private inhibiting factors and public prevention and repression. Firstly, making this distinction helps to elucidate the effects of government attempts to control crime. Furthermore, negative and positive feedbacks should be taken account of. For instance, the scale of crime has an impact on willingness to invest in prevention and repression. In addition, private and public resources employed to combat crime are substitutes to a significant degree (Philipson and Posner, 1996). The effect of public measures can be counteracted to some extent when the sense of security they create makes private parties less inclined to take measures for self-protection.

It is also important to remember that repression and prevention can cause displacement of crime (in terms of location, time, target, modus operandi and type).

Box 5.1 Determinants of crime



Opportunity concerns potential targets of crime (pull factors): the presence of goods, and also behaviour on the part of potential victims (individuals and organisations) which can make them vulnerable to crime.
Individual factors affect a potential offender's decision as to whether to commit a crime.
Private prevention consists of all measures and actions by individuals and private organisations to prevent crime being committed against themselves or third parties.
Public prevention and repression consists of all measures by the public sector to define crime in law, to prevent crime and to punish offenders.

Source: Cohen & Felson, 1979; Clarke, 1997; Van Dijk et al., 1998

5.1.3 *Drawbacks of international comparisons*

Generally speaking, data on crime and its repression come from sources that are compiled specifically for one country. This is a serious obstacle when trying to draw up comparative crime statistics. Sometimes, information on a particular part of the criminal justice system will not refer to the same kind of authority in every country. For instance, the collection of data on prosecutions – generally the responsibility of the public prosecutions department – is the responsibility of the courts in Spain. Also, it is important whether data come from an 'independent' source, as is the case with most national statistics offices, or from 'stakeholders'.

Virtually all countries distinguish between 'serious offences' (which are included in the crime statistics) and 'minor offences' (where although the law has been broken, the action is not regarded as criminal).[5] By the very nature of things, the Criminal Code of each country is different. This can manifest itself in various ways. Actions which, in one country, are regarded as criminal are not in another (e.g. prostitution, abortion, euthanasia). The distinction between serious and minor offences is not always the same. Also, the precise definitions of offence categories will differ (the distinction between murder/manslaughter and culpable homicide, for example; does 'burglary' mean only breaking into someone's home, or does it also include breaking into a car, etc.?).

Each country organises its criminal justice system differently, too. The precise role of the police (and also, for example, the way they record cases) and of the public prosecutions department will affect numbers in national statistics. Whether a reported crime is recorded as such, will depend on the police's obligation to report offences to the prosecution authorities, even if no suspect has been identified. The Dutch police are under no such obligation, while the French police are. The question of whether the prosecutor has discretionary powers will also affect crime figures recorded by the police, and their decision as to whether to pass a case on to the public prosecutions department.

The final drawback lies in the very nature of statistics. In compiling statistics one has to make certain choices. In the case of crime statistics, the most important choices are the unit used and the moment when a case is counted. The unit might be offenders, offences or cases prosecuted. Each country will make its own choice. The moment when a case is counted determines its characteristics. A case which the police initially register as murder might be viewed as culpable homicide after further examination by the public prosecutor.

For all these reasons, some scepticism about the comparability of crime numbers registered by different countries is fully justified. As in health care and education, there is much room for improvement in the international comparability of data. However, this report takes the view that one has to make the best of what is available. Nevertheless, shortcomings of available data underline the need to be cautious when interpreting apparent differences found.

5 France, however, has three categories of offence: *contraventions*, *délits* and *crimes*. Certain petty offences are not regarded as *crimes*. Germany makes a similar distinction between *Ordnungswidrichleiten*, *Vergehen* and *Verbrechen*. Such distinctions can distort the figures.

5.2 *Organisation of the criminal justice system*

Our analysis of the organisation of the criminal justice system in the twenty-nine countries included in this study has been limited by the data available. Lack of data did not permit a more in-depth analysis. A number of international overviews provide an empirical basis for the proposed analysis.[6] However, none of these sources tries to group countries by some sort of international classification. For this purpose, Blank et al. (2004), which attempts to benchmark the legal systems of a number of European countries, is the most useful.

When classifying legal systems, a logical start is to adopt the traditional distinction between the Anglo-Saxon common law tradition and the continental European civil law tradition. Blank et al. summarise the differences as follows (op. cit, p. 18):

> 'In the common law tradition, which originated in England, the judiciary system has created a nationwide legal framework, building upon precedents. The role of judges as the primary lawmakers is reflected in the style of court decisions. In view of their huge responsibilities only highly experienced barristers will qualify for appointment to the Bench. As a consequence, the number of professional judges in England & Wales tends to be relatively small. By contrast, in the continental European tradition, the legislator is the primary lawmaker. The framework of the legal system is laid down in major codes, containing systematized statutory provisions extending to large, well defined areas. The style of court decisions on the continent is conductive to downplaying the role of the individual judge, while magnifying the statutory framework.'

Within the continental tradition, it is possible to distinguish further between the Germanic and the Romanistic tradition. The difference between these latter traditions is rather technical, the Germanic one being more 'orderly and comprehensive'. We can also identify Scandinavian and Eastern European traditions. Blank et al.:

> 'The Eastern European family is characterized by the transformation from a former socialist to a modern market-based civil law judiciary system. The Scandinavian tradition combines the presence of a statutory framework with a pragmatic egalitarian approach to the legal process, involving considerable lay participation. The legal process there reflects an emancipated, collectivised and pragmatic society, traditionally emphasising social responsibilities.'

6 See for example Kangaspunta (1995) and the World Factbook of Criminal Justice Systems, which can be found at a number of URLs, with as central contact point: www.ojp.usdoj.gov/bjs/abstract/wfcj.htm).

From the statutory framework to its practical implementation by the police and the administration of justice is a big step. Table 5.1 shows both the legal tradition and more specific system characteristics, some of them drawn from the above sources. The connections between system characteristics and legal tradition are often indirect and more the result of common roots than of a direct causal relationship. Nevertheless, experience shows that countries with the same legal tradition often have fairly uniform scores for other characteristics.

We use the following properties to characterise legal and police systems:

- The degree of centralisation in the police service (distinguishing between centralised, decentralised and mixed, taking staff numbers as the discriminating feature; mixed implies a ratio of centralised/decentralised staff between 0.5 and 2). In practice, actual police work is always carried out on a decentralised basis, except in the case of mini-states. What we are concerned with is whether the police service is governed centrally or not centrally.
- The role of private security firms, based on the figures in Table 5.3. The classification is based on staffing ratios. Unfortunately, this information is only available for a limited number of countries.
- The discretionary powers of the public prosecutor. In other words, his power to decide whether or not to prosecute.
- The degree of decentralisation and functional differentiation of courts. Decentralisation is found in a number of federal states, where even the law itself may differ from state to state (in the US, for example). Specialisation refers to the existence of separate courts, for example for criminal and civil cases.
- The existence and importance of lay judges. Their role varies considerably, by the way. In England, for example, lay judges act on behalf of judges. In Sweden professional judges are assisted by lay judges.
- Specific characteristics such as the existence of plea bargaining (negotiating the severity of punishment in return for a confession, or willingness to testify against others), the role of juries and whether the country has an adversarial or inquisitorial system. In the former, an impartial judge plays a neutral role between prosecutor and defence, in the latter the judge has a more active role.

Alongside these qualitative characteristics, we also consider two more quantitative characteristics associated with the 'repressiveness' of the system:

– The emphasis on punishment, in terms of the number of prison days per recorded crime (see Figure 5.15). The categories are low - fairly low - fairly high - high (boundaries corresponding to 5,15 and 30 prison days per recorded crime).
– Staff numbers in the police, administration of justice and prison system per 100,000 inhabitants (see Figure 5.1). The categories low - fairly low - fairly high - high have been applied once more, boundaries corresponding to 400, 500 and 600 staff per 100,000 of the population.

Table 5.1 Characteristics of criminal justice systems

	law tradition	adversarial/ inquisitorial	centralisation and specialisation police	role of private security firms
Belgium	civil Romanistic	mixed	intermediate / intermediate	-
Denmark	civil Scandinavian	adversarial	centralised / specialised	moderate
Germany	civil Germanic	inquisitorial	decentralised/ specialised	small
Greece	civil mixed	inquisitorial	centralised / not specialised	-
Spain	civil Romanistic	inquisitorial	intermediate / not specialised	-
France	civil Romanistic	inquisitorial	centralised / intermediate	very small
Ireland	common law	adversarial	centralised / specialised	-
Italy	civil Romanistic	mixed	intermediate / intermediate	-
Luxembourg	civil Romanistic	inquisitorial	centralised / not specialised	-
Netherlands	civil Romanistic	mixed	decentralised / not specialised	small
Austria	civil Germanic	inquisitorial	centralised / not specialised	very small
Portugal	civil Romanistic	inquisitorial	centralised / intermediate	-
Finland	civil Scandinavian	mixed	centralised / -	-
Sweden	civil Scandinavian	adversarial	decentralised / not specialised	small
England/Wales	common law	adversarial	centralised / not specialised	moderate
Cyprus	mixed	adversarial	intermediate / not specialised	-
Czech Republic	civil Eastern Europe	presumably inquisitorial	intermediate / specialised	-
Estonia	civil Eastern Europe	presumably inquisitorial	- / -	-
Latvia	civil Eastern Europe	inquisitorial	centralised / -	-
Lithuania	civil Eastern Europe	presumably inquisitorial	centralised / -	-
Hungary	civil Eastern Europe	inquisitorial	centralised / specialised	-
Malta	mixed	adversarial	centralised / not specialised	-
Poland	civil Eastern Europe	inquisitorial	centralised / specialised	-
Slovenia	civil Eastern Europe	mixed	centralised / not specialised	-
Slovakia	civil Eastern Europe	inquisitorial	centralised / not specialised	-
Australia	common law	adversarial	intermediate / not specialised	large
Canada	predominantly common	adversarial	decentralised / intermediate	large
New Zealand	common law	adversarial	intermediate / not specialised	-
United States	predominantly common law	adversarial	decentralised/ specialised	large

[a] But note the considerable size of the private security services in these countries

Source: Barclay and Tavares (2003), Blank et al. (2004) ; Dalmas-Marty and Spencer (2002), Djankov et al. (2002), Jolowicz (2003), Kangaspunta (1995), Martinec (2002), Nijboer (1993), Taekema (204), World Factbook of Criminal Justice Systems, European Source Book of Criminal Justice (2003), Brienen and Hoegen (2000)

discretionary power of prosecutor	plea bargaining	centralisation and differentiation courts	lay judges and jury trials	emphasis on punishment	personnel per 100,000 population
intermediate	no	centralised / not specialised	yes / yes	low	fairly high
intermediate	no	centralised / intermediate	yes / yes	low	low[a]
no	no	decentralised / intermediate	yes / no	low	fairly low
no	no	centralised / not specialised	- / yes	fairly low	high
no	no	centralised / intermediate	yes / no	fairly high	fairly low
intermediate	no	centralised / intermediate	yes / yes	low	high
yes	no	centralised / not specialised	yes / yes	fairly low	fairly high
intermediate	no	centralised, / intermediate	yes / yes	fairly low	high
yes	no	centralised/ not specialised	no / no	fairly low	fairly low
yes, large	no	centralised/ not specialised	no / no	low	fairly low
intermediate	no	centralised / not specialised	yes / yes	low	fairly high
no	no	centralised / specialised	yes / yes	fairly low	high
no	no	centralised/ intermediate	yes / -	low	low
intermediate	no	centralised / intermediate	yes / yes	low	low
intermediate	no	centralised / not specialised	yes / yes	low	low
no	-	centralised / not specialised	- / -	fairly high	high
no	no	centralised / not specialised	- / -	fairly high	high
-	no	centralised / not specialised	- / -	fairly high	fairly high
-	no	centralised / not specialised	- / -	high	high
no	no	centralised/ not specialised	- / -	high	high
no	no	centralised / not specialised	yes / no	fairly low	fairly high
no	no	centralised / not specialised	no / yes	fairly low	high
intermediate	no	centralised / not specialised	yes / -	fairly high	fairly low
no	yes	centralised / not specialised	yes / no	low	fairly high
presumably no	no	centralised / not specialised	- / -	fairly high	fairly high
no	yes	decentralised / specialised	yes / yes	fairly low	low[a]
yes	yes	decentralised / intermediate	yes / yes	fairly low	low[a]
presumably no	yes	centralised / not specialised	yes / yes	fairly low	fairly low
no	yes	decentralised / intermediate	yes / yes	high	fairly high[a]

The selection of relevant system characteristics is less obvious than with education (chapter 3). Lack of data and the close link between some characteristics also make it hard to do a formal cluster analysis as was performed in the case of health care (chapter 4). However, system characteristics that are not fit for a key role in cluster analysis can be relevant to other types of analysis. The degree of specialisation in the courts, the discretionary powers of the public prosecutor or the difference between an inquisitorial and adversarial system can affect the productivity or effectiveness of the actors concerned, for example.

Table 5.2 System types*

Country group	Countries	Law tradition	Adversarial/ inquisitorial	Centralisation of police	Role of private security firms	Discretionary power of public prosecutor
Scandinavian	DK, FI, SE	Scandinavian	adversarial/ mixed	variable/ variable	small-moderate	intermediate
West European 1	DE	Germanic	inquisitorial	decentralised/ specialised	small	no
West European 2	NE, LU	Romanistic	mixed/ inquisitorial	variable/ not specialised	very small-small	intermediate-large
West-European-3	AT, BE, FR	Germanic or Romanistic	mixed/ inquisitorial	variable/ variable	very small-small	intermediate
South European	GR, ES, IT, PT	Romanistic	mixed/ inquisitorial	variable/ variable	presumably small	no-intermediate
Central European	CZ, EE, LV, LT, HU, PL, SK	Eastern European	inquisitorial	centralised/ unknown	presumably small	no-intermediate
Anglo-Saxon 1	IE, UK, AU, CA, NZ	Common Law	adversarial	variable/ variable	moderate-large	no-yes
Anglo-Saxon 2	US	Common Law	adversarial	decentralised/ specialised	large	no

* Cyprus, Malta and Slovenia do not fit into any of the groups identified.

Source: See table 5.1; interpretation by SCP.

Table 5.2 offers a tentative classification of countries on the basis of characteristics 1 (law tradition), 2 (adversial versus inquisitorial) 4 (private orientation), 6 (plea bargaining and prominence of jury system) , 9 (emphasis on punishment) and 10 (personnel per 100,000 population) in Table 5.1.

On the basis of these characteristics, eight country groups are distinguished: a Scandinavian group, three West- European groups, a South-European group, a Central European Group, and two Anglo-Saxon groups.

This classification was subsequently tested against the other characteristics.

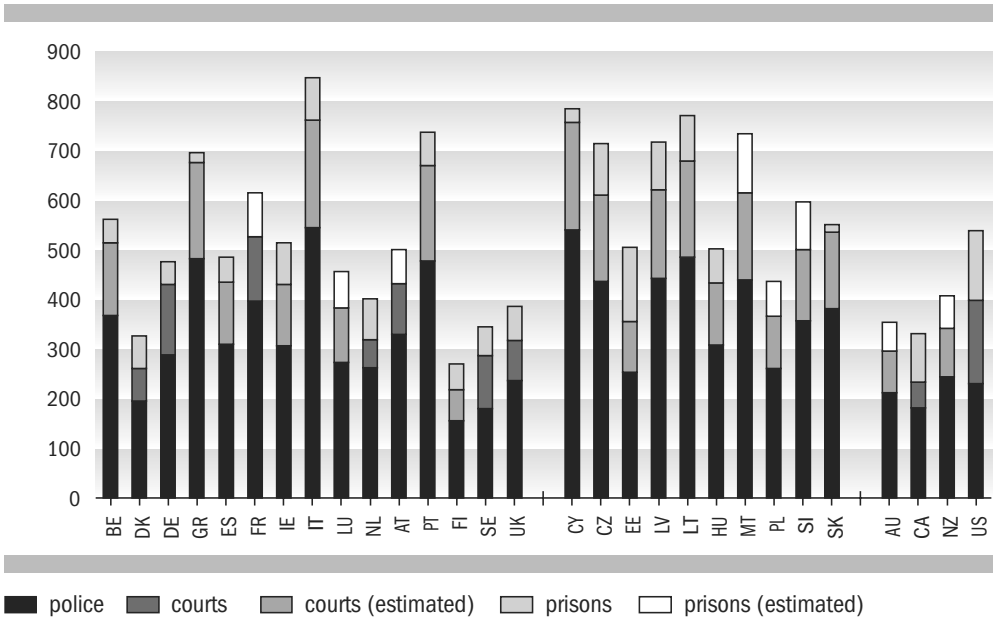
Centralisation and differentiation of courts	Plea bargaining	Lay judges and jury trials	Emphasis on punishment	Personnel per 100,000 population
centralised/ intermediate	no	yes/yes	low	low
decentralised/ intermediate	no	yes/no	low	fairly low
centralised/ not specialised	no	no/no	low	fairly low-fairly high
centralised/ not specialised	no	yes/yes	low	fairly high-high
centralised/ variable	no	yes/yes	fairly low-fairly high	fairly low-high
centralised/ not specialised	no	variable/ variable	fairly low-high	fairly low-high
variable/ variable	yes	yes/yes	fairly low	low-fairly low
decentralised/ intermediate	yes	yes/yes	high	fairly high

The Anglo-Saxon groups are characterized by a common law tradition and distinct features such as plea bargaining and prominence of the jury system. The other groups belong to various subfamilies of the civil law tradition. The adversarial system is characteristic for the Anglo-Saxon countries, but is also applied in a number of Scandinavian countries. The South- and Central-European and two of the West-European groups are characterized by a centralised court system. The Netherlands and Luxembourg are the only countries where the absence of lay judges is explicitly documented. By assigning Austria to the same group as France and Belgium instead of the group consisting of Germany, more emphasis is given to common traits such as the discretionary power of the public prosecutor and the role of lay judges and jury trials than to the technical difference between the Romanistic and Germanic tradition. As far as we are aware, private security firms play a prominent role mainly in the Anglo-Saxon countries. Repression, in the sense of tough sentencing, is characteristic of Southern and Eastern Europe, and also of the US. Personnel numbers are low in the Scandinavian countries, Germany and in the first Anglo-Saxon group. The other characteristics do not contribute to the proposed grouping: Police in Central Europe tends to be centralised, but this is also the case in quite a number of other countries. The discretionary power of the public prosecutor is relatively large in the Netherlands; most clusters are heterogeneous with respect to this characteristic.

5.3 *Use of resources*

Figure 5.1 shows staff numbers in the police, the courts (including public prosecution, criminal, civil and administrative administration of justice) and prisons.

Figure 5.1 Police, court and prison staff per 100,000 population, 2000

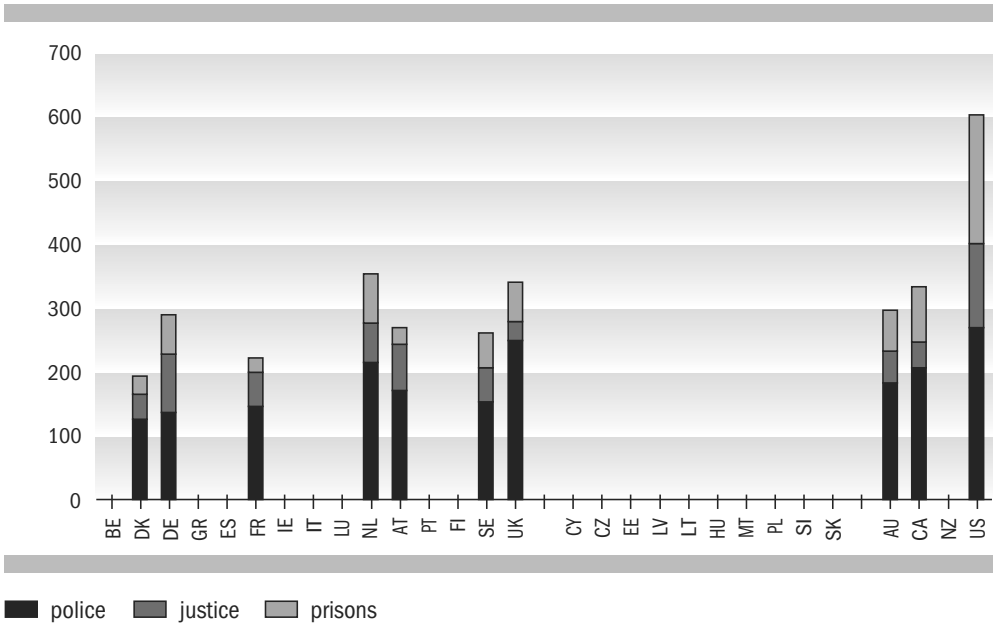


Source: European Sourcebook 2003; Barclay and Tavares (2003), United Nations, Dutch ministry of Justice (revision of various National sources); SCP revision

The blocs in Figure 5.1 shaded grey denote estimated figures. Our estimates are based on the average ratio between the three sectors of the criminal justice system in countries for which figures are available. The average ratio between staff employed by the police, courts and prisons is 5:2:1. Total staff numbers range from 270 per 100,000 inhabitants in Finland to 830 per 100,000 in Italy. Australia, Canada, Denmark, Sweden, England/Wales and the Netherlands (score 400 per 100,000) have fairly low staff numbers. The US, Greece, Portugal and most of the new member states, on the other hand, post high staff numbers. The number of police officers ranges from 150 per 100,000 inhabitants in Finland to 540 in Italy. The Netherlands, on 260, records a fairly low score. It also has relatively low staff numbers in its criminal justice system (including the public prosecutions department). Canada and Denmark have similar scores to the Netherlands. We find relatively high inputs of personnel in the criminal justice systems of Italy, Greece, Portugal, Belgium, the US and some new member states. The Netherlands has more or less average staff in its prison system. Greece, Slovakia, Denmark and Belgium score very low figures, while the US and Estonia have high numbers of prison staff per 100,000 inhabitants.

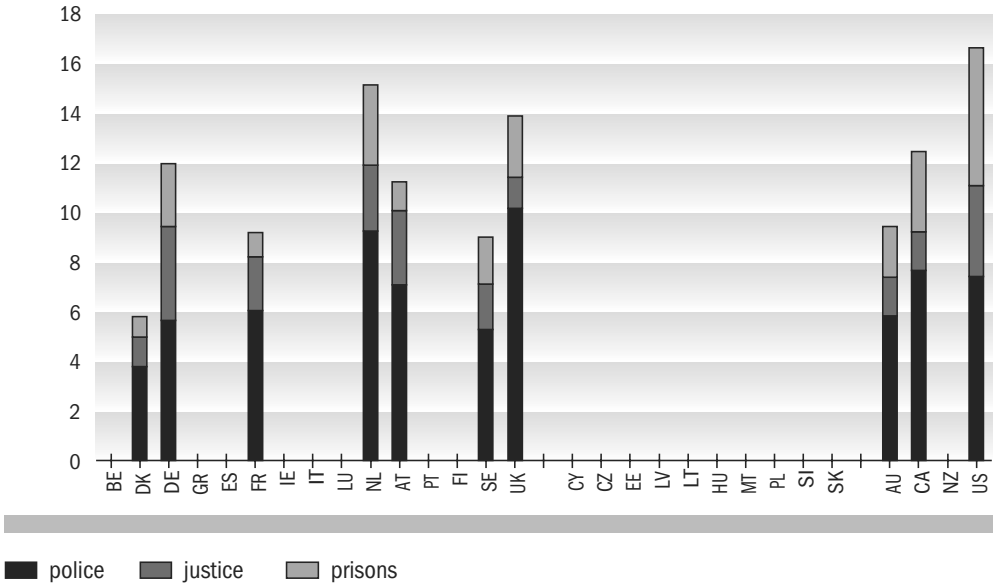
Figures 5.2 and 5.2 present further information on public expenditure on law and order. Unfortunately, figures are available for only ten countries. Spending on police is by far the highest in the US, at 600 euros per capita. The Netherlands comes second on 360 euros, followed closely by England/Wales and Canada. Expenditure is lowest in Denmark (at just under 200 euros). The US also spends much more on its prisons than other countries, at 200 euros per capita, as opposed to 20 to 60 euros elsewhere. However, the position of the US is less extreme when public spending levels are expressed as a proportion of GDP. It should be noted, however, that these figures do not take account of the very high expenditure on private security firms in the US and other Anglo-Saxon countries (see Table 5.3).

Figure 5.2 Public expenditure on police, administration of justice and prisons per capita, in NL€



Source: Dutch ministry of Justice, revision of various National Sources

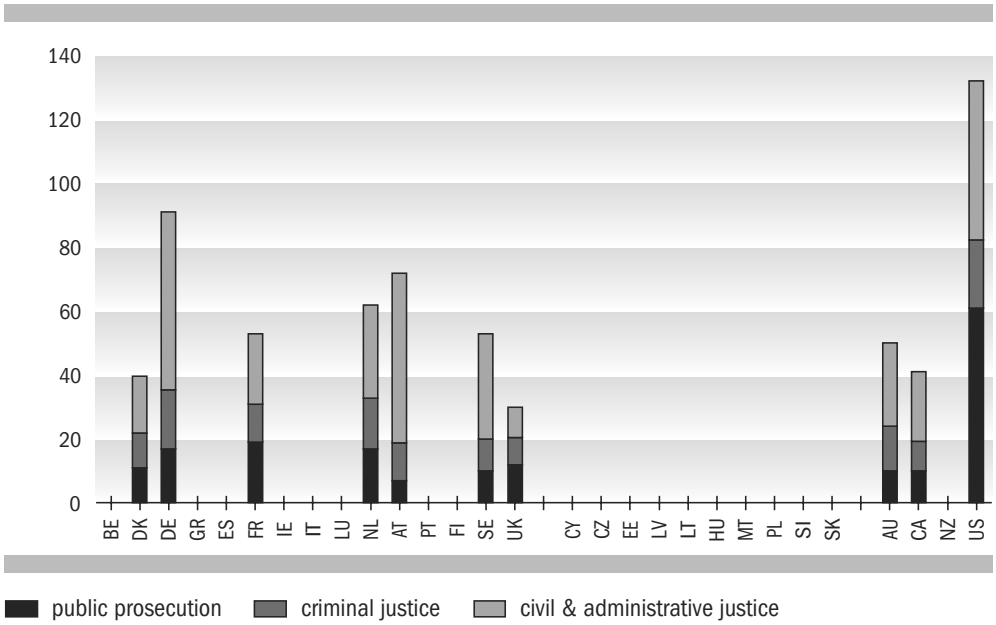
Figure 5.3 Public expenditure on law and order as a permillage of GDP



Source: Dutch ministry of Justice, revision of various National Sources

Figure 5.4 shows the distribution of law and order spending among criminal, civil and administrative cases.

Figure 5.4 Public expenditure on administration of justice per capita, 2000 (in NL€)



Source: Dutch ministry of Justice, revision of various National Sources

For most countries, figures are available only for expenditure on the criminal justice system as a whole. However, data on the share of criminal prosecutions can be derived from, for example, the ratio of criminal cases to the total number of cases brought to court, or from the number of criminal law judges as a proportion of all judges. Where such data is not available, we have taken the average of the other countries. We should stress that these assumptions mean that our estimates of spending on criminal justice are highly uncertain. However, their effect on the Netherlands' ranking is minimal.

Austria and Germany are notable for their large share of spending on civil and/or administrative cases, France and the US for the large proportion spent on the public prosecutions department. The low expenditure on judges in England/Wales might be explained by the prominent role of unpaid lay judges.

In addition to resources devoted by the public sector to maintaining law and order, the private security industry absorbs significant resources, especially so in the US and Australia (see Table 5.3).

Table 5.3 Staff numbers in police service and private security industry per 100,000 population, about 2000

Country	Police	Private security industry	Total
US	375	600	975
Australia	285	516	801
Canada	253	432	685
England/Wales	297	275	572
Germany	342	217	559
Sweden	320	184	504
France	375	121	496
Denmark	229	221	450
Austria	375	75	450
Netherlands	271	148	419

Source: Ministry of Justice 2000; Ministry of Justice 2002

The private security industry is prominent in the US, Australia and Canada (numbers between 400 and 600 per 100,000 inhabitants. With an average of 148 private security officers per 100,000 inhabitants, the Netherlands comes slightly below the EU average of 160. We should note, however, that the figure for the Netherlands is a low estimate based on surveys covering some 80% of annual reports of firms active in the sector (*Jaarboek beveiliging 2002*). The precise number of staff working in the private security industry in the Netherlands will therefore be higher. It is clear that de facto the police no longer have a monopoly in this area. The private security industry may take over more and more of their assistance and prevention tasks, in particular.

Table 5.3 also shows total security efforts of the ten countries covered. With a total of 419 public and private security officials per 100,000 inhabitants (2000 figures), the Netherlands falls well below the 1996 EU average of 535.

5.4 *From crime to punishment*

5.4.1 *Introduction*

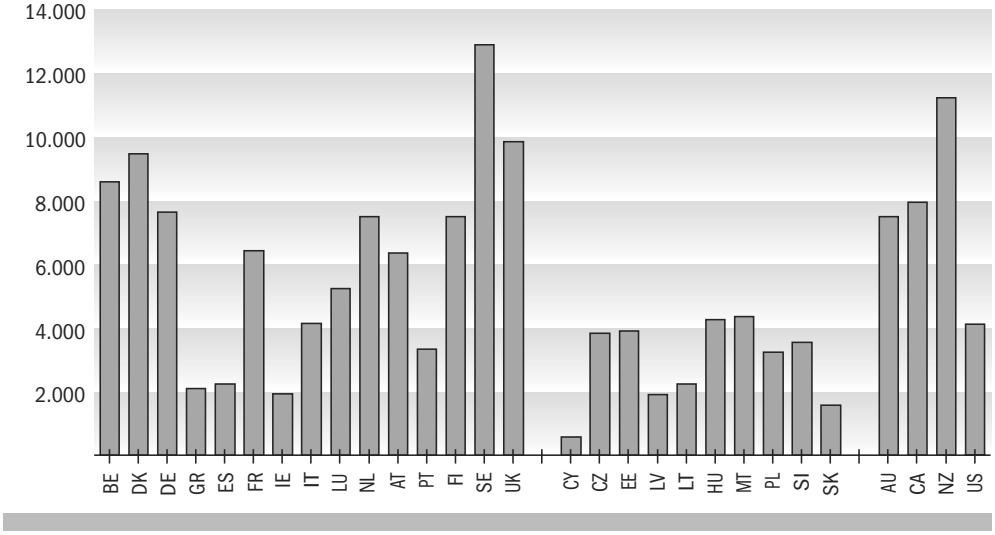
This section looks at the sequence of activities in the criminal justice system from a crime being committed to the sentence being served. Only 10% to 20% of crimes come to the attention of the police and are recorded as such (see Section 5.5). This is because of two factors which have different effects from one country to an other: (1) the willingness of victims to report crime and (2) the extent to which the police actually record the offences reported.

The registration of offences is the first step in the activities of the criminal justice system. It is followed by investigation, prosecution and trying of offenders and execution of sentences. Various indicators are used to measure the production of the agencies involved.

5.4.2 *Recorded crime*

Figure 5.5 shows the number of recorded crimes per 100,000 population. Figures refer to the last year for which data are available. For some countries this was 1999, for others 2000, 2001 or 2002. Here, and elsewhere in this chapter, traffic offences are not included.[7]

Figure 5.5 Number of recorded offences per 100,000 population (excluding traffic offences), 2000.



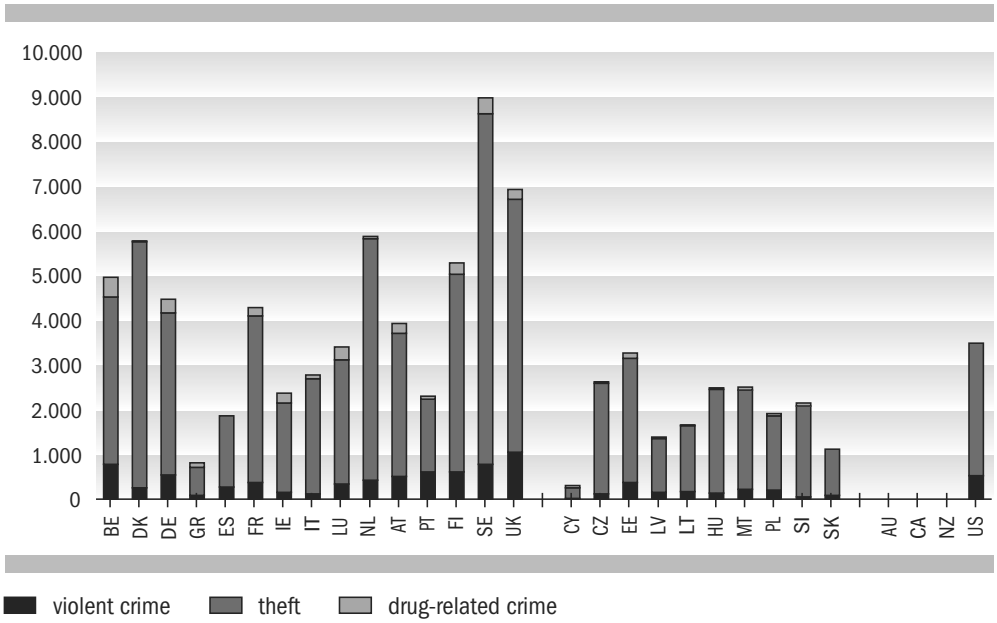
Source: European Sourcebook 2003

Sweden and New Zealand lead the field with more than 10,000 recorded offences per 100,000 inhabitants. They are followed closely by the Netherlands, Finland, Denmark, Belgium and Germany. Ireland, Cyprus, Latvia and Slovakia post relatively low scores, less than 2,000 per 100,000 population. Most other Southern European countries and new member states, score around 4000 per 100,000 population. The same applies to the US, despite its generally poor reputation.

Figure 5.6 provides more detailed figures on three types of crime: violent crime (murder/manslaughter, assault, rape and robbery), property offences (theft), and drugs-related crime. Vandalism has been excluded, as well as traffic offences. The totals in Figure 5.6 are therefore not consistent with those in Figure 5.5.

7 Figures on traffic offences are available for only a small number of countries, and show extreme differences in frequency: approx. 2,800 per 100,000 inhabitants in Finland, as against one or two in Ireland and Italy. The Netherlands comes third, after Finland and Greece, on 740. This can only mean that the term 'traffic offence' is defined differently in different countries.

Figure 5.6 Number of recorded offences per 100,000 population, by type (excluding traffic offences and vandalism), circa 2000



* The number of drug-related crimes committed in the us is unknown

Source: European Sourcebook 2003, US Sourcebook 2003; SCP revision

Figure 5.6 shows that Sweden has the highest rate of property offences. The Netherlands also comes near the top, along with England/Wales and Denmark. The Netherlands' high figures are mainly the result of bicycle theft. The Southern European countries and the new member states typically record low figures for property offences. Greece and Cyprus come last.

Police crime figures include far fewer drug-related crimes than property offences. In most countries, such offences also occur much less frequently than violent crime. Belgium, Luxembourg, Germany, Sweden and Finland have the highest rates of drug-related crime. They appear to play a fairly insignificant role in the Netherlands. However, like traffic offences, drug-related crime is recorded only if it is observed. So drug-related offences actually recorded represent only the tip of the iceberg. Table 5.4 gives more detailed figures.

Table 5.4 Drug problem indicators, circa 1999

	Drug-related crimes per 100,000 population	Problematic drug use per 100,000 population	Percentage of young people who have used marihuana/cannabis	Heroine/ cocaine seizures (kg)
US	–	21.3	41	–
UK	215	5.6	35	5,300
Sweden	365	4.6	8	480
France	176	4.1	35	3,900
Denmark	17	3.9	24	120
Austria	223	3.2	–	140
Netherlands	47	2.7	28	11,100
Germany	297	2.1	–	2,800

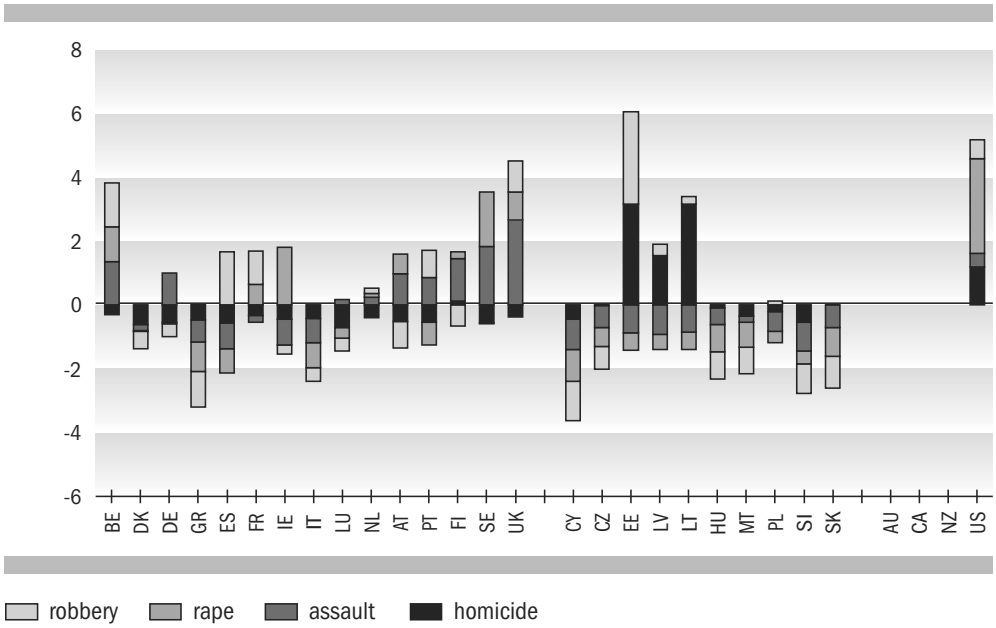
Source: European Sourcebook 2000, EMCDDA, 2001; ESPAD and MTF 1999; UNODC World Drug report, 2000, p. 93

The number of drug-related crimes in the Netherlands is exceptionally low. This can be explained by the Netherlands' policy of tolerance', whereby drug dealing is prosecuted but possession of drugs for personal use is not. The level of problematic drug use and the proportion of youngsters who use marihuana or cannabis is also fairly low. By contrast, the Netherlands is an unmistakable international centre of the drugs trade, as revealed by figures for heroine and cocaine seizures, which are even more striking when expressed in kilos per 100,000 inhabitants. The situation is even worse when it comes to marihuana/cannabis and ecstasy. Indeed, the Netherlands is one of the world's biggest producers of ecstasy.

Figure 5.6 shows that England/Wales, Belgium and Sweden have the highest figures for violent crime and that the Netherlands falls somewhere in the middle. This can be seen even more clearly in Figure 5.7, which shows differences in the incidence of several types of violent crime. This figure is based on standardised scores, which means all categories of crime receive equal weight.[8]

8 An average and a standard deviation for all countries have been calculated for each subcategory. The z-value for each country has been calculated as follows:
$z_i = (x_i - x_{average})$/standard deviation.

Figure 5.7 Standardised country scores for various types of violent crime, circa 2000



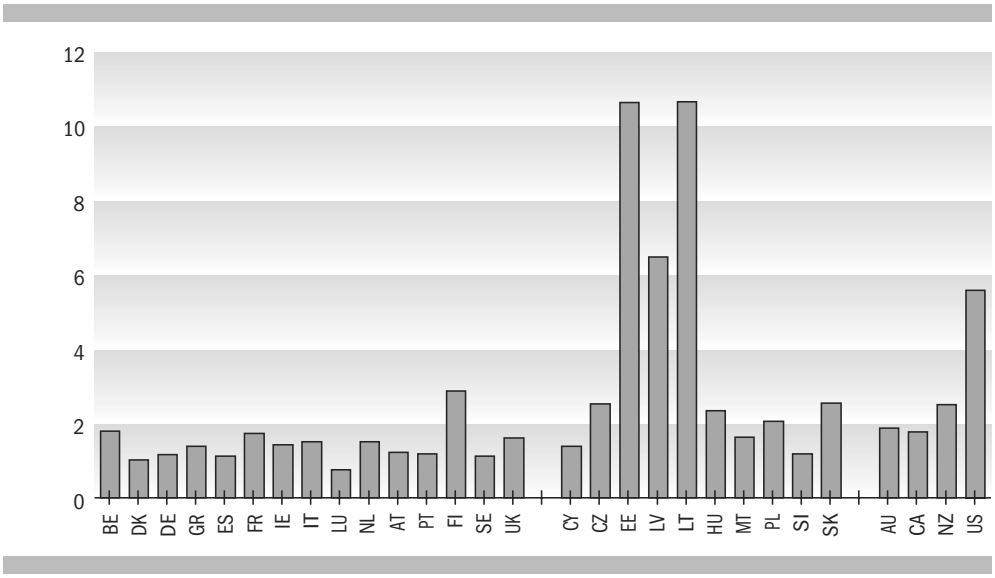
Source: European Sourcebook 2003, Barclay and Tavares 2003. SCP revision

Estonia, Latvia, Lithuania and the US score high on homicide (murder and manslaughter). High levels of assault are found in England/Wales, Sweden, Belgium and Finland. The US has the highest rate of rape, followed by Ireland, Sweden and Belgium. Robbery is most common in Estonia. The Netherlands has a fairly average score for all categories. Greece, Italy and the new member states (with the exception of the three Baltic states) have low rates of violent crime.

Figure 5.8 shows the incidence of arguably the most dramatic of all crimes: homicide. Figures shown represent the annual number of victims per 100,000 inhabitants, excluding attempted homicide. The mean over a three-year period has been used to average out any 'coincidental' fluctuations.

Estonia and Lithuania have some ten homicides per 100,000 inhabitants, and the US and Latvia have around six. Finland, New Zealand, the Czech Republic, Slovakia, Poland and Hungary score between two and three, Luxembourg below one, and the other countries, including the Netherlands, between one and two. Notably, murder and manslaughter occur relatively frequently in a number of countries that are otherwise not generally known for their high crime rates. This applies to the Baltic states mentioned above, and also to the US. The latter's poor reputation for crime is based mainly on the incidence of violent crime, particularly rape and homicide.

Figure 5.8 Homicides per 100,000 population (average 1999-2001)

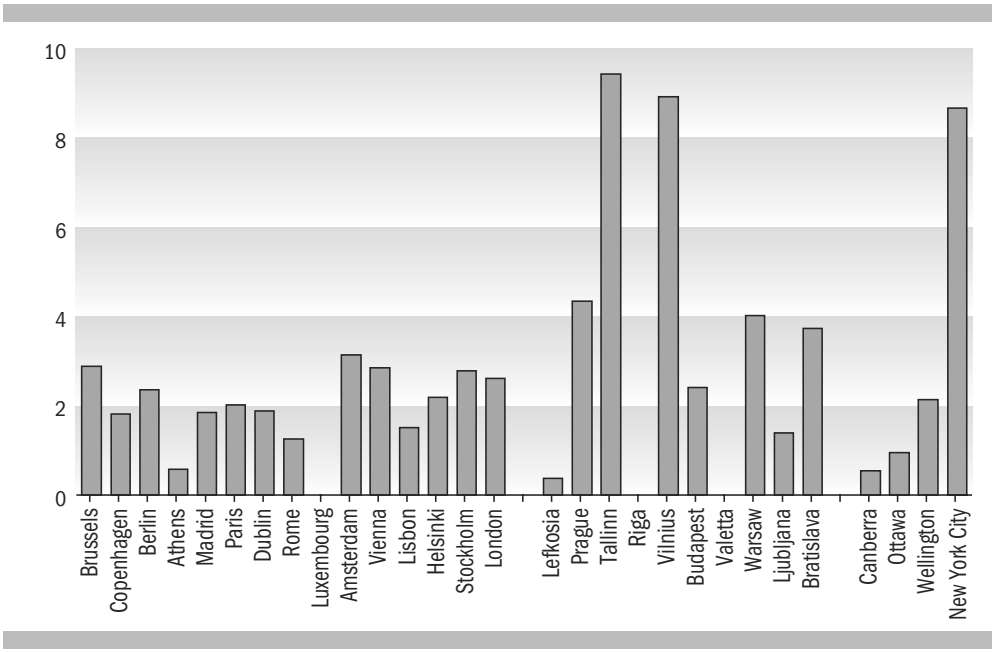


Source: Barclay & Tavares 2003

Figures extending over the past decade (see Smit 2003, Box 7.1) show that most European countries saw the number of homicides fall in the second half of the 1990s. This applies especially to the US, where the number of homicides dropped from 9 to 6 per 100,000.

The Netherlands' position looks less rosy, incidentally, when we look at the murder rate in capital cities (see Figure 5.9). Here, Amsterdam comes in seventh place, with three murders per 100,000, behind Washington and several Central European cities. The lowest rates of homicide (fewer than one per 100,000) are recorded in Athens (Greece), Lefkosia (Cyprus), Canberra (Australia) and Ottawa (Canada).

Figure 5.9 Homicides in capitals (average 1999-2001)[a]

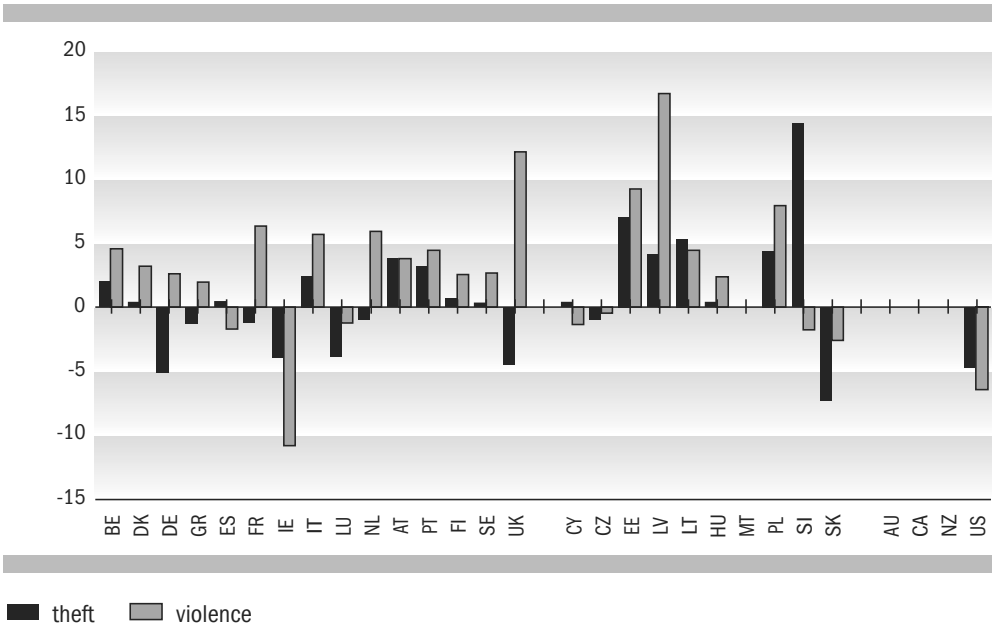


a Washington DC (43 murders per 100,000 population) has been replaced by New York (8.65 murders) to keep the figure legible.

Source: Barclay and Tavares 2003

Figure 5.10 shows recent trends in recorded violent offences and property offences per 100,000 population.

Figure 5.10 Trends in crime rate, 1995–2000 (annual change in percentages)



The figures for England/Wales have been corrected for the change in definition in 1997/1998.

Source: WODC, US Sourcebook

Notably, violent crime rates (Figure 5.10) of most European countries show an upward trend. The sharpest rise has been recorded in Latvia and in England/Wales. With an annual increase of 6%, the Netherlands has an average growth rate. Spain, Luxembourg and several new member states have in fact seen a slight decrease of violent crime rates. The most striking exception is Ireland, where violent crime fell by almost half between 1995 and 2000. The US has also seen a substantial fall in violent crime.

The figures for property offences show a varied pattern. Slovenia, Estonia and Lithuania have seen a relatively sharp increase, while Slovakia, the US, Denmark, Luxembourg and England/Wales have experienced a significant fall. There has been a slight fall in the number of property offences in the Netherlands.

To close this section, we turn our attention to the role of firearms as a cause of violent death. A comparative study of firearms-related deaths in 36 countries has found major differences in the degree to which firearms are involved in fatal incidents. Firearms are used five or six times more in North America than in Europe, and no less than 95 times more than in Asia. More than half of all murders are committed with guns. In the US, firearms are involved in 71% of murders and 61% of suicides. A study of the US and Australia has shown that 92% of the differences in murder and suicide rates between regions can be attributed to differences in access to firearms (Miller and Cohen, 1997). An American study has found that easy access to firearms played a key role in the epidemic of violent crime among young people in the US in the early 1990s (Fagan and Wilkinson, 1998). The trade in crack cocaine and the subculture associated with it caused a huge increase in firearms possession and use among young people. US government policy currently is focused on reducing firearms possession by young people, partly in response to a number of incidents in schools (Source: Miller & Cohen, 1997; Fagan & Wilkinson, 1998).

The role that the availability of firearms plays in the number of gun deaths is the subject of continued debate, particularly in the US. Attempts to place restrictions on the sale of firearms to ordinary citizens repeatedly fail, partly as a consequence of efforts by the powerful pro-gun lobby, in the form of the National Rifle Association. One argument continually put forward is that the danger comes not from the firearms themselves, but from some of the people who carry them ('Guns don't kill, people do'). The availability of firearms should therefore have no impact on the level of crime involving firearms.

It is striking, however, that even the very rough data in this report support the opposite view: that the availability of firearms in itself increases the likelihood of gun violence. Possession of firearms in different countries can be categorised as very low (1-100), low (101-200), high (201-300) or very high (301 or more). Similarly the rate of gun deaths can be categorised as very low (0.1-2.0), low (2.1-4.0), high (4.1-6.0) or very high (6.0 or more). When these two classifications are combined, the following picture emerges (Table 5.5).

Table 5.5 Possession and fatal use of firearms, several years

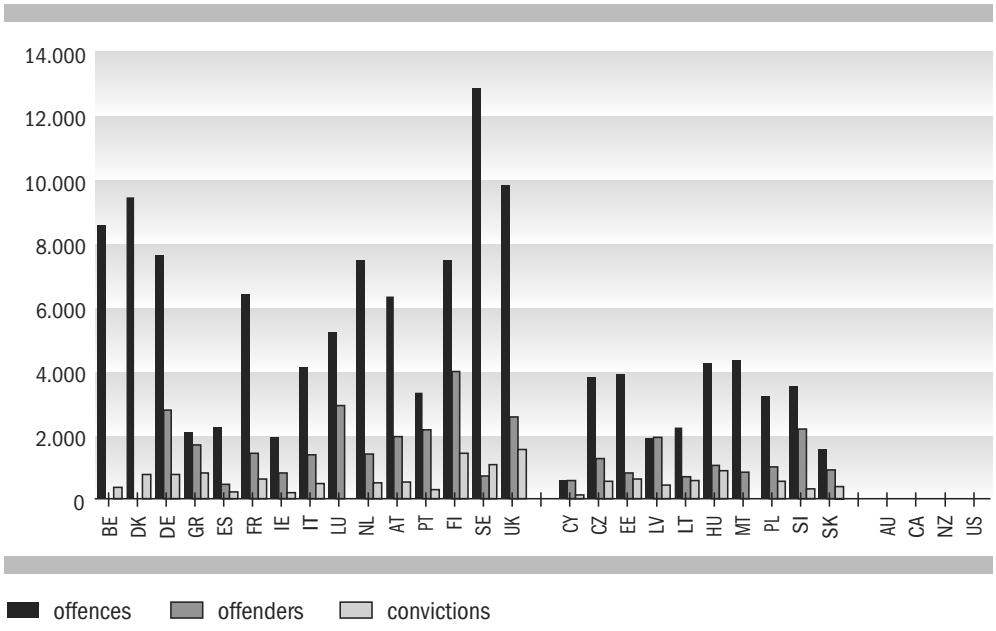
		Possession of firearms			
		Very low	Low	High	Very high
Firearms-related deaths	Very low	Netherlands Germany UK	Sweden		
	Low		Austria Australia		
	High			France Canada	
	Very high				Finland US

Source: Dutch Ministry of Justice (2002)

5.4.3 *Investigation, prosecution and conviction*

The recording of an offence can lead to the identification and interviewing of suspects, and subsequent criminal prosecution. Prosecution might, in turn, lead to a conviction. The correlation between the relevant indicators for each step in this process can be regarded as a country's criminal justice profile. Figure 5.11 shows some of these indicators, expressed in numbers per 100,000 inhabitants. The ratios between these indicators, which refer not to production volume but to the quality and effectiveness of the criminal justice system, are discussed in Section 5.5.

Figure 5.11 Offences, offenders/suspects and convictions (excl. traffic) per 100,000 population, 2000



Source: European Sourcebook 2003

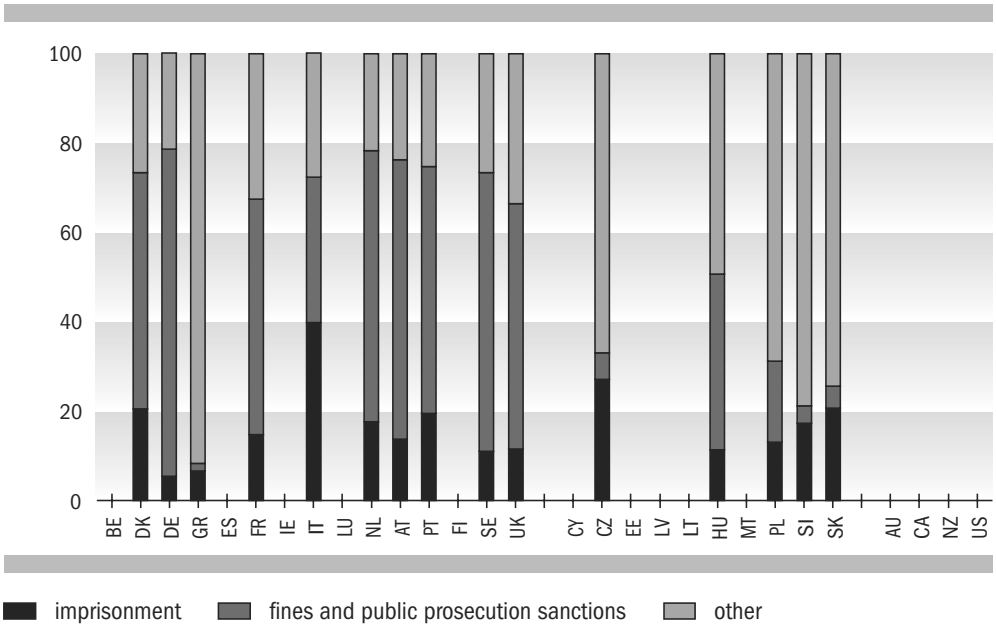
In virtually all countries, the number of offenders (suspects interviewed by police) is significantly lower than the number of crimes recorded. Only Latvia offers the surprising picture that the number of suspects interviewed is higher than the number of recorded offences. Finland leads on the number of suspects interviewed, followed by Luxembourg, Germany and England/Wales. The Netherlands falls somewhere in the middle. The number of suspects interviewed is low in Greece, Spain, Ireland and most of the new member states.

The number of convictions is generally much lower than the number of suspects interviewed. The conviction rate is high in Finland, Sweden and England/Wales, on the low side in the Netherlands (partly as a result of the number of out-of-court settlements by the public prosecutions department) and very low in Spain, Portugal, Ireland and Cyprus. Sweden is the only country where the number of convictions is higher than the number of suspects interviewed, but this is because each individual offence or element of an offence leads to a separate conviction.

5.4.4 *Emphasis on punishment*

The number of convictions is shown in Figure 5.11 (final bar). Figure 5.12 distinguishes between three different types of punishment: (1) imprisonment, (2) fines and (3) other sanctions imposed by the public prosecutions department, and other sanctions (such as alternative punishments, and also suspended prison sentences).

Figure 5.12 Percentage distribution by type of punishment or measure, 1999



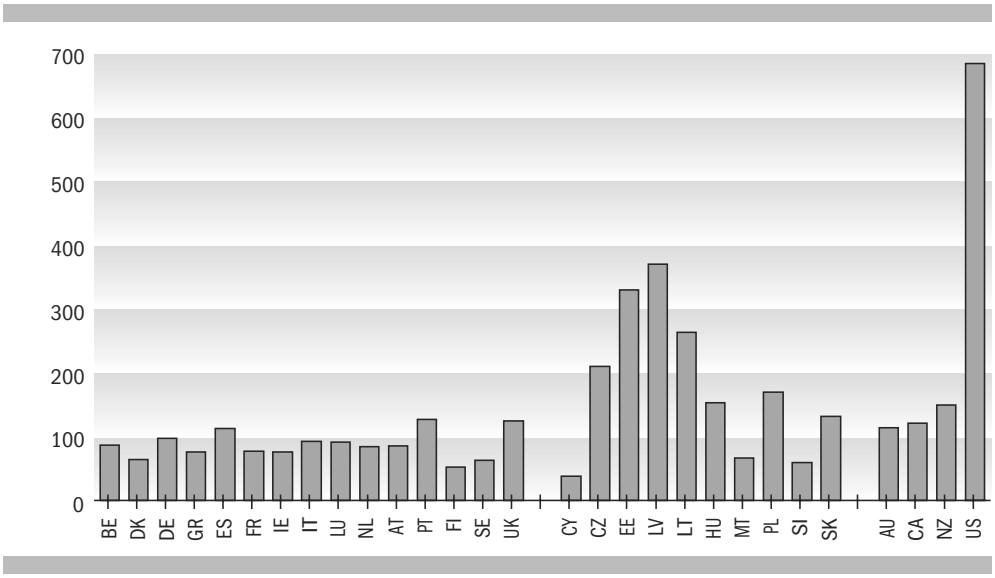
Source: European Sourcebook 2000

It is clear that, in most countries, fines are the most common type of punishment. At 18%, the proportion of prison sentences in the Netherlands is more or less average. It is, however, significantly higher than in France, England/Wales and, especially,

Germany. Countries where the 'Other' category of punishment is large, often have a high incidence of suspended prison sentences.

The prison population in the Netherlands is not particularly high in comparison with the other countries. The number of prisoners is just below the EU average. However, the prison population in the Netherlands has been growing rapidly since 1987. The US and the Baltic states have exceptionally large prison populations (Figure 5.13).

Figure 5.13 Prisoners per 100,000 population

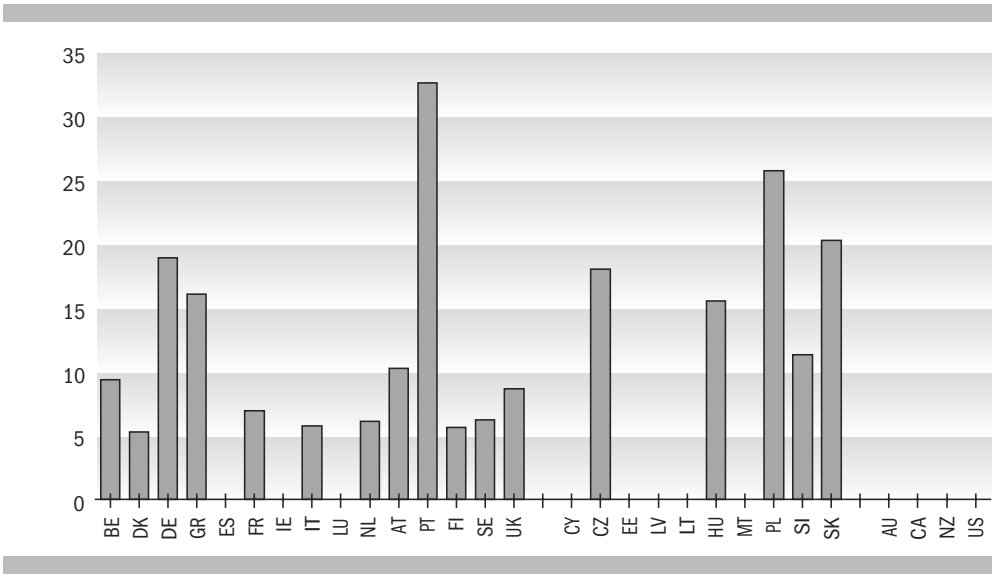


Source: European Sourcebook 2003, Barclay and Tavares 2003 (Estonia)

The length of prison sentences – the subject of Figure 5.14 – is also relevant. The sentences presented here are those actually served, not the sentences passed. Sentences actually served can be estimated by taking the total number of prisoners at any given moment (which is an estimate of the number of years served in prison) and dividing it by the number of prison sentences imposed.[9]

9 This estimate is not entirely accurate. For instance, it takes no account of suspects in provisional detention who will not ultimately receive a prison sentence.

Figure 5.14 Average length of sentence served, in months, 1999



Source: European Sourcebook 2000

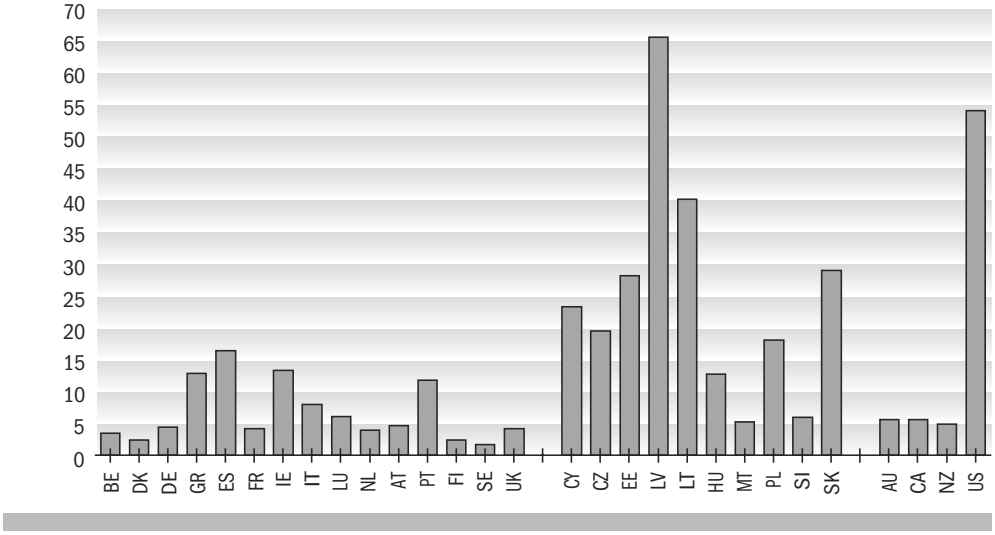
The average length of sentences served in the Netherlands is fairly low by European standards, at 6.1 months. France (6.9) and England/Wales (8.7) have slightly longer periods of imprisonment, and in Germany, in particular, the average sentence served is much longer (18.9 months).

The Netherlands' relatively low score can be explained by two factors. Prison sentences tend to be imposed more often in the Netherlands, including for less serious offences and, since the offences are less serious, the sentences are generally for shorter prison terms. Also, the most prevalent type of offence – property offences – generally incurs a less severe punishment.

On closer analysis, we find that in the Netherlands, as in Sweden, more than half the prison sentences imposed are shorter than three months. Also, the majority of the prison population in the Netherlands are serving a sentence of between one and five years, which is comparable to the situation in Austria and the UK. We should note, however, that the average length of prison sentences in the Netherlands increased by 48%, from 133 to 197 days, between 1985 and 1995 (Grapendaal et al., 1997).

The system analysis in Section 5.2 placed a great deal of emphasis on the degree of repression of the criminal justice system. This is defined as the extent to which a country takes tough measures to fight crime. It thus refers to both the nature and duration of sentences passed and to the number of staff and level of resources used in fighting crime.

Figure 5.15 Repressiveness: average number of prison days per recorded offence, 2000[a]



a corrected for share of violent crime

Source: European Sourcebook 2003

Figure 5.15 shows the number of prison days per recorded offence. The total number of prison days (estimated by multiplying the number of prisoners on a given date[10] by 365) has been divided by the total number of recorded crimes. This thus represents a large segment of the over-all criminal justice system.[11] The outcome depends on various factors: (a) the number of suspects per recorded offence (similar to, though not entirely the same as the clear-up rate), (b) the degree to which offenders are punished, (c) the share of prison sentences among all punitive measures and (d) the average length of sentence. The ratio of serious to less serious offences also plays a role, but this has been corrected for in the figure.[12] On balance, these indicators give some insight into the emphasis on punishment in each country.

The clear geographical division is striking: Scandinavian countries have the lowest number of prison days per recorded offence (in the order of one to three), followed by most Western European countries (including the Netherlands), Slovenia, Australia, Canada and New Zealand. The countries of Southern and Central Europe are much more repressive. The US and Latvia are the most repressive, with over 50 prison days per recorded offence.

10 1 September 2000 for most countries.

11 For this purpose, violent crimes have been assigned a double weight.

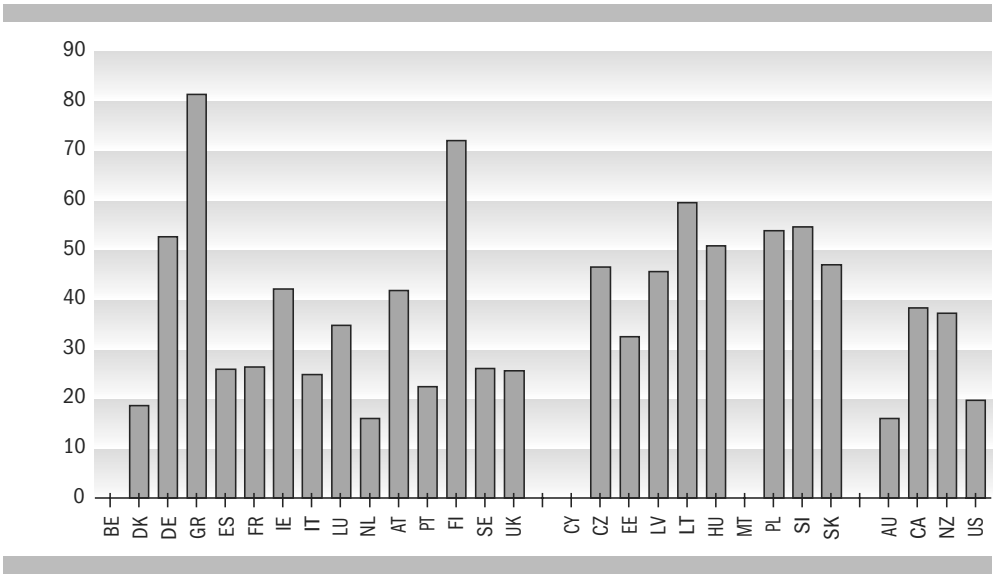
12 In other words, the average prison sentence for each country has been calculated as if the same proportion of violent crimes were recorded there as in the Netherlands, and assuming that violent offences incur a prison sentence twice as long on average as other offences.

The number of staff per capita (Figure 5.1) or the number of staff per recorded crime (Figure 5.25) also give an indication of the repressiveness of the criminal justice system. These are found to correlate quite closely to the severity of punitive measures. The number of staff per capita was used in the classification of systems in Section 5.2, alongside the repressiveness indicator in Figure 5.15.

5.5 *Productivity, quality and effectiveness: official records*

One frequently used measure of the success of criminal investigation work is the clear-up rate (Figure 5.16). This is usually defined as the percentage of recorded offences for which at least one suspect is found. It should be noted, however, that the public prosecutions department in the Netherlands performs tasks that are not reflected in these figures, in particular the processing of traffic offences ('Mulder' cases and sub-district court cases). Special investigation services such as the Fiscal Information and Investigation Service and the Economic Investigation Service also bring cases to the attention of the Dutch public prosecutions department. The number of cases solved has been obtained by multiplying the number of recorded crimes by the clear-up rate.

Figure 5.16 Clear-up rates



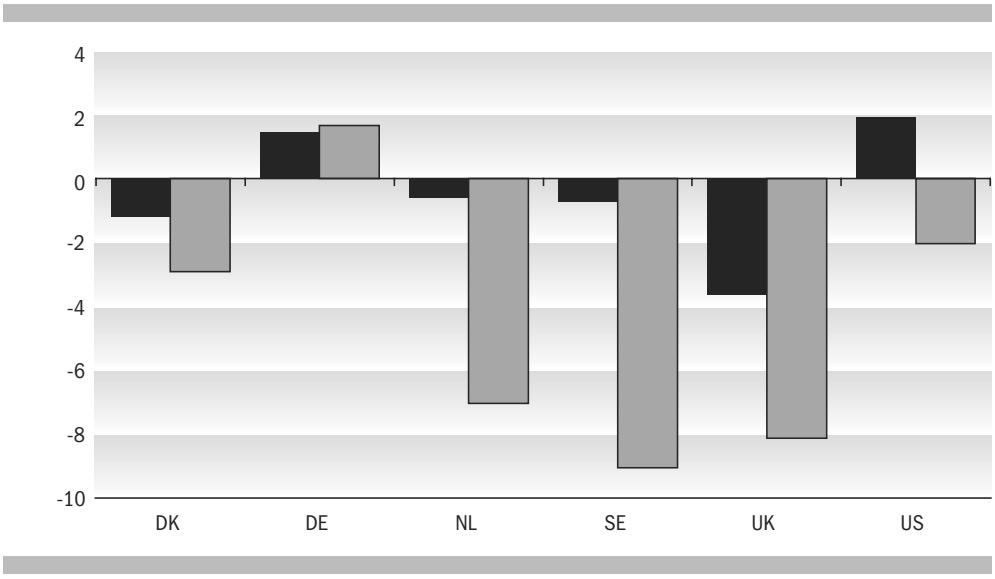
Source: Interpol, SCP revision

The clear-up rate in the Netherlands (15% in 2001) is low compared to other countries. Only Denmark, Australia and the US have a similarly low score. In Germany, Greece, Finland and a number of new member states the clear-up rate is over 50%. However, major differences in the way clear-up rates are determined make it difficult to compare countries (Smit et al., 2003). Nevertheless, we can conclude that the Netherlands' low rate is partly due to the fact that there is less violent crime in this

country. The direct contact between offender and victim in this type of crime means that, in general, the clear-up rate is higher than for property offences.

Figure 5.17 shows the trend in the clear-up rate for two categories of crime over the past ten years. Differences in definition mean that the rates cannot really be compared in absolute terms. As in most other countries, the clear-up rate in the Netherlands is on the decline. Only Germany and the US have seen an improvement.

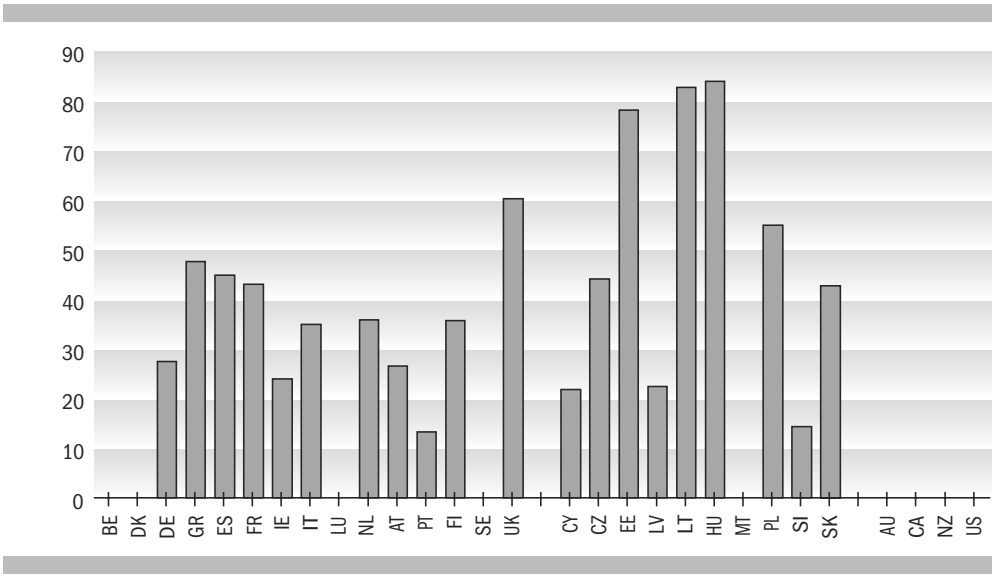
Figure 5.17 Average annual change in clear-up rate (1996 - 2000)



Source: WODC 2003 SCP revision

Prosecution is organised in a variety of ways. In some countries, the police are authorised to deal with cases independently (this includes so-called 'Halt' cases in the Netherlands, whereby the police have the power to conditionally dismiss cases under the responsibility of the public prosecutions department). The extent to which the prosecuting authority can handle cases independently also differs from country to country. And there are many more examples. It is therefore risky to compare individual aspects of criminal prosecution in various countries (different types of dismissal, out-of-court settlement, etc.). Comparing the number of suspects interviewed by the police (as a measure of cases that are 'ripe for prosecution') and the number of individuals who receive a sanction, sentence or other punitive measure from the public prosecutions department or court (as a measure of successfully prosecuted cases) does shed some light on the 'conviction rate', however. Figure 5.18 confronts the number of convicted persons and the number of suspects.

Figure 5.18 Number of convicted persons as percentage of number of suspects, 2000 (excl. traffic)

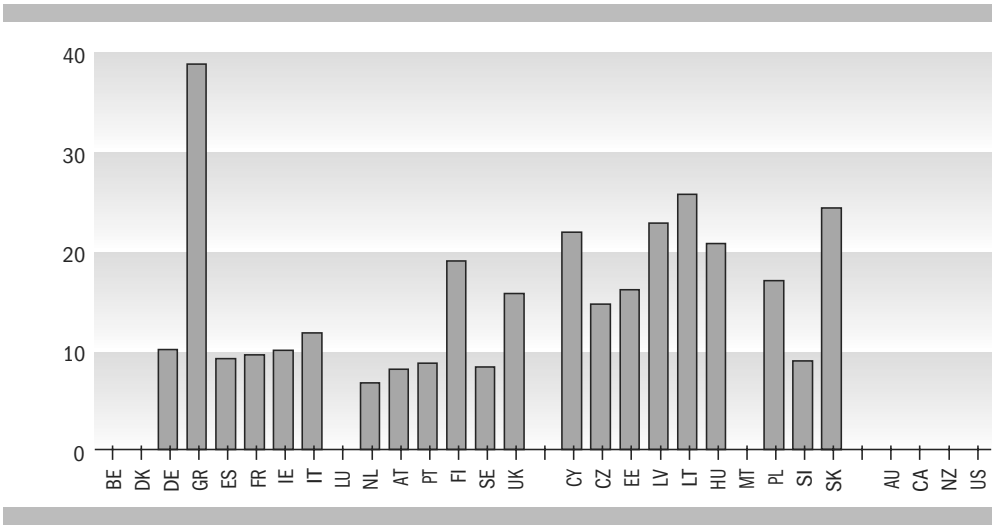


Source: European Sourcebook 2003

The conviction rate is above 50% in England/Wales, Estonia, Lithuania, Hungary and Poland. Sweden (not shown in figure) in fact scores over 100%, but this can be attributed to the way the Swedes handle multiple offences. Ireland, Portugal, Cyprus, Latvia and Slovenia score below 30%. The Netherlands falls in the middle, with 35%, though the conviction rate turns out much higher (in the order of 60%) if out-of-court settlements are included. However, for a fair comparison we would then have to apply similar corrections to other countries' figures.

Clear-up rates are a reflection of the functioning of the police service, conviction rates reflect the functioning of the police, public prosecutions department and courts. To obtain an impression of the functioning of the entire criminal justice system, we can express the number of convicted persons as a percentage of the number of recorded offences (Figure 5.19).

Figure 5.19 Number of convicted persons as percentage of recorded offences, 2000 (excl. traffic)



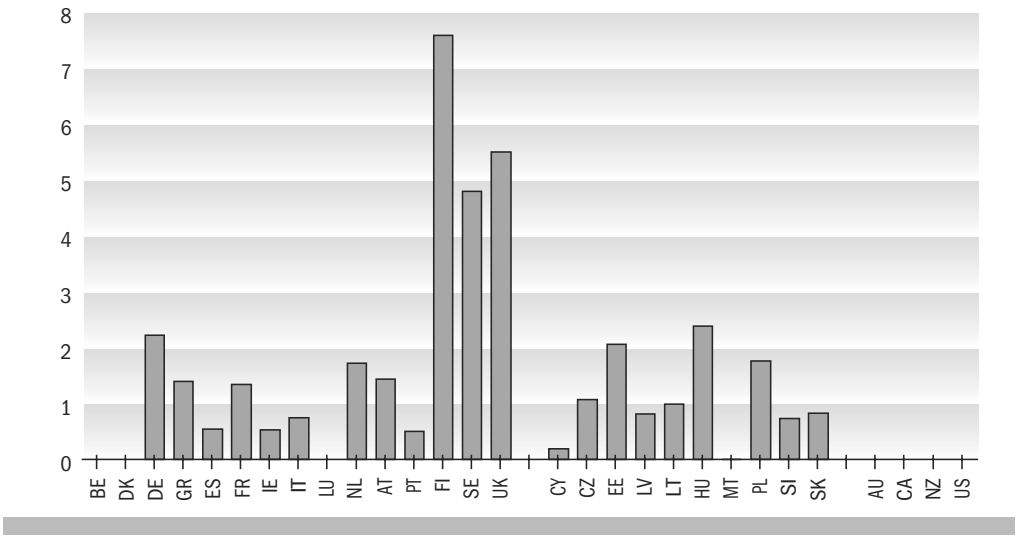
Source: European Sourcebook 2003

By this criterion, Greece posts the highest score, at almost 40%, followed by a number of new member states, with rates between 15% and 25%. Finland and England/Wales have the highest rates in the EU-15 (15% to 20%). The Netherlands comes bottom, on 7% (but see remark in connection with figure 5.18).

Disregarding the practical difficulty of comparing figures internationally, clear-up rates can be seen as an important product of the police service. The number of convictions is less useful as a measure of the production of the courts, because from the court's perspective a case that leads to an acquittal can also be seen as a product. We should therefore in fact focus on the number of cases brought before the courts. However, this figures is available for only a limited number of countries, and this topic is not therefore examined further in this report. However, the number of convictions can be regarded as the final product of the criminal justice system (disregarding the prison system for the time being). From this particular point of view, acquitted suspects would have to be seen as failures.

Figure 5.20 therefore shows labour productivity in the criminal justice system as the quotient of the number of convicted suspects and staff numbers of the police, public prosecutions department and criminal courts.

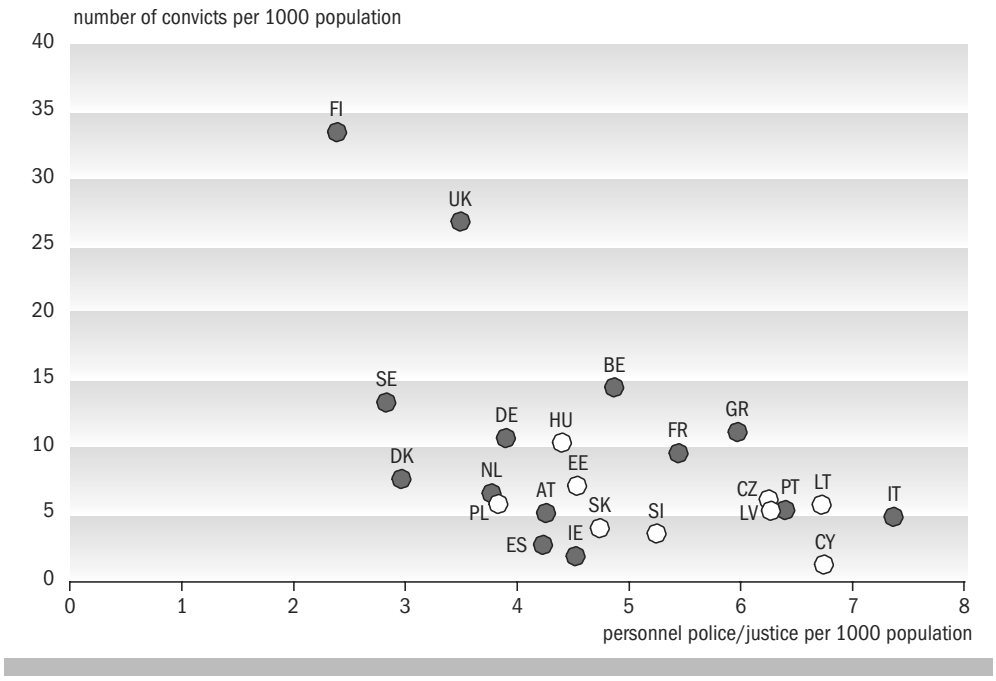
Figure 5.20 Labour productivity in criminal justice system: convicted suspects per FTE in police service, public prosecutions dept. and criminal courts, 2000 (excl traffic)



Source: European Sourcebook 2003; see also Figure 5.1

Productivity defined in this way is very high in Finland, Sweden and England/Wales (at five to eight convicted suspects per FTE) (It should be kept in mind, however, that multiple crimes count as several convictions in Sweden). Productivity is low (less than one conviction per FTE) in Ireland, the Southern European countries and a number of new member states (particularly Cyprus, Latvia, Slovenia and Slovakia). The Netherlands comes somewhere in the middle, with 1.7 convictions per FTE. Figure 5.21 depicts the relationship between convicted suspects and FTE in a scatterplot.

Figure 5.21 Scatterplot of convicted suspects versus FTE in police service, public prosecutions dept. and criminal courts, 2000



Source: European Sourcebook 2003 SCP revision

There appears to be a negative correlation between the number of convicted suspects and the number of FTE employed by the police service, public prosecutions department and criminal courts. This is accentuated by two outliers (Finland and England/Wales) which combine high numbers of convicted suspects with low staffing levels. It is difficult to interpret these outcomes. As will be shown in Figure 5.25, there is a strong negative correlation between registered crime and the number of FTE employed by the criminal justice system, which might mean that high staffing levels in the criminal justice system have a preventive effect. This preliminary conclusion is reinforced by the fact that in countries where staffing levels are high, sentences are generally harsh. Such sentences not only have a deterrent effect, any criminals sentenced to imprisonment are also kept out of circulation for a long time (the 'lock-up effect'). At the same time, this means that countries deploying significant resources, have fewer suspects to arrest and convict, which lowers measured productivity.

Quality and quantity are not always compatible. To a certain extent, the number of appeals can be regarded as an indicator of the quality of the administration of justice (see Table 5.6). However, the costs of lodging an appeal and certain cultural factors also play a role (Blank et al. 2004).

Table 5.6 Number of appeals as percentage of number of completed cases

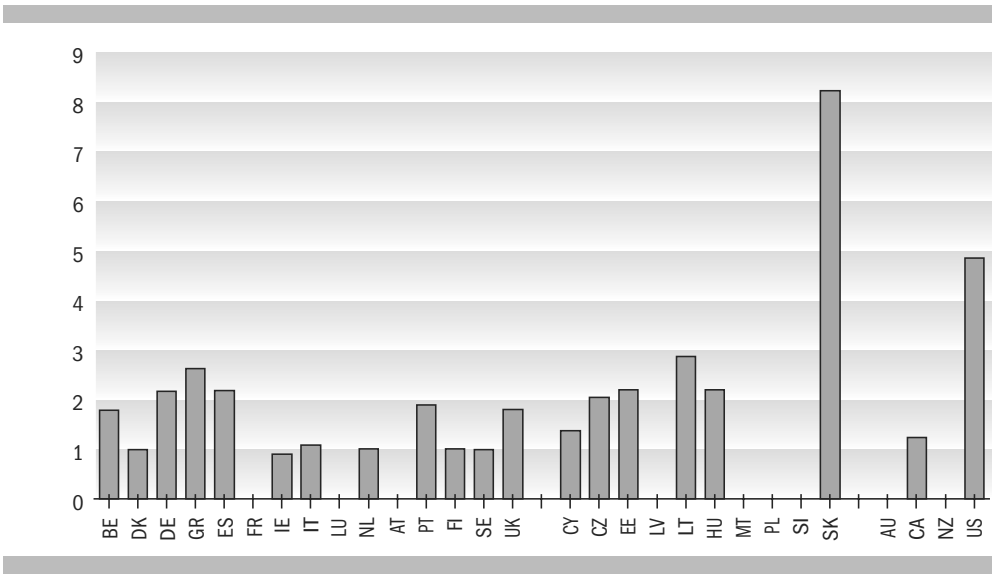
	criminal
Belgium	7
Denmark	3
Germany	7
France	5
Italy	3
Netherlands	8
Austria	9
Finland	13
Sweden	13
England/Wales	1
Poland	1

Source: Blank et al. 2004

Table 5.6 shows that the proportion of appeals in criminal cases ranges from 1% (in England/Wales and Poland) to 13% (in Sweden and Finland). The Netherlands has an average rate of appeals (7%).

We turn now to a number of indicators of the productivity and quality of the prison system. Figure 5.22 shows a measure of labour productivity: the number of prisoners per prison guard.

Figure 5.22 Labour productivity: prisoners per prison guard, 2000



Source: European Sourcebook 2003, Home Office and UNODC

In the Netherlands, Denmark, Ireland, Finland and Sweden the ratio of prisoners to guards is 1:1. In the majority of countries it lies between 1:1 and 1:3, though the ratio is considerably higher in Slovakia and the US. Expenditure per prisoner is also very high in the Netherlands (approx. 90,000 euros per prisoner, as against 30,000 in the US).

As always with this kind of rough data, we must consider whether high staffing levels and high expenditure per prisoner should be seen as a sign of inefficiency or of high quality.

While, in the US, the high spending on the prison system can be attributed to a very large prison population with low costs per prisoner, spending in the Netherlands is high because of the high costs per prisoner, on a prison population that is average by EU standards. The high costs per prisoner found for the Netherlands are confirmed in a study conducted by IOO, the Institute for Public Sector Economic Research (IOO/IVA, 1998). It also looked at Belgium, Lower Saxony, England/Wales and Sweden.

High spending is associated with a humane prison regime. Though this quality aspect is difficult to quantify, some indicators are presented here. One important factor is prevention of overcrowding. In 2000, the Netherlands used 91% of its prison capacity. Denmark and Austria also underused their capacity. Canada, Germany, the UK, France and Sweden had occupation rates over 100% (at a rate of 101% to 105%). No figures are available for the US.

The IOO study examined other indicators, such as the number of hours prisoners are allowed to spend outside their cell and the number of prisoners per cell. The Netherlands and Sweden had positive outcomes for both of these indicators.

Table 5.7 gives more qualitative information on the prison system in a number of countries. Unfortunately, however, this information is somewhat outdated.

Table 5.7 Tentative performance indicators for prison system, 1994

	suicides per 10,000 prisoners	escapes per 10,000 prisoners
Denmark	22	138
Germany	14	37
France	18	10
Netherlands	5	250
Austria	23	194
United Kingdom	13	47
Sweden	5	221
US	1	–

Source: DJI 1996; Council of Europe 1998; Maguire & Pastore 1998

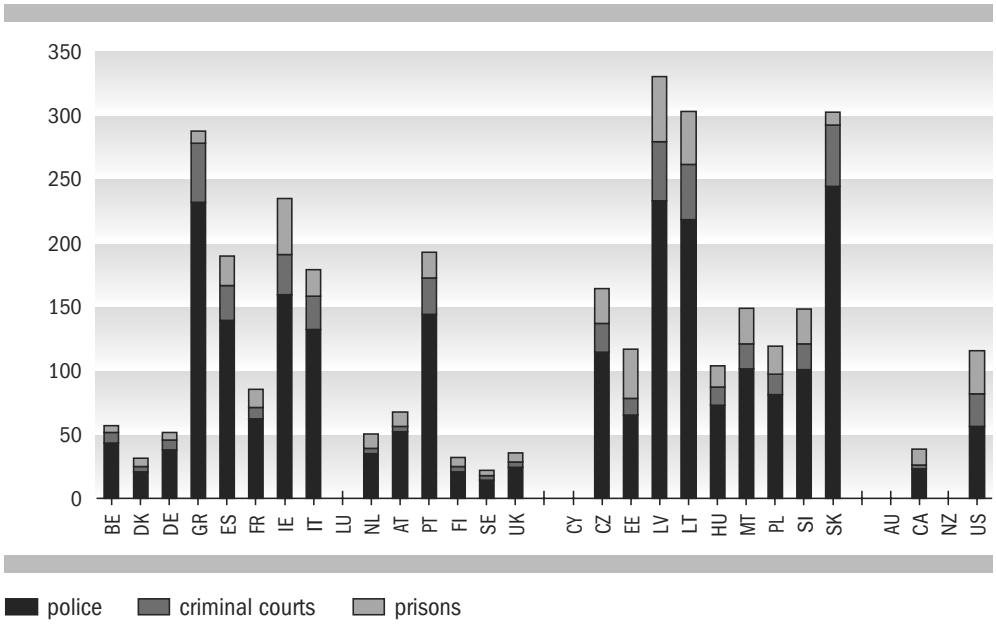
The number of suicides can be seen as reflecting prison conditions. According to Table 5.7 there are few prison suicides in the Netherlands. The US figure is remarkably low, so low in fact that it is open to doubt. No correlation with spending per prisoner is evident. Table 5.7 suggests that the number of escapes in the Netherlands

is high. The figures mainly refer to escapes from semi-open prisons, however, which are relatively common in the Netherlands and Sweden. There are few escapes from closed prisons. Finally, some insight into rates of re-offending in the different countries would be useful. Unfortunately, however, no such information is available.

Recorded crime, which was already discussed in connection with Figure 5.5, can be seen not only as the starting point of all activities in the criminal justice system, but also as a measure of the effectiveness of the agencies concerned. One problem with effect indicators in general, and those for the criminal justice system in particular, is that many social actors and factors can contribute to the measured end result. This complication was discussed in Section 5.1.2. Figure 5.23 relates staffing levels in the criminal justice system to the scale of recorded crime and can be regarded as an indication of cost-effectiveness (whereby staff numbers rather than costs are the measure of resource use, given the lack of complete cost data).

There are several objections to the use of recorded crime figures. Firstly, the police have a certain latitude in deciding what deviant behaviour is regarded as serious enough to be officially recorded. Secondly, recorded crime might be regarded to some extent as a function of the efforts of the police, and therefore indirectly of the resources used. However, as the discussion of Figure 5.25 will make clear, there is no empirical evidence to support this conjecture. Section 5.6 looks at another source of information which is not subject to this shortcoming: victimisation surveys.

Figure 5.23 Personnel in police service, public prosecutions department, criminal courts and prison system per 1000 recorded crimes, 2000



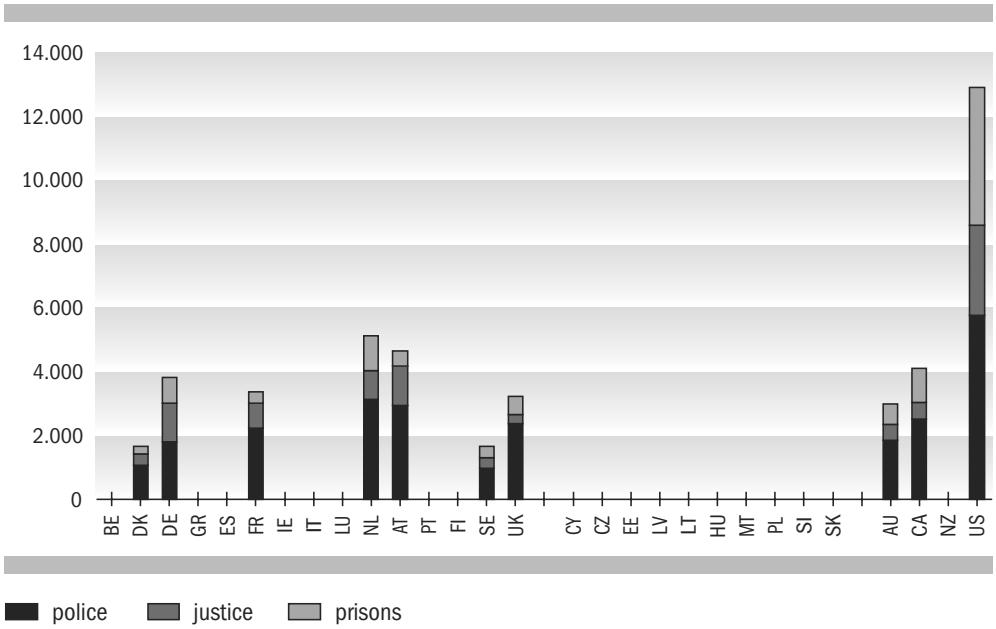
Source: European Sourcebook 2003; Dutch ministry of Justice, revision of various National sources

Figure 5.23 shows that the number of personnel in the police service and criminal justice system per 1,000 crimes varies sharply from country to country. In the Netherlands, Denmark, Finland, Sweden, England/Wales and Canada, the figure is well

below 50. Cyprus lies at the other extreme, with 900, and has been omitted from the figure to maintain readability. Greece, Spain, Ireland, Italy, Portugal, many new member states and the US also record high inputs of personnel (between 140 and 280). As the discussion of Figure 5.25 will make clear, the differences found here are enhanced by an apparent negative correlation between police numbers and the level of crimes. The Southern European countries and many of the new member states have low crime rates and high police numbers, while the reverse applies in other countries (Sweden, Finland, Denmark, Canada, England/Wales and the Netherlands).

It is interesting to look at total expenditure, too. Figure 5.24 presents some data, although information on spending is available for only a limited number of countries.

Figure 5. 24 Expenditure on police, public prosecutions department, criminal courts and prison system per offence, 2000 (PPP's in NL€)

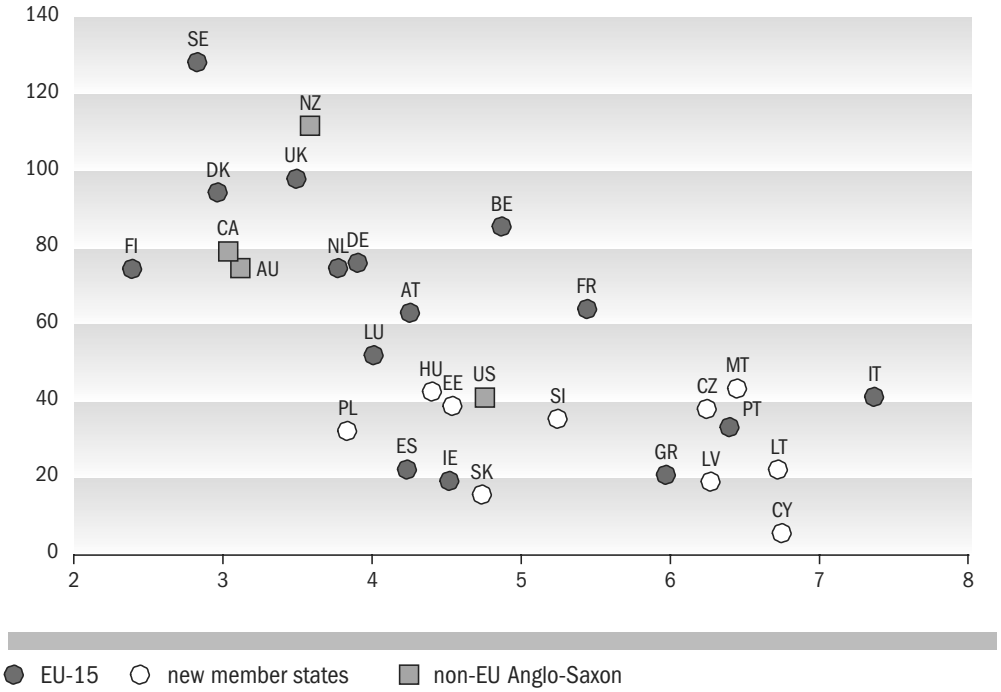


Source: Dutch ministry of Justice, revision of various National sources

At first glance, the picture in Figure 5.24 looks completely different from that in Figure 5.23. However, this is mainly because data on many countries are missing in Figure 5.24. The outcomes are similar for the countries that are represented in both figures, with the US way out in front (1,400 dollars per offence), the Netherlands as runner-up (500 dollars per offence) and Sweden and Denmark bringing up the rear (150 dollars per offence).

Figure 5.25 shows the relationship between the number of recorded crimes and staffing levels in the criminal justice system in a scatterplot.

Figure 5.25 Scatterplot of recorded offences (per 1000 population) versus criminal justice system personnel (per 1000 population), 2000



Source: European Sourcebook 2003, Home Office, Interpol; supplementary country data: Dutch ministry of Justice, revision of various National sources: SCP revision

Figure 5.25 demonstrates a clear negative correlation between the scale of the criminal justice system and crime rates. In the top left of the figure are a group of countries with low staffing levels and high crime rates: the Scandinavian countries, Canada, the Netherlands and England/Wales. Another group of Western European countries (Belgium, Austria, Germany and France) have average scores on both dimensions. A third group, including Spain, Ireland and most of the new member states, report average staffing levels and low crime rates. The fourth group have high staffing levels and low crime rates. They include the US, the other Southern European countries and the remaining new member states.

Incidentally, Figure 5.25 explodes the myth that the number of recorded crimes is a function of the resources absorbed by the police apparatus: in that case there would in fact be a positive correlation between recorded crime and resources allocated to the police force.

5.6 *Quality and effectiveness: the public's view*

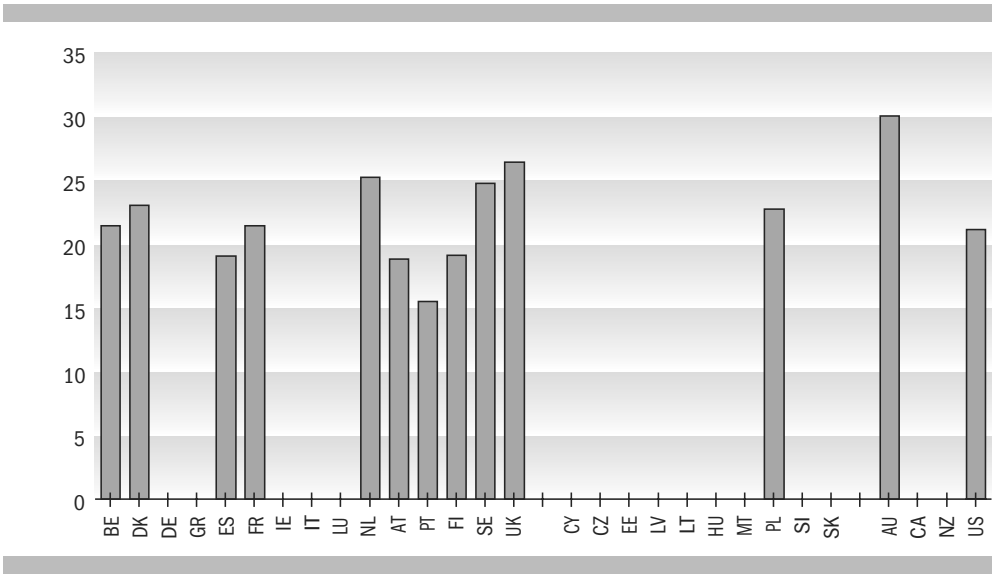
5.6.1 *Crime and victimisation*

Only a small proportion of offences, some 10% to 20%, are reported and registered by the police. Generally speaking, population surveys therefore give a much better indication of crime levels than do police statistics. However, surveys also have draw-

backs, including the distortions that are inherent in random sampling and the much less direct relationship of crimes reported by respondents with the work of the criminal justice system. Furthermore, only a small number of countries carry out surveys among victims. Finally, 'victimless crimes' (traffic offences, fraud, drugs crimes) are not included in victimisation surveys. The key questions in such surveys relate to the extent to which respondents have themselves been the victim of a crime. This information allows two indicators to be calculated. The first is prevalence: the proportion of respondents who have been the victim of a crime on one or more occasions over the course of a year. The second is the number of offences per 100 inhabitants in a year. This indicator is known as incidence.

The International Crime Victimisation Survey (ICVS) measures and compares the level of crime in various countries (Van Kesteren et al., 2000).[13] Figures 5.26 and 5.27 show some of the most important results.

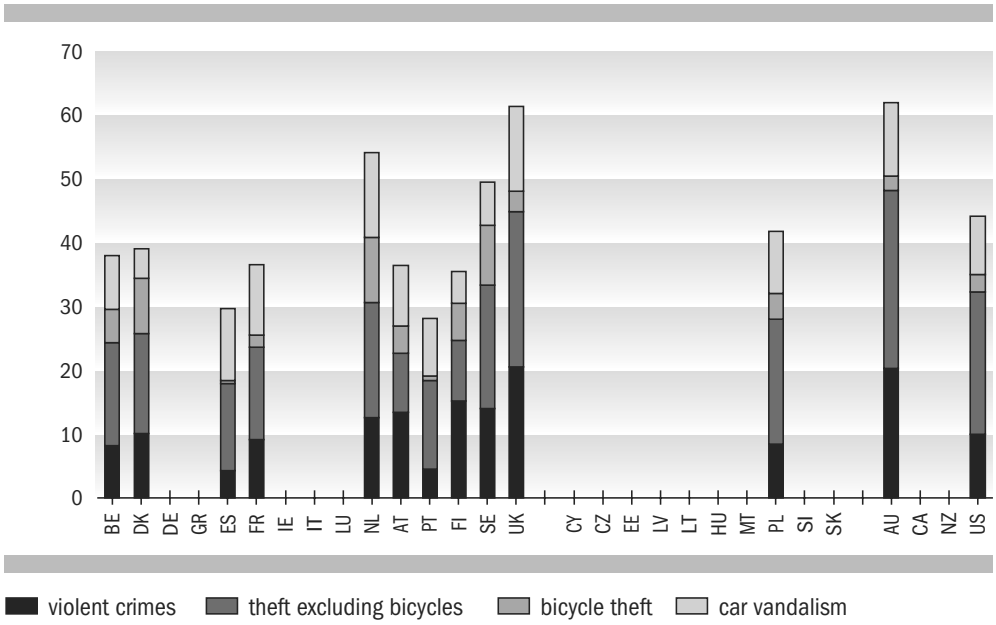
Figure 5.26 Prevalence: risk of victimisation, 2000 (percentage)



Source: International Crime Victimisation Survey

[13] It is important to realise, when interpreting the figures in the ICVS, that victims might have fallen victim to a crime in another country. So the result is not a precise measure of crime in a particular country, but of crime as experienced by victims who live in that country. Although the limited sample size in the ICVS does not allow any clear conclusions to be drawn about any possible distortion, the impact would not appear to be too great. Depending on the type of crime and the country, the proportion of offences experienced abroad is between 0% and 20%. For comments on the methodology see also Bruinsma et al., 1990.

Figure 5.27 Incidence: number of offences experienced per 100 respondents, 2000



Source: International Crime Victimisation Survey:

According to the International Crime Victimisation Survey (Van Kesteren et al., 2000), in 2000 prevalence in the Netherlands was 25 per 100 respondents. The incidence was 54 offences per 100 respondents. The incidence is greater than the prevalence because some respondents had been multiple victims, either of the same crime or of several different crimes.

From these data it may be concluded that three-quarters of the population have not been the victim of any crime, and that the rest have fallen victim to on average two crimes. Repeated victimisation is considerably more common with offences like assault (sexual or otherwise) and burglary than one would expect to see statistically (cf. DPJR, 1996). Polvi et al. (1990), for example, found that, once someone has been burglarised, the likelihood that they will be burglarised again increases fourfold. Information about repeated victimisation allows preventive measures to be targeted more effectively.

Quite strikingly, the ICVS reveals the Netherlands to have a relatively high risk of victimisation, in terms both of the likelihood that a respondent had fallen victim to a crime in 2000 (Figure 5.26) and of the number of offences per 100 respondents (Figure 5.27).

High figures for the Netherlands appear to result mainly from the exceptionally high frequency of two types of offence: bicycle theft and car vandalism. These two offences account for roughly 50% of the total number of crimes reported in the survey. In other countries the corresponding figure is much lower, at 25% to 35%.

Besides the specific opportunity factor in the Netherlands – the fact that there are far more bicycles to 'shoplift' than in other countries – its high level of urbanisation, combined with its level of prosperity, probably also play a role. These are generally regarded as criminogenic factors, particularly in relation to property offences.

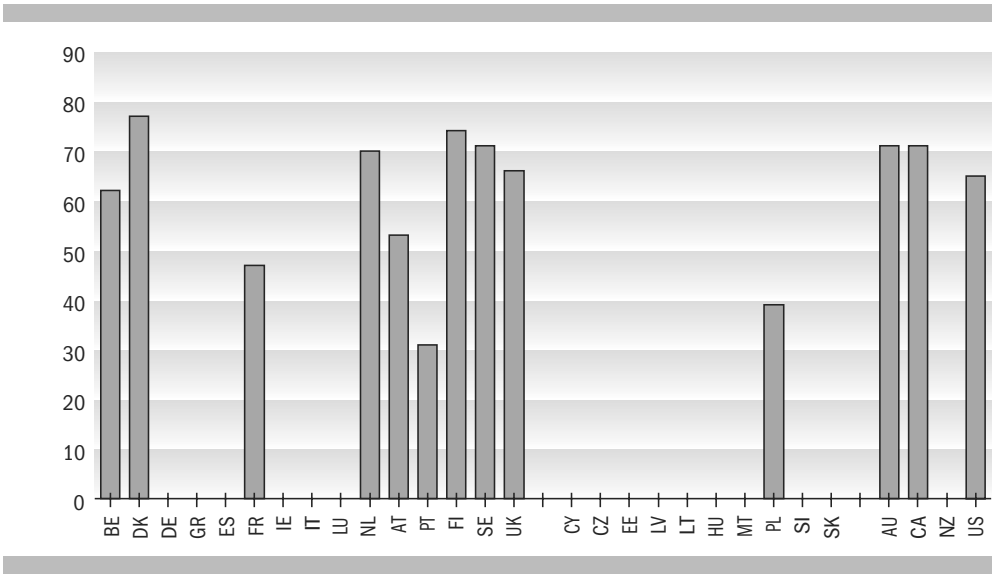
The picture is clearly different when it comes to other crimes. The Netherlands comes in fourth place for burglary (and attempted burglary), behind England/Wales, Canada and the United States. In terms of crimes against the person (robbery, assault and sexual crimes), the Netherlands falls somewhere in the middle.

In comparison with England/Wales and France, victimisation in the Netherlands is clearly lower when it comes to more serious crimes such as car theft, robbery, intimidation and assault.[14]

5.6.2 *Public opinion*

In the victimisation surveys respondents who had actually been victims were asked whether they were satisfied with the way the police had responded (Figure 5.28). In most countries 65% to 77% of victims were satisfied. Denmark scored a first, and the Netherlands also did fairly well, with 70%. Poland, Portugal and France did significantly worse.

Figure 5. 28 Satisfaction with police response, 2000 (percentage)

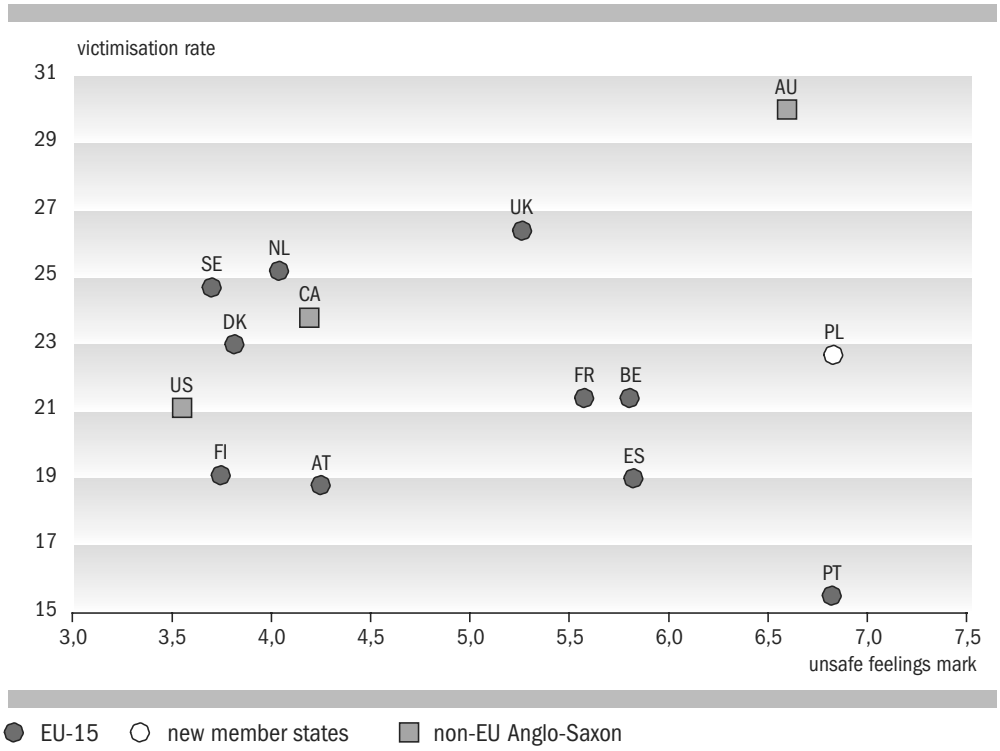


Source: International Crime Victimisation Survey

Figure 5.29 looks at the relationship between the level of crime according to victimisation surveys and people's fear of crime. This is approximated by the total standardised scores for three questions in the victimisation survey, concerning (1) the perceived risk of burglary, (2) fear of crime in the home and (3) fear of crime on the street. The proportion of respondents estimating the risk of burglary as likely to very likely, for example, ranges from 13% in Austria to 58% in Portugal (18% in the Netherlands). The proportion of respondents feeling unsafe when walking alone in the dark ranges from 14% in Sweden and the US to 35% in Australia, Poland and Spain (again, 18% in the Netherlands). These figures bear no relation whatsoever to the objective risk of violent victimisation in the countries considered.

[14] Germany did not participate in the ICVS in 1999.

Figure 5.29 Fear of crime and level of crime, 2000

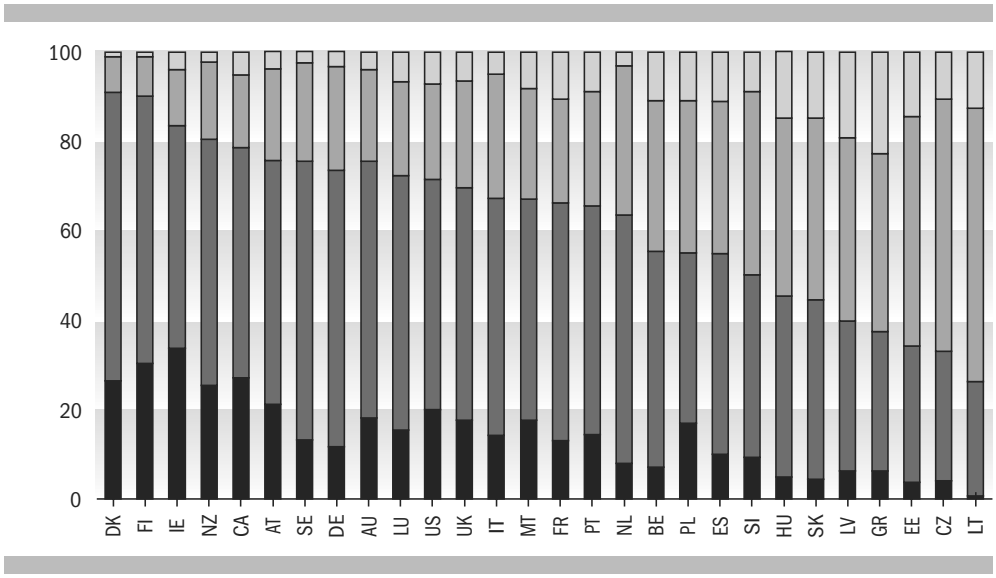


Source: International Crime Victimisation Survey. SCP revision

Figure 5.29 confirms the weak connection between fear of crime and the actual risk of victimisation. Respondents feel unsafe in Portugal, Poland and Australia, while their risk of actually falling victim to a crime in these countries is very low, average and high respectively. People feel relatively safe in the Netherlands, even though they have a relatively high risk of victimisation (Wittebrood 2001).

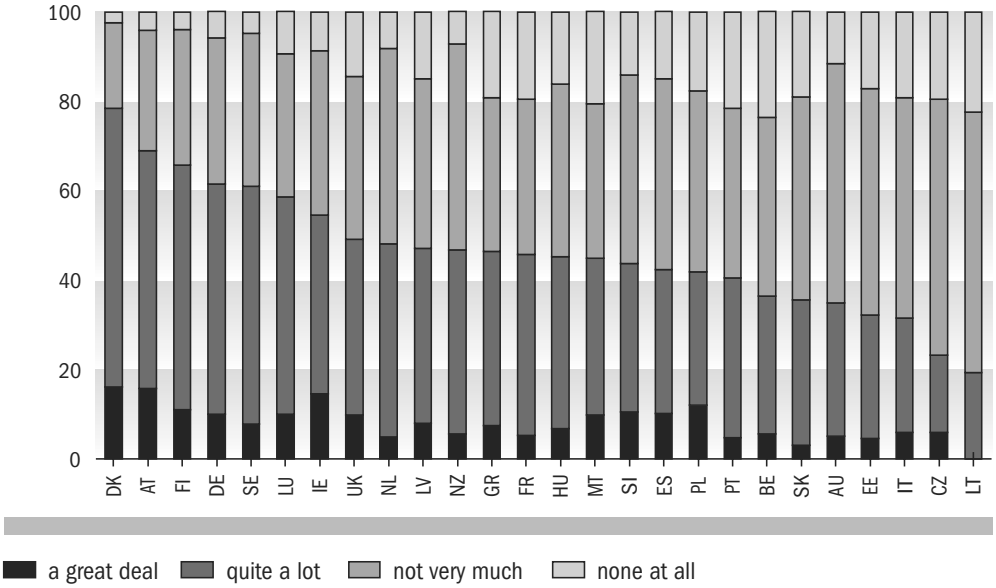
Figures 5.30 and 5.31 report confidence in the police, and the administration of justice system. In Denmark, 92% of the respondents said to have confidence in the police, as against 28% in Lithuania. Most of the EU-15, and the non-European Anglo-Saxon countries, post an average to high score. The Netherlands and Belgium fall in the middle, on 66% and 54% respectively. Greece has a considerably lower score (38%). The new member states also score low, except for Malta. A similar picture emerges for the administration of justice, albeit confidence in that organisation is generally lower than that enjoyed by the police. Again, Denmark tops the table with 79%, and Lithuania comes last with 19%. The Netherlands does slightly better than average, on 50%, and Greece, Latvia and Hungary rise to middle positions in the over-all rankings. New Zealand has a fairly poor score and Australia a bad score. Respondents' confidence in the administration of justice in Belgium, Australia and Italy (39%, 35% and 31% respectively) is significantly lower than their confidence in the national police.

Figure 5.30 Confidence in the police (1999/2000)



Source: European Values Survey (1999-2000), World Values Survey (1995-1997, non-EU counties)

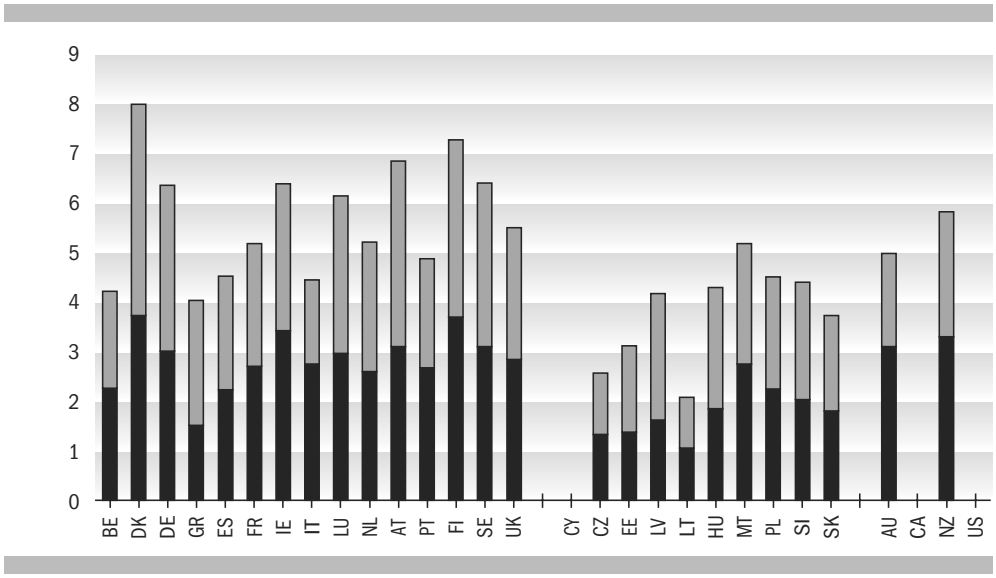
Figure 5.31 Confidence in the adminstration of justice, 1999/2000



Source: European Values Survey (1999-2000), World Values Survey (1995-1997, Australia and New Zealand)

Figure 5.32 shows composite scores for confidence in the police and administration of justice. To obtain these results, the z-scores for the responses ('quite a lot' and 'a great deal') were converted and added as elsewhere in this report, producing marks between 0 and 10.

Figure 5.32 Confidence in police and administration of justice 1999/2000



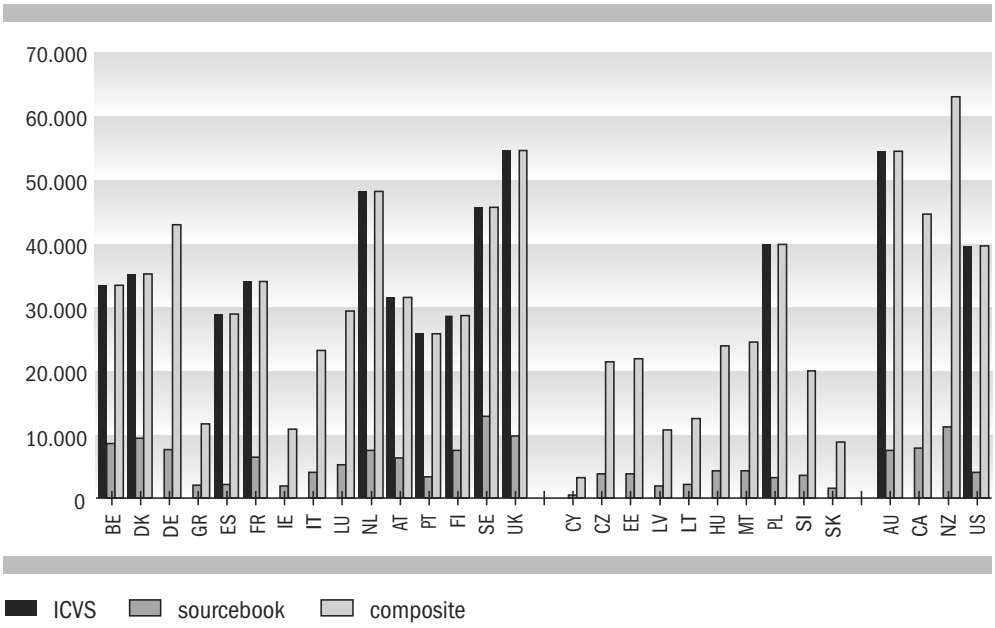
Source: European Values Survey; World Values Survey

Overall marks for confidence in the police and the administration of justice range between 2 and 8. Highest marks go to Denmark (8), Finland (over 7) and Austria (almost 7). The Netherlands comes in the middle, with 5. The Czech Republic, Estonia, Latvia and Slovakia score less than 4.

5.6.3 Closer analysis

Figure 5.33 looks more closely at the relationship between crime rates according to victimisation surveys and crimes recorded by the police.

Figure 5.33 Crime rates per 100,000 according to various measures (2000)



Source: International Crime Victimisation Survey 2000, European Sourcebook 2003; SCP revision

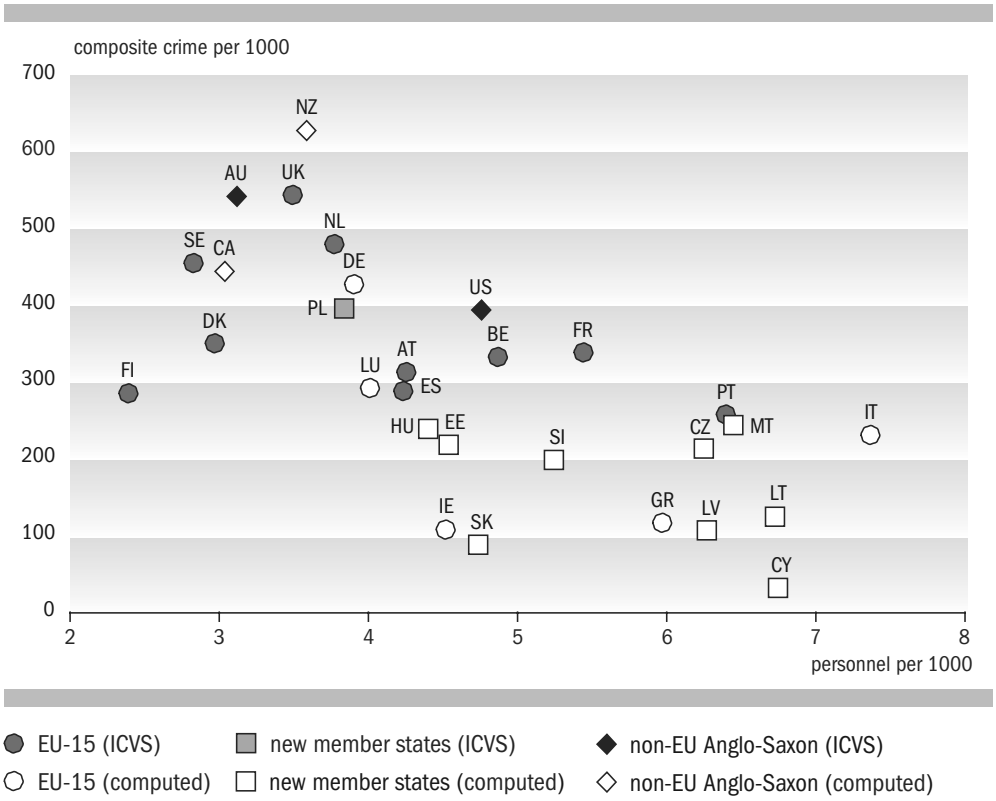
In all countries, only a proportion of offences reported in victimisation surveys, are recorded by the police.[15] The share of offences recorded by the police ranges from 8-9% in Spain, the US and Poland, to 25-35% in Finland, Sweden and Denmark. The Netherlands comes in the middle, with 15%.

This report has wrestled with the issue of which indicator should be used as a measure of actual crime rates. Crimes reported by the population (in representative surveys) seem a measure to be preferred over offences recorded by the police, when the objective is to analyse cost-effectiveness (Figure 5.34), and for the overall analyses in Chapter 7. Bearing in mind that 'victimless crimes' (traffic, drugs, fraud) are not included, victimisation surveys should be regarded as the superior choice, despite the risk of distortion inherent in random sampling. Unfortunately, survey data, unlike recorded crime figures, are available for only a limited number of countries. In the absence of anything better, therefore, we have calculated a composite indicator whereby the results of victimisation surveys are taken as the norm where they are available. In the case of the other countries, recorded crime has been corrected upwards, by applying the ratio of the total crime according to victimisation surveys to the total of recorded crimes, found in those countries where these figures are available. This approach could perhaps be improved upon if one were to take account of specific country characteristics when imputing the missing data, but we have not taken this idea any further in the present report.

[15] To make the figures more comparable, traffic offences and vandalism have been excluded. The former are not represented in victimisation surveys, and the latter are not included in the recorded crime figures presented in the European Sourcebook.

Figure 5.34 looks at the relationship between crime rates and staffing levels in the police and administration of justice. The composite measure discussed in the previous paragraph is using as the indicator of crime.

Figure 5.34 Scatterplot of crime according to victimisation surveys versus personnel in criminal justice system, 2000



Source: Dutch ministry of Justice, revision of various National sources; International Crime Victimisation Survey; European Sourcebook 2003. SCP revision

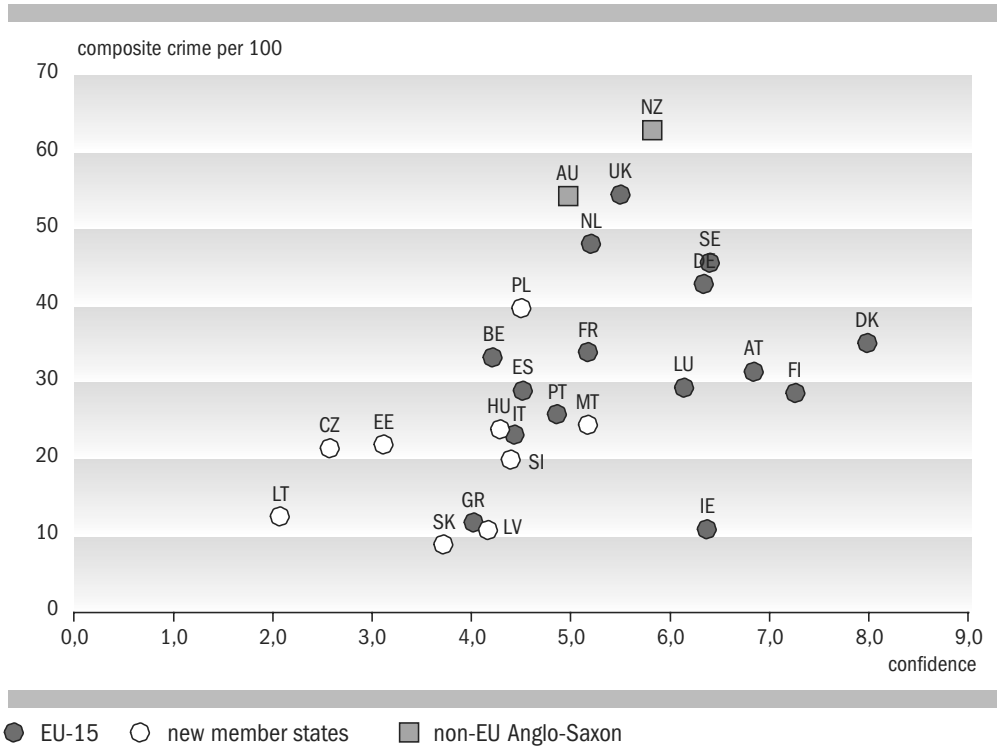
In a sense, Figure 5.34 refers to cost-effectiveness, albeit that the crime rate is an inverse indicator of effectiveness (high crime equals low effectiveness). We have also taken staff numbers as a basis rather than expenditure, because of incomplete spending data. The criminal justice system can be depicted as a circle. The starting point is offences brought to the attention of the police. The investigation, prosecution and punishment of offenders is intended to reduce crime, via the deterrent effect of the likelihood of being caught and punished, and via the lock-up effect. Recorded crime is thus the starting point of the entire process, but actual crime as an effect indicator is also the end point. As stated above, we would rather prefer to measure actual crime rates via victimisation surveys (ICVS), but these surveys are held in only a limited number of countries. For the rest, the data used are in fact corrected recorded crime data. It should therefore come as no surprise that Figure 5.34 bears a strong resemblance to its counterpart, Figure 5.25. The message is also roughly the same: countries that devote significant resources to fighting crime (bottom right) have low crime rates, and vice versa. The first group includes mainly

the Southern European countries and the new member states, while the second comprises a number of Western European and Anglo-Saxon countries. Although the correlation is clear, the causal relationship is not. It is possible that factors other than staff numbers are partially responsible for the correlation. One strong possibility would be the severity of punishment, particularly the number of prison days per recorded offence, which is high in the countries that also have high staff numbers in their criminal justice system.

Despite problems inherent in random sampling, the data from crime victimisation surveys must be regarded as a better measure of crime than police crime figures. Such data are indicated by dark symbols in the figure. We should note that the negative correlation between resource use and crime is less clear in the case of the data from victimisation surveys than for the other data.

Finally, Figure 5.35 considers the relationship between effectiveness and confidence. Here too, the indicator of confidence is based on the composite indicator in Figure 5.33.

Figure 5.35 Police and criminal justice system: crime and confidence, 1999/2000



Source: see Figures 5.32 and 5.33

Contrary to expectations, there appears to be a weak positive correlation between crime levels and confidence in the police and administration of justice. The Northern and Western European countries, plus Australia and New Zealand, have average to high crime rates, with comparable levels of confidence. By contrast, the Southern European countries and, above all, the new member states, combine low confidence

in the police and administration of justice with relatively low levels of crime. Table 5.8 relates the rather surprising outcomes to some other findings in this report.

Table 5.8 Connections identified in this report (schematic)

	crime rate	repressiveness (severity of punishment))	repressiveness (number of staff)	probability of punishment	productivity	confidence
Northern and Western Europe, Australia, New Zealand	high	low	low	low, except for Finland and England/Wales	high	high
Southern and Central European countries	low	high	high	high, except for Portugal and Spain	low	low

Source: SCP

The same groups of countries are notable for the repressiveness of their criminal justice system (severity of punishment and resource use), probability of punishment and productivity. The low productivity in countries with low crime rates is connected with high staffing levels both per capita and in terms of the scale of crime. The low confidence in the police and administration of justice in these countries is possibly related to yet another factor associated with repressiveness: the strong focus on tackling crime and catching offenders might mean that there is less regard for the rights of offenders and the soundness of evidence. There might also be a connection between low pay in the public sector and low confidence, related to corruption in some of the countries concerned (see also Chapter 6). An alternative explanation could be that a lack of confidence moves people not to report crimes to the police. Indeed, the discrepancy between the number of crimes reported in population surveys and registered offences is relatively high in countries such as Poland, Portugal and Spain (see Fig. 5.33). However, this registration failure can only partly explain the differences between the country groups. Further research in this area seems warranted.

6 Public administration

Steven Van de Walle, Miekatrien Sterck, Wouter van Dooren, Geert Bouckaert en Evert Pommer[1]

6.1 Introduction

After the rapid expansion of the welfare state in the 1950s and 1960s, the public sector has been under considerable pressure in the past few decades. Declining public confidence in government institutions and growing demands on public finances have prompted governments to initiate measures to trim the public sector and make it more efficient and effective. Reform strategies adopted can be catalogued as: Maintain, Modernise, Marketise and Minimise (Pollit and Bouckaert 2004).

'Maintain' involves tightening up traditional control mechanisms. The existing system is stretched, for example, by placing linear restrictions on expenditure (the 'cheese slice method'), with no downward revision of policy targets. Another example of the Maintain strategy is more detailed control of expenditure programs. Although this strategy causes less disruption in the functioning of government organisations, it is probably not adequate to tackle existing financial and legitimacy problems of the public sector.

'Modernise' involves organising alternative structures and processes of government policy making. However, any modernisation operation must be consistent with traditional values of public service provision. The public sector is intrinsically different from the private sector, and any fundamental reform has to take account of these differences. The focus of reforms is to improve management (managerial modernisation) and/or to foster participation by citizens and user groups (participatory modernisation).

'Marketise', the third strategy, involves introducing a private-sector focus to the public sector and its values. It does not mean that services are privatised. The aim is still primarily to reform the public sector, not to reduce its scope and public outlays. Techniques common to the private sector are transplanted wholesale to the public sector. In doing so, the unique character of public sector services is implicitly called into question. One example of this strategy has been the introduction of internal competition (competitive tendering) in New Zealand and the United Kingdom.

1 This chapter is mainly based on Van de Walle et al., 2004. The first four authors are employed at the Public Management Institute ('Instituut voor de Overheid') of Leuven University.

'Minimise' – reducing the public sector – involves privatising functions that have traditionally been in the domain of the public sector. The railways in the United Kingdom are perhaps the most notorious example of privatisation, resulting in a poorer safety record and higher rail fares. Privatisation has been much more successful in other sectors (such as telecommunications).

Many monitoring systems have been put into place as part of these reforms, in order to chart the performance of the public sector. This is an essential prerequisite for the success of new management techniques, such as performance budgets, performance contracts and strategic plans. Such national systems produce a wealth of information, but they do not extend beyond the confines of a particular administrative system. National boundaries are rarely crossed. It is in fact difficult to consolidate the data, as different countries use different definitions for the variables concerned. The data available on public adminsitration mainly concerns subjective perceptions of performance, rather than actual measurements of performance. This lack of objective data makes it impossible to draw generalised conclusions as to what is the optimal administrative system, even if we wanted to. This chapter therefore aims above all to point out the possibilities and limitations associated with the comparison of administrative systems at European level, drawing from empirical data on public administration performance.

The public administration includes all those activities directed at policymaking, legislation and management of the public sector. Activities producing individual services for citizens, like health care and education, are not the domain of public administration. However, in practice the demarcation between policy, legislation and management on the one hand and concrete services provided to individual citizens on the other hand, is not always easy to draw. Moreover, data available on public sector performance usually do not allow public administration activities to be identified separately. Consequently, public administration and activities performed by the public administration must often be measured by related concepts, like 'government' and 'general public services'.

The chapter is structured as follows. An overall comparison of administrative systems (Section 6.2), covering administrative culture, the degree of decentralization and the trend towards the autonomisation of government organisations is followed by a survey of resources claimed by the public administration (Section 6.3). Section 6.4 looks at administrative processes in the public sector, including financial management, human resources management and *e*-government. The final section examines the quality of the government and confidence in the Civil Service.

6.2 *Administrative systems*

6.2.1 *Administrative culture*

Differences in administrative culture have a major impact both on fundamental choices concerning the structure of the public sector, and on the daily functioning of the government apparatus. Administrative culture forms part of a wider political and

social culture.[2] Hofstede's dimensions are probably the best-known categorisation of administrative cultures (Hofstede 1980), although other attempts have been made (Mamadouh 1999). It is clearly no simple matter to group countries on the basis of their administrative culture.

Loughlin (1994) groups countries on the basis of broad philosophical and cultural traditions. He distinguishes an Anglo-Saxon (minimal state), a Germanic-organicist and a French Napoleonic state tradition. The Scandinavian type is a mix of the first two. For Pollitt and Bouckaert (2004), administrative culture is that which is considered normal and acceptable in an organisation, and they have mapped the extent of a *Rechtsstaat vs. public interest* tradition in a country. In the *Rechtsstaat* (rule of law) model, the state is the central integrating force in society, and administrative law takes a prominent place in this tradition. In the *public interest* model the state assumes a less prominent role in society and is regarded as something of a necessary evil. Accountability is more important here than legality. Of course, *Rechtsstaat* and public interest are not extremes on a continuum, and in some countries, such as the Netherlands, Finland and Sweden, a trend towards other models can be observed. Hooghe (2002) used four dimensions developed by Page (1995) – cohesion, autonomy from political control, caste-like character and non-permeability of external interest – to construct an index of 'Weberian bureaucratic tradition' (strong, medium, weak), indicating to what degree a national administrative culture corresponds to the Weberian model (strong cohesion, large degree of autonomy from political control, strong caste-like character of the bureaucracy and low permeability of external interests). Her research focused on the European Commission, where differences in administrative cultures are of course more pronounced.

Hajnal (2003) analysed public administration education programmes in Europe. European countries are clustered in three groups. A 'legal' group of countries, where there is a strong focus on law in public administration education, a 'public' group where the unique public and political character of the public administration is recognised, and a 'corporate' group, where (business) management techniques take a central place in the curriculum.

[2] See Peters (1989) for a detailed discussion of the phenomenon of 'administrative culture'.

Table 6.1 Administrative cultures in EU-15 countries

	administrative culture (Pollitt and Bouckaert 2004)	state traditions (Loughlin 1994)	type of national administration: Weberian bureaucratic tradition (Hooghe 2002)	clusters in PA education (Hajnal 2003)
AT	–	Germanic-organicist	weak weberian	–
BE	*rechtsstaat*	French-Napoleonic (until 1988), Germanic-organicist (after 1988)	weak weberian	public
DE	*rechtsstaat*	Germanic-organicist	medium weberian	–
DK	–	Scandinavian (mixture of Anglo-Saxon and Germanic)	medium weberian	corporate
ES	–	French-Napoleonic (until 1978), Germanic-organicist (after 1978)	medium weberian	public
FI	tending to *rechtsstaat*		weak weberian	–
FR	predominantly *rechtsstaat*	French-Napoleonic	strong weberian	public
GR	–	French-Napoleonic	weak weberian	legal
IE	–	Anglo-Saxon (minimal state)	strong weberian	corporate
IT	*rechtsstaat*	French-Napoleonic	weak weberian	legal
LU	–		weak weberian	–
NL	originally very legalistic, but has changed to pluralistic/consensual	Germanic-organicist	medium weberian	corporate
PT	–	French-Napoleonic	medium weberian	legal
SE	originally legalistic but has changed to corporatist	Scandinavian (mixture of Anglo-Saxon and Germanic)	medium weberian	public
UK	public interest	Anglo-Saxon (minimal state)	strong weberian	–

- : not available

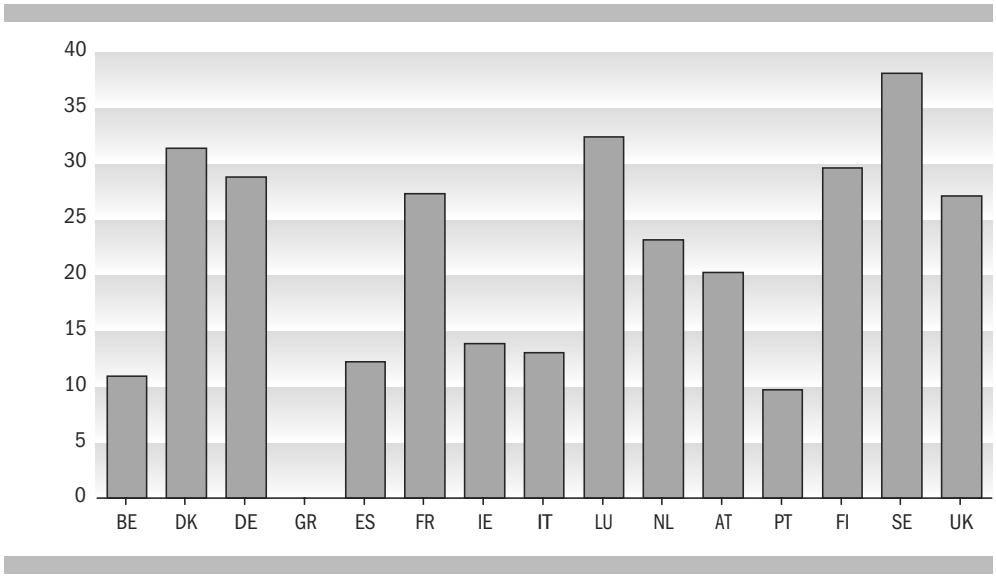
The four categorisations discussed here each have their own focus, so it is difficult to obtain a clear picture. The categorisation of some countries seems fairly coherent, but the absence of clear indicators means it still entails some risk. The Anglo-Saxon tradition differs considerably from the continental tradition. This is reflected, among other things, in the fact that many public servants in the United Kingdom are generalists, while in Germany they tend to have a legal background. The large number of studies of cultural differences among European public servants shows how important it is to take a more in-depth look at this subject. Obviously, the evolution towards a European Administrative Space will be affected by different views on the role of the public administration in society.

6.2.2 *Degree of local decentralization*

Another important characteristic of administrative systems is the degree of decentralization. Decentralization has many faces. One is functional decentralization, whereby resources and powers are devolved to semi-autonomous institutions. Then there is territorial decentralization, which increases the role of other tiers of government, such as regions and local authorities. We focus here on decentralization to the local level. Autonomised institutions are examined in the next section. There appear to be major differences between countries in the degree of decentralization.

Decentralization is usually approached from a financial perspective, with a focus on devolving public resources. Figure 6.1 shows the proportion of the government budget spent by local authorities. Three groups of countries may be distinguished. Firstly, the Scandinavian countries, with a very strong local sector (accounting for over 30% of spending). The outsider here is Luxembourg. The second cluster comprises a number of Central European countries (20%-30%). One notable country included in this group is France, which generally has a centralist image. Finally, we have a number of countries with a small local sector, mainly Southern European countries, and also Ireland and Belgium.

Figure 6.1 Spending by local authorities as % of total government expenditure



Source: Council of Europe (1997)

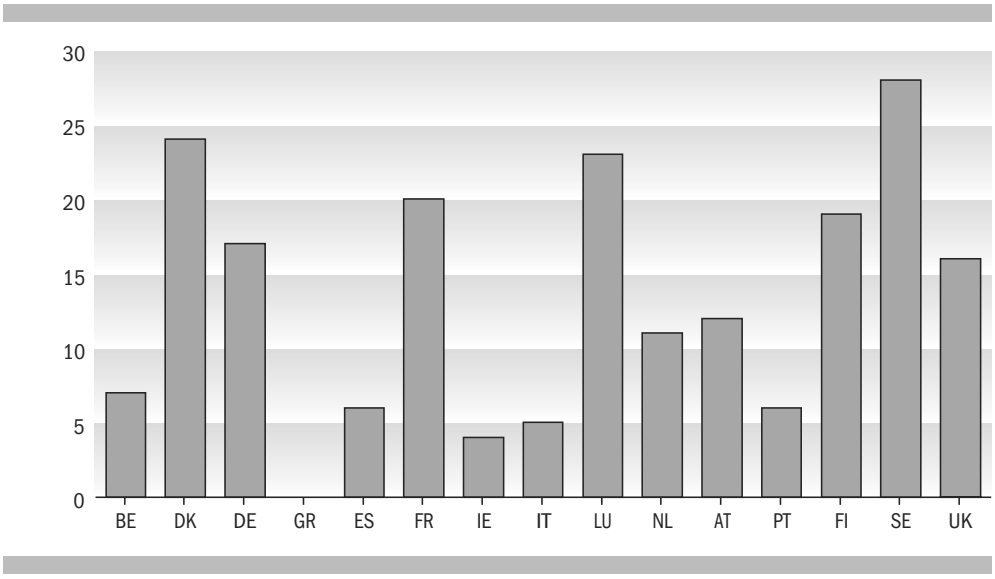
These figures give an first impression. However, the relative share in total public spending is too coarse a measure of decentralization. Can we call it decentralization when a local authority merely acts as the agent of a higher level of government? What autonomy do local authorities have? Figures on spending must always be viewed in the light of autonomy. Indicators of autonomy include spending freedom and freedom to collect resources. The latter concerns the freedom to increase or cut back certain flows of income, and the former an authority's freedom to spend its income as it sees fit. We can examine these concepts on the basis of local authorities' income

structure. Spending freedom and freedom of resources can be established by analysing a breakdown of local authority income.

- Taxes: high freedom of resources, high spending freedom
- Loans: high freedom of resources, high spending freedom
- Shared taxation: low freedom of resources, high spending freedom
- General grants: low freedom of resources, high spending freedom
- Fees & charges: high freedom of resources, low spending freedom[3]
- Targeted grants: low freedom of resources, low spending freedom

Figure 6.2 combines the level of local government expenditure with spending freedom, as a measure of autonomy, showing the product of the percentage of the government budget spent by local authorities (see Figure 6.1) and the percentage over which the local authority has a high degree of spending freedom.

Figure 6.2 Autonomy of local authorities (% of total government budget)



Source: Council of Europe (1997)

The groups identified above remain largely intact. A number of atypical positions are confirmed. France, for instance, despite its centralist image, tends towards the Scandinavian model. Ireland has only a limited degree of decentralization, and thus differs strongly from the United Kingdom, with which it is often associated. The Netherlands finances local authorities to a large extent by means of targeted grants and is therefore less decentralised according to this measure. It ends up closer to Belgium, as was to be expected. Local administration in the Netherlands and

3 This income flow can be increased by raising either performance or charges. Spending freedom is limited, since charges do not always cover costs, so no new policy freedom is created.

Belgium has developed since the early nineteenth century on the foundations laid during the Dutch Republic.

Another indicator of the degree of decentralization is the distribution of public servants among the different tiers of government. Table 6.2 shows the proportion of public servants employed at the various levels of administration. It clearly shows a shift in staff employed by central government to staff on the payroll of local and regional authorities. The proportion of public servants working in central government is declining, while the proportion of staff working at the local and regional level is on the increase. The Scandinavian countries (Finland (23.4%) and Sweden (17.3%)) and most of the federal countries (Australia (12.1%), Germany (11.5%), Canada (17.1%) and the United States (13.5%)) have small central governments. Belgium is an exception, on 34.3%. In unitarian states such as France (51.6%), the Netherlands (74.2%) and Italy (57.9%), the proportion of public servants working in central government is significantly higher. In 2000, as many as 90.9% of public servants worked in central government in New Zealand.

Table 6.2 Percentages of public servants working in each tier of government

	central government			other level of government		
	1990	1994	2000	level	1994	2000
Belgium	53.7 [b]	39.9 [c]	34.3	regional	14.1 [c]	14,8
				local	46.0 [c]	50,8
Germany	21.6	11.9	11.5	länder	51.0	52.2
				municipalities	37.1	36.3
France	55.0	48.7	51.6 [d]	sub national	30.7	25.3 [d]
Italy	63.0	63.0	57.9 [d]	regional	23.0	26.8 [d]
				municipalities	14.0	15.3 [d]
Netherlands	70.1	73.2	74.2 [a]	regional	5.2	4.7 [a]
				municipalities	21.6	21.1 [a]
Finland	24.3	25.2	23.4 [a]	municipalities	74.8	76.6 [a]
Sweden	26.7	17.3	n.a.	regional	24.6	n.a.
				municipalities	58.1	n.a.
UK	47.7	47.7	47.6 [d]	local	52.3	52.4 [d]
Australia	15.0	14.6	12.1 [e]	state	73.3	77.1 [e]
				local	12.1	10.8 [e]
New Zealand	90.1	89.7	90.9	local	10.3	9.1
Canada	17.9	17.1	13.2	provincial	44.1	51.9
				local	38.9	35.0
USA	16.7	15.2	13.5	state	22.6	23.1
				local	61.1	63.4

Notes: a: figures are for 1999; b: figures are for 1989; c: figures are for 1995d: figures are for 1997; e: figures are for 1998

Source: Pollitt and Bouckaert (2004)

6.2.3 Autonomisation of government organizations

This section takes a close look at the trend towards granting government organisations autonomous status, otherwise known as autonomisation. Unlike territorial decentralization to the local level, this is a relatively recent strategy. However, it has formed the core of many public sector reforms in Europe. Autonomisation is based on the hypothesis that greater autonomy for 'front office' agencies leads them to work more efficiently and effectively. The Scandinavian countries have a fairly long tradition of autonomisation. However, in most countries the trend did not set in until the advent of New Public Management in the 1980s (Hood 1991).

Autonomisation can take various forms. There are differences in terms both of legal status, and of the degree of policy and management autonomy. Here, however, we distinguish between three major types of autonomous organisation: arm's length agencies, public law agencies and mixed agencies. *Arm's length agencies* have been hived off from their parent organisation, but remain answerable to the minister. They might still form part of the parent organisation, or they might have their own separate legal status. Examples include the United Kingdom's executive agencies, and the Netherlands' *baten-lastenagentschappen*. *Public law agencies* are bodies set up under public law which are institutionally separate from the parent organisation and have their own board. Examples include the Netherlands' *zelfstandige bestuursorganen* (ZBOs), the United Kingdom's non-departmental public bodies and New Zealand's crown entities. The third group of agencies are private-law bodies that have a public function. Examples include public enterprises and non-profit organisations. These are therefore sometimes referred to as mixed agencies.

Table 6.3 reviews the three forms of autonomisation in fourteen countries, indicating which forms exist in each country, whether they form part of the central budget, and the size of their budgets in relation to the total government budget. This information is helpful to indicate the degree of autonomy and the relative importance of the different forms of autonomous organisations. The data have been drawn from a survey by the OECD and the World Bank (OECD and World Bank 2003).

Table 6.3 Forms of autonomisation

	arm's length agencies[4]		public law agencies[5]		mixed agencies[6]	
	part of central budget?	% of overall government budget	part of central budget?	% of overall government budget	part of central budget?	% of overall government budget
BE	yes, entirely	<10%	yes, partially	10-20%	–	–
DK	–	–	yes, entirely	10-20%	yes, partially	–
DE	yes, entirely	10-20%	yes, partially	10-20%	no	<10%
FR	yes, entirely	–	no	–	no	–
GR	yes, entirely	–	yes, partially	–	no	–
IE	yes, entirely	–	yes, partially	<10%	no	<10%
ES	yes, entirely	–	yes, partially	–	yes, partially	–
PT	yes, entirely	40-60%	yes, entirely	40-60%	no	<10%
UK	yes, entirely	–	yes, entirely	–	yes, entirely	–
NL	yes, entirely	<10%	yes, partially	10-20%	yes, partially	<10%
HU	yes, entirely	–	yes, partially	–	yes, partially	–
CZ	yes, partially	–	no	–	no	–
AU	yes, entirely	10-20%	yes, partially	<10%	no	<10%
NZ	yes, entirely	<10%	yes, entirely	40-60%	no	<10%

-: not available

Source: OECD and World Bank (2003)

4 "Arm's length agencies have no separate entity from the state; the financial framework is predefined; most are funded through allocations from the state budget, and their budget is annually reviewed through the state budget process; no own accounts; e.g. semi-autonomous bodies in New Zealand, executive agencies in the UK (OECD and World Bank 2003)."

5 "Public Law Agencies: 100 per cent public ownership; partially or completely institutionally separate from ministries; can be partially separate or fully separate legal bodies; function mostly under public law; not commercially oriented; most PLAs are tax-revenue financed, and their budget is part of the general budget law; own accounts; e.g. public law ZBOs in the Netherlands, crown entities in New Zealand, most non-departmental public bodies in the UK, Swedish agencies and boards (OECD and World Bank 2003)."

6 "Mixed agencies function mostly under private law, usually with a full separate legal identity from the state; commercially oriented; usually mostly sales revenue financed and can carry forward surpluses, borrow and lend; their budgets are separate from those of ministries; own accounts; e.g. private law ZBOs in the Netherlands (OECD and World Bank 2003)."

In most countries, the entire budget of arm's length agencies is part of the budget of the central or federal government. This is due to the fact that these agencies are still answerable to central government, even though they have been placed at arm's length. Their share of the total government budget ranges from less than 10% to 20%. One exception is Portugal, where the budget of arm's length agencies accounts for 40% to 60% of the total budget. The budgets of public law agencies are usually only partially included in the central government budget. Their proportion of the total government budget ranges from less than 10% to 20%. In Portugal and New Zealand, public law agencies account from 40% to 60% of the budget.

Finally, mixed agencies do not form part of the central budget in the majority of the countries studied. In most cases, their share of the total government budget is below 10%.

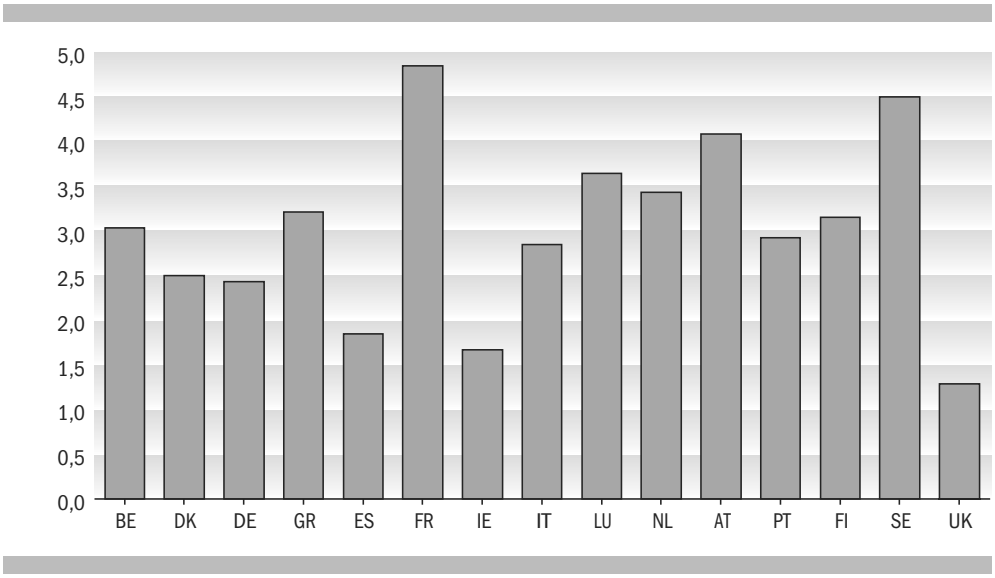
6.3 Use of resources

Public administration includes policy making, legislating policy and management of the public sector. The UN classification of functions of government distinguishes general public services, including legislative, executive, financial, fiscal and foreign activities, apart from other typical public functions like defence, public order and safety.[7] This classification fits very well the usual definition of public administration activities. Unfortunately, this information is only available for EU-15 countries. The new member states will follow this classification from 2004.

The share of expenditure on general public services in GDP varies between 1,3% (United Kingdom) and 4,8% (France). Other countries are scattered evenly between these extreme values (Figure 6.3). Different levels of expenditure are partly explained by differences in over-all public spending levels (Figure 2.6). Expressed as a share of GDP, public expenditure is high in Sweden and Denmark and low in Ireland and the UK. The same pattern holds for expenditure on general public services.

7 The various functions are: (1) general public services, (2) defence, (3) public order and safety, (4) economic affairs, (5) environment protection, (6) housing and community amenities, (7) health, (8) education, (9) recreation, culture and religion, (10) social protection.

Figure 6.3 Expenditure on general public services of EU-15 countries, 2001 (percentage of GDP)[a]

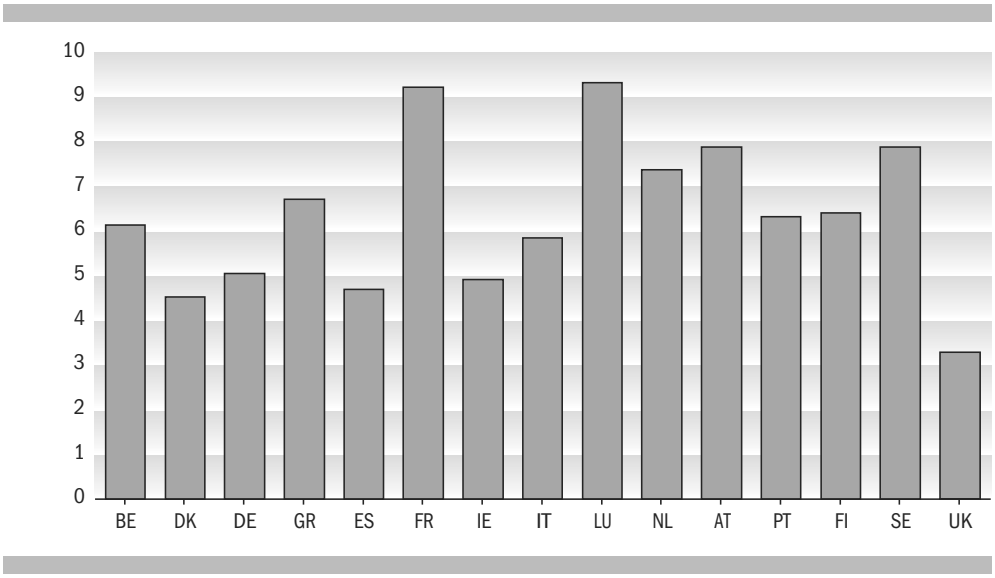


a Excluding debt interest payments (classified as property income consolidated) and foreign transfers (classified as others transfers consolidated).

Source: Eurostat

The share of general public services in total government expenditure varies widely between EU-15 countries (Figure 6.4). Luxembourg and France spend well over 9% of total government expenditure on general public services, while the United Kingdom spends only 3%. A closer view shows a striking similarity between Figures 6.3 and 6.4. Obviously, countries spending much on general public services (Figure 6.3) also devote a larger part of total government expenditure to produce general public services (Figure 6.4).

Figure 6.4 Government expenditure on general public services of EU-15 countries, 2001 (percentage of total government expenditure)[a]

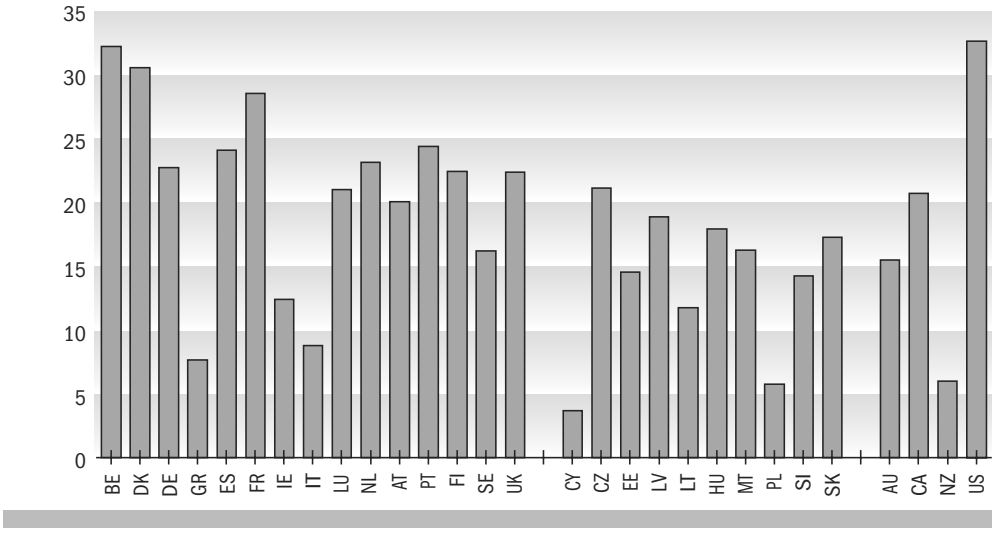


a Excluding debt interest payments (classified as property income consolidated) and foreign transfers (classified as others transfers consolidated).

Source: Eurostat

In Figure 2.12 (Chapter 2) the share of employees in the public administration, expressed as a percentage of total employment, appeared to range from less then 1% in Cyprus to more then 8 percent in Belgium. Because public administration produces public services, it's also relevant to relate employment in public administration to total population (Figure 6.5).

Figure 6.5 Employees in public administration per 1.000 population, 2000

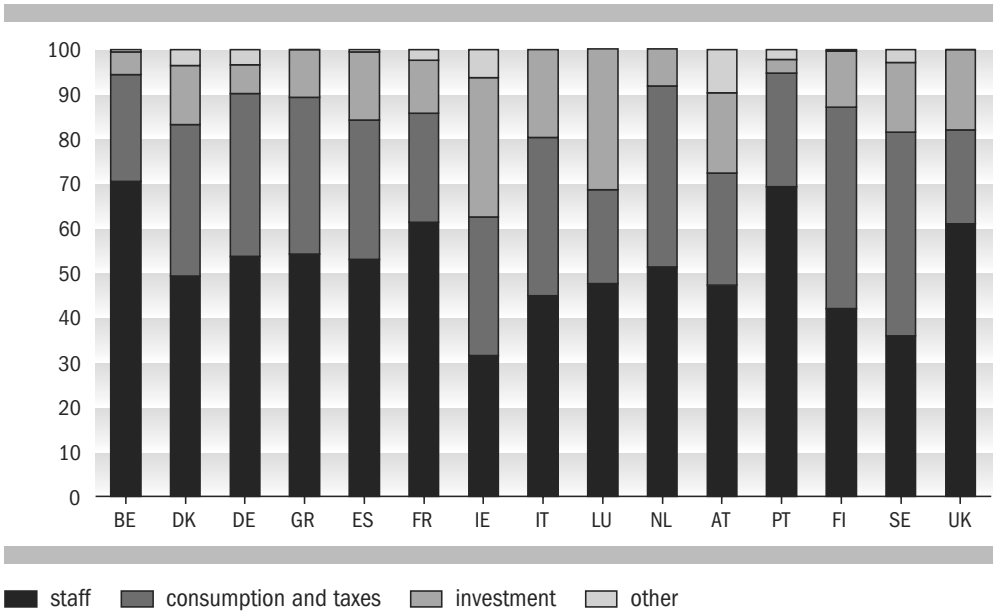


Source: OECD, ILO, NATO, European Sourcebook, US Sourcebook, AIV (SCP revision)

The number of employees per 1.000 inhabitants ranges from 4 in Cyprus to 33 in the United Status. In EU-15 countries the ratio of public administration staff is low in Greece, Italy and Ireland and high in Belgium, Denmark and France. The staff-ratio ends up between 15 and 25 in the other EU-15 countries. Most new member states end up between 10 and 20 employees per 1.000 inhabitants, except for Cyprus and Poland (about 5) and the Czech republic (just over 20).

The ranking of EU-15 countries according to Figure 6.3 (expenditure on Civil service related to GDP) and to Figure 6.5 (civil servants related to inhabitants) differs, although the relation is positive. On top of the civil expenditure ranking are France, Sweden and Austria and on top of the civil staff ranking are Belgium, Denmark and France. Inversely, at the bottom of the civil expenditure ranking are the United Kingdom, Ireland and Spain and at the bottom of the civil staff ranking are Greece, Italy and Ireland. These differences can be attributed partly to differences in share of cost of staff in total production of general public services (Figure 6.6). For example, Sweden scores high on civil expenditure but low on share spent on staff; Belgium scores moderate on civil expenditure but high on share spent on staff and the United Kingdom scores low on civil expenditure but rather high on share spent on staff.

Figure 6.6 Composition of government expenditure on general public services of EU-15 countries, 2001 (percentage)[a]



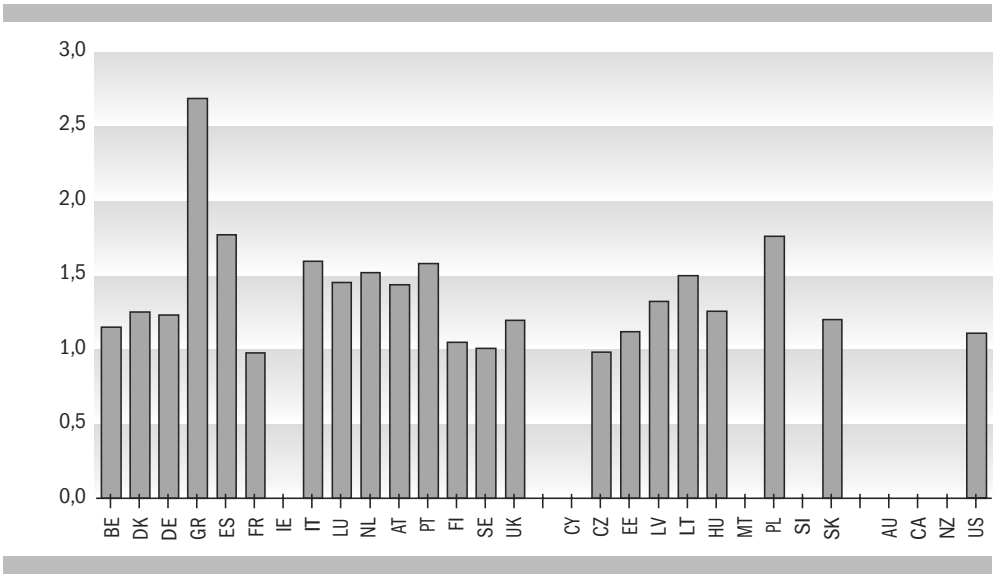
a Excluding debt interest payments (classified as property income consolidated) and foreign transfers (classified as others transfers consolidated).

Source: Eurostat; SCP revision

Unfortunately, no comparable information is available on wages in public administration, but there is some information on public sector wages in general. These public sector wages include earnings in health care, education, defence and law and order. The level of public sector spending in general depends heavily on costs of staff. In most countries, mean public sector wages surpass mean wages of all

employees in the economy (Figure 6.7). The ratio between public sector wages and all wages is almost unity in France, Finland, Sweden and Czech Republic. In all other countries, especially in Greece, this ratio is in favour of public sector employees. On average, public sector employees earned in 2002 about 37% more then employees in general. In part, this salary gap can be explained by the fact that government employees are on average better educated than market sector workers, given job requirements, for example in education and health care.

Figure 6.7 Ratio of public sector wages and all wages, 2002 (or latest available year)



Source: Eurostat; SCP revision

6.4 *Administrative processes*

The previous section considered various input variables for public administration. The government absorbs productive resources to perform its tasks and achieve certain effects in society. This chapter reviews administrative processes associated with the machinery that allows government to pursue its policies. Policy implementation is supported by administrative processes such as financial management, human resources management and information technology. This section looks at trends in financial management (Section 6.4.1), human resources management (Section 6.4.2), and *e*-government (Section 6.4.3). The scope of this section extends to the public sector in general, but the government – and the public administration in particular - is responsible for the quality of financial management, human resources and openness in the public sector. This creates a horizontal persepctive in public sector policy.

6.4.1 *Financial management*

Various factors have prompted public authorities to modernise their budget cycle. The financial reform agenda consists of three major components: greater financial responsibility for management, results-based budgets and multi-year budgets.

Financial responsibility for management

Approval of the budget constitutes part of the legislative power's control function over the executive power. The New Public Management movement has shifted the focus from traditional *a priori* control to control in retrospect, and placed more emphasis on results and greater financial responsibility for management. This section indicates the extent to which governments in Europe are following this trend.

One indicator of the degree of parliamentary control over the budget and of management freedom is the degree of detail to which the budget is appropriated. Five levels of appropriation can be distinguished, corresponding to a declining degree of discretionary power and freedom for agency management:

- aggregated allocation at the level of broad programmes or outcomes;
- aggregated allocation at the level of government departments;
- aggregated allocation for staff and programmes at the programme level, appropriation per programme;
- appropriation for staff expenditure and programme expenditure; and
- disaggregated allocation within programmes.

The more aggregated the appropriation, the more freedom management has to change the budget allocation, giving it more flexibility to make adjustments in order to achieve the desired results. However, a higher level of appropriation usually goes hand in hand with a greater demand for policy information. This information should allow parliament to guide programmes towards the results envisaged.

Another indicator of the degree of parliamentary control and the degree of management freedom is end of year flexibility. This allows managers to carry any surplus budget allocation over to next year's budget. Although the principle of end of year flexibility is contrary to the traditional one-year budget principle, it does offer incentives to use resources more efficiently and can counteract wastage of resources at the end of the year ('December fever'). Budgets no longer have to be used up completely. End of year flexibility might be subject to certain conditions, such as a maximum transferable amount, approval by the finance minister or parliamentary approval.

Table 6.4 shows the level of parliamentary appropriation (X axis) and the degree of end of year flexibility (Y axis). When it comes to parliamentary appropriation, a number of scenarios are possible:

- Aggregate budget amounts for broad programme or outcome areas: envelope for each policy area or policy objective;
- Aggregate amounts for Ministries: envelope for each Ministry;
- Aggregate amounts of personnel and aggregate amounts at the Ministry level for programmes: staff envelope and programme envelope for each Ministry;
- Appropriations at the programme level: envelope for each programme;
- Appropriations split between personnel and programme spending at the programme level: staff envelope and programme envelope for each programme;
- Disaggregated appropriations at the programme level: detailed allocation to budget items within each programme.

End of year flexibility means that unused resources may be carried over to the following year. The following possibilities exist:

– "Yes, without limit": unrestricted transfer of operational resources;
– "Yes, up to a maximum percentage": limited transfer of operational resources;
– "Yes, as approved on a case by case basis by the Ministry of Finance or the Central Budget Authority": transfer of operational resources possible only with approval of the central department responsible for administering the budget;
– "Yes, on a case by case basis according to the underlying statute": transfer of operational resources possible only if specified in a statute;
– "Yes, with notification of the legislature": transfer of operational resources possible only after parliament has been notified;
– "Yes, with the approval of the legislature": transfer of operational resources possible only with parliamentary approval;
– "No": no transfer of operational resources possible.

The countries with the highest degree of management freedom are in the bottom left corner of Table 6.4, those with the least discretionary powers in the top right. The table is based partially on a recent survey of budget practices by the OECD and the World Bank (OECD and World Bank 2003; Scheers and Sterck et al. 2003). Table 6.4 includes data for the EU-15, the new member states and other OECD countries such as the United States, Australia and New Zealand.

Table 6.4 Level of budget appropriation and end of year flexibility in the OECD

		level of appropriation					
		aggregated programme outcomes	aggregated at Ministerial level	aggregated staff & programme at programme level	at programme level	staff & programme expenditure	disaggregated at programme level
end-year flexibility	no		GR, IE		ES		US, SI
	yes, with parliamentary approval		UK		NZ		
	according to statute					BE	
	yes, if approved by Min Finance		NL				AT, HU
	yes, up to maximum					SE	
	yes, without limit	AU		DK			FI

Source: OECD and World Bank (2003)

In some countries, parliamentary appropriation occurs at an aggregated level and it is possible to carry over unused budget resources at the end of the year, albeit sometimes only under certain conditions. This group includes Australia, Denmark, the Netherlands and the United Kingdom. Diametrically opposed to this group is a cluster of countries with less management freedom, where there is no end of year flexibility and parliamentary appropriation is very detailed (the US, Slovenia, Spain). In a number of countries, end of year flexibility is allowed subject to certain conditions, such as a maximum limit, parliamentary approval or the approval of the finance minister. This is the case, for example, in Belgium, Austria, Hungary, Portugal and Sweden. These countries combine conditional end of year flexibility with a relatively detailed level of parliamentary appropriation. A number of countries have both full end of year flexibility and disaggregated appropriation (Finland, Germany and Italy). A number of others have a highly aggregated budget, but no end of year flexibility (Greece and Ireland).

The third indicator of parliamentary control is the legislature's influence on the budget. To what extent does the budget ultimately approved by parliament differ from the budget originally submitted by the government? In the majority of the countries studied, the budget submitted by the executive is approved without major amendments (less than 3%). This is the case in Denmark, Germany, Spain, France, Italy, the Netherlands, Austria, Portugal, Finland, the Czech Republic, Hungary, Slovenia and the United States. Some countries in the OECD-World Bank survey even reported that parliament approved the budget without any amendments (Belgium, Greece, Ireland, Sweden, the United Kingdom, Australia, New Zealand and Canada) (OECD and World Bank 2003).

Results-based budgets

The growing importance of efficiency and effectiveness has prompted governments to focus more and more on results as the basis for their budgets. Information on output and outcome is included in the budget. A number of countries are in fact moving towards accrual budgeting, a system of costs and benefits. Table 6.5 depicts the trend towards more result-based budgeting. First, we have classified countries on the basis of the use of output and outcome information in budgets. We then went on to classify them on the basis of their method of reporting receipts and outlays: cash or accrual. In a *cash-based budget system*, the actual cash receipts and expenditure for the budget period are estimated. An *accrual budgeting system* focuses on resources used and the associated costs, and claims on receipts that arise during the budget period. Table 6.5 shows the percentage of spending programmes in the budget for which performance information is given (from 0% to 100%). The Y axis shows the method of charging (from full cash to full accrual). The table is based partially on a recent survey of budget practices by the OECD and the World Bank (OECD and World Bank 2003; Scheers and Sterck et al. 2003). It includes data for the EU-15, the new member states and other OECD countries such as the United States, Australia and New Zealand.

Table 6.5 Use of performance information in budget and method of charging

Method of charging	percentage of programs for which performance information is contained in the budget documentation					
	0%	1%-25%	25%-50%	50%-75%	75%-99%	100%
full accrual						AU, NZ
cash and accrual	IT				FI	SE
cash and commitment		BE			DK	US, NL
full cash	IE, PT, AT	DE, GR, CZ		SI		ES

Source: OECD and World Bank (2003)

The first cluster consists of countries which have full or partial accrual budgeting whereby performance information is provided for all programmes (Australia, New Zealand, Finland and Sweden). The second group comprises countries which include performance information in the budget documents, but have opted not to make the move to accrual budgeting (the US, the Netherlands[8], Denmark, Slovenia and Spain). The third group of countries maintain the traditional line-item cash budget geared mainly to inputs, with little performance information (Ireland, Portugal, Austria, the Czech Republic and Greece).

A number of positions allocated to countries in Table 6.5 seem questionable. For instance, according to the OECD-World Bank survey, all of the Netherlands' budget programmes include performance information. Reports from the Netherlands' Court of Audit, however, show that this is not yet the case (Algemene Rekenkamer 2002; Algemene Rekenkamer 2003). There is therefore a gap between aspirations concerning results-based budgeting and its actual implementation. The positions of Sweden and Spain should also be put into perspective. However, the OECD and World Bank survey does not take account of differences between rhetoric and reality.

Multi-year budgets

The third trend in the modernisation of government finances has been a move towards multi-year budgets. Most countries add multi-year forecasts to their budgets to place their annual income and expenditure in a longer-term perspective. In most cases, these forecasts are purely informative and do not require parliamentary approval. However, in Italy and the United States, parliament does have to approve the multi-year budget. Table 6.4 shows which countries have a multi-year budget, and what exactly its status is.

8 In 2001 the Netherlands announced it intended to introduce accrual budgeting for all ministries, as it had done previously for *baten-lastenagentschappen* (executive agencies). However, in 2003 the Minister of Finance decided to alter this policy towards a partial implementation of accrual budgeting.

Table 6.6 Existence and status of multi-year budgets

	yes	no
does the annual central government budget documentation submitted to the legislature contain multi-year expenditure estimates?	BE, DK, DE, GR, FR, IE, IT, NL, PT, SE, UK, HU, SI, AU, US, NZ, CA	ES, AT, FI, CZ,
do these expenditure estimates require authorization by the legislature?	IT, US[9]	AU, AT, BE, CA, CZ, DE, DK, ES, FI, FR, GR, HU, IE, NL, NZ, SI, SE, UK

Source: OECD and World Bank (2003)

6.4.2 *Human resources management*

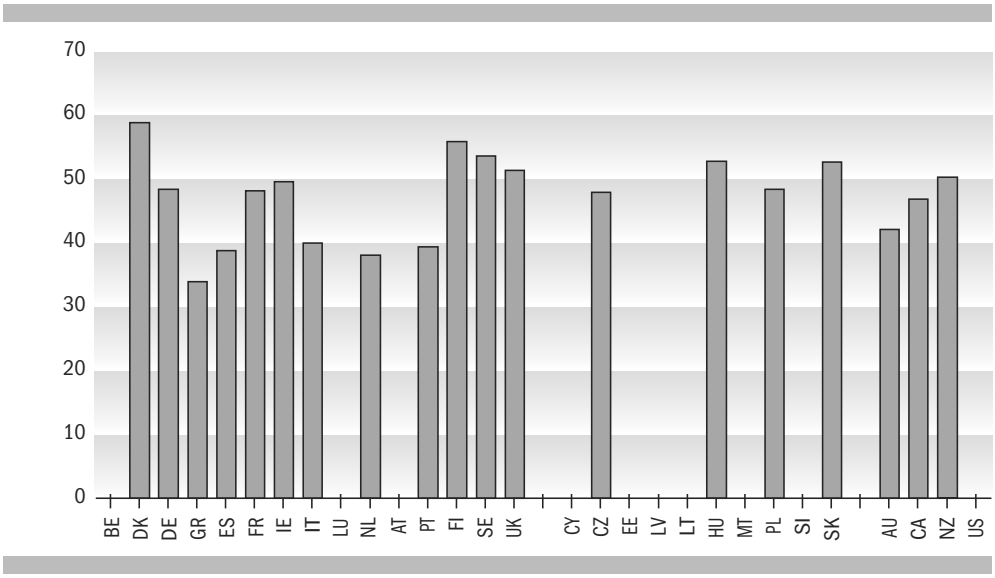
Personnel policy, or human resources management is another horizontal policy area within the public sector currently experiencing change. Strategic human resources policy, competency management, equal opportunities policy and public service motivation are key concepts in the modernisation of human resources management (HRM) in the public sector. One important choice in public-sector HRM policy is whether to attempt to ensure that the staff profile reflects the composition of the population. Moreover, the Lisbon agenda aims to raise the employment rate of women from an average of 51% in 2000 to more than 60% by 2010. This section therefore looks at the number of female public servants and the age profile of the public service.

Figure 6.8 shows the proportion of female staff in the public administration and defence sector.[10]

9 The multi-year expenditure estimates are approved by Congress, apart from the appropriation bills for the budget year

10 ISIC Rev. 3 (UN Classifications Registry): ISIC L – Public administration and defence; compulsory social security & ISIC M – Education. Public servants can also be employed in other categories, M (health and social work) or O (other community, social and personal service activities).

Figure 6.8 Employment of women in public administration, defence and compulsory social security, 2002



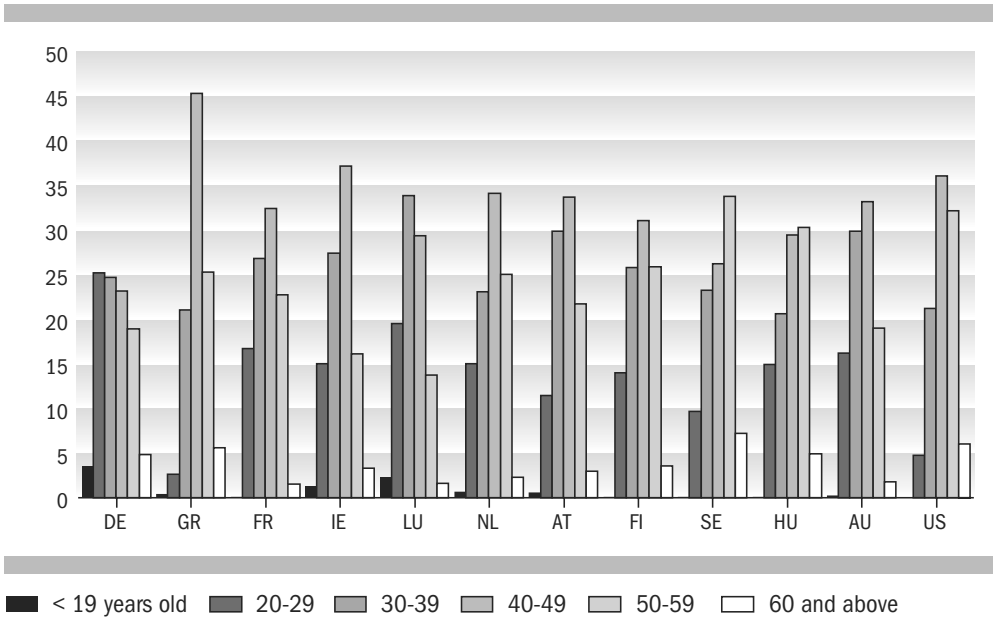
Source: OECD online database

An average of 47% of staff in the public administration and defence sector are women. The average is much higher in education, at 69%, while in the health care and social welfare sector it is no less than 80%. We shall focus our attention here on the proportion of female staff in public administration, defence and compulsory social security. The proportion of female staff in this sector is well above average in Denmark, Finland and Sweden. In Hungary and Slovakia, too, there are more female than male staff in this sector. The United Kingdom and New Zealand also score above average. A number of countries fluctuate around the average: Ireland, Germany, France, Poland, the Czech Republic and Canada. In a number of Southern European countries, such as Spain, Portugal and Italy, the representation of women in the public sector is some 10% lower than the overall average. The proportion is even lower in Greece. Notably, the proportion of female staff in the Dutch public administration and defence sector is also well below average (38%). Figures from Statistics Netherlands confirm and indeed reinforce this conclusion, indicating that only 35% of jobs in public administration and compulsory social security[11] are held by women (CBS 2004).

Figure 6.9 shows staff in the public sector by age group. The graph reveals that 40- to 49-year-olds are most strongly represented in the public service. Exceptions are Sweden, where 50- to 59-year-olds constitute the largest group, and Germany, which has relatively young public servants. In the majority of countries, there are more older public servants (over-50s) than young public servants (aged 20 to 29). Ireland and Germany, however, seem to have enjoyed more success than other countries in attracting young people to the public service. In these two countries, staff in their 20s account for more than a quarter of all public servants, and the 18-19 age group is also relatively large.

[11] Category 75, SBI 1993.

Figure 6.9 Staff in central/federal government by age group, 2002



Source: OECD/PMC (2002)

The problem of demographic ageing also presents the public sector with a major challenge. The preponderance of staff aged over 50 in the public service has increased steadily since 1990. As the baby boom generation (born between 1945 and 1955) retires over the next ten years, the public service may face a growing staff shortage. Personnel planning and the recruitment of young staff by promoting the public sector as a good employer are therefore key objectives of current human resources policy.

6.4.3 e-Government

The development of a knowledge-based society also has implications for the services and communications of the public sector. There is a general tendency in the public sector towards automating bureaucratic procedures and processes, and electronic interaction with citizens. However, *e*-government is a very broad concept, ranging from electronic communications, via online services to e-democracy and e-participation. *e*-Government is one of the newest forms of modernisation in the public sector, and it is being followed closely by research centres and international organisations. In this field, benchmarks are frequently used to compare and rank countries (Janssen et al. 2004). The focus in this section is on three such benchmarks.

The United Nations and the American Society for Public Administration (ASPA) have developed an *e-government index* based on countries' official online presence, their telecommunications infrastructure and their human development capacity. This benchmark defines *e*-government as utilising the Internet and the World Wide Web to deliver government information and services to citizens. Table 6.7 ranks countries on the basis of this benchmark.

Table 6.7 **Ranking of EU-15, accession countries and other OECD countries in the *e*-government index compiled by the United Nations and the American Society for Public Administration**

1	US	11	FI	21	LV
2	AU	12	FR	22	LI
3	NZ	13	ES	23	GR
4	UK	14	IT	24	SK
5	CA	15	IE	25	SI
6	NL	16	PT		
7	DK	17	AT		
8	DE	18	CZ		
9	SE	19	EE		
10	BE	20	PL		

Source: ASPA and UN (2002)

The second benchmark, the *Networked Readiness of Nations* (NRN) was compiled by Harvard University's Centre for International Development (Table 6.8). It uses a broad definition of *e*-government, which includes e-administration, e-business, the presence of infrastructure and IT know-how. The indicators used in this benchmark include the number of online services, the number of online transactions, subsidies for *e*-government, promotion of IT by government and the *e*-government environment (e.g. public access to the Internet).

Table 6.8 **Ranking of EU-15, accession countries and other OECD countries in the *Networked Readiness of Nations Benchmark***

1	FI	11	FR	21	LV
2	US	12	IE	22	PL
3	SE	13	BE	23	SK
4	CA	14	NZ	24	GR
5	UK	15	EE	25	LI
6	DK	16	ES		
7	DE	17	IT		
8	NL	18	CZ		
9	AU	19	PT		
10	AT	20	SI		

Source: Harvard University Centre for International Development (2003)

The third benchmark is the *e-Readiness Ranking* (ERR) 2003 produced by the Economist Intelligence Unit (Table 6.9). Here, too, a broad definition of *e*-government is used. Indicators include public expenditure on IT as a proportion of GNP, the quality of Internet connections, financial support for IT projects, and the number of PCs and Internet connections.

Table 6.9 Ranking of EU-15, accession countries and other OECD countries in the *e-Readiness Ranking* (ERR), 2003

1	SE	7	CA	13	BE
2	DK	8	AU	14	FR
3	US	9	DE	15	IT
4	UK	10	AT	16	PT
5	NL	11	IE	17	ES
6	FI	12	NZ	18	GR

Source: EIU/IBM (2003)

Although the three benchmarks do not use the same indicators, the correlation between ranking orders in Tables 6.7 through 6.9 would appear to be significant. Countries that score high on one benchmark also tend to score high on the others. The only exceptions are Finland and New Zealand, for which varied pictures emerge.

The US has the best average score on all three *e*-government benchmarks, and three Scandinavian countries appear in the top five: Sweden (2), Finland (3) and Denmark (5).[12] The United Kingdom comes in fourth place. The majority of countries have an average score. This group includes a number of countries in continental Europe: the Netherlands (7), Germany (8), Austria (10), France (11) and Belgium (13). Canada (6), Australia (9) and New Zealand (12) are also in this group. A small number of countries score below 5: Ireland (14) and a group of Southern European countries (Italy (15), Spain (16), Portugal (17) and Greece (18).

The United Nations and ASPA Networked Readiness of Nations benchmark also includes data on the newly acceded EU member states (with the exception of Malta and Cyprus). These countries score less well than the EU-15 and Canada, the United States, Australia and New Zealand. The new member countries that have progressed furthest in the field of *e*-government are Estonia (1), the Czech Republic (2) and Slovenia (3), followed by Poland (4), Latvia (5) and Slovakia (6). Lithuania (7) has the poorest scores.

6.5 *Performance*

A well-functioning and reliable public administration is an essential factor for economic growth. However, there are no objective indicators of the efficiency and effectiveness of public administration. Because the whole nation takes advantage of services produced by public administration, they can be classified as social goods: consumption is non-rival and nobody can be excluded from consumption (Musgrave and Musgrave 1984). In the absence of individual consumers, the functioning of the

[12] The average score differs from the average ranking; especially the ranking of Germany, Finland and Canada differs: Germany takes position 5 on the base of average scores and position 9 on the base of average ranking; Finland takes position 3 respectively 6 and Canada takes position 7 respectively 4.

public administration can only be measured by subjective indicators. These indicators reflect trust of the population in public administration and confidence in the Civil service. Of course, the lack of information about the performance of public administration can be explained by the very nature of its products: legislation, policy and management. No 'natural' performance indicators are available for these activities. However, some public administration activities can be regarded as individual services, like the issue of passports or the entering of transactions in the land register. In Kuhry en Veldheer (2004) objective performance indicators are defined for the majority of municipal services. However, we don't have acccess to similar detailed data for other countries.

While subjective indicators yield useful information, they must be approached with caution, for two reasons (Van de Walle et al. 2004). Firstly, a negative attitude towards the public sector on the part of the general public can lead to a negative perception of its performance. Such an attitude might arise from the general cultural context, and therefore have little to do with objective performance. Secondly, expectations of the citizenry will affect their perception of public sector performance. Satisfaction and perception are determined partly by expectations. In countries with traditionally strong services, people will expect a lot of the public sector. If their expectations are not met, they will award low performance scores, even if the objective performance of the public sector is better than in countries where people expect less of their government.

It is already hard to measure the performance of public administration at all, but even more difficult to make cross-national comparisons of administrative performance. Only global judgements about the functioning of government and the public administration can be used to measure the performance of public administrations. The Dutch government states that citizens may expect an integer, transparent, credible, responsive, effective and efficient government in exchange for taxes and trust they make available (TK 2003). In general, public administrative systems are founded on the following principles (Vidlakova 1999): trust and credibility, openness and transparency, accountability, efficiency and effectiveness. These principles were an important condition for the new member states to enter the European community.

6.5.1 Quality of government

The well functioning of the government is an important dimension of the performance of public administrations. A major source for measurement of well functioning governments- called hereafter government quality - is a survey among representatives of the business community in a range of countries (IMD 2003). More than 4,000 respondents in about 60 countries answered questions about economic performance and government quality.

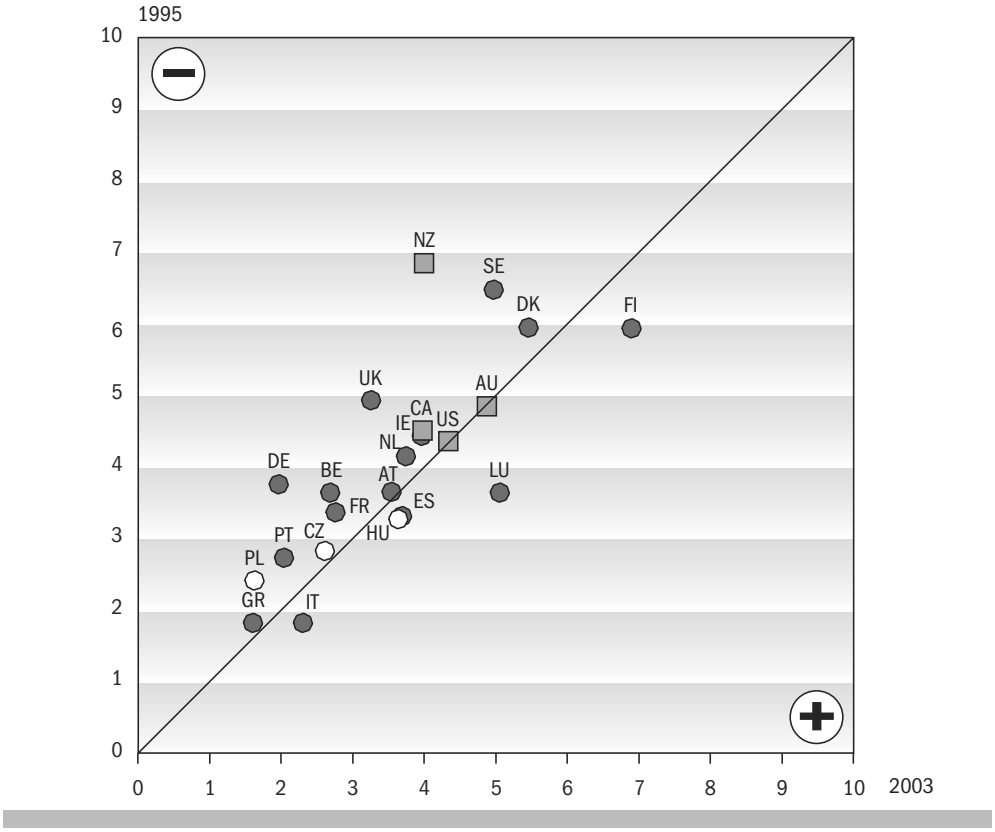
Four indicators of government quality are selected, based on the principles of well functioning administrative systems:

– level of bureaucracy: does bureaucracy hinder business activity?

– level of transparency: is transparency of government policy satisfactory?
– level of effectiveness: are government decisions effectively implemented?
– level of corruption: do bribing and corruption exist in the economy?

The level of corruption is included in the IMD index of government efficiency. However, because Transparency International publishes a widely used composite index of corruption, including the IMD index, this composite index will be used instead of the IMD index (www.transparency.org).[13] On the next indices, zero is the worst possible score and ten the best possible.

Figure 6.10 Bureaucracy does not hinder business activity, 1995 and 2003[a]



EU-15 ○ new member states ▭ non-EU Anglo-Saxon

a scale: 0-10 (0 = total bureaucracy; 10 = no bureaucracy);
Scores only available for 2003: EE (4,7), SI (2,2), SK (1,9)

Source: IMD (1995, 2003)

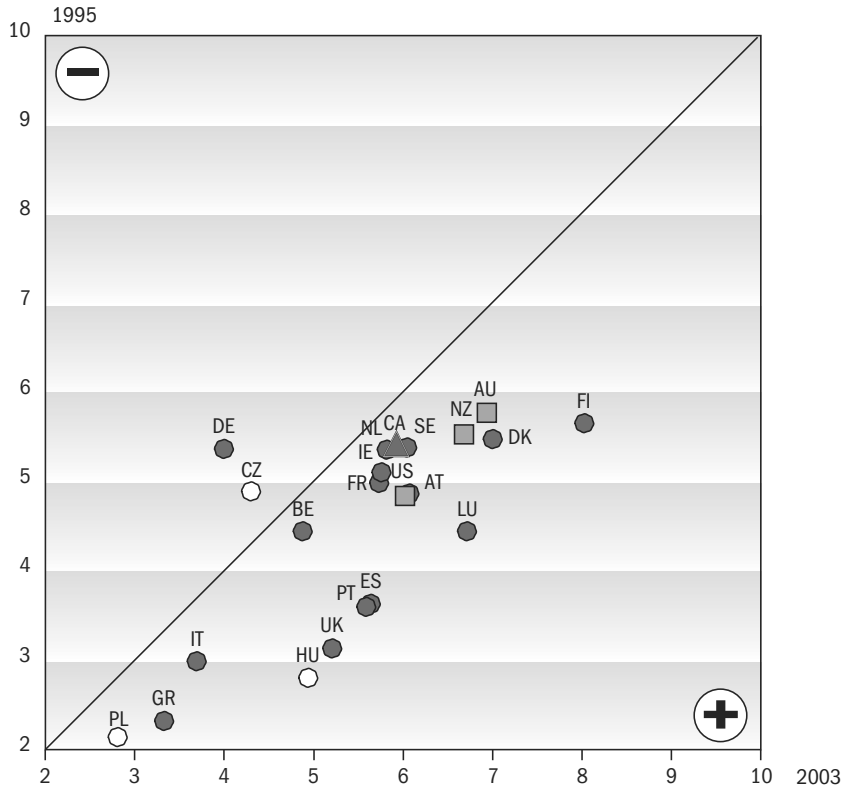
Bureaucracy seems to hinder economic activities more in southern then in northern European countries (Figure 6.10). In 2003, countries with the most favourable outcome

13 This composite index of Transparency international (TI) is compiled of different indices, of which the IMD index, World economic forum index, World bank index and Gallup international index. Both corruption indices (IMD and TI) are highly correlated (r > 0,96).

are Finland, Denmark, Luxembourg and Sweden. The ranking of Germany amongst the less performing southern countries is striking. Differences between the new member states are also worth mentioning. Between 1995 and 2003 the perception of the level of bureaucracy shows an upward trend. Especially in New Zealand but also in Germany, Sweden and the United Kingdom the level of bureaucracy has risen substantially. Luxembourg and Finland counter this trend and have moved to a lower level of bureaucracy.

Transparency of government is judged markedly more positive then is bureaucracy (Figure 6.11). Even though differences between countries are smaller, roughly the same ranking emerges. Within the EU-15 area, northern countries generally perform well and southern countries perform less. But this pattern is less manifest then with bureaucracy. Compared with its position on bureaucracy, Portugal performs better on transparency. Obviously, the level of transparency has strongly improved between 1995 and 2003. Only two countries, Germany and the Czech republic, deviate from this positive trend. Transparency has increased most in Finland, Luxemburg, Spain, Portugal, Hungary and the United Kingdom.

Figure 6.11 Transparency of government is satisfactory, 1995 and 2003[a]



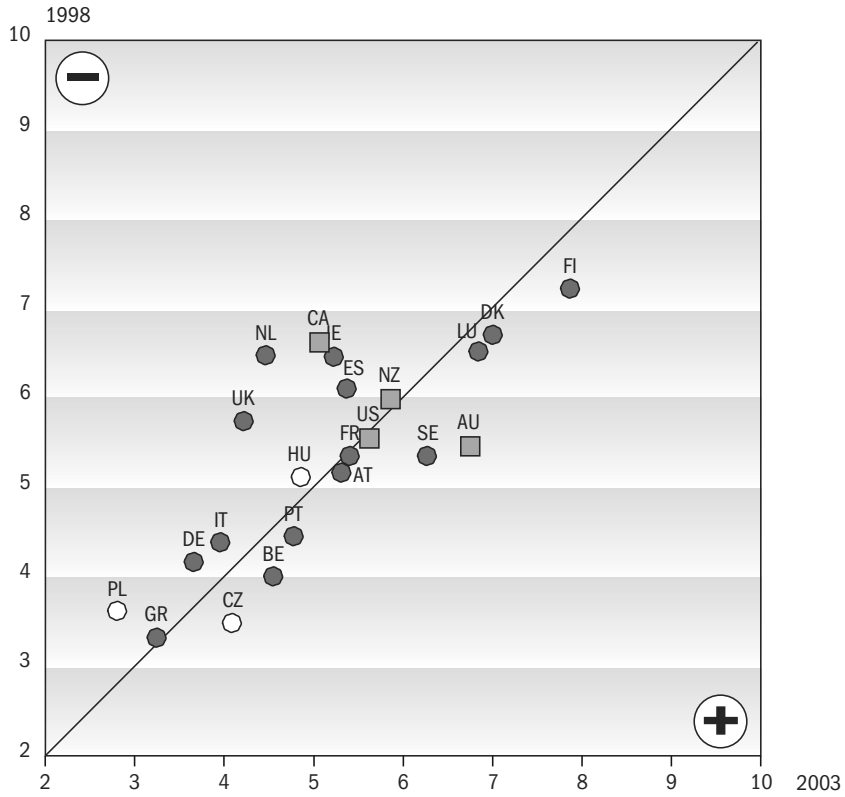
EU-15 ○ new member states ■ non-EU Anglo-Saxon

a scale: 0-10 (0 = no transparency; 10 = full transparency)
Scores only available for 2003: EE (6,0), SI (4,3), SK (5,1)

Source: IMD (1995, 2003)

An important indicator for the quality of the government is effective implementation of decisions and regulations. Government decisions seem to be implemented very well in Scandinavian countries (Figure 6.12). Greece, Germany and Italy seem to experience some problems in implementing government decisions. Differences between the new member states are smaller, as compared with bureaucracy and transparency, but their ranking is about the same. The perception of effective implementation of governmental decisions did not change much between 1998 and 2003. Some countries improved the implementation of their decisions according to the business community (Australia, Sweden) but some did not (Netherlands, Canada, Ireland and the United Kingdom).

Figure 6.12 Government decisions are effectively implemented, 1998 and 2003[a]



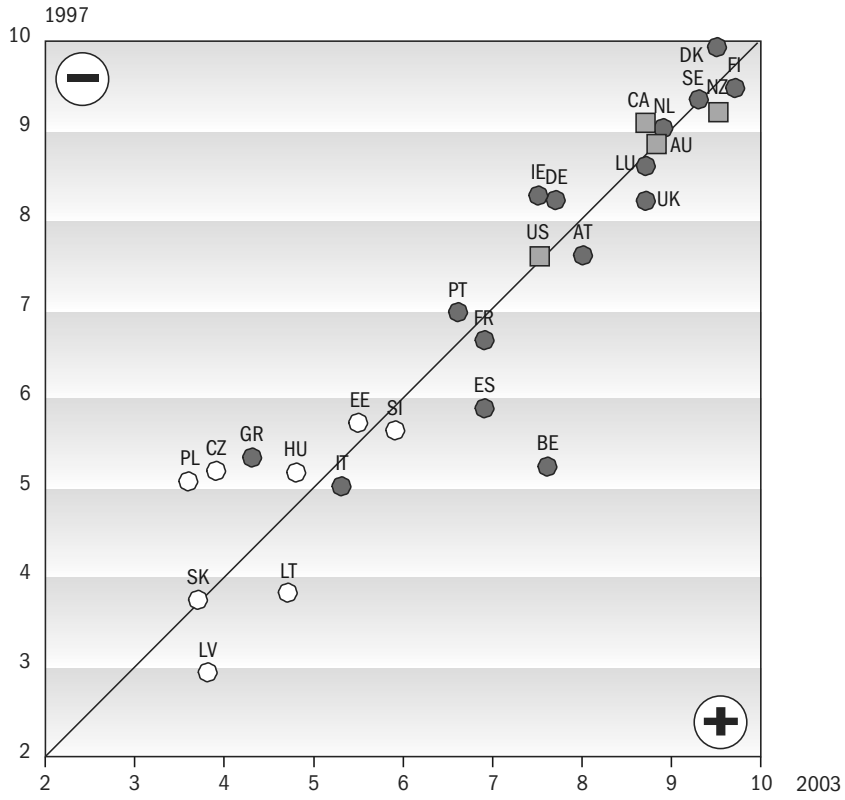
EU-15 ○ new member states ▭ non-EU Anglo-Saxon

a scale: 0-10 (0 = not effective; 10 = full effective)
Scores only available for 2003: EE (5,1), SI (3,9), SK (3,6)

Source: IMD (1998, 2003)

Another important dimension of the quality of government is absence of corruption. The differences between European countries are significant. Confidence in public services appears to be linked to perceived corruption. In countries where there is believed to be a lot of corruption, citizens do not tend to have confidence in the administration.

Figure 6.13 Perception of corruption, 1997 and 2003[a]



EU-15 ○ new member states ▭ non-EU Anglo-Saxon

a scale: 0-10 (0 =total corruption; 10 = no corruption)

Source: www.transparency.org

Figure 6.13 compares scores on Transparency International's corruption perceptions Index for the EU-15 and the new member countries in 1997 and 2003. The Scandinavian countries head again, and the central European countries trail behind the rest. Among the Western European countries, the poor scores of Italy and Greece are striking, as well as the poor scores of most new member states in eastern Europe. Belgium, in particular, is experiencing an upward trend. Italy, Lithuania and Latvia are also making progress, although – on the basis of these results – they still have a long way to go to reach the current European average. Poland, the Czech Republic and Greece have declining scores and Latvia, Lithuania and Spain have rising scores.

6.5.2 Openness of government

Freedom of information is a fundamental right in a democracy. The importance of open and transparent government is universally recognised. Although freedom of information has been enshrined in law for centuries in some countries, most of the legislation allowing access to government information has been passed in the last ten or twenty years, in response to the democratisation of countries in transition,

scandals, the modernisation of the public sector, the growth of the knowledge-based society and international pressure. Sweden was a pioneer, passing its Freedom of the Press Act in 1766. Other early birds were the United States (Freedom of Information Act 1966), France and Australia. Most industrialised countries took steps towards legislation on access to government information in the 1980s and early 1990s. One exception is the United Kingdom, which did not pass its Freedom of Information Act until 2000. This particular legislation will not come into force until 2005. In Central and Eastern Europe, the fall of the Communist regimes allowed freedom of information to be enshrined in the constitution and the statute books. Most of these countries passed freedom of information legislation in the late 1990s/early 2000s.

Access to information is a constitutional right in most countries. The openness of government is also regulated by legislation. Firstly, there are laws that determine procedures. Freedom of Information Acts stipulate the type of documents that should be in the public domain, institutions subject to the legislation, response times, any exceptions and appeal procedures in the event of a refusal. The most common reasons cited for refusing access to information are national security and international relations, privacy, commercial confidentiality, law and order, respect for the confidentiality in which information was given and the internal nature of certain debates among policy makers. Most countries also have specific legislation relating to classified information. The protection of personal data and access to individual information are also regulated separately in most countries. Legislation gives people access to their own personal files held by both public and private institutions.

Deadlines for responding to requests for information differ from country to country. In Sweden, Denmark and Belgium the authorities are obliged to respond immediately. On average, legislation stipulates a maximum of 19 days for the release of the information. Spain has the longest deadline, with officials having up to three months to furnish the requested information.

Table 6.10 shows the degree of government openness in the EU-15, the accession countries and other OECD countries. The figures reflect whether the principle of transparency is laid down in the constitution, when the first freedom of information laws were passed, what legislation on transparency is currently in place, the situation regarding classified information and protection of and access to personal data and, finally, the deadline for responding to requests for information. The data are based on surveys of the openness of government (Banisar 2003; Mendel 2003).

Table 6.10 Openness of government in the EU-15, the accession countries and other OECD countries

	constitution	current freedom of Information; legislation	legislation on classified information	legislation on the protection of and access to personal data
SE	yes	Freedom of the Press Act 1976	Secrecy Act 1980	Personal Data Act 1998
DK	no	Access to Public Administration; Files Act 1985	-	Act on Processing of Personal Data
US	no	Freedom of Information Act 1966 as amended by the Electronic Freedom of Information Act 1996	Presidential Records Act	Privacy Act of 1974
FR	-	Law on Access to Administrative Documents 1978	Loi du 8 juillet 1998 instituant une Commission ; Consultative du secret de la défense nationale	1978 Data Protection Act
NL	yes	Government Information (Public Access) Act 1991	-	Personal Data Protection Act of 2000
NZ	no	Official Information Act 1982	Official secrets Act 1951	Privacy Act 1993
AU	no	Freedom of Information Act 1982	266 (2001-2002)	Privacy Amendment Act 2000
CA	no	Access to Information Act 1983 as amended by the Terrorism Act 2001	Security of Information Act	Privacy Act of 1985
AT	yes	Federal Law on the Duty to Furnish Information 1987	-	Data Protection Act 2000
IT	no	Law n°241 of 7 August 1990	-	Data Protection Act of 1996
HU	yes	1992 Protection of Personal Data and Disclosure of Data of Public Interest	Secrecy Act of 1995	1992 Protection of Personal Data and Disclosure of Data of Public Interest
ES	yes	Law on Rules for Public Administration 1992	-	Personal Data Protection Act 1999
PT	yes	Law of Access to Administrative Documents 1993	Law of State Secrecy 1994	Act on the Protection of Personal Data 1998
BE	yes	Wet van 11 april 1994 op de openbaarheid van bestuur	Law on the Security of Information 1998	Law on the Protection of Personal Data 1992
LI	yes	Law on the Provision of Information to the Public 1996	Law on State Secrets and Official Secrets 1999	Law on Legal Protection of Personal Data 2003
IE	no	Freedom of Information (Amendment) Act 2003	Official Secrets Act 963	Data Protection Act 1988 as amended by the Data Protection (Amendment) Act of 2003
LV	yes	Law on the Freedom of Information 1998	State Secrets Act 1996 as amended in 2001	Law on Personal Data Protection

Table 6.10 (cont.) Openness of government in the EU-15, the accession countries and other OECD countries

	constitution	current freedom of Information; legislation	legislation on classified information	legislation on the protection of and access to personal data
FI	yes	Act on the Openness of Government Activities 1999	-	Personal Data Act 1999
CZ		Law on Free Access to Information 1999	Protection of Classified Information Act 1998	2000 Data Protection Act
GR	yes	Code of Administrative Procedure 1999	-	Law on the Protection of Individuals with regard to the processing of personal data
EE	yes	Public Information Act 2000	State Secrets Act 1999	Data Protection Act
SK	yes	Act on Free Access to Information 2000	Act on Protecting Classified Information 2001	Act on Protection of Personal Data
UK	no	Freedom of Information Act 2000	Official Secrets Act 1989	Data Protection Act 1998
PL	yes	Law on Access of Public Information 2001	Classified Information Protection Act 1999	Act on Protection of Personal Data 1997
SI	yes	Act on Access to Information of Public Character 2003	Classified Information Act 2001	Personal Data Protection Act

-: not available

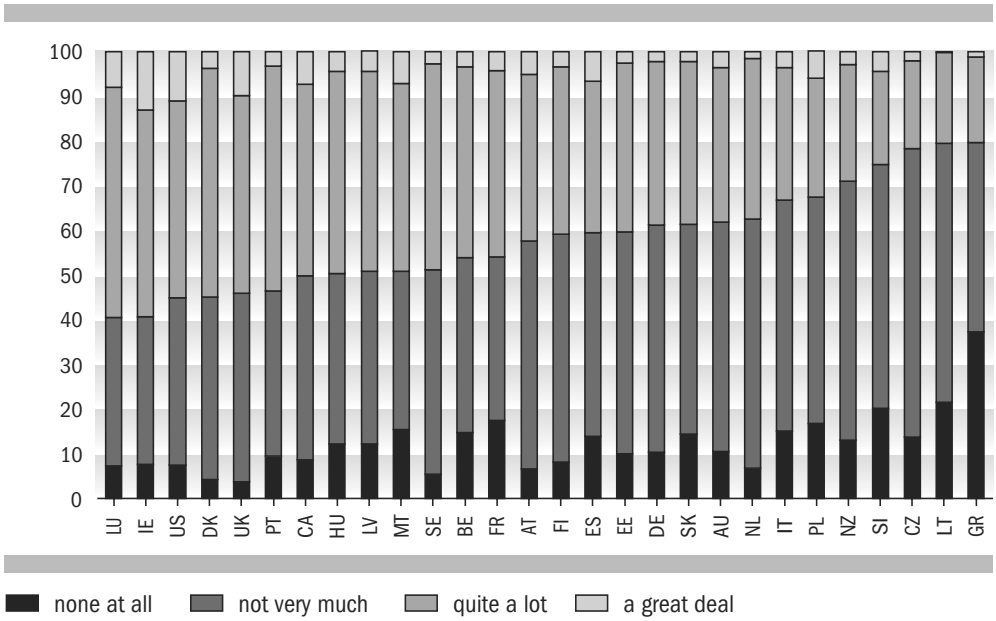
Source: Banisar (2003); Mendel (2003)

6.5.3 Confidence in the Civil service

Confidence in public institutions has been widely researched by political scientists. In general, trust in government is declining in almost all modern welfare states (Dalton 2004). The World Values Survey (WVS) is the most important source to investigate cross-national differences in confidence and trust. This worldwide survey, conducted by a network of social scientist around the world, is performed on nationally representative samples of at least 1,000 respondents and includes questions about confidence in different public institutions. According Rothstein & Stolle (2002) three types of public institutions can be distinguished: political (parliament, government), controlling (media) and implementing (police, justice, school, hospital) institutions. The civil service is in between those three types of public institutions, but resembles most the controlling type.

Confidence in the Civil service differs strongly across countries (Figure 6.14). The EU-15 countries are both scattered at the left side (much confidence) as well as the center and right side (less confidence) of the range of values. The same holds for the non-EU Anglo-Saxon countries and – to a smaller degree - for the new member states. Residents of Luxembourg and Ireland are the most positive about their Civil service and the residents of Greece and Lithuania are the least positive.

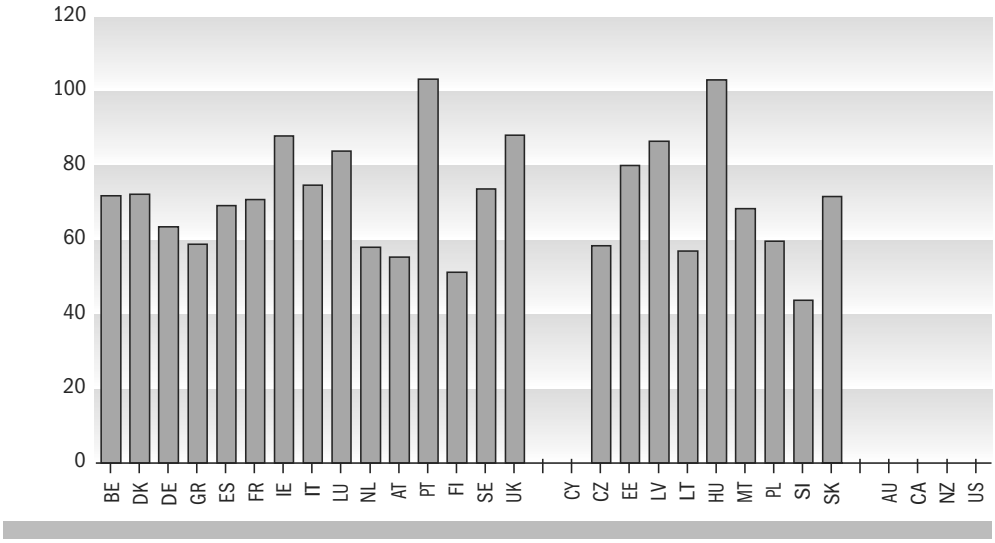
Figure 6.14 Confidence in the Civil service, 2000



Source: European Values Survey (2000); World Values Survey (1995-1997)

Confidence in the Civil service can be compared with confidence in other institutions delivering public sector services, like health care, safety, justice, education and social security (Figure 6.15). On average, confidence in the Civil service amounts to about 70% of mean confidence in other public sector institutions. Only in Portugal and Hungary the Civil service is able to compete with other public sector institutions. The Civil services in Ireland, the United Kingdom, Luxembourg and Latvia perform relatively well on confidence, but this is certainly not the case in Slovenia and Finland.

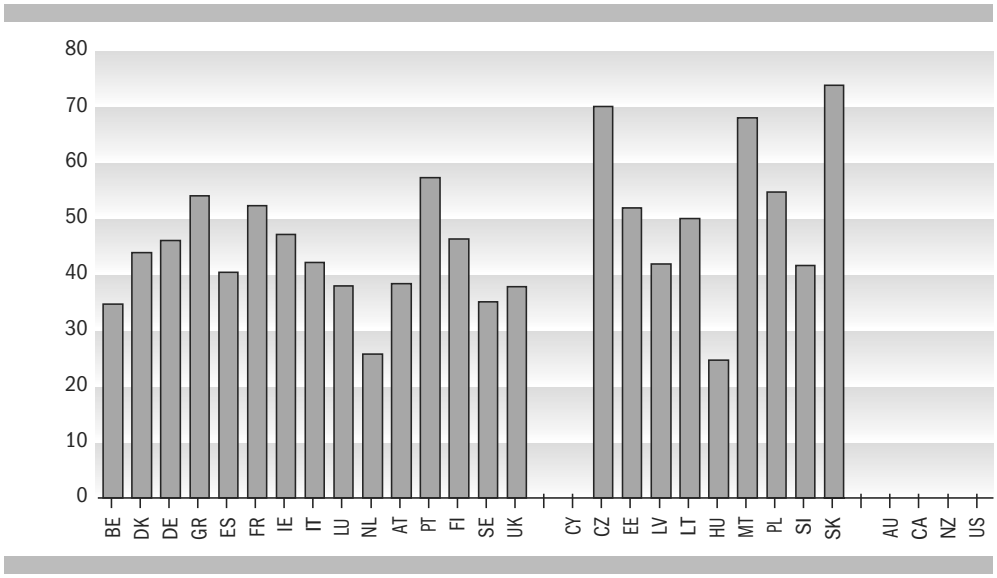
Figure 6.15 Confidence in the Civil service as percentage of average rating of public sector services, 2000



Source: European Values Survey (2000)

An important issue in some countries is the level of decentralization of public services. One argument in favour of decentralization is better fine-tuning of supply of public services to demand, because the needs and preferences of citizens are in principle better known at the local level. One argument against decentralization is the unequal regional allocation of public services that may result. In general, the population supports the idea to enlarge the competence of local authorities (Figure 6.16). On average, about 46% of the residents of all selected countries are in favour of handing down greater powers to local authorities. A lot of residents don't have an opinion on this matter and only a minority of 25% feel decentralization to be a bad idea.

Figure 6.16 Percentage of population that thinks that more power to local authorities is a good thing, 2000



Source: European Values Survey (2000)

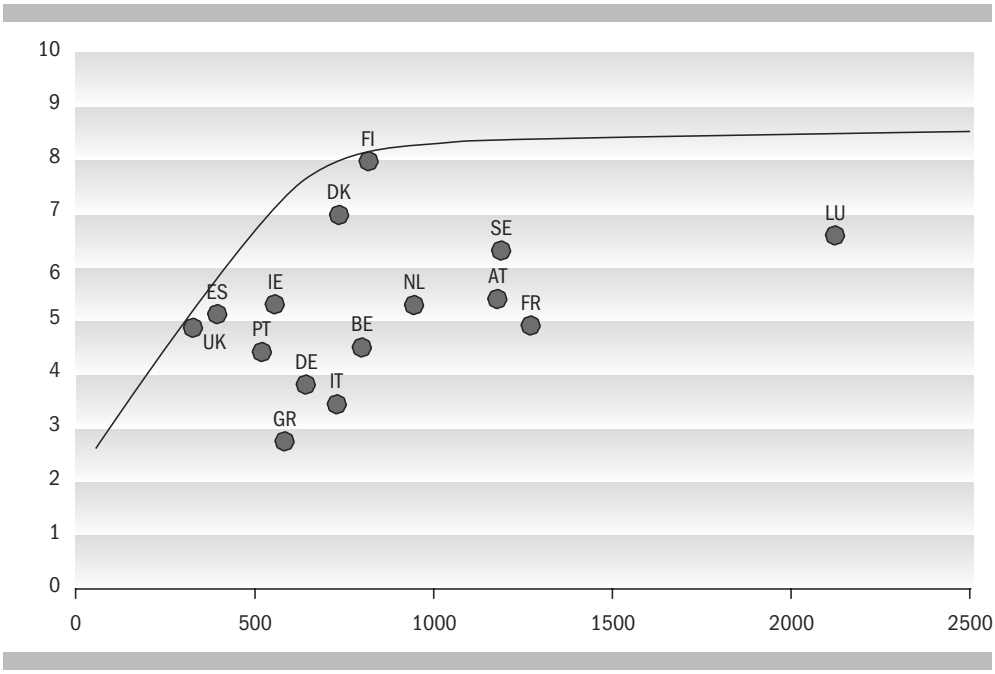
Opinions differ strongly between countries. Especially in the new member states, except for Hungary, residents are in favour of shifting power to local authorities. This is not surprising, given the high level of centralization in the former socialist republics. Nowadays, the process of decentralization is well under way. In the EU-15, only residents of the Netherlands are clearly in favour of central government and don't like to give more power to local authorities.

6.5.4 Quality, confidence and expenditure

The public administration produces public services like legislation, public policy and public management. In general, no clear indicators are available to measure the production of this kind of public services. Because of the lack of objective indicators, the effectiveness of public administration is measured here by using subjective indicators. In previous sections two types of subjective indicators were presented: subjective judgements of government quality and confidence in the Civil service. Subjective quality refers to the perception of governmental bureaucracy, transparency, effectiveness and corruption expressed by representatives of the business community in different countries (IMD 2003). Confidence refers to the perception of the performance of the Civil service by a representative sample of the population (WVS 2000).

Effectiveness of public administration can be expressed in subjective terms by relating expenditure to subjective quality (Figure 6.17) and confidence (Figure 6.18). Subjective quality of the government is a composite index of perceived bureaucracy, transparency, effectiveness and corruption, and is related to expenditure on general public services per capita.

Figure 6.17 Subjective quality of government (2003) and expenditure per capita on general public services, 2001 (nl €)

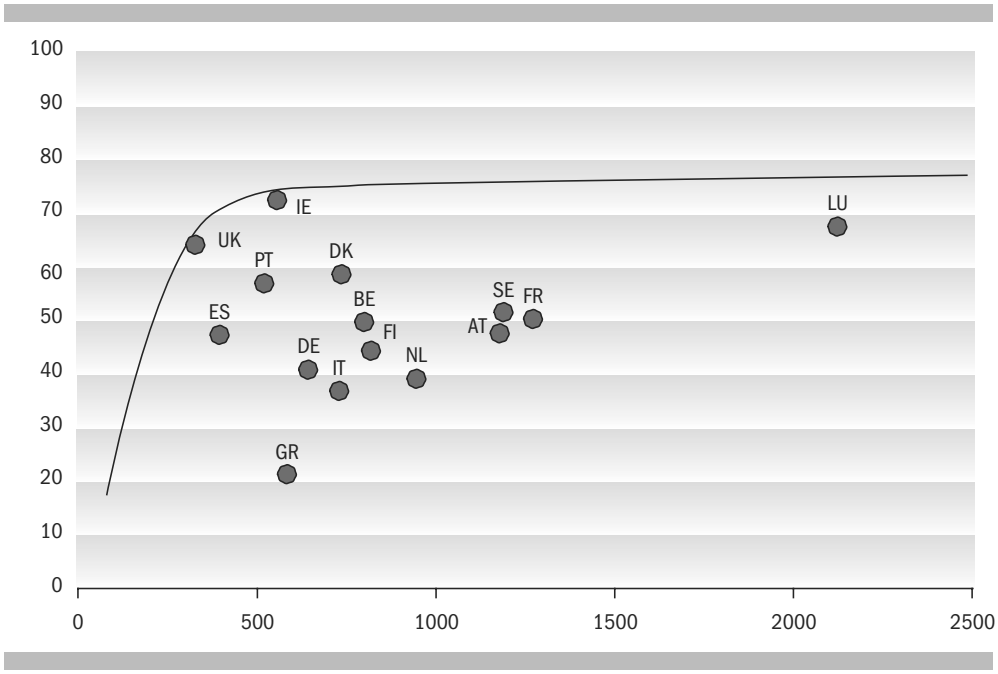


Source: IMD (2003) and Eurostat

In both figures there is a weak relation between expenditure and subjective performance. The most striking observation is the location of Finland and Denmark, combining fairly moderate expenditure with high subjective quality. Luxembourg is also characterized by high quality, but pays a considerably higher price.The lowest spending countries in Figure 6.17 perform in general at a lower level and the highest spending countries at a higher level. In Figure 6.18 this weak relation is hardly observable. As far as there is any relation between expenditure on general public services and subjective performance, this relation cannot be interpreted as a causal relation without closer investigation. Other factors related to expenditure as well as subjective performance can explain the observed relation. In this report, the relations between expenditure and performance are not checked on possible intervening factors.

Expenditure on general public services can also be expressed in relative terms, as percentage of GDP, and related to quality and confidence. However, in general this does not change the presented pictures. Of course, Luxemburg moves halfway to the left (above the Netherlands) and Ireland and Spain change positions in figure 6.17. But the favourable positions of Finland, Denmark and - to a lower degree - the UK in figure 6.17 are preserved, as are the unfavourable positions of Greece, Italy, Germany and France. In figure 6.18 only Luxembourg moves halfway to the left and the remainder of the picture is roughly preserved.

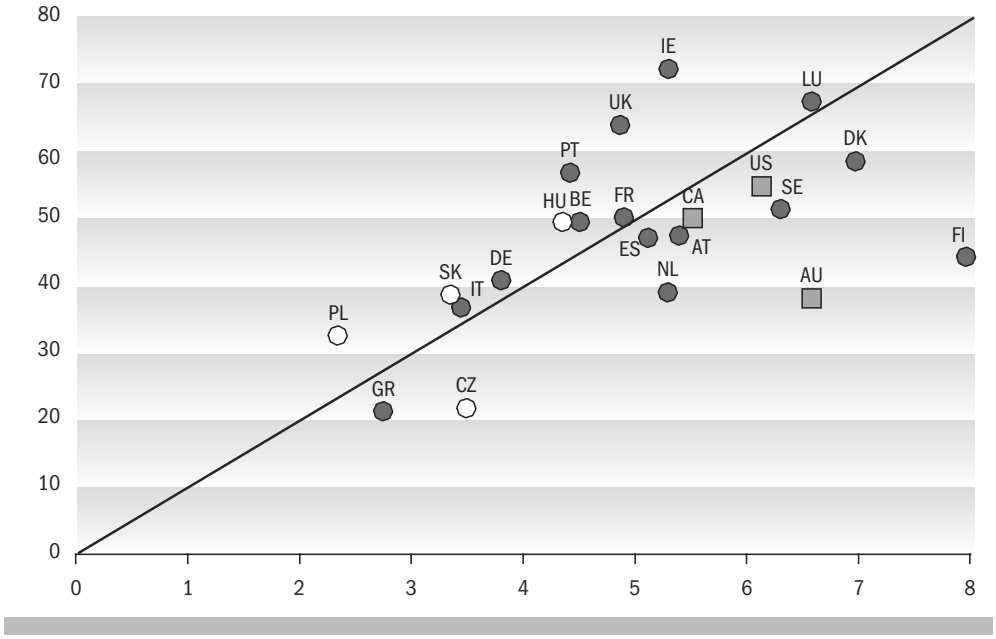
Figure 6.18 Confidence in the Civil service (2000) and expenditure per capita on general public services, 2001 (nl€)



Source: European Values Survey (2000) and Eurostat

A closer examination of both plots shows a fairly similar pattern. However, Finland has fallen from the top (Figure 6.17) to the lower part of the middle group (Figure 6.18). The resemblance of both plots seems to indicate a strong correlation between subjective quality of government and confidence in the Civil service. Figure 6.19 demonstrates the relationship between both types of subjective indicators, including some other countries too. Over half of the countries are located close to the diagonal, indicating a close relationship between subjective quality of government and confidence in the Civil service. In just over a quarter of all countries this relationship is somewhat weaker, but still strong. Only three countries show a greater gap between both indicators: Ireland, Australia and Finland. In Ireland, the population expresses slightly more confidence in the Civil service then the business community in the perceived quality of the government. In Australia but especially in Finland it's just the opposite: more quality perceived by the business community and less confidence expressed by the population.

Figure 6.19 Subjective quality of government (2003) and confidence in the Civil service, 2000



EU-15 ○ new member states ■ non-EU Anglo-Saxon

Source: European Values Survey (2000); World Values Survey (1995-1997); IMD (2003)

7 Performance of the public sector

Bob Kuhry and Evert Pommer

7.1 Introduction

Previous chapters have assessed the performance of twenty-nine countries in several policy areas: the economy (Chapter 2), education (Chapter 3), health care (Chapter 4), law and order (Chapter 5) and public administration (Chapter 6). In some cases, the analysis covered less than twenty-nine countries because of missing data. This concluding chapter aims to synthesise the findings presented in earlier chapters. Section 7.2 attempts to group nations in several classes by taking into account system characteristics in all policy areas considered in the report. Section 7.3 describes aggregated performance in the fields of education, health care and law and order. Section 7.4 attempts to group nations on the basis of aggregate public service sector performance. Sections 7.5 describes aggregated performance and relates it to aggregated confidence. The final section summarizes core results for a number of different regions which, irrespective of the subject, appear to emerge from all cluster analyses: Northern, Western, Southern en Central Europe and the Anglo-Saxon countries.

7.2 Grouping welfare states by type

Existing typologies of welfare states

In a strand of the literature, the performance of welfare states is linked to their institutions. A typology aims to explain the performance of national institutions in the light of their key characteristics. One well-known typology of institutions for social protection found in welfare states was developed by Esping-Andersen (1990). In his approach, the defining characteristic of welfare states is the generosity and accessibility of government programs designed to protect the citizenry against loss of income and poverty. Esping-Andersen proceeds by grouping countries on the basis of a historical sociological theory, and uses an analytical sociological model to define three types of welfare state that perform differently in their efforts to provide social protection: liberal, corporatist and social-democratic. Each type is different in terms of the regulation of labour markets (primary protection) and the level and scope of income guarantees (secondary protection). The Social and Cultural Planning Office – using empirical data – has also classified welfare states on the basis of social protection offered to citizens. Eastern European countries emerge as a separate type of welfare state.[1]

[1] See: SCP/CERP 2004.

Mediterranean countries are characterised by limited access to social security, but a high level of pension benefits. Corporatist countries score fairly low on both points, liberal countries score low on providing pensions and social-democratic countries score high on access to social security programs. In fact, Eastern European countries resemble corporatist countries to a great extent. While responsibility for social protection rests largely with the individual in liberal countries and with the public sector in social-democratic countries, in corporatist countries it is more the province of civil society, with an important role for employer, professional and trade associations. The Netherlands is difficult to place in this classification, and is usually positioned between the corporatist and the social-democratic types.

Other studies have attempted to find a relationship between key demographic indicators and the institutions of welfare states. For example, Mellens (1999)[2] has tried to relate birth rate, migration, family formation and the death rate to dominant socio-economic and cultural treats of welfare states. Socio-economic characteristics here include level of income, educational attainment and health status of the population. Cultural characteristics include gender equality, conservatism, individualism and post-modernism. In fact, his classification is largely consistent with the classification based on the degree of social protection. Mediterranean, Scandinavian, Central European and Eastern European types can be distinguished. Notably, Ireland ends up in the Mediterranean group and Portugal in the Eastern European group. In Ireland's case, this is put down to the Catholic tradition and a strong orientation towards family values, while Portugal's position can be attributed to its relatively poor economic performance. Another outcome worth noting is that Mellens finds no liberal cluster. Australia and the UK mostly resemble the Central European countries.

Typology of welfare states: the public service sector

In producing a typology of welfare states, we have opted for yet another approach. We start by considering the degree to which countries manage to guarantee certain basic rights for the whole of the population (education, health care, law and order). To this end, the government must provide or arrange the provision of police services, a judicial system, various health care services and education of sufficient quality. The producers of these services, which may include public, private or non-profit organizations, constitute the 'public service sector' of the economy (see definitions in Box 1.1 and in Section 2.3).

The typology of the public service sector should tie in with structural characteristics of welfare states, which help determine the degree to which they succeed in offering citizens basic rights such as education, health care and safety. Another very important factor is income. Basic rights can be guaranteed in various ways, given the income available.

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[2] In De Beer and Van Wissen (eds.), Europe: One Continent, Different Worlds; Nidi 1999.

In *education* the aim is to allow individuals to develop their innate talents. The philosophy of equal opportunity can be applied either broadly or in depth. When applied broadly, governments try to keep children on the same educational course for as long as possible; when applied in depth, institutions focus on selecting children as soon as possible in order to exploit their talents. In both cases, there is a risk that talent may be wasted: in the 'broad' version in children with good chances, and in the 'in-depth' version in children with poor chances.

The goal of *health care* is for the population to be healthy and have a long life expectancy. Good accessibility to health care is essential. In practice, national health systems differ in the degree to which responsibility for health care lies with the government or with individual citizens. Countries that place more responsibility on citizens will also expect them to pay part of the bill – in the form of out-of-pocket payments – but also offer them greater choice in terms of insurers and health care providers.

When it comes to *law and order* the aim is to achieve the lowest possible level of crime. The focus will be either on repression or on prevention. Countries that put their faith in repression are likely to devote a relatively large amount of resources to the punishment side of the criminal justice system. Countries that focus more on prevention will maximise the likelihood of punishment and minimise the chance of repetition. The likelihood of being punished depends on the likelihood of criminals being caught, and this in itself is largely the result of the investigation and detection efforts of the policy and judiciary. This characteristic is therefore so interwoven with the performance of the police and judiciary that it is difficult to use it in a public service sector typology.

Responsibility for guaranteeing the three basic rights mentioned above can be apportioned in various ways. On the one hand, primary responsibility for safety, care and skills can be placed in the hands of individuals, e.g. in the form of high out-of-pocket payments in health care and with a significant role for private security firms. On the other hand, primary responsibility may be placed in civil society (e.g. private educational organisations) or the public sector, e.g. state hospitals and state prisons. Indicators selected must reflect these policy options.

Moreover, indicators must also tie in with types of education, health care and police systems outlined in the previous chapters. Our analysis has revealed that education systems differ mainly in terms of the degree of differentiation in learning paths. In health care, countries differ mainly in the level of private and public financing and the degree to which the insurance system is universalistic (Beveridge) or corporatist (Bismarck). In law and order, the repressiveness (number of prisoners per crime) and the distinction between an adversarial and inquisitorial system are selected as system characteristics..

Performance in the public service sector depends not only on the resources used but also on the size and composition of the target group. For education, therefore, the analysis is based on spending per 5- to 19-year-old, and in considering health care account is taken of demographic ageing, by assuming that health care expendi-

ture on the over-65s is three times higher than that on the rest of the population (see Chapter 4). No correction has been made for the size of the 'target group' in the case of law and order, in view of the lack of a demographic component in spending.

The above considerations produce three groups of properties that are potentially important for the typology of welfare states in terms of their public services: indicators of resources used, indicators of the method by which services are financed and indicators of the delivery of services. The choice of indicators is limited by the fact that sufficient data have to be available for all countries covered in the report.

Table 7.1 lists selected indicators and results of a principal component analysis of these indicators. This analysis was performed in order to identify correlations between the indicators and to classify countries.[3]

Table 7.1 System characteristics of public service sector, principal component analysis (2001)

system characteristic	compo-nent 1	compo-nent 2	compo-nent 3
level of resources used			
- health spending per capita[a]	0.95	0.15	0.05
- education spending per 5- to 19-year-old	0.87	–0.29	0.17
- law and order spending per capita	0.71	0.37	–0.27
- public administration and defence spending per capita[b]	0.89	–0.24	–0.23
structural characteristics of financing			
- proportion of income spent on health care[a]	0.73	0.44	0.06
- proportion of income spent on education	0.46	–0.25	0.39
- proportion of income spent on law and order	–0.10	0.70	–0.46
- proportion of income spent on public administration and defence	0.43	–0.23	–0.47
- proportion of private financing of health care	0.02	0.73	0.07
- proportion of out-of-pocket payments for health care	–0.54	0.48	0.13
- proportion of private financing of tertiary education	0.41	0.74	0.07
- Bismarck (1) or Beveridge (2) system of financing	–0.20	–0.16	0.76
- structural characteristics of delivery			
- free choice of health care supplier	–0.14	0.20	0.02
- degree of differentiation in education[c]	–0.07	0.41	0.75
- adversarial criminal law system (versus inquisitorial)	0.43	0.38	0.63
- number of prisoners per 1000 crimes	–0.32	0.52	–0.24

a Corrected for differences in demographic ageing between countries.
b Including defence and social security administration bodies.
c A high score implies low differentiation.

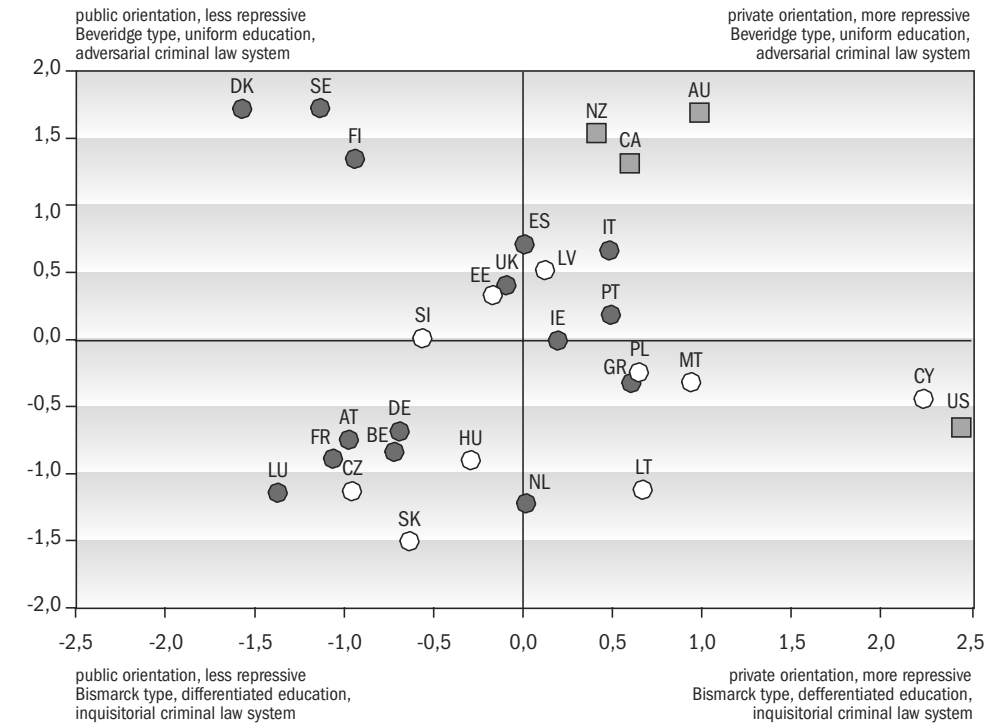
Source: SCP

3 Principal component analysis attempts to find out if a large number of variables measures one or more underlying common factors. The figures in table 7.1 and 7.1 represent the correlation between each variable and the (non observed) hypothetical component. These correlations range from 0 (no) to 1 (perfect). A high correlation means that this variable counts well in the component score of countries.

Some 60% of the variance in the sixteen characteristics is tied to the first three components. This implies that the selected components are highly correlated and that the correlation can be summarised in a limited number of components. The *first component* represents the input of resources for public sector services. Since inputs are measured in absolute levels at comparable prices, this dimension is determined to a large degree by the income level of a country. Notably, health spending as a proportion of income also scores high on this component. This is a reflection of the fact that the level of health spending is strongly related to income per capita (see Chapter 4). The *second component* represents the public or private orientation of the country. The key factor here is the degree to which health care and education are publicly or privately financed. Notably, this also corresponds to a certain extent to spending on the police and judiciary, and the likelihood that crime will lead to a stay in prison. Apparently, countries with a strong orientation towards private financing tend to tackle law and order problems more rigorously. The reason might be cultural, with individuals in these countries being held more responsible for their own actions. A *third component* is centred around three items: type of welfare state, the degree of differentiation in education and type of criminal law system. On the one hand we observe countries where the financing of social security and health care is based more on universalistic principles (Beveridge-type welfare state), where education systems are more uniform organized and where the judge's role is that of an impartial referee (adversarial type of criminal law). On the other hand we observe countries with corporative financing of social security and health care (Bismarck-type welfare state), with differentiated education systems and with a legal system where the court is actively involved in determining the facts of crime (inquisitional type of criminal law). In general, these component is weakly correlated with spending on traditional functions of the welfare state (public administration, law and order).

Combination of the first and second component generates four areas, of which only three can be used to classify countries: Poland, Lithuania and Greece in the private, low expenditure area; the US in the private, high expenditure area and Denmark, Sweden, Luxembourg, Austria, Belgium and France in the public, high expenditure area of the plot. Figure 7.1 shows countries' scores for the second and third components, which produce clearer clusters than the plot of the first and second components.

Figure 7.1 Plot of countries on second (horizontal axis) and third ((vertical axis) component of institutional characteristics, 2001



● EU-15 ○ new member states ■ non-EU Anglo-Saxon

Source: SCP (US out of range)

In the plot of the second and third component, the Scandinavian countries are found in the top left quarter, reflecting the fact that they have a publicly oriented system, low expenditure on the police and judiciary, a uniform education system and a Beveridge-type health care system. The bottom left quarter contains most of the countries of Western and Central Europe, with their publicly-oriented systems, Bismarck-type health care systems and generally strongly differentiated education systems. Both these groups of countries are notable for their scores on the first component (spending per capita, not shown here). In the top right quarter of Figure 7.1 are the non-European Anglo-Saxon countries, with the US at the extreme (out of range). These countries combine a stronger private orientation with a Beveridge-type health care system and a uniform education system. Close to the centre of the plot are the Southern European countries, with a Beveridge-type health care system and various types of education system.

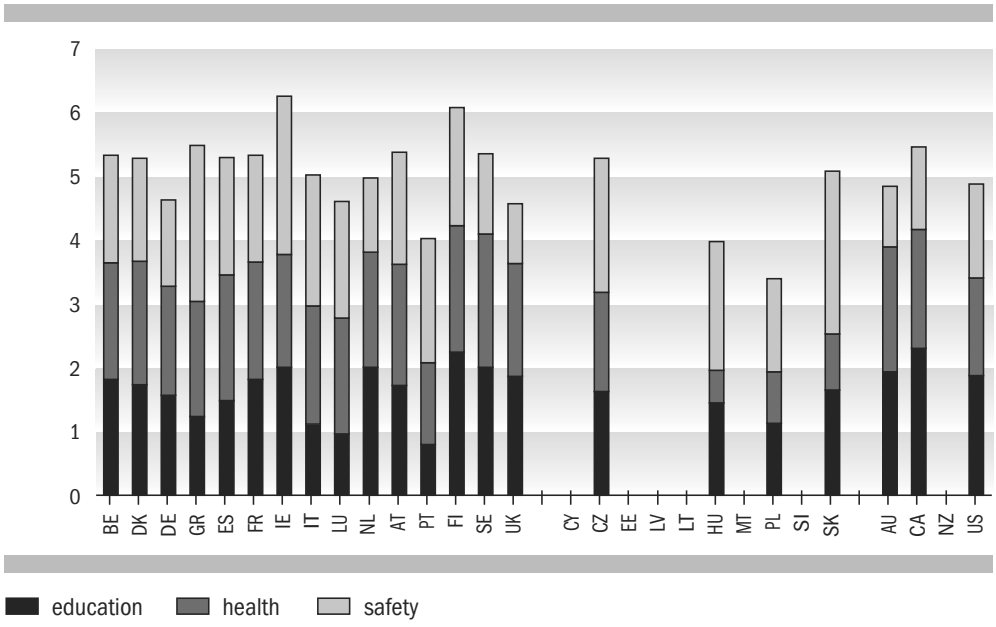
7.3 Overall performance for education, health care and law and order

To measure aggregated performance, we have for each country combined its performance scores for education (Chapter 3), health care (Chapter 4) and law and order

(Chapter 5) by adding and rescaling the separate z-scores for these characteristics (see Annex B.3 for an explanation). The aggregated score (see Figure 7.2) represents the allocation function of the public sector. The scores for education refer to achievement and attainment. The performance of the health care system is reflected in the health of the population measured by disability-adjusted life years, infant mortality and subjective health status. The performance of the police and judiciary system is reflected in the level of crime. No suitable performance indicators are available for public administration.

Notably, many countries have a score that deviates from the average. Ireland and Finland score well above average, followed by a group of EU-15 countries, the Czech Republic, Slovakia and Canada. The Netherlands comes somewhere in the middle. Poland, Hungary and Portugal clearly score below average. Ireland achieves its top position thanks to its excellent crime rate, a good score for education and an average score for health. Finland has a very good score for education and health, but is beaten to the top position by Ireland because of its poor score on law and order.

Figure 7.2 Overall performance for the allocation function (education, health care, law and order)



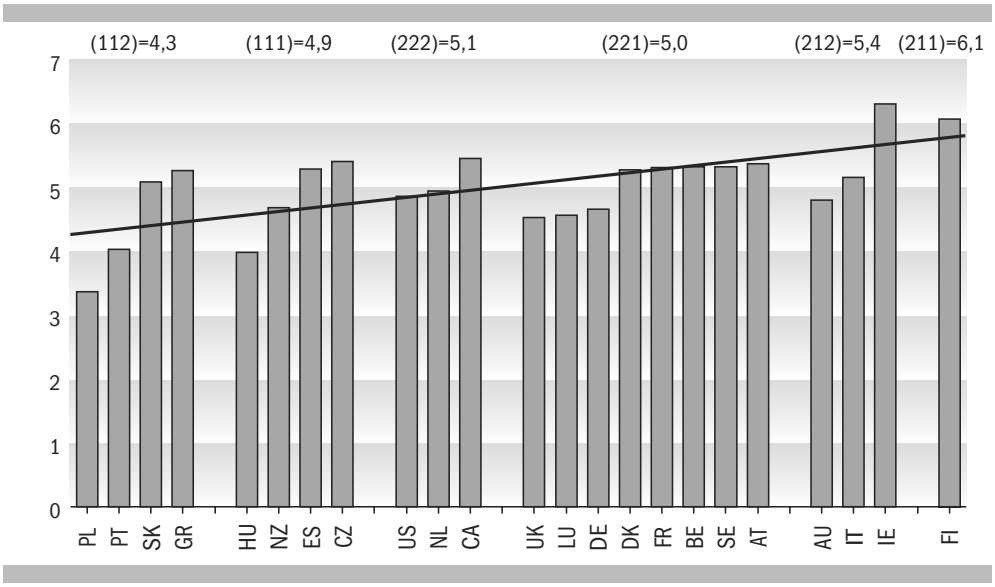
Source: SCP

The scores range between 3,5 and 6, indicating that the correlation between separate indicators is not very high, since scores for individual indicators tend to range from 2 to 8. Apparently, countries performing well in one area will not necessarily perform well in other areas. There is therefore a weak correlation between performances in the three selected areas. The correlation is greatest between health and education (0.48), smaller between education and crime (0.31) and smallest between health and crime (0.19).

At the country level, we observe a significant relationship between overall performance scores and system characteristics reduced to the three components

identified in Section 7.2, but the correlation is rather weak (see Figure 7.3). Income per capita still appears to have most influence on overall performance, measured by educational attainment, health status and crime rates. However, where per capita income is high, countries with relatively low expenditure would seem to put in a slightly better average performance: this does especially hold for Ireland and Finland. Apparently, good arrangements are not necessarily expensive arrangements. Furthermore, publicly-oriented systems perform on average better than privately-oriented systems. Although Figure 7.3 shows that these correlations are generally present (see inserted regression line), the country variation within the groups is so great that it is not possible to draw any definite conclusions.

Figure 7.3 Overall performance for the allocation function by type of country



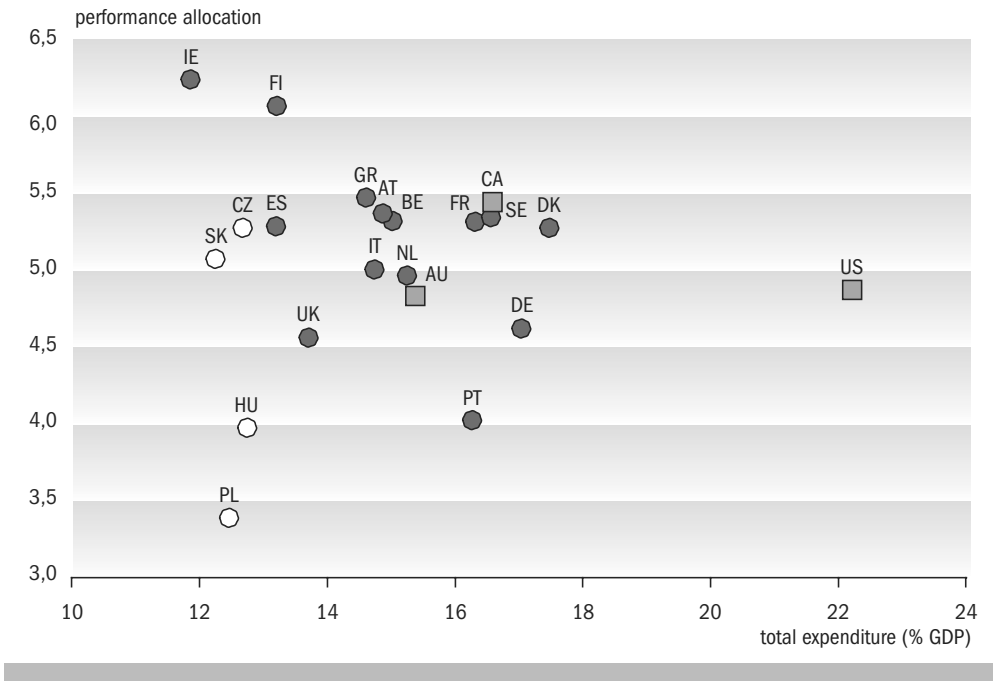
overall effectiveness score

Country types (inserted: mean overall performance score):
(112) lower income, lower total expenditure, more privately oriented funding
(111) lower income, lower total expenditure, more publicly oriented funding
(222) higher income, higher total expenditure, more privately oriented funding
(221) higher income, higher total expenditure, more publicly oriented funding
(212) higher income, lower total expenditure, more privately oriented funding
(211) higher income, lower total expenditure, more publicly oriented funding

Source: SCP

Figure 7.4 shows a scatterplot of overall performance in the policy areas of education, health care and law and order, now in relation to the resources used.

Figure 7.4 Cost effectiveness of allocation function



Source: SCP

From Figure 7.4 it emerges that Ireland and Finland combine relatively low expenditure (as a proportion of GDP) with high levels of performance. Spain, the United Kingdom, the Czech Republic, Slovakia, Hungary and Poland also use relatively few resources. However, the last two countries, in particular, are characterised by relatively weak performances. Portugal is an exception, with weak performances and average expenditure levels, as is the US, with fairly poor performances and very high spending, especially on health care. The other countries, including the Netherlands, have more or less average performance and expenditure levels.

7.4 *Grouping of countries on the basis of performance*

This section places performance of the public service sector in a broader perspective. Our analysis is inspired by the work of Afonso et al. (2003). Their paper for the European Central Bank compares the performance of the public sector in twenty-four countries and relates it to resource use. These authors use indicators relating to effectiveness and in a number of major policy areas: education, health care and infrastructure. In addition, Afonso et al. draw on indicators of the quality of public administration, based on survey data. Finally, the authors operationalize the conventional functions of government: distribution, stabilization and allocation (Musgrave and Musgrave 1984). Their indicators are aggregated by means of unweighted totalling of standardised component scores. Performance is then related to resource use on two levels: in each individual policy area, and for the public sector as a whole.

This inspiring work leaves room for doubt when it comes to certain details. For instance, it is strange that economic growth and unemployment are regarded as indicators of the government's allocation function, rather than its stabilisation function. It would seem more logical to treat indicators for individual policy areas (education, health care etc.) as allocation indicators. Secondly, the authors make the crucial mistake of relating public expenditure (rather than total expenditure) to integrated effect indicators (life expectancy etc.). This means that the private resources that help to achieve measured performance are overlooked. For this purpose, a functional definition of the public sector (here termed "public services sector", see Box 1.1 and Section 2.3) and the inclusion of private expenditure are of vital importance. Furthermore, in aggregating the individual indicators and setting up the final analysis, one can try to use more sophisticated techniques to help prevent the outcomes from being excessively influenced by arbitrary (politically sensitive) assumptions about the relative importance of indicators in various areas.

The ambition here is to improve on the work by Afonso et al. (2003) in several respects. Our analysis in principle applies to the twenty-nine countries covered in the present report. However, due to missing data, it was only possible to include four of the new EU entrants (Czech Republic, Hungary, Poland and Slovakia). New Zealand has been left out for lack of data. The analysis therefore in fact includes twenty-two countries. Performance indicators for the public service sector are consistent with those used in earlier chapters. The nineteen indicators can be divided into four main groups: stabilisation/growth, distribution, allocation and quality of public administration (see the list in Table 7.2). The table shows the outcomes of a principal component analysis.

One problem with such an analysis is the rather arbitrary selection of criteria, which necessarily affects the results. One useful point of reference are the criteria from the Lisbon Agenda. The choice of policy areas (health care, education, law and order, and infrastructure) can easily be justified. The precise choice of indicators and their weighting, which is implicitly reflected in the aggregation to four main groups, remains subjective to a large extent. For instance, should GDP per capita (and growth in GDP) not be included among the criteria? If so, this raises the question of whether income should not in fact be weighted more heavily. In addition, poverty implicitly carries extra weight, for the simple fact that it is the only indicator of distribution.

It would appear to be impossible to establish the relative importance of all the items concerned in a value-free manner, purely on the basis of economic theory. One may consider to weight indicators by resource inputs. While this approach is feasible for allocation (education, health care and police/judiciary) and distribution (social security), it is by no means certain that the importance of these policy areas can be directly associated with the resources spent on them.

In fairly similar situations, it is sometimes possible to estimate the weights of individual indicators via *a cost function*, which relates costs to production for a number of different products.[4] This strategy might work for allocation, but would certainly not work for stabilisation and growth, or for the quality of public administration. Here, there is either no correlation or, indeed, a negative correlation between input and effect. When it comes to the quality of public administration, we are concerned not so much with the input of resources as with the quality of legislation, transparency and confidence. In terms of stability and growth, while it can be assumed that a certain level of input into education, health care, law and order, and infrastructure is necessary to allow economic development, a high level of public spending can reduce potential for economic growth (certainly above a certain threshold). This has been confirmed by both theoretical and empirical analyses (see for example CPB, 2003; Gwartney et al. 1998). Our data also point to a weak negative correlation between macroeconomic performance (growth and stability) and public expenditure as a proportion of GDP (see Figure 2.27).

A technique that yields useful information to discover dimensions of performance is to apply a principal component analysis to effect indicators. This technique was also used in Section 7.2, to analyse system characteristics. Results are shown in Table 7.2.

4 A good function would be: $C_k = a_1 S_k + a_2 D_k + a_3 A_k + a_4 Q_k$, where C_k represents the integral (private + public costs of public administration, education and health care) and S_k, D_k, A_k and Q_k are the composite scores for the main groups stability, distribution, allocation and quality of public administration in the k-st country.

Table 7.2 Effect indicators for public sector, principal component analysis (2001)

System characteristics	compo-nent 1	compo-nent 2	compo-nent 3
Stabilization and growth of the economy			
1. GDP growth (average 1995-2003)	-0.25	0.34	**0.60**
2. unemployment rate	**0.56**	0.26	0.11
3. inflation rate (average 1995-2003)	**0.77**	0.36	-0.38
4. budget deficit as proportion of GDP	**0.76**	0.44	-0.01
Distribution of welfare			
5. poverty rate	-0.09	-0.14	0.34
Allocation of public services			
6. education 1a: reading literacy	**0.74**	**-0.57**	-0.02
7. education 1b: mathematical literacy	**0.71**	**-0.63**	0.07
8. education 1c: scientific literacy	**0.58**	**-0.73**	0.07
9. education 2a: percentage of drop-outs	0.35	**-0.56**	0.26
10. education 2b: percentage with higher qualifications 25-34	**0.70**	-0.03	0.07
11. health care 1: life expectancy at birth	**0.72**	0.38	-0.48
12. health care 2: disability-adjusted life years	**0.64**	0.43	-0.24
13. health care 3: infant mortality	**0.60**	0.20	-0.32
14. health care 4: subjective health status	**0.59**	-0.44	-0.37
15. 37- law & order: crime	**-0.55**	0.20	0.27
Quality of public administration			
16. bureaucracy	**0.75**	0.13	**0.58**
17. transparency	**0.78**	0.15	**0.50**
18. effectiveness	**0.74**	0.31	**0.51**
19. corruption	**0.95**	0.08	0.06

Source: SCP

The first component explains 43% of the total variance and that the five most important components together account for 85%. This implies that there is a considerable degree of correlation between the selected indicators. Virtually all indicators have a high positive score on the first component (mostly between 0.5 and 0.8). The first component describes high performing societies, characterised by a stable economy, a high level of public performance and a high quality of public administration Three indicators have a negative score: economic growth (slightly negative), poverty (slightly negative) and crime (fairly negative). Apparently, economic growth and income distribution (poverty) are not correlated with the other public performance indicators and high performing societies are faced with problems of law and order.

After including the other components in the analyses, the indicators form a number of clusters:

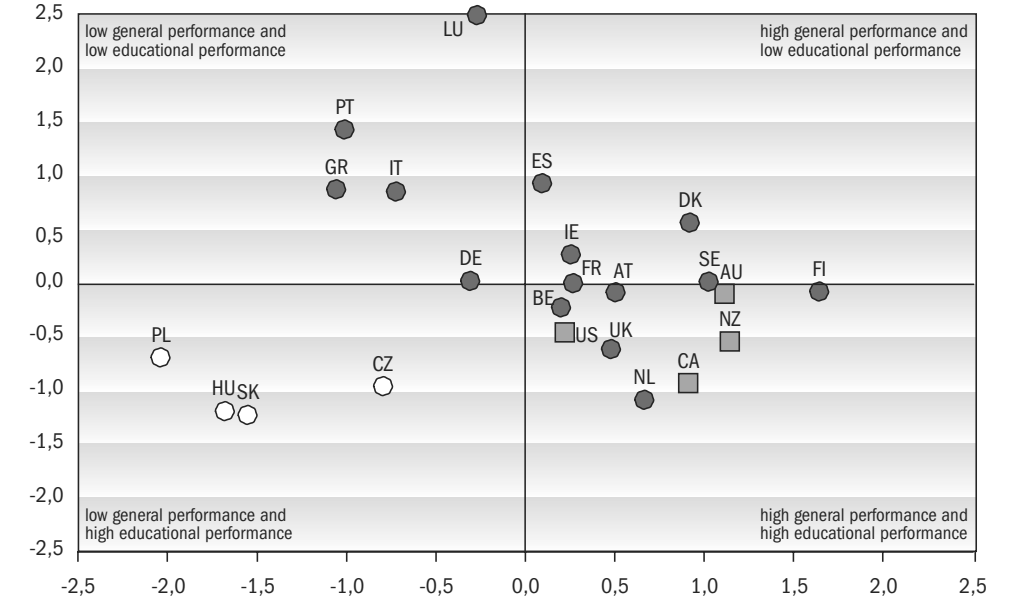
1) economic growth
2) stability (unemployment, inflation and budget deficit)
3) distribution (poverty rate)
4) crime
5) educational achievement (3 indicators)
6) upper secondary educational attainment
7) tertiary educational attainment
8) life expectancy, disability adjusted life years and infant mortality
9) subjective health status
10) quality of the public sector (3 indicators)
11) corruption

There is also a considerable amount of correlation between some of these clusters. This applies, for example, to clusters 5/6 and clusters 10/11. In addition, there is a degree of dependency associated not so much with direct correlations between indicators, but with a common history shared by certain groups of countries. For example, a correlation is found between health indicators and economic stability because the new entrants score badly on both indicators (clusters 2 and 8). Such links reduce the number of relevant components even further.

We performed a similar analysis for the effectiveness/quality indicators combined with five confidence indicators: confidence in (1) the education system, (2) the health care system, (3) the police, (4) the judiciary and (5) the civil service. The data available for the non-European Anglo-Saxon countries are incomplete, which reduces the number of countries for which usable data are available to nineteen. Since, in such an analysis, the number of variables (indicators) may not exceed the number of cases (countries), several indicators that show a strong degree of correlation with others were omitted. In this new analysis, the first component explains 41% of the total variance, and the first five together explain 83%. A close relationship is found between confidence in the police and in the judiciary, though the other measures of confidence appear fairly independent (apart from the high score for the first component). Furthermore, it would appear that confidence indicators, particularly those for the police and judiciary, show little correlation with effectiveness in the areas in question.

Such an analysis can also produce information on the clustering of countries (see Figure 7.5). Unlike in Figure 7.1, this analysis refers to performance in the public sector, rather than to system characteristics.

Figure 7.5 Plot of countries on first (horizontal axis) and second (vertical axis) component



EU-15 new member states non-EU Anglo-Saxon

Source: SCP (Luxembourg out of range)

The first axis of Figure 7.5 represents the greatest common denominator of all variables, and thus produces a kind of composite ranking, with Finland at the top and the new member states and Southern European countries at the bottom. However, poverty, law and order and economic growth play no role on the first axis, rendering the ranking useless. The second axis mainly refers to educational performance (negative). The third axis corresponds to economic growth and the quality of public administration, the fourth to poverty and the fifth to crime.

What we do, however, see is that the grouping of countries found in all analyses up till now, is repeated once more: the new member states in the bottom left, a number of Southern European countries in the top left and the Northern European and Anglo-Saxon countries to the right and in the centre. As is often the case, Luxembourg is in an exceptional position, with a high macroeconomic score, but fairly poor results for the effectiveness of its education system.

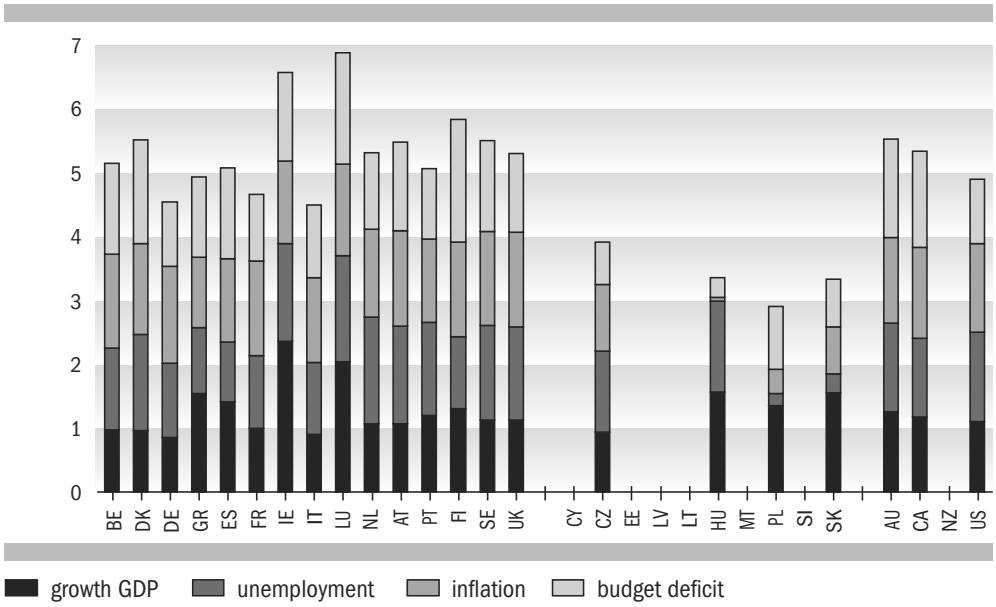
However interesting it may be, the outcome of a principal component analysis does not tell how the individual indicators should be weighted. The fact that groups of indicators appear to correlate in no way implies that these indicators should have a lower weight. Therefore, we have not used countries' score on the first component for the comprehensive assessment, but a very simple and transparent aggregation technique: an unweighted averaging of groups and sub-groups of indicators. We have corrected for differences in scale and variability in the variables by using normalised scores. (see Annex B.3). The idea behind this is either that variables with

a high relative standard deviation are more difficult to control or that there is less consensus over the desired value. To give an example: hyperinflation happens more commonly worldwide than a sharp fall in GDP, and is certainly less harmful.

7.5 *Overall performance of the public service sector*

The performance of the public services sector is measured here by the score on four public sector functions in Table 7.2: stabilization and growth of the economy, distribution of welfare, allocation of public services and quality of public administration. Three of these functions are composed of a number of different indicators, added by using the z-score methodology (see Annex B.3). One is shown in Figure 7.2: allocation of public services (representing total performance of the public service sector). Figure 7.6 pictures growth and stability indicators for the economy and Figure 7.7 quality indicators for public administration. Signs of indicators are changed to measure favourable and unfavourable circumstances. Distribution of welfare is measured by just one indicator (poverty), shown earlier in Figure 2.24.

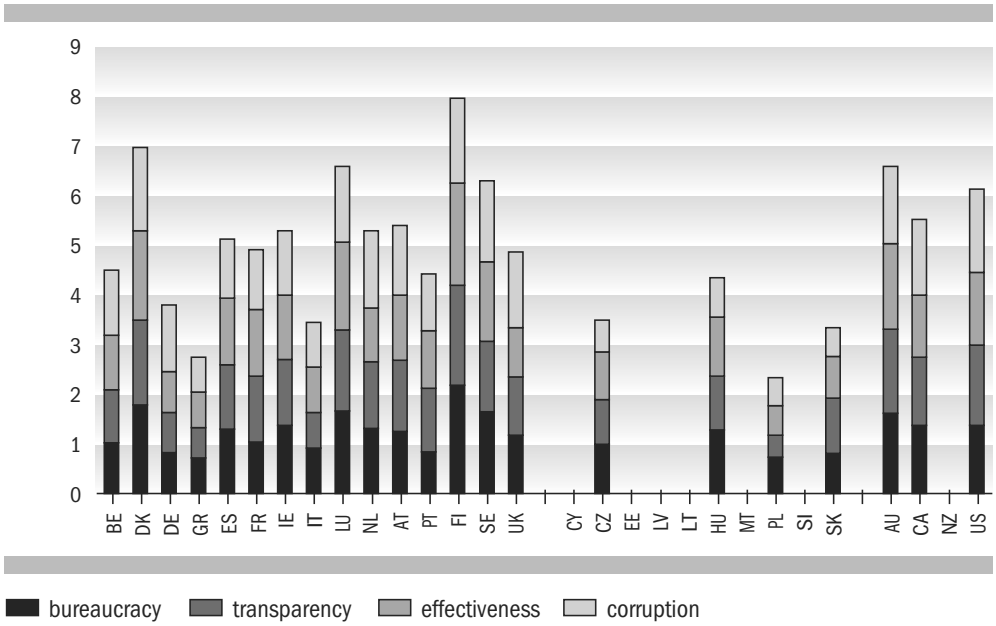
Figure 7.6 Stabilization and growth of the economy



Source: SCP

Luxembourg and Ireland perform well in terms of stabilisation and growth. Luxembourg scores high on all components and Ireland very high on economic growth but less on budget deficit. Of all EU-15 countries, Germany, France and Italy achieve the least satisfying results, mainly because of a rather poor performance on economic growth and budget deficits. New member states perform clearly less on the economic dimension. These poor results are brought about by rather bad scores on unemployment (Slovak Republic and Poland), on inflation (Hungary and Poland) and on budget deficits (Hungary and Czech Republic). On the other hand, economic growth is high in the new member states, except for the Czech Republic.

Figure 7.7 Quality of public administration



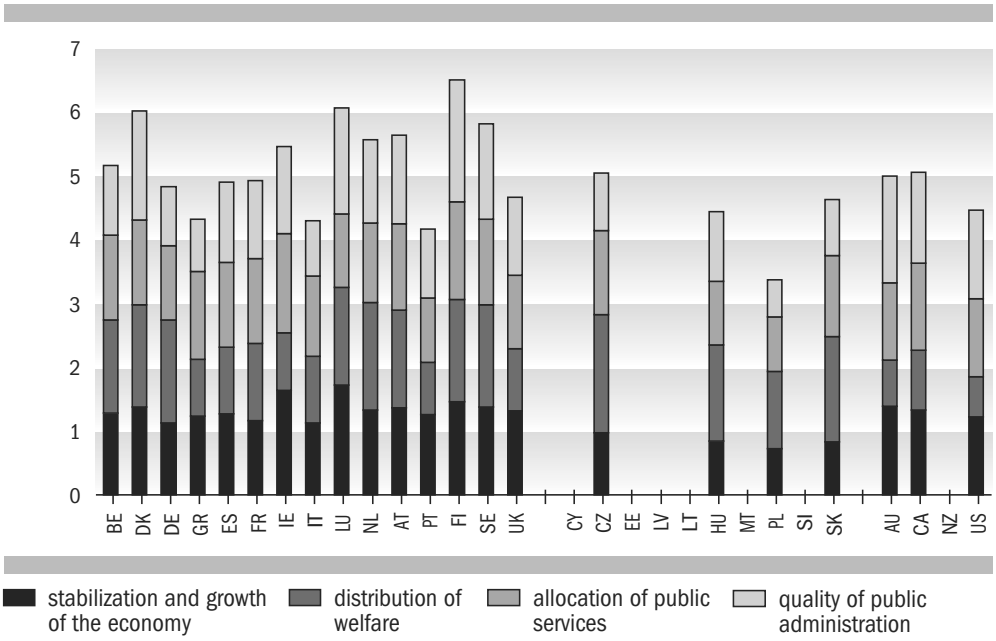
Source: SCP

The variables indicating the quality of public administration are summed up in figure 7.7. The first three variables have been taken from the World Competitiveness Report (IMD 2003). The empirical basis of this study is fairly weak, as the data were collected via an international survey of managers and experts from the business community. The measure of corruption is based on the Transparency International indicator.

In the bar diagram in Figure 7.7 the composite score shows a fairly wide range, from 2.5 to 8. This indicates there is a high degree of correlation between the indicators. Finland again has the highest score, followed by Australia, Denmark, Sweden and Luxembourg. Then come Austria, Canada and the US. The Netherlands comes in the middle, and Greece, Italy, Poland, the Czech Republic and Slovakia have the lowest scores.

Figure 7.8 offers a comprehensive overview of performance by all twenty-two countries in all areas selected: growth/stability, distribution, allocation and quality of public administration. In order to obtain a single aggregated score the usual z-score methodology has been used (see Annex B.3)

Figure 7.8 Overall performance of countries



Source: various

The score for individual variables generally lies between 2 and 8. The range of variation is considerably smaller in the overall score in Figure 7.8, at 3.5 to 6.5. This is because no country posts high scores for all items. Leaders like Denmark and Finland score high for the quality of their public administration and for distribution, but low on allocation, particularly as a result of their high crime rates. Poland trails the rest of the field, but does well on criteria like economic growth, income distribution and preventing school drop-outs. Generally speaking, the new member states score badly for stability and allocation, the Anglo-Saxon countries do badly on distribution, and Poland in particular does badly in terms of the quality of its public administration.

The choice of indicators, and also their weighting (via the categorisation into main groups) implies a considerable degree of arbitrariness. Table 7.3 considers how an alternative selection of indicators might have affected the outcomes. The main variant (four categories) is in line with the conventional categories: stability, distribution and allocation, plus the quality of public administration. In variant 2 (seven categories), growth, education, health care and crime are weighted separately. Variant 3 (eight categories) takes account of differences in per capita GDP.

Table 7.3 Sensitivity of ranking (aggregate performance)

	4 categories[a]	7 categories[b]	8 categories[c]	ECB-analysis[d]	World Bank[e]
Finland	1	1	1	10	4
Denmark	2	4	5	4	5
Luxembourg	3	5	2	1	2
Sweden	4	3	4	6.5	8
Austria	5	7	6	2	10
Netherlands	6	6	7	3	1
Ireland	7	2	3	5	14
Belgium	8	10	10	12	7
Czech Republic	9	14	16	–	20
Canada	10	8	8	8.5	6
Australia	11	9	9	6.5	9
France	12	12	12	13	13
Spain	13	11	11	15	15
Germany	14	15	15	11	11
Slovakia	15	16	18	–	22
United Kingdom	16	13	13	14	3
United States	17	17	14	8.5	12
Hungary	18	19	20	–	19
Italy	19	20	19	16	17
Greece	20	18	17	18	18
Portugal	21	21	21	17	16
Poland	22	22	22	–	21

a growth/stability, distribution, allocation, quality
b growth, stability, distribution, education, health, crime, quality
c former 7 plus prosperity
d Afonso et al. (2003)
e Word Bank Government Effectiveness Indicator

Source: SCP

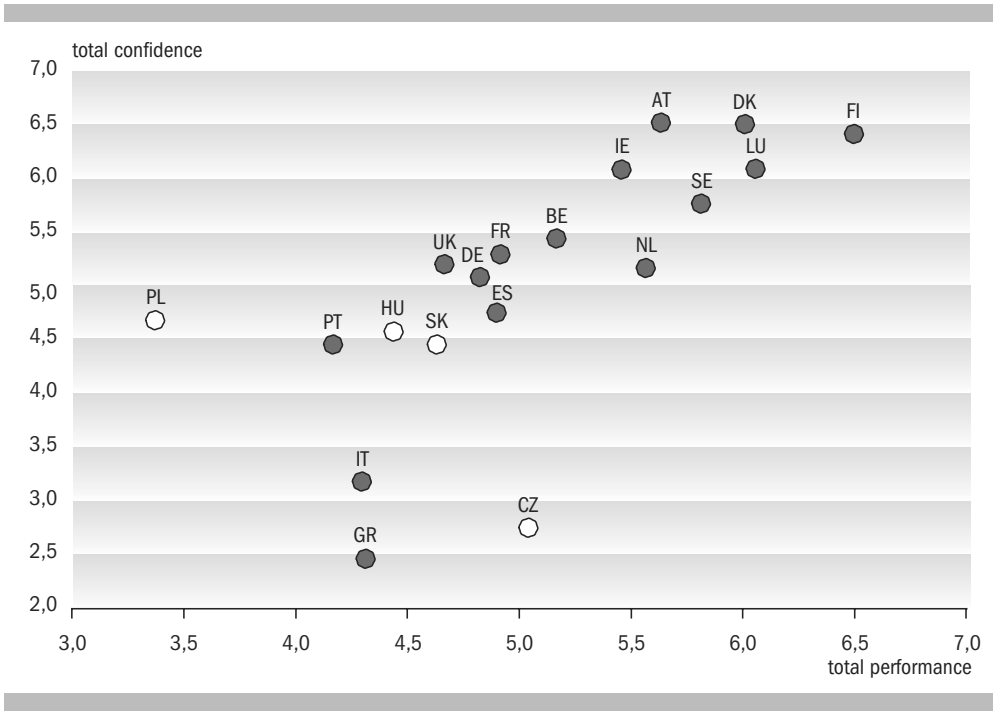
The first three columns in Table 7.3 show that ranking according to the system used in the present report is after all fairly robust. Only two countries trade more than three places: Ireland (high growth and high GDP per capita) and the Czech Republic (low growth and low GDP per capita).

The two rankings based on external sources give entirely different results and also differ from each other. Finland scores much lower in the ECB analysis, while the US scores much higher. In the case of the US, this is partly explained because Afonso et al. overlook the use of private resources for a number of services. As demonstrated in the previous section, this can lead to a country's performance being overstated. The World Bank analysis puts the United Kingdom, in particular, in a higher position.

In terms of formal (Spearman) rank correlations, the differences actually turn out to be not that great. The correlation among the first three columns is in the order of 0.95, between the ECB column and the first column (our main variant) 0.75, between the World Bank column and the first column 0.7 and between the ECB and World Bank columns 0.8.

Chapters 3 through 6 examined the relationship between the effectiveness of public services and the confidence that the public have in their national system. Figure 7.9 shows the relationship between the aggregated effectiveness and confidence measures.

Figure 7.9 Total performance versus total confidence

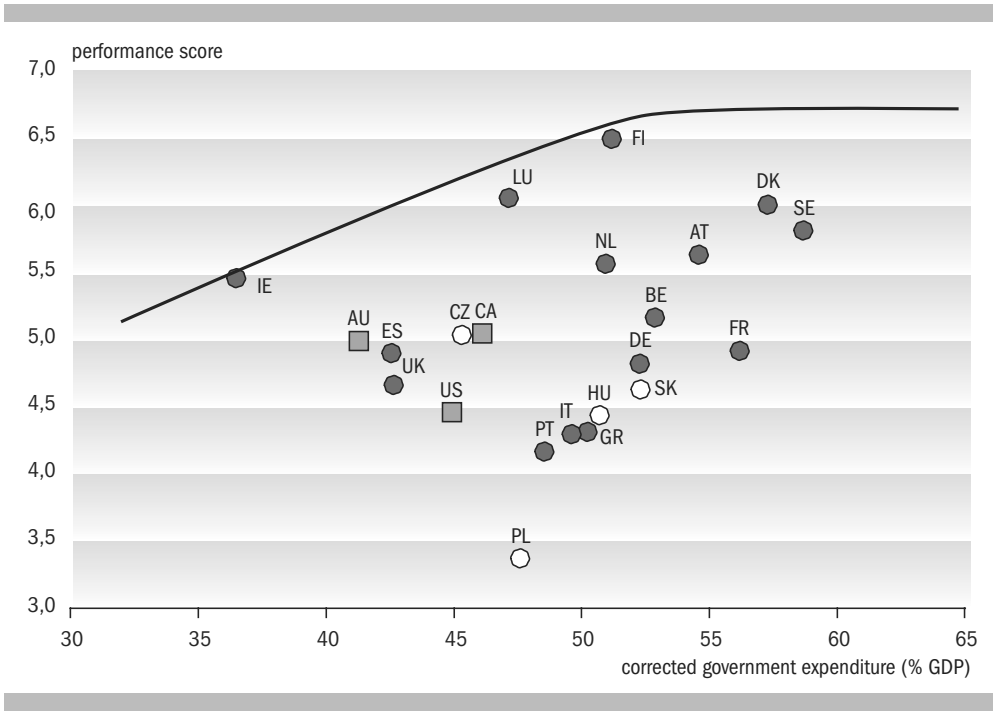


Source: various

Italy, Greece and the Czech Republic score particularly low on public confidence. The Northern European countries, Austria, Ireland and Luxembourg book the highest scores. The Netherlands falls somewhere in the middle, together with the bulk of the Western European countries. There is a fairly strong correlation between performance and confidence. Notable exceptions are the Czech Republic, with reasonable performance but low confidence, and Poland, where the reverse applies.

Figure 7.10, finally, links the overall scores from Figure 7.4 with the resources used. Here, private spending on education and health care have been added to total government spending. This gives 'corrected public sector spending' figures (see Figure 2.9). Using these corrected figures may be regarded as a significant improvement on the ECB analysis.

Figure 7.10 Overall performance of countries and corrected government expenditure



Source: SCP

Roughly speaking, there is little connection between public performance and corrected government expenditure. In Figure 7.10, a curve has been pencilled in to denote 'best practice'. Ireland and Finland lie on the curve. Finland has by far the best performance score, while Ireland scores slightly above average. In the case of Finland, this high score is accompanied by fairly high (corrected) government spending, but Ireland has low (corrected) spending. Just behind the leaders on performance we find Sweden, Denmark, Austria, Luxembourg and the Netherlands, but the first three have relatively high government expenditure, while the last two have fairly average spending. Australia, Canada, Spain and the Czech Republic combine an average performance score with fairly low government spending, while others (particularly Germany, Belgium and France) occupy a fairly average position on both. The US and the United Kingdom have fairly poor performance scores and relatively low public spending. Most Southern European countries, and also Hungary, have a poor performance score and average public spending. Poland produces poor performances with average spending.

The outcomes of the analysis in Figure 7.10 differ markedly from those in the ECB paper. To conclude that the law of diminishing returns applies to public spending, as the ECB paper does, is simply too simple. The highest levels of public performance are achieved in Scandinavia, and are paid for by high levels of public spending. The Netherlands also comes near the top in terms of performance, with considerably

lower spending. The example of the Scandinavian countries, in particular, would appear to show that high government spending need not necessarily be associated with poor economic performance or an unwieldy public sector.

7.6 Some concluding remarks

One of the most striking outcomes of the analysis in the present report is that the same clusters of countries repeatedly emerge in analyses of public sector performance, no matter what the policy area or level of analysis. Again and again, the Scandinavian countries, the Southern European countries, the Central European countries, the Western European countries and the Anglo-Saxon countries form fairly consistent clusters. This became clear in this chapter in the analyses both of system characteristics (Figure 7.1) and of performance (Figure 7.2). The same clusters also emerge from analyses of macroeconomic characteristics (Figure 2.26), demographics (Mellens, 1999), education (Figure 3.36), health care (Figure 4.41), the police/judiciary (Figure 5.35) and public administration (Figure 6.17).

Table 7.4 lists the main characteristics of these groups of countries. These characteristics refer to demographic profile (1), institutional characteristics (7, 9, 11), resource characteristics (4, 5, 6) and performance (2, 3, 8, 10, 12, 13, 14). We should note that, though there is considerable correlation between public sector performance in the different areas, it is by no means perfect. Countries that do well in several respects also produce poorer performances in some other areas. Finland, for example, records high scores for many policy areas, but has a low score for crime. Poland does badly in many areas, but does well on economic growth, income distribution and its school drop-out rate.

In most respects, the Netherlands shares characteristics with other Western European countries. The Netherlands falls somewhere in the middle when it comes to the size of its public service sector. Educational differentiation can be regarded as high (or even extremely high). Educational performance is good in terms of achievement and moderate in terms of attainment. Public confidence in the public sector is fairly low. In our own ranking of public performance, the Netherlands comes sixth, in the ECB ranking it comes third, and in the World Bank ranking it actually occupies the top spot. In the World Competitiveness Yearbook, too, the Netherlands spent several years near the top of the rankings. The economic downturn after 2001 and, probably, the political wrangling of recent years, has caused the country to fall to the middle of the ranks, however.

Table 7.4 Characteristics of country groups

	Northern European[1]	Western European[2]	Southern European[3]	Central European[4]	Anglo-Saxon[5]
1. ageing	medium	medium	high	low	low
2. prosperity (GDP per capita)	medium	medium	low	low	high
3. economic growth	medium	low	high	high	medium
4. public spending (% GDP)	high	medium	low	low	low
5. size of public service sector (staff)	high	mixed	low	low/medium	medium
6. private share of public service sector	low	medium	low/medium	low	medium/high
7. educational differentiation	low	high/medium	medium	mixed	low/medium
8. educational performance	medium/high	medium/high	low	low/medium	high
9. health care system	Beveridge	Bismarck	Beveridge	Bismarck	Beveridge
10. health care performance	high	high	medium/high	low/medium	medium/high
11. repressive law and order system	low	medium	medium	medium/high	mixed
12. crime	high	medium	low	low	mixed
13. quality of public administration	high	medium	low/medium	low/medium	medium/high
14. aggregated confidence	high	medium/high	low/medium	low/medium	medium[6]

1 Finland, Sweden, Denmark
2 Germany, Austria, France, Belgium, Netherlands; Luxembourg is a special case
3 Greece, Portugal, Spain, Italy; Cyprus and Malta are special cases
4 Czech Republic, Slovakia, Hungary, Poland , Slovenia and Baltic States
5 United Kingdom, US, Canada, Australia, New Zealand; Ireland is a special case
6 Based on partial data.

Source: SCP

Thus, countries differ in terms of system characteristics, resource use and performance of the public (service) sector. Nevertheless, It is possible to group countries into clusters that take account of each of these three dimensions. These clusters are almost entirely consistent with generally accepted geographical/historical classifications of countries. Though this suggests that our conclusions are plausible, it also makes them a little predictable.

References

Adema, W (2001). *Net social expenditure* (second edition). Paris: OECD Labour market and social policy (occasional paper 52).

Afonso, A., L. Schuknecht and V. Tanzi (2003). *Public Sector Efficiency: An International Comparison*. Frankfurt am Main: European Central Bank (ECB working paper 242, July 2003).

Algemene Rekenkamer (Court of Audit) (2002). *VBTB in begrotingen 2002. Deel A: samenvattend rijksbreed beeld*. The Hague: Sdu.

Algemene Rekenkamer (Court of Audit) (2003). *Doelmatigheidsinformatie in begroting en jaarverslag*. The Hague: Sdu.

ASPA and UN (2002). *American Society for Public Administration and United Nations. Benchmarking E-government: A Global Perspective. Assessing the Progress of the UN Member States*. www.unpan.org

Balkenende 2 (2003). *Hoofdlijnenakkoord voor het kabinet CDA, VVD, D66. Meedoen, meer werk en minder regels.* The Hague: Tweede Kamer (House of Representatives), 16 mei 2003.

Banisar, D. (2003).The www.freedominfo.org Global Survey. Freedom of Information and Access to Government Record Laws around the World. [UITGEVER]

Barclay, G. and C. Tavares (2003). *International Comparisons of Criminal Justice Statistics 2001*. London: Home Office (bulletin 12/3, 24 October 2003).

Barr, N. (1993). *The Welfare State*. Oxford: Oxford University Press.

Bartlett, H.P. and D.R. Phillips (1996). 'Policy Issues in the Private Health Sector: Examples'. In: *Social Science and Medicine* 43 (5) p. 731-737.

Becker, G.S. (1975). *Human Capital*. New York/London: Columbia University Press.

Bertels, J. and W. Cocquyt (1995a). *De sociale gezondheidszorgstelsels in de landen van de Europese Unie, deel 1, België, Denemarken, Duitsland, Frankrijk*. Reeks gezondheidszorgverzekering en Europa, deel 15. Antwerpen/Apeldoorn: Maklu uitgevers.

Bertels, J., W. et al. (1995b). *De sociale gezondheidszorgstelsels in de landen van de Europese Unie, deel 2, Griekenland, Ierland, Italië, Luxemburg*. Reeks gezondheidszorgverzekering en Europa, deel 15. Antwerpen/Apeldoorn: Maklu uitgevers.

Bertels, J., P. Schoukens and S. Vansteenkiste (1995c). *De sociale gezondheidszorgstelsels in de landen van de Europese Unie, deel 3, Nederland, Portugal, Spanje, het Verenigd Koninkrijk*. Reeks gezondheidszorgverzekering en Europa, deel 15. Antwerpen/Apeldoorn: Maklu uitgevers.

Biemans, A., and B. Kuhry (2002). 'Komt er een einde aan de onderwijsexpansie?'. In: *Tijdschrift voor hoger onderwijs & management* 9 (1) p. 29-34.

Blank, J.L.T. (ed.) (2000). *Public Provision and Performance*. Amsterdam: Elsevier.

Blank, J. et al. (2004). *Bench Marking in an International Perspective: An International Comparison of the Mechanisms and Performance of the Judiciary System*. Rotterdam: Ecorys research.

Blaug, M. (1970). *An Introduction in the Economics of Education*. London: Penguin Press.

Bocken J., W. Kunstman and M. Butzlaff (2002). 'Free choice of doctors - an international comparison'. In: *Gesundheidswesen* 2002 (64), p. 267-271.

Brettenthaler, Reiner (2003). *Comparison of European Health Systems*. Consulted 12-2-2004 via http://www.aek.or.at/EUSTUDPPT/insurance.htm (website Österreichische Ärtzekammer).

Brienen, M.E.I. and E.H. Hoegen (2000). *Victims of Crime in 22 European Criminal Justice Systems*. Nijmegen: Wolf Legal Productions.

Bronneman-Helmers, H.M., L.J. Herweijer and H.M.G. Vogels (2002). *Voortgezet onderwijs in de jaren negentig*. The Hague: Social and Cultural Planning Office (SCP publication 2002/3).

Bruinsma, G.J.N., H.G. van de Bunt, J.P.S. Fiselier (1990). 'Hoe onveilig is Nederland? Enkele theoretische en methodische kanttekeningen bij een internationaal vergelijkend victimologisch onderzoek'. In: *Tijdschrift voor Criminologie* 32, p. 138-155.
Burger, A. and P. Dekker (eds.) (2001). *Noch markt, noch staat*. The Hague: Social and Cultural Planning Office (SCP publication 2001/2).
Burgess, J.F., and P.W. Wilson (1995). 'Decomposing Hospital Productivity Changes, 1985-1988: A Nonparametric Malmquist Approach'. In: *Journal of Productivity Analysis* 6, p. 343-363.
CBS (2003a). *Trends in doodsoorzaken 1970-2001*. Voorburg/Heerlen: Statistics Netherlands.
CBS (2003b). *Unemployment by Education Level*. www.cbs.nl/statline.
CBS (2004). *Banen van werknemers naar economische activiteit en geslacht 1993-2002*. Voorburg/Heerlen: Statistics Netherlands.
Clarke, R.V. (1997). *Situational Crime Prevention: Successful Case Studies*. New York: Harrow and Heston.
Cohen, L.E. and M. Felson (1979). 'Social Change and Crime Rate Trends: A Routine Activity Approach'. In: *American Sociological Review* 44, p. 588-608.
Cohn, E. (1997). 'Public and Private School Choices Theoretical Considerations and Empirical Evidence'. In: E. Cohn (ed.). *Market Approaches to Education; Vouchers and School Choice*. Oxford: Elsevier Science.
Coleman, J.S. and T. Hoffer (1987). *Public and Private High Schools. The Impact of Communities*. New York: Basic Books.
Council of the EU (2001). *Joint Report on Social Inclusion* (December 2001). Brussels: Council of the European Union.
Council of the EU (2003). *Joint Report by the Commission and the Counsel on Supporting National Strategies for the Future of Health Care and Care for the Elderly* (20 February 2003). Brussels: Council of the European Union (6528/03).
Council of Europe (1997). *Local Government Finance*. Strasbourg: Council of Europe.
Council of Europe (1998). 'Statistics on Prison Population in the Member States of the Council of Europe: Survey 1995-1996'. In: *Penological Information Bulletin* 21, December 1998.
CPB (2002). *De pijlers onder de kenniseconomie: opties voor institutionele vernieuwing*. The Hague: The Netherlands Bureau for Economic Policy Analysis.
CPB (2003). *Four Futures of Europe*. The Hague: The Netherlands Bureau for Economic Policy Analysis.
CPB/SCP (2003). *European Outlook 1: Social Europe*. The Hague: The Netherlands Bureau for Economic Policy Analysis/Social and Cultural Planning Office.
Dalton, R. (2004). *Democratic Challenges, Democratic Choices: The Erosion of Political Support in Advanced Industrial Democracies*. Oxford: Oxford University Press.
Delmas-Marty, M. and J.R. Spencer (2002). *European Criminal Procedures*. Cambridge: Cambridge University Press.
Djankov, S. et al. (2002). *Courts: The Lex Mundi Project*. Cambridge (Massachusetts): Institute of Economic Research, Harvard University (discussion paper 1951, March 2002).
DJI (1996). *Jaarverslag 1996*. The Hague: Ministry of Justice, Correctional Institutions Agency.
Dor, A. (1989). 'The Costs of Medicare Patients in Nursing Homes in the United States: A Multiple Output Analysis'. In: *Journal of Health Economics* 8, p. 253-270.
DPJR (1996). *Herhaald slachtofferschap; omvang, verschijningsvormen en mogelijkheden voor een aanpak*. The Hague: Ministry of Justice, Sanctions, Probation and Victim Care Department.

Dronkers, J. and P. Robert (2003). *The Effectiveness of Public and Private Schools from a Comparative Perspective.* Florence: European University Institute, Department of Political and Social Sciences (EUI working paper SPS 2003/13).
Dijk, J.J.M. van, H.I. Sagel-Grande, and L.G. Toornvliet (1998). *Actuele criminologie.* Lelystad: Koninklijke Vermande.
EC (1997). *Resolution on the Stability and Growth Pact.* Amsterdam: European Commission, 17 June 1997 (#150/97).
EC (2000). *Presidency Conclusions on Employment, Economic Reform and Social Cohesion: A Strategic Goal for the Next Decade.* Lisbon: European Commission, 24 March 2000 (#100/00).
EC (2000c). *Key Data on Education in Europe.* Luxembourg: European Commission, Office for Official Publications of the European Communities.
EC (a). *Mutual Information System on Social Protection (MISSOC) in the EU Member States and the EEA.* Consulted february 2004 via http://europa.eu.int/comm/employment_social/missoc2001/index_chapitre2_en.htm.
ECHP (a). (European Centre for Health Policy). *Health Care Systems in Transition.* consulted in June 2004 via www.euro.who.int/observatory/Hits/TopPage.
Einerhand, M. et al. (1995). *Sociale zekerheid: stelsels en regelingen in enkele Europese landen.* The Hague: Ministry of Social Affairs and Employment.
EIU/IBM (2003). (The Economist Intelligence Unit in cooperation with IBM). *E-readiness Rankings 2003.* Harvard: University Center for International Development.
EMCDDA (2001). *Annual Report on the State of the Drugs Problem in the European Union.* Lisbon: European Monitoring Centre for Drugs and Drug Addiction.
ESPAD/MTF (1999). *Data Based on European School Survey Project on Alcohol and Drugs* and *Monitoring the Future.* Council of Europe/University of Michigan. http://monitoringthefuture.org
Esping-Andersen, G. (1990).*The Three Worlds of Welfare Capitalism.* Cambridge: Polity Press.
European Sourcebook (2000). *European Source Book of Criminal Justice Statistics – 2000.* Strasbourg: Council of Europe.
European Sourcebook (2003). *European Source Book of Criminal Justice Statistics – 2003.* Meppel: Boom (report 212 of the Research and Documentation Centre of the Dutch Ministry of Justice)
Eurostat (2002). *Assessment of the Quality in Statistics.* Luxembourg: Eurostat (Doc.Eurostat/A4/Quality/02/General/Definition).
Eurostat. *NewCronos Online Database.* Europe.eu.int/newcronos
Eurydice (2000). *European Glossary on Education, Volume 2 Educational institutions.* Brussels: Eurydice.
Fagan, J. and D.L. Wilkinson (1998). 'Guns, Youth Violence, and Social Identity in Inner Cities. In: M. Tonry and M.H. Moore (eds.) *Youth Violence.* (*Crime and Justice* 24, p. 105-188). Chicago: University of Chicago Press.
Ferrier, G.D., and V. Valdmanis (1996). 'Rural Hospital Performance and its Correlates'. In: *The Journal of Productivity Analysis* 7, p. 63-80.
Friedman, M. (1955). The Role of Government in Public Education. In: R.A. Solo (ed.). *Economics and the Public Interest.* New Brunswick, NJ: Rutgers University Press.
Friedman, M. (1962). *Capitalism and Freedom.* Chicago: University of Chicago Press.
Gakidou, E. and G. King (2000). *An Individual-level Approach to Health Inequality: Child Survival in 50 Countries.* Geneva: WHO (discussion paper 18).
Gerdtham, U.-G. and B. Jönsson (2000). 'International Comparison of Health Expenditure'. In: A.J. Culver and J.P. Newhouse, *Handbook of Health Economics* (volume 1A, p. 11-49). New York: Elsevier.

Gertler, P.J. (1992). 'Medicaid and the Cost of Improving Access to Nursing Home Care'. In: *The Review of Economics and Statistics* 74 (2) p. 338-345.
Giarchi, G. (1996). *Caring for Older Europeans : Comparative Studies in 29 Countries.* Aldershot: Arena.
Gil, J. and E. Gracia (2002). 'A Comparison of the USA Health Care Effort with other OECD Countries'. In: *Revista de Economia Pública* 161 (2) p. 31-48.
Goudriaan, R. et al. (1989). *Doelmatig dienstverlenen.* The Hague: Social and Cultural Planning Office (Social and Cultural Study 11).
Granneman, W., R.S. Brown, and M.V. Pauly (1986). 'Estimating Hospital Costs: A Multiple-output Analysis'. In: *Journal of Health Economics* 5 (3) p. 107-127.
Grapendaal, M., P.P Groen, and W. van der Heide, (1997). *Duur en volume: Ontwikkeling van de onvoorwaardelijke vrijheidsstraf tussen 1985 en 1995, feiten en verklaringen.* The Hague: Research and Documentation Centre of the Dutch Ministry of Justice (Onderzoek en Beleid, 163)
Grosskopf, S., and V. Valdmanis (1987). 'Measuring Hospital Performance: A Non-parametric Approach'. In: *Journal of Health Economics* 6, p. 89-197.
GVG (2003). (Gesellschaft für Versicherungswissenschaft und –Gestaltung). *Study on the Social Protection Systems in the 13 Applicant Countries Study Financed by the European Commission (DG Employment and Social Affairs)* (January 2003). consulted June 2004 via http://europa.eu.int/comm/employment_social/soc-prot/social/index_en.htm.
Gwartney, J., R. Lawson and R. Holcombe (1998). *The Size and Functions of Government and Economic Growth.* Joint economic committee study. US House of Representatives, April 1998.
Hajnal, G. (2003). 'Diversity and Convergence: A Quantitative Analysis of European Public Administration Education Programs'. In: *Journal of Public Affairs Education* 9 (4) p. 245-258
Hartog, J. and J.M.M. Ritzen (1986). 'Onderwijs en arbeidsmarkt'. In: J.A. van Kemenade (red.). *Onderwijs: bestel en beleid 2b.* Groningen: Wolters-Noordhoff.
Haselbekke, A.G.J. et al. (1990). *Prestaties tellen. Kengetallen als instrumentarium voor een bedrijfsmatig(er) bestuur en beheer van decentrale overheden.* The Hague: VNG.
Hawes, C., and C.D. Phillips (1986). 'The Changing Structure of the Nursing Home Industry and the Impact of Ownership on Quality, Cost, and Access'. In: H.B. Gray (red.). *For-profit Enterprise in Health Care.* Washington: National Academy Press.
Herweijer, L.J. and B. Kuhry (2003). 'Onderwijs'. In: C.A. de Kam and A.P. Ros. *Jaarboek overheidsfinanciën 2003.* The Hague: Sdu.
Hilten, O. van (2004). 'Volumestijging in de zorg lastig te schatten'. In: *Economisch Statistische Berichten* 4439 (6-8-2004) p. 362-364.
Hofler, R.A., and B. Rungeling (1994). 'U.S. Nursing Homes: Are They Cost Efficient?' In: *Economic Letters* 44 (3) p. 301-305.
Hofstede, G.H. (1980). *Culture's Consequences: International Differences in Work-related Values.* Beverly Hills (California): Sage.
Hood, C. (1991). 'A Public Management for All Seasons?' In: *Public Administration* 69 (Spring) p. 3-19.
Hooghe, L. (2002). *The European Commission and the Integration of Europe: Images of Governance.* Cambridge: Cambridge University Press.
Hoorn, W. van, and R. Broekman (1999). 'Uniformity and Diversity Scenarios for Mortality'. In: J. de Beer and L. van Wissen (eds.). *Europe: One Continent, Different Worlds. European Population Scenarios for the 21st Century.* Dordrecht: Kluwer.
Hoorn, W. van, N. van der Gaag and C. Huisman (1999). 'Population Development in Europe in the 21st century'. In: J. de Beer and L. van Wissen (eds.). *Europe: One Continent, Different Worlds. European Population Scenarios for the 21st Century.* Dordrecht: Kluwer.

Houtkoop, W. (1999). *Basisvaardigheden in Nederland; de 'geletterdheid' van Nederland: economische, sociale en educatieve aspecten van de taal- en rekenvaardigheden van de Nederlandse beroepsbevolking.* Amsterdam: Max Goote Kenniscentrum voor Beroepsonderwijs en Volwasseneneducatie.

Hughes Tuohy, C., C.M. Flood and M. Stabile (2001). *How Does Private Finance Affect Health Care Systems?* Toronto: University of Toronto (report 46/1000, June 2001).

Hurley, J. (2000). 'An Overview of the Normative Economics of the Health Care Sector'. In: A.J. Culver and J.P. Newhouse, *Handbook of Health Economics* (volume 1A, p. 55-110). New York: Elsevier.

ICVS (2000). *International Crime Victims Survey 2000.* See: Van Kesteren et al. 2000.

IMD (1995). *World Competitiveness Yearbook 1995.* Lausanne: Institute for Management Development.

IMD (1998). *World Competitiveness Yearbook 1998.* Lausanne: Institute for Management Development.

IMD (2003). *World Competitiveness Yearbook 2003.* Lausanne: Institute for Management Development.

Inspectie van het onderwijs (1999). *Evaluatie van de basisvorming na vijf jaar.* Utrecht: Inspectorate of Education.

Inspectie van het Onderwijs (2002). *Onderwijsverslag over het jaar 2001.* Utrecht: Inspectorate of Education.

Inspectie van het Onderwijs (2003). *Groepsgrootte, personele inzet en onderwijskwaliteit in de onderbouw van het basisonderwijs 2002.* Utrecht: Inspectorate of Education.

IOO/IVA (1998). *Arbeidsvolume publieke sector in internationaal perspectief.* The Hague: Institute for Research of Public Expenditure (IOO onderzoeksrapport 87).

Janssen, D., S. Rotthier, and K. Snijkers (2004). *If You Measure It They Will Score. An Analysis of International E-Government Benchmarking.* paper presented at the 4th European Conference on e-Government, Dublin Castle, 17-18 June 2004.

Jolowicz J. (2003). 'Adversarial and Inquisitorial Models of Civil Procedure'. In: *International and Comparative Law Quarterly* 52 (2) p.281-295

Jong, A. de, and R. Broekman (1999). 'Uniformity and Diversity Scenarios for Fertility'. In: J. de Beer and L. van Wissen (eds.). *Europe: One Continent, Different Worlds. European Population Scenarios for the 21st Century.* Dordrecht: Kluwer.

Kaiser, F. and P. Wach (2003). 'Poland'. In: J. File and L. Goedergebuure (eds.) *Real-time Systems. Reflections on Higher Education in the Czech Republic, Hungary, Poland and Slovenia* (p. 77-93). Enschede: University of Twente, Center for Higher Education Policy Studies (CHEPS).

Kalma, P. (2002). 'Quasi-ondernemers'. In: P. Dekker (ed.), *Particulier initiatief en publiek belang.* The Hague: Social and Cultural Planning Office.

Kangaspunta, K. (ed) (1995). *Profiles of Criminal Justice Systems in Europe and North America.* Helsinki: Tampere (publication series 26 of European Institute for Crime Prevention and control, affiliated with the United Nations).

Kemenade J.A. van (1981). *Onderwijs: beleid en bestel.* Groningen: Wolters-Noordhoff.

Kesteren, J. van, P. Mayhew and J.J.M. van Dijk (2000). *Criminal Victimisation in Seventeen Industrialised Countries; Key Findings from the 2000 International Crime Victims Survey.* The Hague: Research and Documentation Centre of the Dutch Ministry of Justice.

Kooiker, S. and L. van der Wijst (2003). *Europeans and Their Medicines.* Dongen/The Hague: GFK/SCP.

Kreier, Rachel (2001). *Costs, equity, and quality in the health care systems of the developed nations.* (Comparative International Health Systems Supervised reading course, May, 2001).

Kuhry, B. (1998). *Trends in onderwijsdeelname. Van analyse tot prognose.* Rijswijk/The Hague: Social and Cultural Planning Office/VUGA (Social and Cultural Study 25.).

Kuhry, B (2003). 'Production and Costs of the Public Sector in the Netherlands'. In: Ceies, 24the seminar on *The Size of the Government Sector – How to Measure.* (conference in Vienna, 23 and 24 October 2003). Luxembourg: EC/Eurostat.
Kuhry, B. and A. van der Torre (2002). *De vierde sector.* The Hague: Social and Cultural Planning Office (research paper 2002/15.)
Kuhry, B. and V. Veldheer (2004). *Maten voor Gemeenten 2004.* The Hague: Social and Cultural Planning Office (research paper 2004/5).
Kwong, J. (2000). 'Introduction: Marketization and Privatization in Education'. In: *International Journal of Educational Development* 20, p. 87-92.
Levin, J.D. (2002). *Essays in the Economics of Education* (thesis). Amsterdam: University of Amsterdam (Tinbergen Institute Research Series 297).
Lieshout, H. van (1996). *Beroepsonderwijs in Duitsland. Een analyse van het Duitse duale stelsel van beroepsonderwijs vanuit Nederlands perspectief.* Amsterdam: Max Gootte Kenniscentrum voor Beroepsonderwijs en Volwasseneneducatie.
Loughlin, J. (1994). 'Nation, State, and Region in Western Europe'. In: L. Bekemans (ed.), *Culture: Building Stone for Europe 2002: Reflections and Perspectives*, Brussels: Peter Lang Publishing.
Maguire, K. and A.L. Pastore (eds.) (1998). *Sourcebook of Criminal Justice Statistics 1997.* Washington D,C.: U.S. Department of Justice, National Institute of Justice.
Mamadouh, V. (1999). 'National Political Cultures in the European Union'. In: M. Thompson, G. Grendstad and P. Selle, *Cultural Theory as Political Science* (p. 138-53), London: Routledge.
Mark, T.L. (1996). 'Psychiatric Hospital Ownership and Performance: Do Nonprofit Organizations Offer Advantages in Markets Characterized by Asymmetric Information?' In: *The Journal of Human Resources* XXXI (3) p. 631-649.
Martinek, M. (2002). *Unjust Enrichment Issues in Triangular Situations of Defective Cashless Payments - The German Approach in a Comparative Perspective* (contribution to the Annual Banking Law Update Conference at Rand Afrikaans University, Johannesburg, South Africa, April 2002). Johannesburg: Rand Afrikaans University.
Mathers, C. et al. (2000). *Estimates of DALE for 191 Countries: Methods and Results.* Geneva: WHO (discussion paper 16).
Mellens, M. (1999). 'Determinants of Demographic Behaviour'. In: J. de Beer and L. van Wissen (eds.), *Europe: One Continent, Different Worlds. European Population Scenarios for the 21st Century.* Dordrecht: Kluwer.
Mendel, T. (2003). *Freedom of Information: A Comparative Legal Survey.* New Delhi: UNESCO ('OECD Corporate Data Environment: Labour Market Statistics'. www.oecd.org).
Miller, T. and M.A. Cohen (1997). 'Costs of Gunshot and Cut/Stab Wounds in the United States, With Some Canadian Comparisons'. In: *Accident Analysis and Prevention* 29, p. 329-341.
Ministry of Economic Affairs (2002). *Lokaal loket. Rapport van de MDW-werkgroep Benchmark gemeentelijke dienstverlening.* The Hague: Ministry of Economic Affairs.
Ministry of Finance (1994). *Handleiding kengetallen. Het gebruik van kengetallen bij de rijksoverheid en in de rijksbegroting.* The Hague: Ministry of Finance.
Ministry of Justice (2000). *Juridische infrastructuur in internationaal perspectief. Criminaliteitsbeheersing.* Report offered with letter to House of Representatives (5014737/500/RR), 2 March 2000. The Hague: Ministry of Justice.
Ministry of Justice (2002). *Jaarboek beveiliging 2002.* The Hague: Ministry of Justice.
Mobley, L.R. and J. Magnussen (1998). 'An International Comparison of Hospital Efficiency: Does Institutional Environment Matter?' In: *Applied Economics* 30, p. 1089-1100.
Musgrave, R.A. and P.B. Musgrave (1984). *Public Finance in Theory and Practice.* New York: McGraw-Hill Book Company.

Müller, W. and M. Wolbers (1999). 'Educational Attainment of Young People in the European Union. Cross Country Variation of Trends over Time'. In: W. Müller et al. (eds.). *A Comparative Analysis of Transition From Education to Work in Europe - Based on the European Community Labour Force Survey* (p. 19-56). Mannheim/Maastricht/Marseille: MZES/ROA/CEREQ.

Nijboer, J.F. (1993). 'Common Law Tradition in Evidence Scholarship Observed From a Continental Perspective'. In: *American Journal of Comparative Law* 41, p. 299-311.

Nyman J.A., and D.L. Bricker (1989). 'Profit Incentives and Technical Efficiency in the Production of Nursing Home Care'. In: *Review of Economics and Statistics* 71 (4) p. 586-594.

NCES (2001). *Digest of Education Statistics 2000.* Washington, DC: U.S. Department of Education, National Center for Education Statistics (2001/034).

OECD (1998a). *Pathways and Participation in Vocational and Educational and Training.* Paris: Organisation for Economic Co-operation and Development.

OECD (1998b). *Education at a Glance, OECD Indicators 1998.* Paris: Organisation for Economic Co-operation and Development.

OECD (2000a). *Education at a Glance 2000.* Paris: Organisation for Economic Co-operation and Development.

OECD (2000b). *Economic Outlook 68.* Paris: Organisation for Economic Co-operation and Development.

OECD (2001). *Education at a Glance 2001.* Paris: Organisation for Economic Co-operation and Development.

OECD (2002). *Education at a Glance 2002.* Paris: Organisation for Economic Co-operation and Development.

OECD (2002b). *Society at a Glance 2002.* Paris: Organisation for Economic Co-operation and Development.

OECD (2003ca). *Education at a Glance 2003.* Paris: Organisation for Economic Co-operation and Development.

OECD (2003da). *The Impact of Ageing Populations on Public Finances.* Paris: Organisation for Economic Co-operation and Development.

OECD (2003db). *A Disease-based Comparison of Health Systems.* Paris: Organisation for Economic Co-operation and Development.

OECD (2003dc): J. Hurst and L. Siciliani. *Tackling Excessive Waiting Times for Elective Surgery: A Comparison of Policies in Twelve OECD Countries.* Paris: Organisation for Economic Co-operation and Development (working paper 6).

OECD (2003dd): J. Hurst and L. Siciliani. *Explaining Waiting Times Variations for Elective Surgery Across OECD Countries.* Paris: Organisation for Economic Co-operation and Development (working paper 7).

OECD (2003de): E. Docteur and H. Oxley. *Health Care Systems: Lessons From the Reform Experience.* Paris: Organisation for Economic Co-operation and Development (working paper 9).

OECD (2003df): E. van Doorslaer and C. Masseria. *Income-related Inequality in the Use of Medical Care in 21 OECD Countries.* Paris: Organisation for Economic Co-operation and Development (working paper 14).

OECD (2003dg): F. Colombo and N. Tapay. *Private Health Insurance in OECD Countries: The Benefits and Costs for Individuals and Health Systems.* Paris: Organisation for Economic Co-operation and Development (working paper 15).

OECD (2003dh). *Health at a Glance 2003.* Paris: Organisation for Economic Co-operation and Development.

OECD (2003di). *Health data 2003 database.* Paris: Organisation for Economic Co-operation and Development.

OECD (2004da). *Towards High-performing Health Systems, 2004.* Paris: Organisation for Economic Co-operation and Development.
OECD (2004ba). *Economic Outlook 75.* Paris: Organisation for Economic Co-operation and Development.
OECD/PMC(2002). *Highlights of Public Sector Pay and Employment Trends: 2002 Update.* Paris: OECD Public Management Committee.
OECD/World Bank (2003). *Survey on Budget Practices.* http://ocde.dyndns.org
Okun, A.M. (1975). *Equality and Efficiency: The Big Tradeoff.* Washington D.C.: The Brookings Institution.
Osberg, L. (2001). *Labour Supply and Inequality Trends in the USA and Elsewhere.* Paper presented at CSLS/IRPP conference, Ottawa January 26, 2001.
Osborne, D. and T. Gaebler (1992). *Reinventing Government.* New York: Penguin Books.
Pacolet, J. et al. (1999). *Social Protection for Dependency in Old Age in the 15 EU Member States and Norway.* Brussels: EC, DG Employment and Social affairs.
Page, E.C. (1995). 'Administering Europe'. In: E.C. Page and E.C. Hayward, *Governing the New Europe* (p. 257-85). Cambridge: Polity Press.
Peters, B.G. (1989). *The Politics of Bureaucracy.* New York/London: Longman.
Philipson, T.J. and R.A. Posner (1996). 'The Economic Epidemiology of Crime'. In: *Journal of Law and Economics* 39, p. 405-433.
Pollitt, C. and G. Bouckaert (1999). *Public Management Reform: A Comparative Analysis.* Oxford: Oxford University Press.
Pollitt, C. and G. Bouckaert (2004). *Public Management Reform: A Comparative Analysis.* (second edition). Oxford: Oxford University Press.
Polvi, N. et al. (1990). 'Repeat Break-and-enter Victimization: Time Course and Crime Prevention Opportunity'. In: *Journal of Police Science and Administration* 17, p. 8-11.
Register, C.A., and E.R. Bruning (1987). 'Profit Incentives and Technical Efficiency in the Production of Hospital Care'. In: *Southern Economic Journal*, p. 899-914.
RIVM (2002). *Gezond op koers?* Bilthoven: The National Institute for Public Health and the Environment.
Rothstein, B. and D. Stolle (2002). *How Political Institutions Create and Destroy Social Capital: An Institutional Theory of Generalized Trust.* Paper presented at Collegium Budapest, project on honesty and trust, November 22-23, 2002.
Salamon, L.M. et al. (1999). *Global Civil Society. Dimensions of the Nonprofit Sector.* Baltimore, Maryland: The Johns Hopkins Center for Civil Society Studies.
Santana, P. (2003). 'Poverty, Social Exclusion and Health in Portugal'. In: *Social Science & Medicine* 55, p. 33-45.
Scheers, B. and M. Sterck et al. (2003). *Internationaal vergelijkend onderzoek naar de modernisering van de financiële cyclus en de beleids- en beheerscyclus: begroting en planning.* Leuven: SBOV.
Scott, P. (1995). *The Meanings of Mass Higher Education.* Buckingham: The Society for Research into Higher Education/Open University Press.
SCP (2000). *Sociaal en Cultureel Rapport 2000: Nederland in Europa.* The Hague: Social and Cultural Planning Office.
SCP (2002a). *Memorandum quartaire sector 2002-2006.* The Hague: Sociaal en Cultureel Planbureau (SCP working paper 86).
SCP (2002b). *Sociaal en Cultureel Rapport 2002: De kwaliteit van de quartaire sector.* The Hague: Social and Cultural Planning Office.
SCP(2003). *De sociale staat van Nederland 2003.* The Hague: Social and Cultural Planning Office (SCP publication 2003/12).

SCP/SEO (2001) (Social and Cultural Planning Office/Foundation for Economic Research). *De vraag naar kinderopvang: Raming voor 2003-2007.* The Hague: Social and Cultural Planning Office (SCP working paper 67).
SCP/CeRP (2004) (Social and Cultural Planning Office of the Netherlands/Centre for Research on Pensions and Welfare Policies). *Unequal Welfare States.* The Hague/Turin: SCP/CeRP.
Smit, P.R. (2003). 'Nederland in internationaal perspectief'. In: W. van der Heide and A.Th. J. Eggen (eds.) *Criminaliteit en Rechtshandhaving 2001; ontwikkelingen en samenhangen.* The Hague: Boom Juridische Uitgevers.
Smit, P.R. et al. (2003). *Het ophelderingspercentage nader beschouwd.* Meppel: Boom (report 213 of the Research and Documentation Centre of the Dutch Ministry of Justice).
Sogaard, J. en J. Kjellberg (2003). *Structures and Funding of the Health Sector in Europe, Overview*. Copenhagen: Eurosai eurorai Co-operation on Audit of Health Care.
Staat, M. and M. Hammerschmidt (2000). *Benchmarking the Health Sector in Germany - An Application of Data Envelopment Analysis* (Economics Working Paper Archive at WUSTL). http://econwpa.wustl.edu:80.
Taekema, S. (ed) (2004). 'Understanding Dutch Law'. In: *Tijdschrift voor hoger onderwijs en management* 5 (special edition: *Doorgaande leerwegen*).
TK (2001). *Evaluatie Basisvorming: variëteit in de basis van het voortgezet onderwijs.* Tweede Kamer (House of Representatives), conference year 2001/2002, 26.733, nr 13. The Hague: Sdu.
TK (2003). *Trendnota arbeidszaken overheid 2004*. Tweede Kamer (House of Representatives), conference year 2003/2004, 29.204, nrs. 1-2. The Hague: Sdu editors.
SCP(2004). *Onderzoek naar de zorguitgaven.* Tweede Kamer (House of Representatives), conference year 2003/2004, 28.852, nrs. 2-3. The Hague: Sdu editors.
Torre, A.G.J. van der, and F.P. van Tulder (2001). *Een model voor de strafrechtelijke keten.* The Hague: Social and Cultural Planning Office (SCP research report 2001/15).
Transparency International (2003). *The Global Coalition Against Corruption.* http://www.transparency.org
Uslaner, E.M. and G. Badescu (2003). 'Honesty, Trust, and Legal Norms in the Transition to Democracy: Why Bo Rothstein Is Better Able to Explain Sweden than Romania'. In: J. Kornai, S. Rose-Ackerman and B. Rothstein (eds.), *Creating Social Trust: Problems of Post-Socialist Transition.* Hampshire,UK: Palgrave Macmillan.
UN (2003). *Handbook on Non-Profit Institutions in the System of National Accounts.* New York: UN Department of Economic and Social Affairs, Statistics Division (Studies in methods, series F, 91).
UNODC (2000) (United Nations Office for Drug Control and Crime Prevention). *World Drug Report 2000.* Oxford: Oxford University Press.
Uplekar, M.W. (2000). 'Private Health Care'. In: *Social Science and Medicine* 51, p. 897-904.
US/HHS (2003). *Addressing the New Health Care Crisis: Reforming the Medical Litigation System to Improve the Quality of Health Care.* Washington DC: US Department of Health and Human Resources.
US Sourcebook (2003): K. Maguire, and A.L.Pastore (eds). *Sourcebook of Criminal Justice Statistics.* http://www.albany.edu/sourcebook
Valdmanis, V.G. (1990). Ownership and Technical Efficiency Hospitals. In: *Medical Care* 28 (6) p. 552-561.
Vitaliano, D.F. and M. Toren (1996). 'Hospital Cost and Efficiency in a Regime of Stringent Regulation'. In: *Eastern Economic Journal* 22 (2) p. 161-175.
Vidlakova, O. (1999). 'Sigma Programme to the Aid of Countries to Join the European Union' (translation from Czech). In: *Verejna Sprava*.

Vrooman, C. and E. Snel (1999). 'Op zoek naar de echte armen'. In: Engbertsen et al. *Arm Nederland: Armoede en verzorgingsstaat. Vierde jaarrapport armoede en sociale uitsluiting*. Amsterdam: Amsterdam University Press.
Walle, S. van de, et al. (2004). *What You See Is Not Necessarily What You Get: Een verkenning van de mogelijkheden en moeilijkheden van internationale vergelijkingen van publieke sectoren op basis van indicatoren.* Leuven: Instituut voor de Overheid.
Webbink, D. and W. Hassink (2002). *Preventie van onderwijsachterstanden in de kenniseconomie.* The Hague: The Netherlands Bureau for Economic Policy Analysis (memorandum 30).
WHO (2000). *The World Health Report 2000; Health Systems: Improving Performance.* Geneva: World Health Organization.
WHO (2002). *Summary Measures of Population Health.* Geneva: World Health Organization.
Wijnstra, J.M. (2001). *Bruikbare kennis en vaardigheden voor jonge mensen.* Arnhem: Citogroep.
Wildeboer Schut, J.M., J.C. Vrooman and P.T. de Beer (2001). *On worlds of welfare: institutions and their effects in eleven welfare states.* The Hague: Social and Cultural Planning Office.
Wilson, G.W. and J.M. Jadlow (1982). 'Competition, Profit Incentives and Technical Efficiency in the Provision of Nuclear Medical Services'. In: *Bell Journal of Economics* 13, p. 427.
Witte, J.F. (1997). 'Private School Versus Public School Achievement: Are There Findings That Should Affect the Educational Choice Debate?' In: E. Cohn (ed.). *Market Approaches to Education; Vouchers and School Choice.* Oxford: Elseviers Science.
Wittebrood, K. (2001). 'Onveiligheidsbeleving en slachtofferschap in westerse geïndustrialiseerde landen: een multilevel-analyse'. In: *Tijdschrift voor Criminologie* 43 (2), p. 144-157.
WODC (2003). *European Source Book of Criminal Justice Statistics – 2003.* Meppel: Boom (report 212 of the Research and Documentation Centre of the Dutch ministry of Justice)
Woittiez, I., E. van Gameren and I. Ooms (2003). *Modellering van de care-sectoren in het ramingsmodel zorg.* The Hague: Social and Cultural Planning Office (SCP working paper 89).
Woolhandler, S., T. Campbell and D.U. Himmelstein (2003). 'Costs of Health Care Administration in the United States and Canada'. In: *New England Journal of Medicine* 349 (8) p. 768-775.

Annex A Data sources and data correction

When comparing international data in different fields of the public service sector, it is desirable to use correct and comparable statistics for all countries involved. The quality of statistics is defined by Eurostat (2002) with reference to the following seven criteria:
- relevance, implying that the needs of the users are adequately met,
- accuracy, defined as the closeness between the value retained and the true value,
- timeliness and punctuality, referring to the lapse of time between the delivery and the data to which the data apply,
- accessibility and clarity, referring to the way data can be obtained and the quality of the documentation,
- comparability, which is a result of using uniform concepts/definitions, measuring tools and procedures.
- coherence, implying that the data are mutually consistent, and
- completeness, defined as the extent to which the required data are available.

National data are difficult to find and tend to be insufficiently comparable. For this reason, it is better to rely on data collected by international organisations. These organisations tend to have close contacts with the national statistical offices and other country experts and are thus able to make a multi-year effort to obtain data according to uniform definitions. When a broad field and many countries are involved, small organisations can hardly be expected to gather the necessary data on their own.

For these reasons, the present report heavily relies on Online Data Bases and publications of organisations as Eurostat, OECD, World Bank, United Nations, European Council, the International Labour Organisation and the US Bureau of Census. Apart from these, population surveys such as the European and World Values Study, the Eurobarometer, the European Community Household Panel, the Luxembourg Income Survey, the International Crime Victims Survey and the World Competitiveness Report are useful data sources.

Although the organisations involved make a considerable effort to deliver high quality data, users face several problems that in particular restrict the comparability of data:
- Institutional differences,
- Differences in definitions,
- Differences in registration procedures,
- Longitudinal inconsistencies.

Institutional differences may seriously hamper international comparisons. The entities for which national data are collected may not allow a one to one translation into the international classification used. This is for example the case in non-acute in-patient health care, where institutional arrangements differ drastically from country to country.

Longitudinal inconsistencies find their source in inconsistencies in national data. One of the reasons is that different definitions may have been used in the course of time. A major cause for inconsistencies is the recent revision of the National Account system. Another example is the recent changes in the ISCED-classification system for education.

Although the activities of the international organisations involved proved very useful for the purpose of our study, the task of developing and maintaining huge datasets apparently places a heavy burden on the shoulders of their staff, and – as a result – users are frequently confronted with various types of shortcomings:
- Incorrect data,
- Preliminary data,
- Inconsistent data,
- Incomplete data.

Human errors or errors in communication may result in incorrect data, the more so when priority is given to innovation and expansion rather than to painstaking maintenance of existing databases. Another source for discrepancies involves preliminary data. For recent years, preliminary data are often published, which later are to be replaced by definite data. However, the preliminary data and the moment of substitution by definite data may cause differences between data published in different reports of the same organisation or by different organisations. A related problem involves old databases, which are still available, but not adapted to new developments and insights.

Far to often, data are inconsistent in the sense that parts don't sum up to totals or in the sense that breaks in time series occur as a result of changing definitions. In the former case, parts can be readjusted to the total or the reverse. In the latter case, an appropriate technique is proportional correction of older segments of a time series. This involves multiplication of the older segment with the proportion between the new and the old segment for a year of overlap. Frequently, data are only available for some years, while the selection of years varies between countries. For the purpose of comparison, data for the same reference year are required. When numbers can be expected to be more or less stable, numbers for an earlier or later year may be substituted. In other cases, missing data can be estimated by interpolation or extrapolation. In some cases this inter- or extrapolation has been performed with the aid of a reference category. To use an example from education, the enrolment rate (the number of pupils divided by the size of the relevant age group) may be interpolated. Subsequently, the number of pupils can be estimated by multiplying the estimated enrolment rate with the size of the relevant age group. In estimating expenditure for missing years, information on the inflation rate may be used, etc. etc. These types of data processing are accounted for in Annex C of this report (published on www.scp.nl).

Annex B Technical notes

B.1 *Calculation of Purchasing Power Parities*

Cost and expenditure data are generally derived from information in nominal amounts in national currency units. To make these data comparable over countries and over time, three operations have been carried out:

1 for the Euro-countries: conversion of local national currencies in euros for years previous to 2002 with the official exchange rates on January 1st 1999 (see the first column of table B.1),
2 the conversion of data in national currency in Dutch euros (NL€) on the basis of Purchasing Power Parities,
3 the deflation of all numbers on the basis of the Dutch index series for household consumption, with 2003 = 100.

Purchasing Power Parities (PPP's) are conversion rates between national currency units, which are not based on exchange rates but on the purchasing parity. In order to obtain these PPP's, organisation like the OECD, the World Bank and Eurostat investigate the price of a representative basket of consumption goods in the national currencies of the different countries. On the basis of this approach it was established that the purchasing power of 1 Dutch euro in 2002 was equal to that of 8.58 Danish crowns and 1.03 US dollars. Because the purchasing power of the euro also differs between the euro-countries, other euro-countries are characterized by conversion factors different from 1. For example, the conversion factor for Portugal was 0.72 in 2002, implying that the purchasing power of a euro in Portugal is almost 40% (1/0.72) higher in Portugal than in the Netherlands. In this report the Dutch euro is chosen as a standard, but it is easy to recalculate all outcomes to French, German or other euros, or US dollars. The conversion factors are given in the second column of table B.1. By expressing amounts in this way, equal numbers imply an equal amount of purchasing power sacrificed.

In order to be able to evaluate developments of expenditure in PPP's in time the Dutch price index for household consumption (see table B.2) is applied. Figures are to be divided by (100/index) to obtain amounts in fixed prices of 2003. The outcome is (more or less) equivalent to the one obtained when the currency of another country is taken as standard and its price index for household consumption is applied.

In this way all financial data have been made comparable between countries as well as in time.

Table B.1 Conversion of amounts in national currencies

Country	Euro-conversion	Purchasing power conversion (example 2002)
Belgium	40.34	0.96
Denmark	1.00	8.58
Germany	1.96	0.97
Greece	340.75	0.73
Spain	166.39	0.81
France	6.56	0.97
Ireland	0.79	1.00
Italy	1936.27	0.85
Luxembourg	40.34	0.85
Netherlands	2.20	1.00
Austria	13.76	0.93
Portugal	200.48	0.72
Finland	5.95	1.04
Sweden	1.00	9.92
United Kingdom	1.00	0.69
Cyprus	1.00	0.45
Czech republic	1.00	14.74
Estonia	1.00	6.71
Latvia	1.00	0.25
Lithuania	1.00	1.46
Hungary	1.00	127.43
Malta	1.00	0.25
Poland	1.00	1.96
Slovenia	1.00	143.64
Slovak republic	1.00	16.00
Australia	1.00	1.39
Canada	1.00	1.25
New Zealand	1.00	1.59
United States	1.00	1.03

Source: World Bank; Eurostat (NewCronos)

Table B.2 Harmonized price index for household consumption in the Netherlands, 2003=100[a]

year	Price index
1995	81.6
1996	82.8
1997	84.4
1998	85.8
1999	87.6
2000	89.6
2001	94.2
2002	97.8
2003	100.0

[a] term "harmonized" implies that the choice of a basket of goods and services is based on a common European definition.

B.2 Calculation of country means

Country means for groups of countries are calculated as weighted averages. This implies that larger countries obtain a higher weight than smaller countries. In most cases, the indicators used are ratios of numbers (such as patients per inhabitant, education expenditure as a percentage of GDP). Technically, the means are calculated as the ratio of sums and not as the average of ratios. In the patient example, this implies that all patients and inhabitants are added over countries. Next, the ratio of all patients to all inhabitants is calculated. Thus, the position of the average citizen in the country group is depicted. In the case of education expenditure as a percentage of GDP the sum of education expenditure in the countries involved is divided by the corresponding sum of GDP.

B.3 Calculation and aggregation of z-scores

In this report, a total of nineteen effect-indicators is used for measuring the performance and quality of various segments of the public service sector. Because no a priori information is available on the weights that must be attached to the separate characteristics (see discussion in Section 7.4), indicators are aggregated by using an unweighted scaling and addition procedure. A similar procedure is used for the calculation of sub-sector totals and aggregated confidence.

In order to correct for differences in scale and variability, scores are normalized by a so-called z-transformation. The formula used is $z_i = (x_i\text{-}m)/s$, where z_i stands for the transformed value for the i-th country, x_i for the observed value, m for the country mean and s for the standard deviation of the observations. As a consequence of this transformation z has a mean value of 0. It is a well-known statistical rule-of-thumb, that the values of z_i tend to range in about 95% of cases from –2 to 2. Next, z is transformed in such a way that the resulting score can be interpreted as a

mark, which tends to lie between 0 and10: $z^{\star}_{i} = 5 + 1{,}5\ c\ z_{i}$. The constant c may take the value +1 or –1. The former applies when 'high' is 'good', the latter when 'high' is 'bad'. For example, high economic growth and a high government surplus are considered to be good, but a high poverty rate, a high inflation rate and a high unemployment rate are considered to be bad. If z_{i} - as expected - ranges from –2 to 2, $z^{\star}_{i}$ will range from 2 to 8. Finally, the transformed scores can be aggregated to larger entities by calculating averages of the separate marks. If scores are highly correlated, the aggregated scores will also range from 2 to 8, if correlation is low or negative, the range of the aggregated scores will be much smaller.

Annex C Explanatory notes
See www.scp.nl/9037701841

Annex D Source of data on staff and expenditure for law and order
See www.scp.nl/9037701841

Annex E Data corresponding to figures
See www.scp.nl/9037701841

Publications of the SCP in English

25 Years of Social Change in the Netherlands; Key Data from the Social and Cultural Report (1999). Carlo van Praag and Wilfried Uitterhoeve. ISBN 90-6168-580-x

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