OECD Employment Outlook

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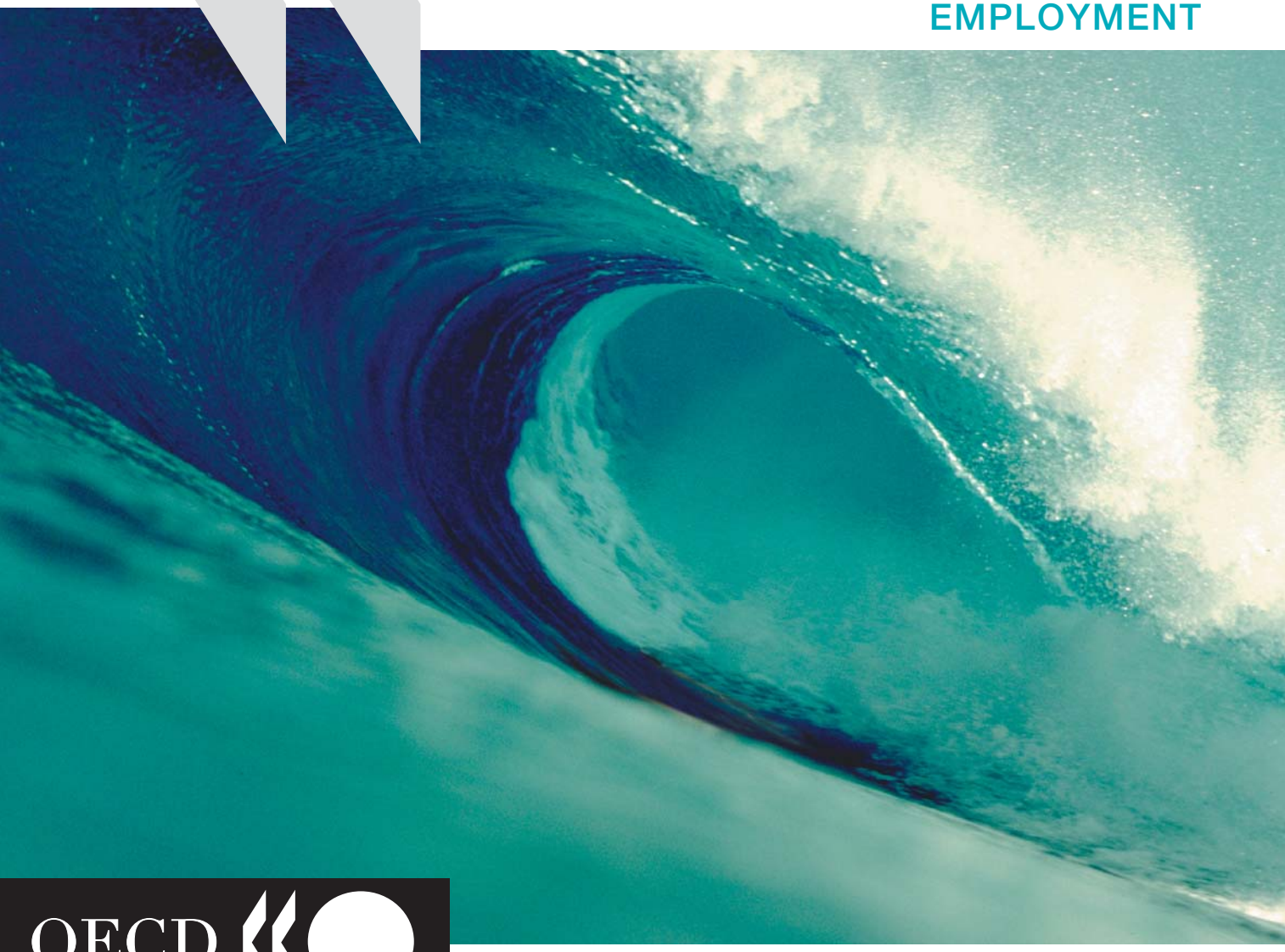

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OECD EMPLOYMENT OUTLOOK

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ORGANISATION FOR ECONOMIC CO-OPERATION AND DEVELOPMENT

The OECD Employment Outlook

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EDITORIAL

Reconciling social and employment goals

Rising prosperity has not eliminated poverty, and OECD countries aim to reduce social exclusion…

While improved economic conditions and low or falling unemployment in many OECD countries have made some in-roads into poverty rates, there are still many individuals living in poverty. Even if their physical subsistence needs can be met, their household income does not support adequate living standards, leaving them and their families at high risk of social exclusion. In order to minimise this risk, reducing the incidence and persistence of poverty is a goal shared by all OECD countries.

… often through strategies oriented towards increasing employment…

While public policies continue to address the needs of those no longer able to work, new strategies to tackle poverty and social exclusion are being implemented in many OECD countries for those still able to function in the labour market.* Often, these have the aim of promoting increased employment as a core component. This approach is sometimes characterised as "employment-oriented social policy" and frequently entails closer co-ordination of social and employment policy.

… by trying to avoid adverse effects on labour supply/ demand.

There are good reasons to better co-ordinate social and employment policies. Poorly designed social policies can be a cause of structural unemployment. For example, income transfer programmes may discourage labour supply if they offer too-high replacement rates, if the availability rules and checks are too slack, and they impose very high effective tax rates on earnings. The taxes which are the counterpart of social benefits may also discourage labour demand by increasing indirect labour costs. Accordingly, reform of the benefit/tax system to promote employment opportunities has been identified as one important orientation of the *OECD Jobs Strategy* and many countries have enacted reforms in this area in recent years.

But doing so while tackling poverty is not easy.

But reforms in this area may involve difficult trade-offs and policy makers must address the following question: Will reconfiguring social policy to contribute to improved employment performance also contribute to better meeting one of the traditional goals of social policy, *i.e.* reducing poverty and social exclusion? While the observed aim of policy makers in many countries is to answer this question in the positive, it rests on a number of conditions being satisfied which are often not spelt out.

Social and employment goals can reinforce each other, since work is the surest source of income…

An appraisal that the goals of social and employment policy are complementary, would begin with the observation that for many low-income families improved employment and earnings prospects are the best route for achieving adequate incomes and full integration into the broader society. It follows that better integration of social policy with employment policy potentially could increase the effectiveness of social policies by facilitating job placement and career development for adults in low-income families.

* The OECD and the United Kingdom Department of Social Security jointly sponsored a conference on such strategies in London in October 2000. The results of the conference are published in *Opportunity for All*, joint OECD/UK Conference Report 2000, Department of Social Security, London, February 2001.

… but conversely measures encouraging work could increase poverty…

A less optimistic appraisal would emphasise that some of the changes in social policy identified as potentially helpful to employment could exacerbate, rather than ameliorate, poverty. The most obvious example is benefit reductions, whether general (*e.g.* so as to maintain fiscal balance while reducing the tax wedge) or targeted (*e.g.* of benefits for non-working families, so as to increase the incentives for them to take employment). Any resulting trade-off between the objectives of social and employment policy is, however, complex. Lower benefits may stimulate higher employment, via a variety of mechanisms in labour and product markets, off-setting the fall in income. Higher employment may also strengthen social integration.

… unless designed with a good understanding of its underlying causes…

Thus, a careful analysis of the causes of poverty is required in order to design and implement effective employment-oriented social policies. Chapter 2 of this issue contributes to such an analysis by documenting the patterns and determinants of poverty incidence, transitions and persistence, collectively referred to as "poverty dynamics". Despite large cross-country differences in annual poverty rates, important similarities emerge in poverty transitions and persistence. Together with recent OECD analyses of the extent and causes of rising income inequality, the analysis in Chapter 2 helps to characterise the changing terrain on which employment-oriented social policy must operate.

… for example, while poverty is a temporary set-back for many, for others it is a long-term trap.

The analysis reveals the seeming paradox that poverty is simultaneously fluid and characterised by long-term traps. Many poverty spells represent transitory set-backs for persons who have adequate income over the longer term. More typically, however, persons in poverty spend many years in that state and have longer-term incomes below the poverty threshold on average (defined in Chapter 2 as less than 50% of the median income). In the twelve EU countries studied in Chapter 2, 59% of persons poor in a given year in the mid-1990s (more up-to-date data are not available) had incomes over three years that, on average, fell below the poverty threshold throughout. The corresponding shares of this so-called "permanent-income" poverty group were 67% in Canada and 78% in the United States. Repeat spells of poverty help to explain the importance of long-term poverty traps despite substantial transitions in and out of poverty every year. Evidence from OECD countries shows that the majority of individuals who exit poverty in a given year will re-enter it within a short time frame.

Policies should distinguish between those requiring temporary relief and others facing exclusion over long periods.

Thus, in order to be effective, employment-oriented social policy must take account of the large differences in the labour market histories and prospects of individuals who are poor in any given year. When poverty is truly transitory, public interventions may require only temporary income support, such as that provided by unemployment benefits and other social insurance programmes, together with a minimal degree of employment services. But for those caught in a poverty trap, implying a low standard of living and social exclusion over a prolonged period, the underlying barriers preventing them from entering the economic mainstream have to be identified and overcome if they are to have a reasonable chance of getting into, and staying in, work.

For the latter, lack of qualifications and family responsibilities are both barriers, so family-friendly policies are needed.

What are these barriers? There is much similarity across countries in terms of the individual and family characteristics that are associated with poverty traps. Poverty persistence is higher for households containing no worker, as well as for households where the head has not finished upper secondary schooling and/or those composed of a single adult and children. In addition, poverty persistence tends to be greater for children than for adults. There is a clear risk, therefore, of passing poverty on from one generation to the next. These patterns suggest that both *low earnings potential* (*e.g.* due to the absence of qualifications and/or valuable work experience) and *family responsibilities* that prevent full realisation of potential earnings (*e.g.* caring for children or elderly relatives) are important causes of long-term poverty. The latter implies that family-friendly policies, such as the provision of

quality child care, maternity leave, child-care leave and working-hours flexibility, have a role to play in combating poverty and facilitating mothers getting into the labour market (Chapter 4 discusses the incidence of family-friendly policies in the work-place and analyses their impact on employment).

But poverty among working households must not be neglected: it affects large numbers of people…

A closer look at the relationship between employment and poverty dynamics provides further guidance for how to design employment-oriented social policies. It is important to emphasise that the overlap between work and poverty is quite high. First, much of the time spent in poverty is associated with working households, despite workless households being at a higher risk of poverty traps, for the simple reason that the former represent a much larger share of the total population. Second, the overlap between employment and poverty is increased when work over a multi-year period is considered. Among the working-age households poor in a given year, only 2 in 5 contained no adult worker in the EU and 1 in 5 in the United States. However, among those who were "permanent-income" poor over three years, the shares without employment fell to 1 in 4 and 1 in 10, respectively. This suggests that low-paying and precarious jobs better characterise the experience of some poor households than does continuous exclusion from the labour market.

… reinforcing the case for policies to make work pay, which if well designed can simultaneously address employment and social goals.

These stylised facts about poverty transitions indicate that it is not enough to design and implement policies that will get those at risk of a poverty trap into a job, important as that objective is. The importance of working poverty also indicates that an effective employment-oriented social policy needs to include transfer programmes that "top-up" earnings that are inadequate to meet family income needs as well as measures which improve the career prospects of low-income earners. Thus, policies which make work pay (MWP) are important elements in such a strategy, as discussed in detail in last year's editorial.

Such policies are likely to be most successful if labour demand is buoyant.

Importantly, an employment-oriented social policy will tend to work better in an economy with buoyant labour demand. Hence, it is important that the settings of macroeconomic and structural policies in labour and product markets are conducive to maintain strong employment growth.

Effective active labour market policies also play a role in helping people into work.

Effective active labour market policies also have a role to play in any strategy to assist the excluded into jobs. Even for very difficult groups, experience shows that seemingly simple and low-cost interventions such as job counselling and job-search assistance, coupled with the monitoring of search behaviour of benefit recipients, can help.

Although less is known about what works, policy must also be concerned about job retention and skills.

However, while policies can be designed to get those at-risk of exclusion into jobs, many will be at high risk of either losing/leaving the job quickly and/or earning too little to lift them permanently out of poverty. Hence, policy must also be concerned about employment retention and skills upgrading. Unfortunately, much less is known about what works in these crucial areas. It is urgent that research takes them up and provides some answers.

An effective strategy requires a wide range of co-ordinated social and employment policies that will not come cheap, but will pay off by reducing the waste of people's lives.

To effectively reduce the scourge of poverty and exclusion requires social and employment policies to be highly integrated, active rather than passive, and well-tailored to specific national circumstances. It requires a combination of investments in MWP policies, getting the incentives right for business and individuals to upgrade skills, getting effective forms of employment retention assistance, family-friendly policies, policies that assist mobility out of low-pay jobs and effective active labour market policies. These will not come cheaply and need to be done in the context of prudent budget management. But, such investments will, eventually, reduce the misery and loss of potential that underlie the dry statistics on poverty and social exclusion.

May 2001.

Chapter 1

RECENT LABOUR MARKET DEVELOPMENTS AND PROSPECTS

Special Focus on Labour Market Policies: How the Money Has Been Spent

Summary

The special section of this chapter describes trends in public spending on labour market programmes, using the Labour Market Programme (LMP) database developed by the OECD, and explores their relationship with the unemployment rate. In particular, following the OECD Labour Ministerial agreement in 1992, it addresses the question, "Have OECD governments heeded the call to put more emphasis on 'active' labour market programmes?" ("active" programmes are those designed to help the unemployed back into work, as opposed to "passive" measures concerned with the payment of unemployment benefits and early retirement payments). It also reviews the changes in the structure of expenditure on labour market programmes and the recent developments in policies and measuring instruments emerging out of the experience of the past two decades.

The results show some evidence of a cautious move towards "active" programmes, in many countries. At the same time, experience with active labour market programmes has shown the importance of more careful design and much greater emphasis on rigorous short- and long-term evaluation. Some relatively inexpensive policies (notably assistance with and active encouragement of job-search) have been found to be among the most cost-effective for substantial numbers of the unemployed and careful targeting has also been emphasised. Another widely accepted priority is to continue to integrate active and passive labour market programmes and to improve the delivery of "passive" unemployment and welfare benefits, so as to encourage active participation in the labour market. Thus the small shift towards "active" programmes recorded in the data may not have fully captured the changes that have taken place in the orientation of labour market policy.

Introduction

After a year of particularly strong performance, economic growth in the OECD area has been weakening since the autumn of 2000. The 2001 growth rate is projected to be half that of 2000, at around 2%, and the long-running reduction in unemployment is projected to come to a halt. However, the forces dampening economic growth are projected to dissipate in the second half of 2001, leading to a growth rate of 2.5 to 3% over the next twelve months. Inflation is expected to remain low.

Section I of this chapter reviews economic and employment developments in the OECD area, paying particular attention to labour market prospects for 2001 and 2002. It also investigates the possible existence of skilled-labour shortages and structural change in OECD labour markets, through an analysis of Beveridge curves. Section II is a special section which documents trends in spending on "active" and "passive" labour market programmes since 1985, reviews the changes in the structure of active labour market policy expenditure, and notes some of the recent developments in policy instruments.

I. Recent developments and prospects

A. Economic outlook to the year 2002

In 2000,[1] all OECD countries experienced positive real GDP growth. The figure for the area as a whole was 4.1%, the highest for 12 years. Particularly strong growth was seen in Korea, Mexico, the United States and Ireland (at 11%, the highest in the OECD area, see Table 1.1). However, over 2001, economic

Table 1.1. **Growth of real GDP in OECD countries**[a, b]

Annual percentage change

	Share in total OECD GDP 1995	Average 1988-1998	1999	2000	Projections	
					2001	2002
North America						
Canada	3.2	2.1	4.5	4.7	2.3	3.2
Mexico	2.9	3.4	3.8	6.9	3.7	4.7
United States	35.0	2.9	4.2	5.0	1.7	3.1
Asia						
Japan	13.9	2.2	0.8	1.7	1.0	1.1
Korea	2.9	5.6	10.9	8.8	4.2	5.5
Europe						
Denmark	0.6	1.9	2.1	2.9	2.0	2.0
Finland	0.5	1.7	4.2	5.7	4.0	3.7
Norway	0.5	3.3	0.9	2.2	2.0	2.0
Sweden	0.8	1.3	4.1	3.6	2.8	3.0
Greece	0.6	1.9	3.4	4.1	4.0	4.4
Italy	5.5	1.6	1.6	2.9	2.3	2.5
Portugal	0.6	2.9	3.0	3.2	2.6	2.8
Spain	2.8	2.7	4.0	4.1	2.9	2.9
Czech Republic	0.6	. .	–0.8	3.1	3.0	3.5
Hungary	0.4	. .	4.5	5.1	5.1	4.7
Poland	1.3	. .	4.0	4.1	3.8	3.9
Slovak Republic	0.2	. .	1.9	2.2	2.8	3.6
Austria	0.8	2.5	2.8	3.2	2.3	2.5
Belgium	1.0	2.1	2.7	4.0	2.8	2.7
France	5.7	1.8	3.2	3.2	2.6	2.7
Germany[c]	8.3	2.4	1.6	3.0	2.2	2.4
Iceland	0.0	1.8	4.1	3.6	1.5	2.4
Ireland	0.3	6.4	9.8	11.0	7.8	7.8
Luxembourg	0.1	5.4	7.5	8.5	5.6	5.5
Netherlands	1.6	3.0	3.9	3.9	3.0	2.8
Switzerland	0.9	1.2	1.5	3.4	2.1	2.0
Turkey	1.6	4.3	–4.7	7.2	–4.2	5.2
United Kingdom	5.2	1.9	2.3	3.0	2.5	2.6
Oceania						
Australia	1.8	3.4	4.7	3.7	2.0	3.8
New Zealand	0.3	2.0	4.0	3.0	2.2	3.0
OECD Europe[d]	**39.9**	**2.2**	**2.2**	**3.5**	**2.4**	**2.8**
EU	**34.4**	**2.1**	**2.6**	**3.3**	**2.6**	**2.7**
Total OECD[d]	**100.0**	**2.6**	**3.2**	**4.1**	**2.0**	**2.8**

. . Data not available.

a) The OECD Secretariat's projection methods and underlying statistical concepts and sources are described in detail in "Sources and Methods: OECD Economic Outlook" which can be downloaded from the OECD Internet site (*www.oecd.org/eco/out/source.htm*).

b) Aggregates are computed on the basis of 1995 GDP weights expressed in 1995 purchasing power parities.

c) The average growth rate has been calculated by chaining on data for the whole of Germany to the corresponding data for western Germany prior to 1992.

d) Averages for 1988-1998 exclude the Czech Republic, Hungary, Poland and the Slovak Republic.

Source: OECD (2001*c*), OECD *Economic Outlook*, No. 69, June.

growth for the OECD area is projected to slow to 2.0%, before recovering somewhat to 2.8% in 2002. The pattern varies considerably between the major OECD regions. In the United States, the growth rate is projected to fall particularly strongly between 2000 and 2001, before recovering to slightly over the OECD average in 2002. The weaker prospects for Japan are expected to continue. On the other hand, the European Union is projected to experience only a small decline in growth.

The projections for a recovery in growth in 2002 are based on a number of observations, and assumptions. The interest rate reductions that have taken place, together with some shifts towards lower tax burdens, are assumed to combine with lower oil prices to spur aggregate demand over the coming months. In addition, the sustained growth in productivity in the United States over recent years is taken as suggesting that such gains are durable and may spread to other countries. Finally, there are as yet no signs of inflationary pressures in much of the OECD region, leaving scope for monetary policy to support activity further in the period ahead, if need be. However, the risks to the outlook are considered to be on the downside, stemming *inter alia* from the possibility of continued share price declines, increased indebtedness in some countries, and a deterioration in confidence.

B. Employment and unemployment

In 2000, employment growth in the OECD area benefited from the generally strong economic growth, to reach 1.2% (Table 1.2). It was highest in Ireland and Spain, at a little under 5%, though negative in the Czech Republic, Japan and Poland. With the exception of Japan and Turkey, all OECD countries are projected to experience positive employment growth in 2001 and 2002, although the area-wide growth rate is projected to decline to 0.6% in 2001 and 0.9% in 2002. Following the pattern of economic growth, the projected slow-down is stronger in the United States than the European Union.

The 2000 unemployment rate in the OECD area was the lowest since 1990, at 6.3% (Table 1.3). The decline since 1999 was widespread, with a full percentage point decrease in the European Union. For the OECD area as a whole, the outlook is for a continuation of these comparatively low levels. However, increases are projected for the United States, up to the end of the projection period, and for Japan in 2001. Decreases in unemployment rates are projected for most of the EU member states.

C. Compensation and labour costs

For the OECD area as a whole, the growth of compensation per employee in the business sector was 3.6% in 2000, a small increase from the figure of 3.5% observed in 1999 (Table 1.4). Countries with, or near to, double-digit growth rates included Hungary, Ireland, Korea, Mexico, Poland and Turkey, of which only Hungary and Ireland experienced an acceleration in the rate of growth. At the same time, the growth of unit labour costs in the OECD area decelerated slightly from 1.3% growth in 1999 to 1.1% in 2000. These favourable developments, in the face of increases in energy prices, have been a surprising feature of the recent business cycle. Even in the tight labour market of the United States, unit labour costs increased by only 1.0% in 2000, compared with 1.6% in 1999. The projections are for a further, small increase, to 3.8%, in the growth of average compensation per employee for the OECD area in 2001, before a slight reduction to 3.7% in 2002. Unit labour costs are projected to rise more significantly, to 2.3% in 2001, falling to 1.6% in 2002. In the United States, the growth in unit labour costs is projected to be 3.5% in 2001 and 1.8% in 2002.

D. The unemployment-vacancy relation: a Beveridge curve analysis

Over the past year, anecdotal reports of skilled-worker shortages have increased in frequency in many countries. Such reports have suggested skilled-labour shortages in areas ranging from information and communication technology sectors to more traditional sectors such as construction and agriculture.[2] This subsection uses Beveridge curves (see Box 1.1), to shed light on possible labour and skill shortages in the current period, while at the same time examining possible structural changes in OECD labour markets. The current recovery is compared to the previous one, where possible.[3] Countries experiencing rapid recent wage growth would naturally be given special attention in any analysis of skill shortages. However, the available data generally show little evidence of any acceleration of wages. The country experiencing the strongest acceleration in wage growth in the past year has been Ireland, where the annual growth in compensation per employee increased from 4.0% in 1999 to 8.3% in 2000 (see Table 1.4).

Evidence of a skilled-worker shortage?

There are a number of countries where the combination of unemployment and vacancy rates seen in the current period, taken in the light of those at the end of the previous recovery, appears to suggest tight labour markets and the possible approach of labour and skill shortages (see the Beveridge curves in Chart 1.1). These include the Netherlands, Portugal, Spain and the United Kingdom, where unemployment rates are similar or lower to those at the end of the previous recovery but vacancy rates are higher. In addition, for the United States, unemployment rates are lower and vacancy rates are at similar levels. For Canada and France, both variables are at similar levels.[4] Denmark is an exception: vacancies appear to have been falling at the same time as unemployment, contrary to the pattern observed in the previous recovery. It is noticeable that

Table 1.2. **Employment and labour force growth in OECD countries**[a]

Annual percentage change

	Employment						Labour force					
	Level 1999 (000s)	Average 1988-1998	1999	2000	Projections		Level 1999 (000s)	Average 1988-1998	1999	2000	Projections	
					2001	2002					2001	2002
North America												
Canada	14 533	1.0	2.8	2.6	1.2	1.3	15 722	1.0	2.0	1.8	1.6	1.4
Mexico[b]	18 457	3.0	1.3	3.4	2.0	2.5	18 950	3.0	0.7	3.1	2.2	2.6
United States	133 501	1.3	1.5	1.3	0.4	0.4	139 380	1.2	1.2	1.1	1.0	0.9
Asia												
Japan	64 620	0.8	–0.8	–0.2	–0.1	0.2	67 793	1.0	–0.2	–0.2	0.1	0.2
Korea	20 281	1.7	1.4	3.8	0.5	2.0	21 634	2.2	0.8	1.5	0.6	1.8
Europe												
Denmark	2 708	0.0	0.9	0.8	0.6	0.5	2 856	0.0	0.8	0.3	0.6	0.5
Finland	2 287	–0.9	3.3	1.7	1.7	1.6	2 548	–0.1	2.0	1.2	0.9	1.0
Norway	2 258	0.6	0.4	0.5	0.6	0.7	2 333	0.6	0.4	0.7	0.6	0.6
Sweden	4 067	–0.9	2.2	2.2	1.6	1.0	4 308	–0.5	1.2	1.2	1.0	0.8
Greece	3 893	0.7	–0.7	1.2	1.1	1.4	4 426	1.1	0.2	0.4	0.4	0.6
Italy	20 492	–0.3	1.2	1.9	1.6	1.7	23 162	–0.1	0.8	0.9	0.8	0.8
Portugal	4 791	1.0	1.9	1.7	1.0	1.0	5 012	0.9	1.2	1.2	1.1	1.1
Spain	13 817	0.9	4.6	4.8	2.9	2.2	16 422	0.9	1.0	2.6	1.9	1.5
Czech Republic	4 709	. .	–2.3	–0.7	0.2	0.1	5 163	. .	0.2	–0.7	–0.2	–0.3
Hungary	3 750	. .	3.6	0.9	1.3	1.2	4 035	. .	2.6	0.3	1.1	1.0
Poland	14 757	. .	–3.9	–1.6	0.0	0.0	17 148	. .	–0.1	1.0	0.6	0.8
Austria	4 011	0.7	1.4	1.0	0.3	0.6	4 237	0.9	0.9	0.3	0.3	0.4
Belgium	3 906	0.4	1.3	1.7	1.1	0.9	4 283	0.4	0.5	–0.2	0.8	0.7
France	23 222	0.3	1.4	2.4	1.6	1.5	26 146	0.5	0.7	0.6	0.5	0.9
Germany[c]	37 942	0.4	1.1	1.5	0.9	0.8	41 370	0.6	0.3	1.0	0.4	0.2
Iceland	137	0.4	2.7	2.0	0.1	0.6	139	0.6	1.8	1.4	1.0	1.0
Ireland	1 616	3.2	6.3	4.7	3.7	3.1	1 711	2.2	4.0	3.3	3.2	3.1
Luxembourg	178	1.0	2.5	2.9	1.8	1.6	183	1.2	2.3	2.6	1.7	1.6
Netherlands	6 805	2.1	3.0	2.5	1.7	1.3	7 027	1.7	1.9	1.7	1.5	1.4
Switzerland	3 867	0.6	0.7	1.0	0.7	0.7	3 966	0.9	–0.4	0.3	0.7	0.7
Turkey	21 913	1.4	2.5	–3.8	–2.0	2.0	23 687	1.2	3.4	–4.9	–1.5	1.8
United Kingdom	27 649	0.4	1.3	1.0	0.6	0.4	29 428	0.2	1.4	0.5	0.5	0.5
Oceania												
Australia	8 811	1.5	2.3	2.9	1.0	1.8	9 491	1.6	1.4	2.2	1.8	1.7
New Zealand	1 751	1.4	1.5	1.6	1.0	1.0	1 878	1.6	0.7	0.8	0.6	1.0
OECD Europe[d, e]	**208 776**	**1.0**	**1.3**	**1.0**	**0.8**	**1.1**	**229 590**	**1.1**	**1.1**	**0.3**	**0.5**	**0.8**
EU	**157 385**	**1.0**	**1.7**	**2.0**	**1.3**	**1.2**	**173 119**	**1.1**	**0.9**	**1.0**	**0.8**	**0.7**
Total OECD[d, e]	**470 727**	**1.2**	**1.1**	**1.2**	**0.6**	**0.9**	**504 438**	**1.2**	**0.9**	**0.7**	**0.7**	**0.9**

. . Data not available.
a) See note *a)* to Table 1.1.
b) Data based on the National Survey of Urban Employment (see "Sources and methods: OECD Economic Outlook", *www.oecd.org/eco/out/source.htm*).
c) The average growth rate has been calculated by chaining on data for the whole of Germany to the corresponding data for western Germany prior to 1992.
d) Averages for 1988-1998 exclude the Czech Republic, Hungary, Poland and the Slovak Republic.
e) Countries shown.
Source: OECD (2001*c*), OECD *Economic Outlook*, No. 69, June.

the most recent movements of the 1990s Beveridge curves are often inward. However, it is difficult to determine to what extent this might be due to improved labour market functioning as opposed to some slackening off in employment demand, leading to a fall in vacancies.

Evidence of structural change?

An outward shift of the Beveridge curve is apparent in Finland, France, New Zealand, Norway, Sweden and Switzerland.[5] While this might be taken as a sign of poorer labour market functioning, for Finland and

Table 1.3. **Unemployment in OECD countries**[a]

	Percentage of labour force					Millions				
	Average 1988-1998	1999	2000	Projections		Average 1988-1998	1999	2000	Projections	
				2001	2002				2001	2002
North America										
Canada	9.4	7.6	6.8	7.2	7.2	1.4	1.2	1.1	1.2	1.2
Mexico[b]	3.7	2.6	2.3	2.5	2.6	0.6	0.5	0.5	0.5	0.5
United States	5.8	4.2	4.0	4.6	5.0	7.5	5.9	5.7	6.5	7.1
Asia										
Japan	2.8	4.7	4.7	4.9	4.8	1.8	3.2	3.2	3.3	3.3
Korea	2.8	6.3	4.1	4.1	4.0	0.6	1.4	0.9	0.9	0.9
Europe										
Denmark	7.5	5.2	4.8	4.7	4.8	0.2	0.1	0.1	0.1	0.1
Finland	10.6	10.2	9.8	9.1	8.6	0.3	0.3	0.3	0.2	0.2
Norway	4.8	3.2	3.4	3.4	3.3	0.1	0.1	0.1	0.1	0.1
Sweden	5.4	5.6	4.7	4.1	3.9	0.2	0.2	0.2	0.2	0.2
Greece	9.0	12.0	11.3	10.8	10.0	0.4	0.5	0.5	0.5	0.5
Italy	10.5	11.5	10.7	10.0	9.2	2.4	2.7	2.5	2.4	2.2
Portugal	5.7	4.4	4.0	4.1	4.2	0.3	0.2	0.2	0.2	0.2
Spain	19.6	15.9	14.1	13.2	12.6	3.1	2.6	2.4	2.3	2.2
Czech Republic	. .	8.8	8.8	8.4	8.1	. .	0.5	0.5	0.4	0.4
Hungary	. .	7.1	6.5	6.3	6.1	. .	0.3	0.3	0.3	0.3
Poland	. .	13.9	16.1	16.6	17.3	. .	2.4	2.8	2.9	3.0
Slovak Republic	. .	16.4	18.8	18.3	17.5	. .	. .	. .	. .	. .
Austria	5.0	5.3	4.6	4.6	4.4	0.2	0.2	0.2	0.2	0.2
Belgium	8.6	8.8	7.0	6.8	6.5	0.4	0.4	0.3	0.3	0.3
France	10.9	11.2	9.7	8.6	8.1	2.8	2.9	2.5	2.3	2.2
Germany	7.5	8.3	7.8	7.3	6.8	2.9	3.4	3.2	3.1	2.9
Iceland	3.1	1.9	1.3	2.2	2.6	0.0	0.0	0.0	0.0	0.0
Ireland	13.2	5.6	4.3	3.9	3.9	0.2	0.1	0.1	0.1	0.1
Luxembourg	2.3	2.9	2.6	2.5	2.5	0.0	0.0	0.0	0.0	0.0
Netherlands	6.3	3.2	2.4	2.2	2.3	0.4	0.2	0.2	0.2	0.2
Switzerland	3.0	2.7	2.0	1.9	1.9	0.1	0.1	0.1	0.1	0.1
Turkey	7.7	7.5	6.4	6.9	6.7	1.6	1.8	1.5	1.5	1.5
United Kingdom	7.9	6.0	5.5	5.4	5.5	2.3	1.8	1.6	1.6	1.7
Oceania										
Australia	8.6	7.2	6.6	7.4	7.2	0.8	0.7	0.6	0.7	0.7
New Zealand	7.7	6.8	6.0	5.6	5.6	0.1	0.1	0.1	0.1	0.1
OECD Europe[c]	**9.2**	**9.1**	**8.4**	**8.1**	**7.9**	**17.7**	**20.8**	**19.4**	**18.8**	**18.3**
EU	**9.6**	**9.1**	**8.2**	**7.7**	**7.3**	**15.9**	**15.7**	**14.3**	**13.5**	**13.0**
Total OECD[c]	**6.9**	**6.7**	**6.3**	**6.3**	**6.3**	**30.5**	**33.7**	**31.5**	**32.0**	**32.2**

. . Data not available.
a) See note *a)* to Table 1.1.
b) See note *b)* of Table 1.2.
c) Averages for 1988-1998 exclude the Czech Republic, Hungary, Poland and the Slovak Republic.
Source: OECD (2001*c*), OECD *Economic Outlook*, No. 69, June.

Sweden the explanation lies in the severe economic crises of the 1990s, which make it difficult to compare the current expansion with the previous one. For France, the outward movement is very slight, and the most recent figures available can be interpreted as showing that labour demand is higher than at the end of the previous recovery, while unemployment is at a similar level. It is too early to attempt to assess the impact of the 35-hour week legislation which began to come into force in January 2000, and which was designed to increase labour demand. Early indications appear to suggest that sectors which moved relatively quickly to the 35-hour week are not suffering particularly badly from skilled-labour shortages.[6] However, the impact on other sectors is not yet known. For

Table 1.4. **Business sector labour costs in OECD countries**[a, b]

Percentage changes from previous period

	Compensation per employee					Unit labour costs				
	Average 1988-1998	1999	2000	Projections 2001	Projections 2002	Average 1988-1998	1999	2000	Projections 2001	Projections 2002
North America										
Canada	3.5	2.6	3.6	3.2	3.4	2.3	0.7	1.4	2.1	1.4
Mexico	21.4	13.5	12.0	9.0	7.0	21.4	10.4	9.4	7.0	4.7
United States	3.5	4.3	4.5	4.7	4.4	2.0	1.6	1.0	3.5	1.8
Asia										
Japan	1.7	–1.1	0.1	0.3	0.4	0.3	–2.4	–1.7	–0.7	–0.5
Korea	10.9	12.2	8.0	6.6	6.8	6.5	2.1	2.9	2.7	3.1
Europe										
Denmark	3.7	3.8	3.8	3.8	3.9	1.3	2.2	1.1	2.0	1.9
Finland	4.5	3.1	4.7	4.5	4.4	0.9	0.9	0.0	1.9	2.1
Norway	4.0	5.7	4.5	4.5	4.8	1.7	4.8	2.9	3.3	2.8
Sweden	6.1	2.8	3.7	3.7	4.3	3.4	0.1	2.2	2.3	1.8
Greece	13.0	4.2	5.1	5.0	5.2	11.5	–0.4	1.9	1.7	1.9
Italy	5.3	2.1	2.9	2.6	3.0	3.3	1.3	1.4	1.5	1.9
Portugal	9.7	4.2	5.8	5.5	5.3	7.6	2.9	4.1	4.0	3.3
Spain	6.9	3.0	3.5	4.3	4.3	4.8	2.6	3.0	3.4	3.0
Czech Republic	. .	4.9	7.0	7.1	6.5	. .	3.2	2.8	3.9	2.7
Hungary	. .	11.4	13.1	18.0	11.9	. .	11.4	8.5	13.9	8.2
Poland	. .	15.2	8.4	8.1	7.1	. .	5.4	1.8	3.7	2.7
Austria	3.6	1.6	2.2	2.7	3.0	1.5	–0.1	–0.3	0.5	0.8
Belgium	3.7	2.0	2.7	3.3	3.2	2.0	0.5	0.3	1.4	1.2
France	2.6	2.3	1.4	2.7	2.9	0.8	0.3	0.7	1.6	1.6
Germany[c]	3.5	0.9	1.3	1.9	2.3	1.4	0.5	–0.1	0.5	0.6
Iceland	7.9	4.5	5.7	7.0	7.0	6.1	3.1	3.8	5.3	5.0
Ireland	3.8	4.0	8.3	7.8	7.6	0.2	0.3	1.6	3.4	2.7
Luxembourg	4.5	3.6	4.9	3.6	3.2	. .	. .	. .	. .	. .
Netherlands	2.7	2.9	4.1	4.4	4.2	1.3	1.9	2.5	2.8	2.4
Switzerland	3.4	1.3	1.9	2.6	2.7	2.2	0.1	–0.6	1.1	1.3
United Kingdom	5.6	4.9	4.4	4.8	4.9	4.4	3.9	2.3	2.6	2.4
Oceania										
Australia	4.2	2.4	3.0	4.0	3.7	2.1	0.1	2.3	2.9	1.6
New Zealand	2.0	2.4	3.1	3.7	3.2	1.4	–0.2	1.1	2.4	1.1
OECD Europe[d, e]	**4.5**	**3.1**	**3.7**	**3.6**	**3.7**	**2.7**	**1.7**	**1.3**	**2.0**	**1.9**
EU	**4.6**	**2.5**	**2.8**	**3.2**	**3.5**	**2.7**	**1.4**	**1.2**	**1.7**	**1.7**
Total OECD less high-inflation countries[d, e, f]	**3.6**	**2.6**	**3.1**	**3.3**	**3.4**	**1.9**	**0.9**	**0.7**	**2.1**	**1.4**
Total OECD[d, e]	**4.4**	**3.5**	**3.6**	**3.8**	**3.7**	**2.7**	**1.3**	**1.1**	**2.3**	**1.6**

. . Data not available.
a) See note *a)* to Table 1.1.
b) Aggregates are computed on the basis of 1995 GDP weights expressed in 1995 purchasing power parities.
c) The average growth rate has been calculated by chaining on data for the whole of Germany to the corresponding data for western Germany prior to 1992.
d) Averages for 1988-1998 exclude the Czech Republic, Hungary, Poland and the Slovak Republic.
e) Countries shown.
f) High inflation countries are defined as countries which had 10 per cent or more inflation in terms of GDP deflator on average between 1988 and 1998 on the basis of historical data. Consequently, the Czech Republic, Greece, Hungary, Korea, Mexico, and Poland are excluded from the aggregate.
Source: OECD (2001*c*), OECD *Economic Outlook*, No. 69, June.

New Zealand, the shift may partly reflect the major policy reforms since 1984. Part of the shift in the Norwegian curve can be explained through the success of the Public Employment Service in increasing the market penetration of job vacancies.[7] However, it may also reflect some deterioration in the matching of labour supply and demand.

Box 1.1. **Beveridge curves**

Beveridge curves provide a useful perspective on potential skilled-labour shortages, as well as on structural changes in the labour market. High and increasing levels of unfilled job vacancies, especially at low levels of unemployment, may denote skilled-worker shortages and labour market tightening. If combined with sustained levels of high unemployment, they may indicate a mismatch in the labour market between skills available and skills required. In addition, an outward (inward) shift of the curve over time may denote a decrease (increase) in the efficiency of labour market matching. However, any analysis of the Beveridge curve must bear in mind the deficiencies of currently available job vacancy data as indicators of unsatisfied labour demand.

Most job vacancy data are obtained from the Public Employment Service (PES). However, not all vacancies are reported to the PES. The definitions of job vacancies and the proportion of vacancies reported to the PES vary considerably across countries. Institutional changes may affect the proportion of vacancies that are notified, making it difficult to interpret both current trends and shifts over time. One example of such an institutional change is provided by Australia, where the Commonwealth Employment Service was shut down in May 1998 and replaced by the Job Network system, which depends on contracted employment service providers [OECD (2001*a*)]. A structural change of this nature might well have a significant impact on measured job vacancies.* Another example is the integration of information technology, including the Internet, into the delivery of labour market services in a number of countries. For example, the Flemish PES office has developed a large-scale electronic network since 1992, which appears to have increased the number of reported job vacancies considerably [OECD (2001*b*)].

While France maintains a series of new job vacancy data from its PES, changes in the method of compilation are thought to preclude comparisons between the 1990s and the 1980s. The only consistent information is provided by surveys of employers' reports of recruitment difficulties. For Ireland, data are available only on new vacancies reported to the Training and Employment Authority (FAS) since 1985. Finally, for Canada and the United States, the best indicator of unsatisfied labour demand is considered to be the "Help-Wanted Index", derived from a count of newspaper advertisements.

* Employers may list vacancies with the "employment service" in Australia via Job Network providers or directly via the Australian Job Search Internet site.

For Switzerland, the outward movement of the curve has occurred alongside a rapid rise in the proportion of long-term unemployment, adding weight to the possibility that the outward shift signals an unfavourable structural change in the labour market.

On the other hand, Canada, Denmark, the Netherlands, the United Kingdom and the United States have seen an inward shift in the Beveridge curve, suggesting increased market adjustment efficiency and better matching compared to the 1980s expansionary period. One reason for this may be an increased emphasis on mobilising the unemployed to fill available vacancies [Layard (2001)]. This was an objective of the Canadian Employment Insurance reform of 1996, the Danish unemployment insurance reform of 1994, the Netherlands Job-seekers Employment Act (WIW) of 1998, and the United Kingdom New Deal of 1997. Welfare reform in the United States may have had a similar effect for some groups of unemployed. As most of these measures affect only unemployed individuals receiving benefits and, in some cases, have been introduced rather recently, they cannot explain the entire shift. However, it can be argued that policy in these countries has been moving in the direction of "activation" for some time and may have played a role in improving labour market functioning over the past economic cycle.

In conclusion, a comparison of the patterns of Beveridge curves over recent economic cycles does show some reason for concern over possible shortages of labour and of skilled workers. However, as noted above, there is little sign that any such shortages have yet been translated into wage inflation. Nevertheless, the issue should by no means be ignored. In addition, while many countries appear to show signs of favourable structural change in labour markets, some do not, and in general the process of reform needs to continue. Policy initiatives to make paid employment more financially attractive, working arrangements more flexible and lower-skilled workers more productive should help extend the employment gains of recent years. The following section reviews spending on a range of labour market policies across OECD countries and regions since 1985, and discusses the latest trends in policy development.

Chart 1.1. **Job vacancies[a] and unemployment**

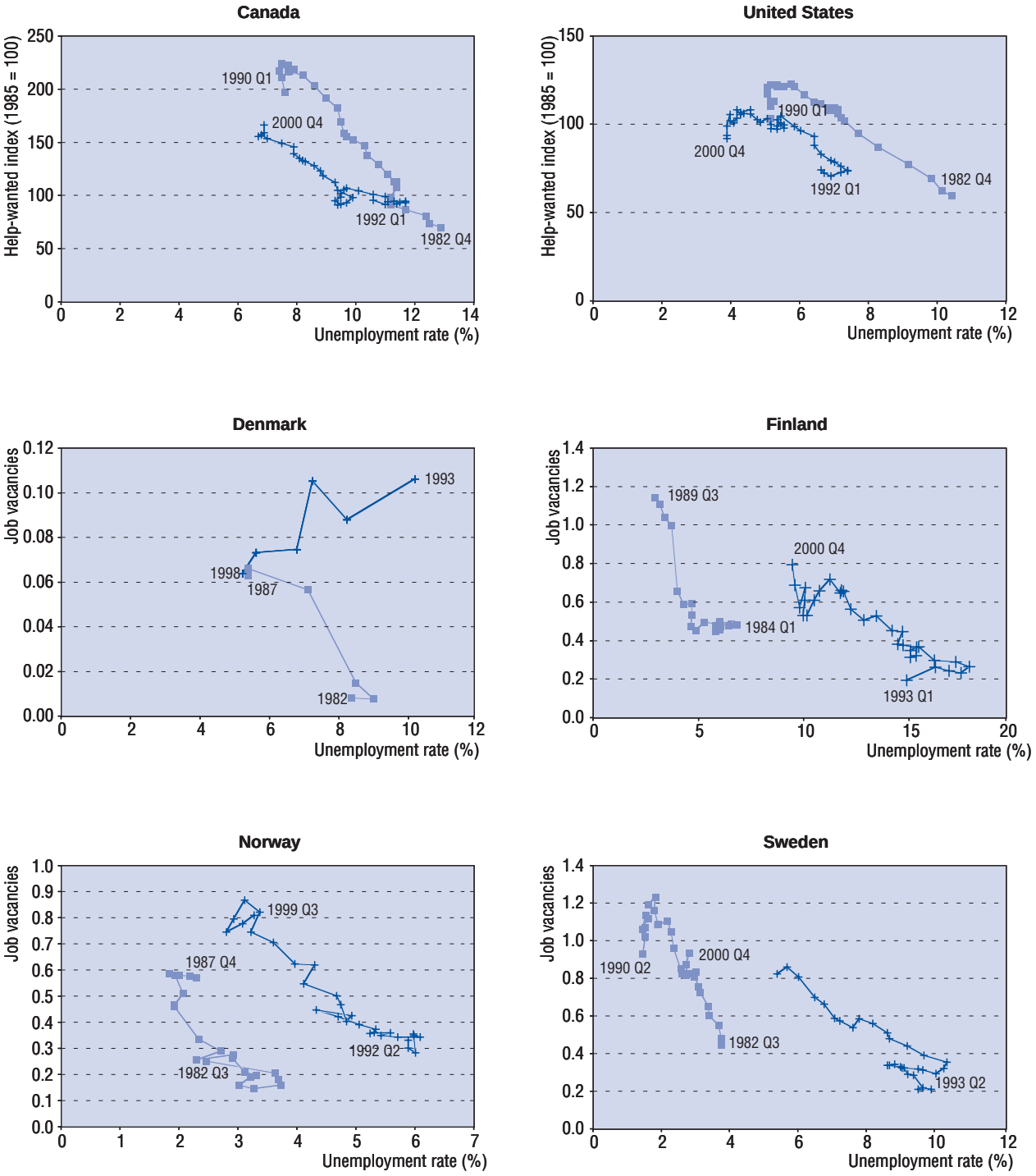


Chart 1.1. **Job vacancies[a] and unemployment** *(cont.)*

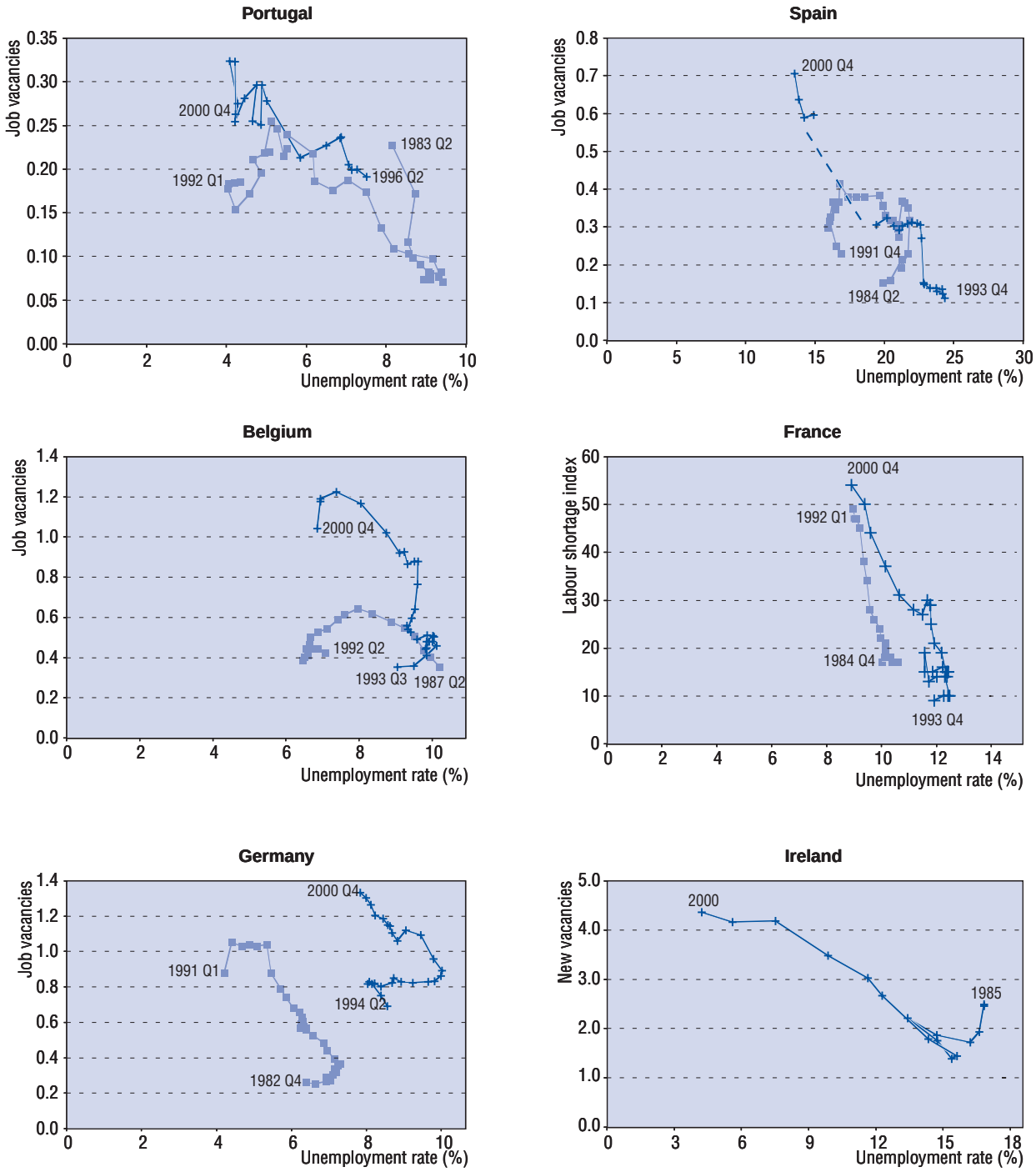
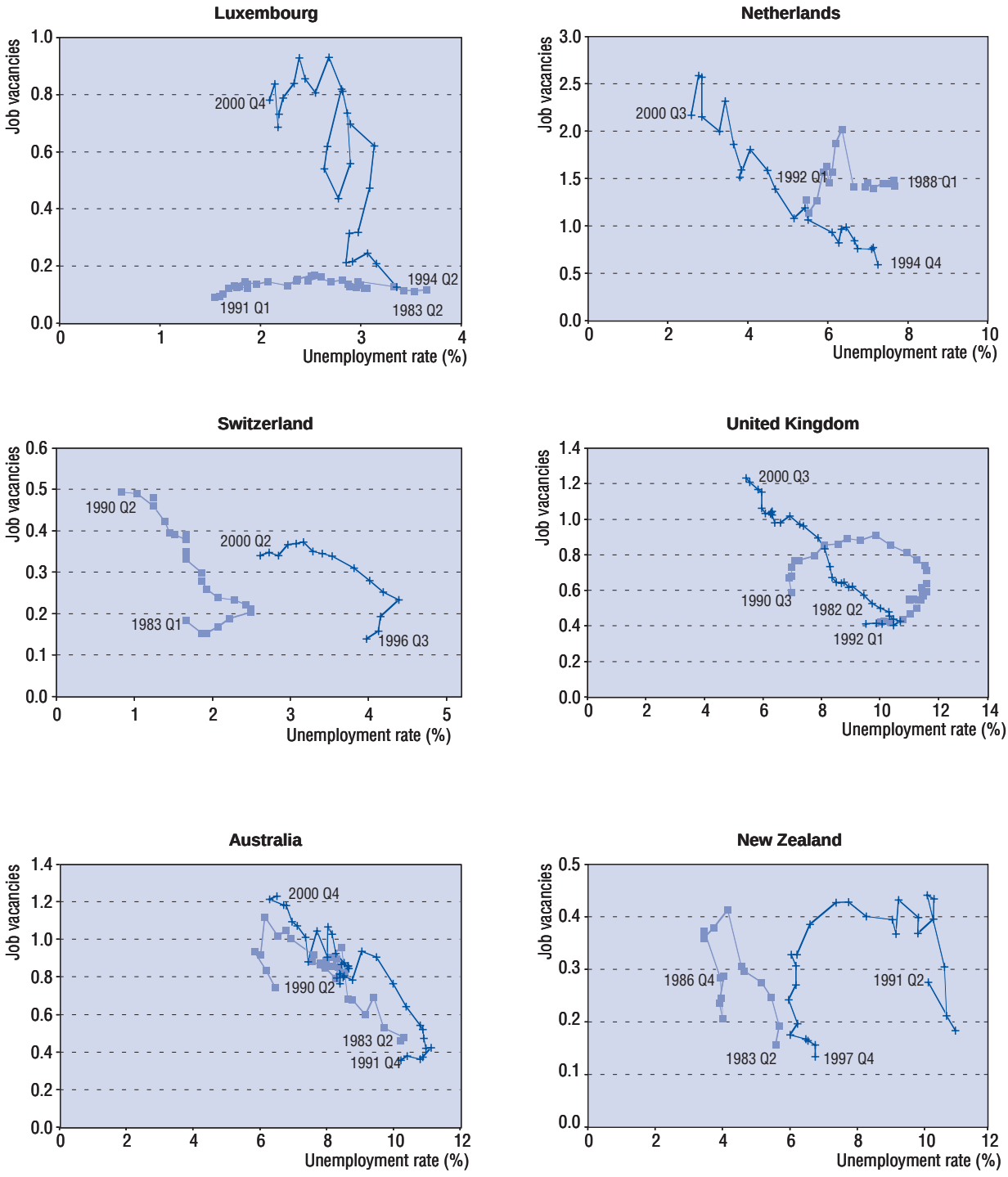


Chart 1.1. **Job vacancies[a] and unemployment** *(cont.)*



a) Vacancy data are reported as a percentage of the labour force.

Sources : OECD, *Main Economic Indicators*; Institut national de la statistique et des études économiques; Training and Employment Authority (FÁS, Ireland); Richard Layard (Danish vacancy data); and Economic Cycle Research Institute.

II. Labour market policies: how the money has been spent

A. Introduction

The high levels of unemployment in almost all OECD countries during the 1980s and early 1990s entailed large increases in public spending on unemployment benefits. At the same time, considerable expenditure was allocated to so-called "active labour market programmes" (ALMPs). Many of these ALMPs were designed to help unemployed people find work faster. Others aimed to foster employment growth and reduce unemployment over the medium-term through structural change in the labour market. In 1992, OECD Labour Ministers agreed that "labour market programmes are important tools for pursuing structural reform" and endorsed a "long-term strategy for a progressive shift from passive to active labour market measures and related social policies". The 1994 OECD *Jobs Study* explained that ALMPs are "aimed at improving the functioning of the labour market by enhancing labour market mobility and adjustment, facilitating the redeployment of workers […] and, generally, enabling people to seize new job opportunities as they arise", adding that they are "particularly appropriate instruments for improving the prospects of poorly qualified job-seekers and the long-term unemployed". One of the recommendations of the *Jobs Study* was to "strengthen the emphasis on active labour market policies and reinforce their effectiveness".

The aim of this section is to document the trends in public spending on labour market programmes, using the OECD Labour Market Programme (LMP) database, containing data from 1985. This was first restricted to expenditure on selected programme categories, but was later extended to include a limited amount of information on numbers of participants in these programmes.

The LMP database provides a valuable instrument for monitoring international trends in labour market programme spending, though its limitations need to be borne in mind. It is based on three principles (Box 1.2). The first is the distinction between "passive" programmes (taken to include early retirement schemes as well as the payment of unemployment benefits) and "active" programmes. The second is the importance of targeting – witness the special categories for young people and the disabled. The third is the separation of expenditure by government "functions", namely, the Public Employment Service and administration, labour market training, and subsidies to employment.

These three principles remain of great importance. However, even as unemployment rates in most OECD countries have declined to the levels of the mid-1980s, the role of ALMPs is being rethought. As a result, the database needs to be re-developed. Two of the most important reasons for this are: *i*) the blurring of the distinction between active and passive programmes, as unemployment benefit payments are increasingly made subject to conditions involving active participation in the labour market and *ii*) the emergence of new forms of policies, such as "Making Work Pay" policies, which were not foreseen in the original database. Work is now underway, in conjunction with EUROSTAT, the Statistical Office of the European Union, to construct an enhanced OECD database to track these policy developments better (see Box 1.3).

The structure of this section is as follows:

- Sub-section B describes the basic patterns of LMP expenditure, and outlines its relationship with the unemployment rate. It addresses the question, "Have OECD governments heeded the call to put more emphasis on active' labour market programmes?"
- Sub-section C explores the changes in the structure of expenditure on ALMPs.
- Sub-section D reviews some of the developments in policies and measuring instruments emerging out of the experience of the past two decades.

B. How did labour market expenditure vary between 1985 and 1998?

Chart 1.2 shows that, on average for OECD countries, the average proportion of GDP devoted to labour market programmes varies strongly with the economic cycle. For example, it rose from 2.1% in 1989, before the recessionary period of the early 1990s, to 3% in 1993, when the average unemployment rate was at its peak.[8] The average over the whole period, 1985 to 1998, was 2.5% of GDP for total LMP spending, of which 0.8% was for "active" measures.

Country detail is shown in Table 1.5. For 1998, the highest figures, for both total LMP spending and active spending, are seen in the Nordic countries, at 3.6% and 1.5%, respectively. Figures for the four southern European countries tend to be lower, averaging 1.6% and 0.7%, respectively, while those for the eastern European countries are lower still, at 0.8% and 0.3%. The remaining European countries occupy an intermediate position. Overall, spending in OECD Europe countries tends to be higher than in other OECD regions. The lowest figures for total spending in 1998 are for Mexico, the Czech Republic and the United States. The lowest figures for active spending are for Mexico, Japan and the Czech Republic.

Box 1.2. Main features of the OECD LMP database

The database consists of public expenditure data, beginning in 1985 for the majority of countries, supplemented by data on the number of participants for 10 countries from 1985 and for 16 countries from 1992. The latest year generally available for OECD countries is 1998. The information is based on data provided annually by Member countries in respect of each of their relevant labour market programmes, which are allocated to the appropriate category by the Member countries, in collaboration with the Secretariat, following guidelines laid down by the OECD. All Member countries are covered, with the exceptions of Iceland, the Slovak Republic and Turkey. However, not every country has provided data for every year. As a result, some countries have been excluded from the analysis in this section, and a number of estimations have been made, as explained in Annex 1.A.

Public expenditure on labour market programmes is defined to include all public outlays, or outlay equivalents for relevant purposes, both public sector consumption and transfers to individuals and enterprises. No distinction is made between central, local government and quasi-public sources of finance, such as social insurance funded by compulsory contributions. The emphasis is on labour market programmes, as opposed to general employment or macroeconomic policies, and so the database includes only expenditure targeted on particular labour market groups. For example, reductions of taxes and social security contributions are included only when they are made in respect of particular labour market groups. Payroll-tax reductions for lower-paid workers are considered general employment policies and are not included.

Participation in ALMPs is measured, for the most part, as the inflows into the programmes, *i.e.* the number of persons starting the programme over the course of the year in question. This generally corresponds to the type of data which is most readily available. However, stock data are included for some types of programmes, including direct job creation and work for the disabled.

Definitions of the categories

1. **Public Employment Services and administration** includes the following services: placement, counselling and vocational guidance; job-search courses; assistance with displacement costs; administering unemployment benefits; and all other administration costs of labour market agencies (at central and local level) including running labour market programmes.
2. **Labour market training** includes both course costs and subsistence allowances and is divided into two sub-categories: training for unemployed adults and those at risk; and training for employed adults. Special training programmes for youth and disabled are excluded (see below).
3. **Youth measures** include only special programmes for youth in transition from school to work. They do not cover young people's participation in programmes which are open to adults as well. The two sub-categories are: measures for unemployed and disadvantaged youth, targeted principally on those who do not follow regular upper-secondary education or vocational education and are unsuccessful in finding jobs; and support of apprenticeship and related forms of general youth training, covering a variety of forms of training and work practice in enterprises.
4. **Subsidised employment** covers targeted measures to promote or provide employment for the unemployed and other priority groups (but not youth and the disabled). It is divided into: wage subsidies paid to private sector firms to encourage the recruitment of targeted workers or continued employment of those whose jobs are at risk (not including general employment subsidies); support of unemployed persons starting enterprises; and direct job creation (in public or non-profit organisations) to benefit the unemployed.
5. **Measures for the disabled** include only special programmes for the disabled and do not cover the total policy effort in support of the disabled. The two sub-categories are: vocational rehabilitation; and work for the disabled.
6. **Unemployment compensation** includes all cash benefits to compensate for unemployment except early retirement. It covers unemployment insurance and assistance, compensation to workers whose employers go bankrupt and special support for various groups such as construction workers laid-off in bad weather.
7. **Early retirement for labour market reasons** is limited to special schemes under which workers receive retirement pensions either because they are out of work or because their jobs are released to the benefit of others. Disability pensions are excluded.

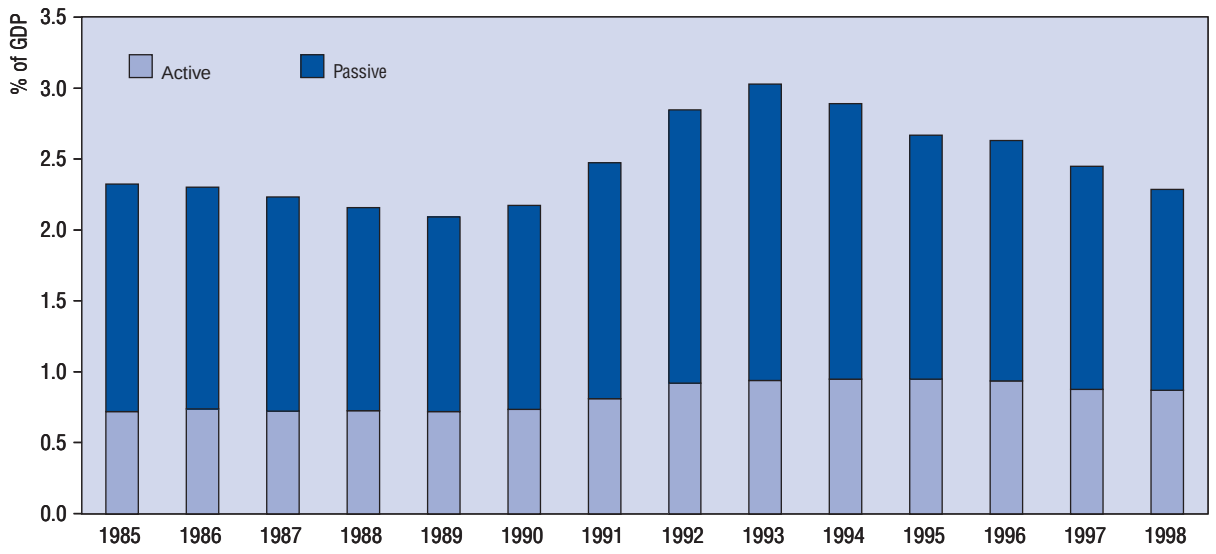
These main categories are defined in more detail in OECD (1990). In this section, "active" programmes are those included in categories 1 to 5 above, while "passive" programmes comprise categories 6 and 7.

Limitations of the data for analytical purposes

The following limitations need to be borne in mind when using the data for analysis [see also OECD (1988); OECD (1993); Martin (2000)]:

- Potential inconsistencies between data for different Member countries arise from institutional differences and different interpretations of the criteria and the categories.
- Spending on labour market programmes at regional or sub-national levels is not always captured fully.
- Public expenditure data alone cannot encompass a country's entire labour market policy, which also includes many legislative and regulatory policies. In addition, as one of the criteria is that programmes be targeted, the data exclude general macroeconomic policies, general tax exemptions, work-time reduction measures, and so on.
- As the database only refers to public expenditure, it excludes private-sector spending, for example, on programmes organised at the industry level and financed by special payroll taxes, private spending on apprenticeships, training, and so on.
- The data on participant numbers relate to annual inflows into various labour market programmes. They give no direct information on the average length of time spent in a programme nor on the number of repeated spells.

Chart 1.2. **OECD spending on active/passive measures, 1985-1998**[a]



a) Not all OECD countries are included in the figures shown, and some missing data have been estimated by the Secretariat. See Annex 1.A for details.

Source : OECD database on Labour Market Programmes.

Chart 1.3 explores the relationship between LMP expenditure and the unemployment rate. The first panel shows the (unweighted) average for OECD countries. Several points emerge:

- Both passive and active spending rise and fall with the unemployment rate. However, the slope of the passive line is greater than that of the active line – passive expenditure is more responsive than active to changes in the unemployment rate. This is only to be expected. Active policies take some time to put into place, while the payment of unemployment benefits, the main component of passive programmes, does not. Moreover, benefits are usually administered as open-ended entitlements and tend to rise and fall automatically with unemployment.

- The relationship between passive spending and the unemployment rate has shifted over time. For example, at roughly the same level of the unemployment rate, passive spending was higher in 1991 than in 1987. However, by the end of the 1990s, again at roughly the same unemployment rate, the proportion of passive spending had fallen to just below the level of 1987. The reasons for this may include a tightening-up of the rules for eligibility in the more recent period, a change in the composition of the unemployed, a reduction of expenditure on early retirement schemes and some transfer of expenditure to active programmes (see below).

- For active programmes, the relationship between spending and unemployment also appears to have shifted over the recent business cycle. On average, for OECD countries, active spending tended to rise with the unemployment rate up to 1993, but it fell only slightly when unemployment fell during the rest of the 1990s. This is consistent with a continuing effort to achieve structural reform after unemployment had peaked [OECD (1996*a*)].

The remaining panels in Chart 1.3 show the patterns of change for a number of OECD country groupings; the Nordic countries, Southern Europe,[9] Central and Western Europe, North America and Oceania. The patterns for these different areas show considerable differences. For the Nordic countries, the proportion of spending on active policies responds particularly strongly to a rise in the unemployment rates (presumably because active programmes are offered to a relatively high proportion of the unemployed). In the southern European, and central and western European countries the line for active spending has shifted upwards noticeably. For North America, it can be seen that spending on passive programmes was much lower in 1998 than in 1989. This is linked to the fact that, in 1996, Canada reformed its Employment Insurance system while the United States introduced profiling of the

Table 1.5. **Spending on labour market programmes, 1985, 1989, 1993 and 1998**

	Total spending (as % of GDP)				Active spending (as % of GDP)				Active spending (as % of total spending on LMPs)			
	1985	1989	1993	1998	1985	1989	1993	1998	1985	1989	1993	1998
Canada	2.49	2.07	2.60	1.49	0.64	0.51	0.66	0.50	25.9	24.5	25.3	33.8
Mexico	. .	0.01	0.01	0.08	. .	0.01	0.01	0.07	. .	59.8	56.4	98.2
United States	0.79	0.62	0.79	0.42	0.25	0.23	0.21	0.17	32.1	36.8	26.1	41.4
North America[a, b]	**1.64**	**1.34**	**1.70**	**0.96**	**0.45**	**0.37**	**0.43**	**0.34**	**29.0**	**30.6**	**25.7**	**37.6**
Japan	0.50	0.40	0.39	0.61	0.17	0.16	0.09	0.09	33.5	41.1	22.8	15.0
Korea	. .	. .	0.06	0.64	. .	. .	0.06	0.46	. .	. .	100.0	71.7
Asia[a, b]	**. .**	**. .**	**0.22**	**0.62**	**. .**	**. .**	**0.07**	**0.27**	**. .**	**. .**	**61.4**	**43.3**
Denmark	5.38	5.49	7.08	5.03	1.14	1.13	1.74	1.66	21.2	20.6	24.6	33.1
Finland	2.22	2.11	6.57	3.96	0.90	0.97	1.69	1.40	40.7	46.0	25.8	35.2
Norway	1.09	1.83	2.64	1.39	0.61	0.81	1.15	0.90	55.7	44.0	43.7	64.7
Sweden	2.97	2.17	5.73	3.92	2.10	1.54	2.97	1.97	70.8	70.9	51.8	50.4
Nordic countries[a, b]	**2.92**	**2.90**	**5.51**	**3.58**	**1.19**	**1.11**	**1.89**	**1.48**	**47.1**	**45.4**	**36.5**	**45.8**
Greece	0.53	0.80	0.72	0.84	0.17	0.38	0.31	0.35	32.7	47.5	43.0	41.5
Italy	. .	. .	2.51	1.83	. .	. .	1.36	1.12	. .	. .	54.2	61.1
Portugal	0.69	0.72	1.74	1.60	0.33	0.48	0.84	0.78	47.3	66.9	48.2	48.6
Spain	3.14	3.18	3.83	2.25	0.33	0.85	0.50	0.70	10.5	26.9	13.1	30.4
Southern Europe[a, b]	**1.45**	**1.57**	**2.10**	**1.63**	**0.28**	**0.57**	**0.55**	**0.73**	**30.2**	**47.1**	**34.7**	**40.2**
Czech Republic	. .	. .	0.30	0.36	. .	. .	0.16	0.13	. .	. .	54.3	35.7
Hungary	. .	. .	2.76	1.01	. .	. .	0.65	0.39	. .	. .	23.6	38.6
Poland	. .	. .	2.45	1.00	. .	. .	0.58	0.44	. .	. .	23.6	44.4
Above countries[a, b]	**. .**	**. .**	**1.84**	**0.79**	**. .**	**. .**	**0.47**	**0.32**	**. .**	**. .**	**33.9**	**39.6**
Austria	1.20	1.20	1.74	1.71	0.27	0.27	0.32	0.44	22.6	22.6	18.5	25.9
Belgium	4.68	3.91	4.24	3.87	1.31	1.26	1.24	1.42	28.0	32.2	29.2	36.7
France	3.03	2.60	3.32	3.11	0.66	0.73	1.25	1.30	21.9	28.2	37.6	42.5
Germany	2.22	2.26	4.10	3.54	0.80	1.03	1.58	1.26	36.1	45.6	38.6	35.6
Ireland	5.04	4.17	4.64	3.44	1.52	1.41	1.54	1.54	30.2	33.9	33.3	44.7
Luxembourg	1.48	0.96	0.88	0.96	0.52	0.30	0.19	0.29	35.3	31.1	21.4	30.3
Netherlands	4.65	4.04	4.61	4.72	1.16	1.25	1.59	1.74	25.0	31.0	34.5	37.0
Switzerland	0.46	0.34	1.99	1.77	0.19	0.21	0.38	0.77	42.0	62.0	19.1	43.5
United Kingdom	2.86	1.53	2.15	0.98	0.75	0.67	0.57	0.34	26.2	43.9	26.4	36.4
Central and Western Europe[a, b]	**2.85**	**2.33**	**3.07**	**2.68**	**0.80**	**0.79**	**0.96**	**1.01**	**29.7**	**36.7**	**28.7**	**36.9**
OECD Europe[a, b]	**2.60**	**2.33**	**3.50**	**2.69**	**0.80**	**0.83**	**1.12**	**1.05**	**34.1**	**40.8**	**31.8**	**39.6**
Australia	1.72	1.04	2.51	1.48	0.42	0.24	0.71	0.42	24.7	23.3	28.4	28.4
New Zealand	1.54	2.66	2.40	2.21	0.90	0.93	0.79	0.63	58.6	35.0	32.8	28.3
Oceania[b]	**1.63**	**1.85**	**2.46**	**1.84**	**0.66**	**0.59**	**0.75**	**0.52**	**41.6**	**29.1**	**30.6**	**28.4**
EU[a, b]	**2.91**	**2.53**	**3.63**	**2.80**	**0.86**	**0.86**	**1.13**	**1.07**	**31.7**	**38.6**	**31.3**	**37.7**
OECD[a, b]	**2.32**	**2.09**	**3.03**	**2.29**	**0.72**	**0.72**	**0.94**	**0.87**	**34.2**	**38.4**	**30.3**	**37.3**

. . Data not available.
a) The averages are calculated including only those countries for which data are available for all of the years shown, and some missing data have been estimated by the Secretariat. See Annex 1.A for details.
b) Unweighted averages.
Source: OECD database on Labour Market Programmes.

unemployed (and there were also indirect effects from the reform of its welfare system) [see OECD (2001*b*)]. For Oceania, the curve for active spending turns down sharply after 1995, reflecting the considerable reduction in public expenditure on active programmes in both Australia [see OECD (2001*a*)] and New Zealand.

The answer to the question posed at the beginning of this section, "Have OECD governments heeded the call to put more emphasis on "active' labour market programmes?", can thus be answered with a qualified "yes". Between 1986 and 1998, two years of approximately equal unemployment rates for the OECD as a whole, the proportion of LMP

Chart 1.3. **Active/passive spending and unemployment rates, 1985-1998**[a]

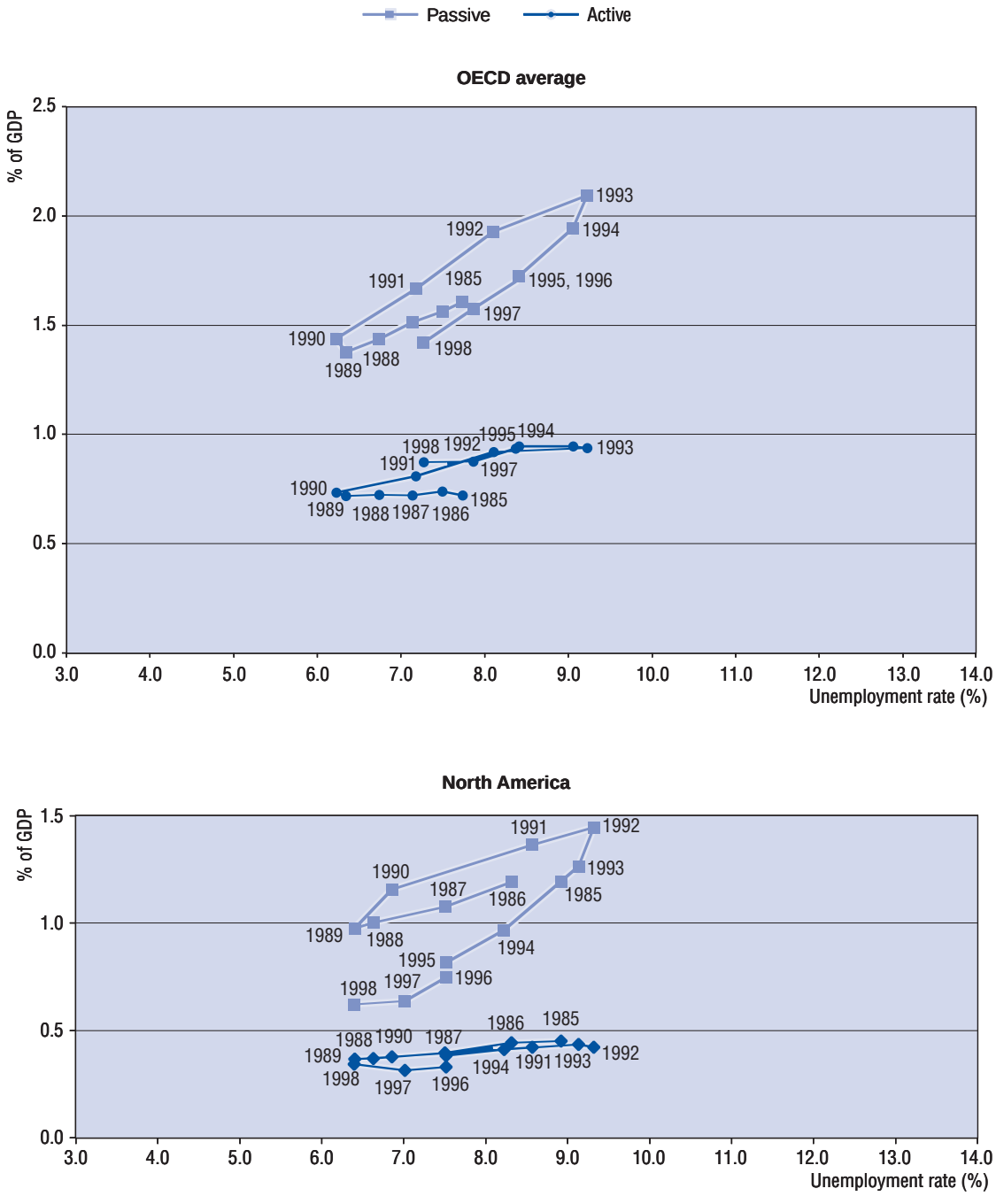
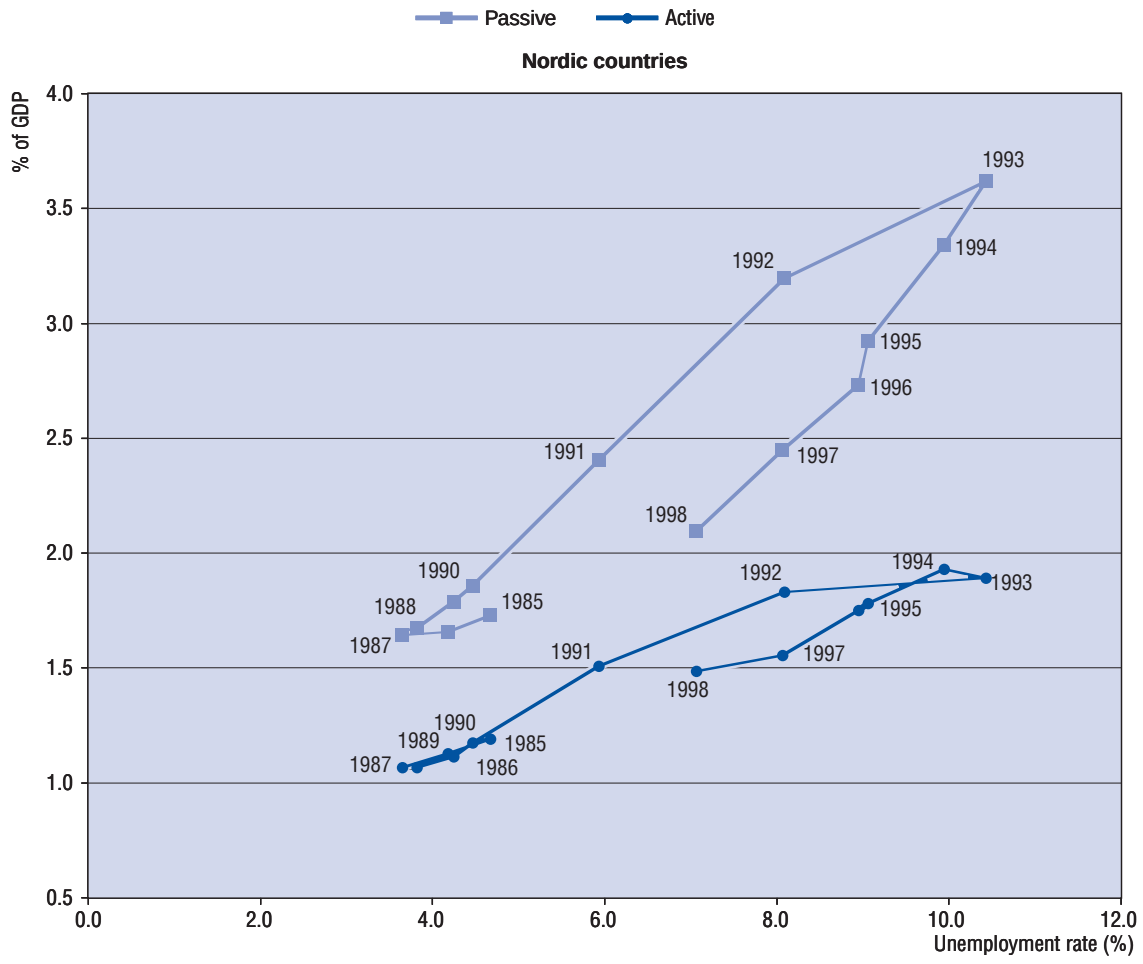


Chart 1.3. **Active/passive spending and unemployment rates, 1985-1998**[a] *(cont.)*



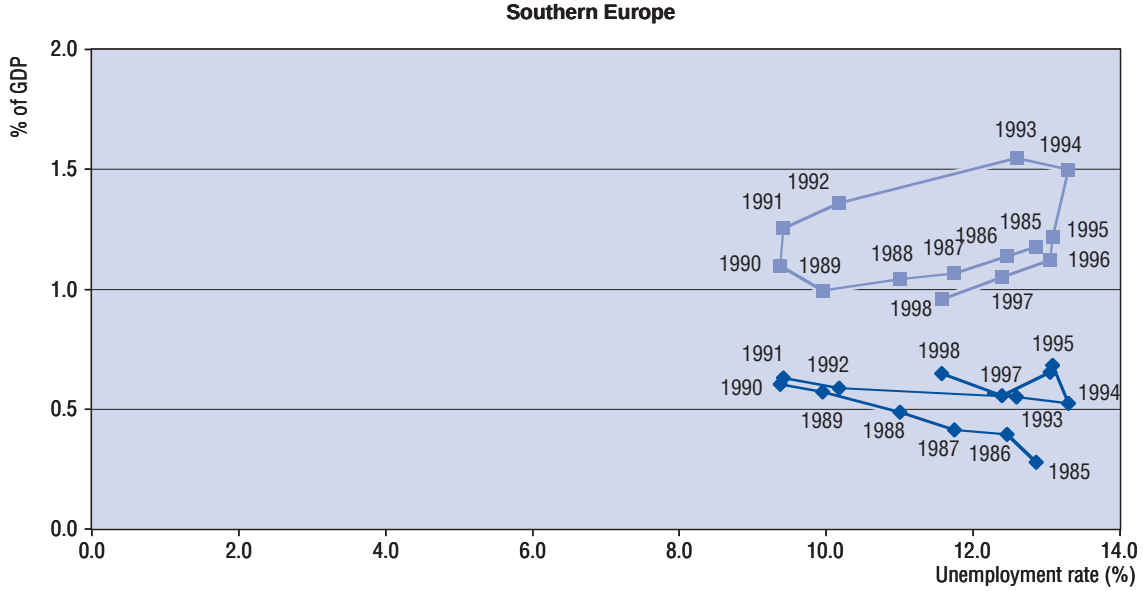
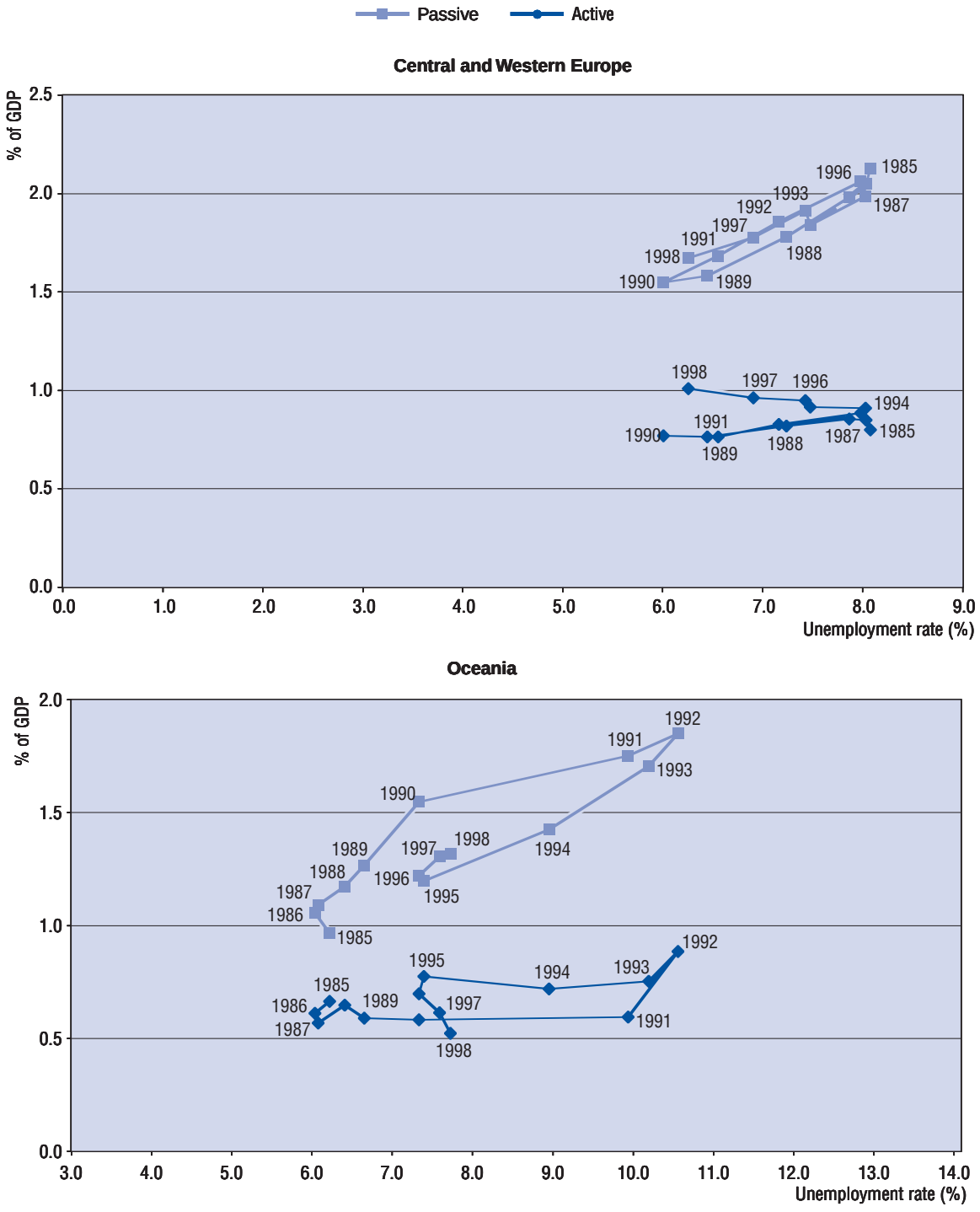


Chart 1.3. **Active/passive spending and unemployment rates, 1985-1998[a]** *(cont.)*



a) The charts have been drawn on the same scale to facilitate comparisons. Not all OECD countries are included in the figures and regions shown, and some missing data have been estimated by the Secretariat. See Annex 1.A for details.

Source : OECD database on Labour Market Programmes.

spending allocated to active programmes rose in two-thirds of the OECD countries and the OECD average also rose very slightly, from 35.0% to 37.3%. There were falls in Finland, Japan, Luxembourg, New Zealand, Sweden and Switzerland. However, Finland, Japan, Sweden and Switzerland were among the few countries where unemployment in 1998 was considerably higher than in 1986, boosting the proportion of passive spending. In addition, it must be noted that, in Australia, Ireland, the United Kingdom and the United States, the proportion of active spending in total LMP spending rose because of a fall in passive spending as a proportion of GDP, rather than because of an increase in active spending.

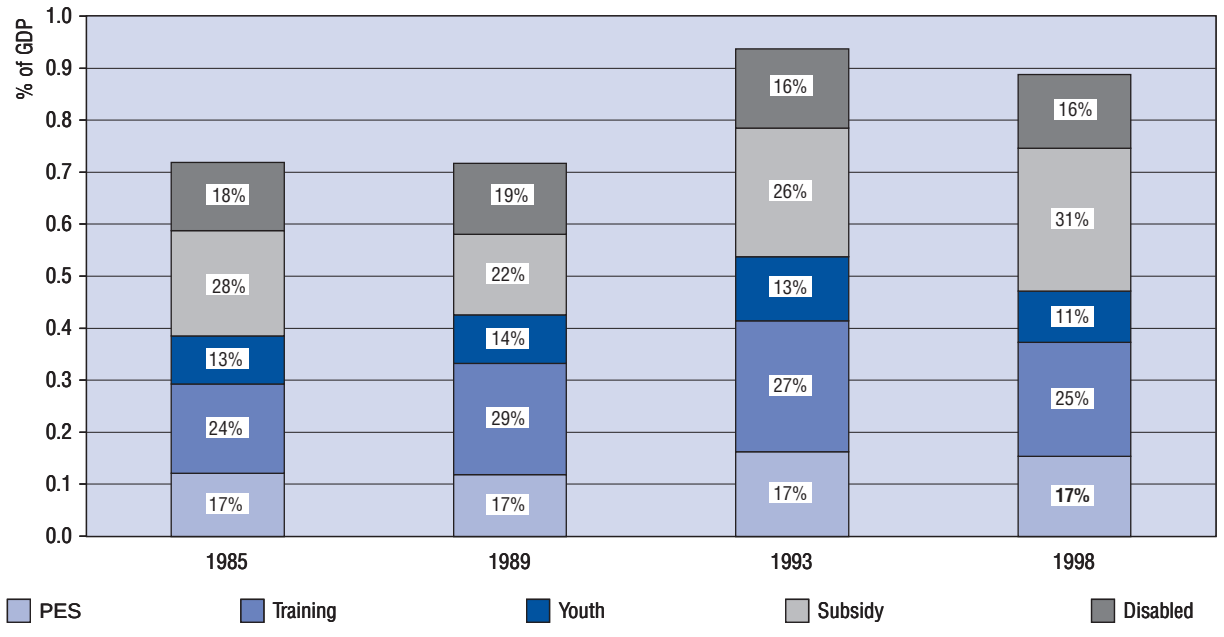
As noted above, one of the reasons for the decline in passive spending as a proportion of GDP is that the contribution of early retirement schemes to the total of passive expenditure has tended to decline since the mid-1980s. Data on spending on early retirement programmes are available for only 10 countries since 1985: Australia, Austria, Belgium, Denmark, Finland, France, Germany, Italy, Luxembourg, and Sweden. If the period is restricted to begin in 1992, data for Hungary, Ireland, Poland and Portugal also become available. As a proportion of GDP, spending has fallen rather consistently since 1985. The decline was from 0.5% in 1985 to 0.4% in 1992 (average figures for the 10 countries) and from 0.4% in 1992 to 0.3% in 1998 (average for the 14 countries). This is in line with concerns about the long-term costs of such policies, recent reforms in some countries (*e.g.* Denmark, Finland, Germany and the Netherlands) and the move to what has been called "active ageing" [OECD (1994, 1995, 2000*a*)].

C. How did the pattern of spending on active measures change?

Chart 1.4 shows remarkably little variation in patterns of expenditure on average for OECD countries between 1985 and 1998. The main changes are a slight fall in the proportion of active expenditure allocated to programmes for youth and the disabled (over a period when the numbers of young people were falling and conditions for receipt of disability benefits were being tightened), and a slight increase in the proportion of expenditure accounted for by employment subsidies.

Chart 1.5, however, brings out considerable differences across regional groupings in 1998. Relative to other regions, the Nordic countries devote a high percentage of its active spending to training. A detailed examination of the database shows that, as in other regions, the bulk of this is devoted to training for the unemployed and those at

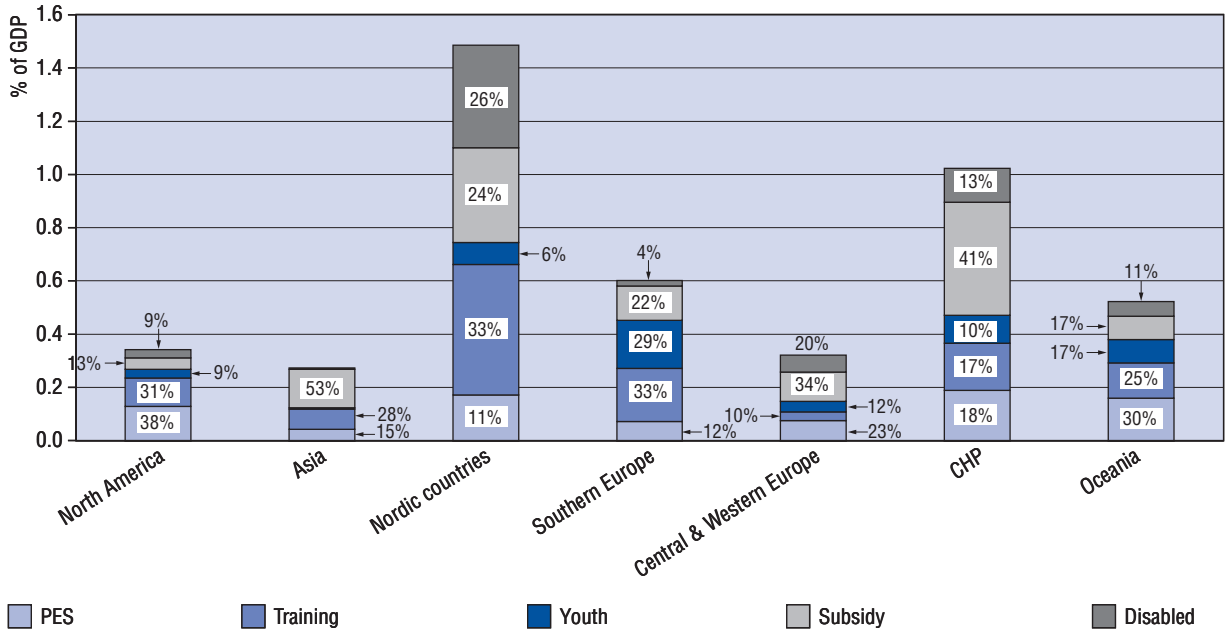
Chart 1.4. **Composition of active spending in the OECD area, 1985-1998**



Note : Unweighted averages.

Source : OECD database on Labour Market Programmes.

Chart 1.5. **Composition of active spending in OECD regions, 1998**



Note : Unweighted averages. CHP represents the Czech Republic, Hungary and Poland.

Source : OECD database on Labour Market Programmes.

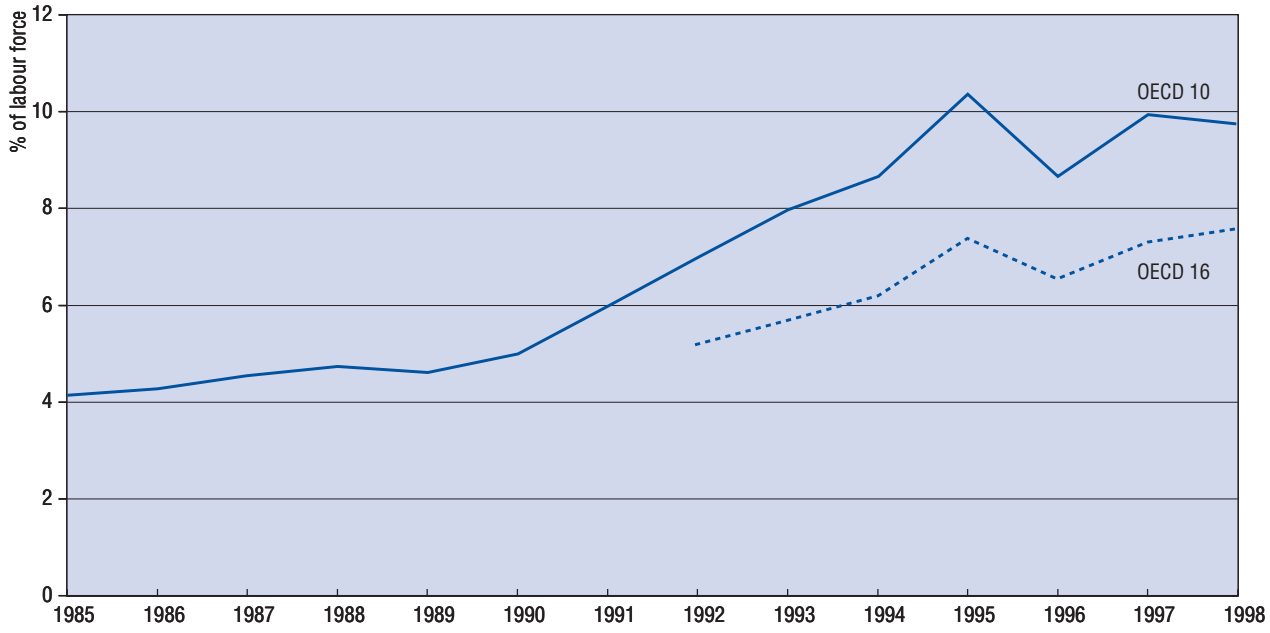
risk, rather than training for employed adults (though Denmark is an exception here). Spending on measures in the "youth" category has risen sharply to 39% of total active spending, on average for the Southern Europe countries (in 1998) compared to 6% in 1985. Expenditure on employment subsidies now represents a particularly large proportion of active expenditure in Japan and Korea, as well as in Central and Western Europe, after increases over recent years. On average, just over half of this type of expenditure is devoted to direct job creation, which remains an important component of labour market policy in many countries. Some countries have developed more individualised programmes, while others have incorporated skills-training [Brodsky (2000)]. For North America, spending on programmes for youth and the disabled, and on employment subsidies, all represent small proportions of an already relatively small percentage of GDP allocated to active programmes.

Chart 1.6 presents another viewpoint on the changing structure of expenditure, showing trends in the "participant inflow" – the annual inflow of participants into the various programmes. While active spending has risen only slightly as a proportion of GDP, the participant inflow has risen much faster: in 1998 over twice as many people entered ALMPS as did in 1985, and around 50% more than in 1992. This very likely reflects greater use of "lighter" active measures, and reduced emphasis on expensive programmes, such as long periods of training [see OECD (1996*b*)].

D. New developments in policies and measuring instruments

The large volume of expenditure on labour market programmes has given rise to a number of concerns. Part of the reason for the emphasis on active programmes has been the perception that excessive reliance on passive policies might lead to substantial numbers of the unemployed gradually becoming detached from the labour market. However, in addition, there has been growing concern over the effectiveness of ALMPs themselves. While the number of rigorous evaluations remains inadequate,[10] those that have been undertaken suggest that broadly-targeted programmes to tackle unemployment are rarely effective in achieving their stated objectives for programme participants. In addition, most measures designed to help disadvantaged youth, whether training or subsidies for job creation, appear to have had much less success than hoped for [OECD (1996*b*); OECD (1999*a*); Martin (2000)].

Chart 1.6. **OECD participant inflows into ALMPs, 1985-1998**



Note : Unweighted averages.

OECD 10 : Australia, Canada, Denmark, Finland, France, the Netherlands, Portugal, Spain, Sweden and Switzerland.
OECD 16 : Australia, Canada, the Czech Republic, Denmark, Finland, France, Greece, Hungary, Korea, Mexico, the Netherlands, Portugal, Spain, Sweden, Switzerland and the United Kingdom.

Source : OECD database on Labour Market Programmes.

In response, many new ALMPs incorporate much more careful targeting. For young people, there is renewed emphasis in many countries on achieving a smooth transition from school to work as opposed to broadly-based measures for school-leavers [OECD (1999*a*) and OECD (2000*b*)]. Another trend is towards greater co-ordination of labour market programmes with each other, as well as with other economic and social policies. For example, an emphasis on increased co-ordination between active and passive programmes is found in recent reforms in the Canadian Employment Insurance system, the United States Welfare system, the Korean welfare system (now called the "Productive Welfare" system), and the Danish and Irish Unemployment Benefit systems; in the Swiss procedures for "activation" of benefit recipients; in the United Kingdom New Deal and in the French *Plan d'aide au retour à l'emploi* (PARE). Finally, a number of countries have introduced innovative programmes, for example the "Making Work Pay" policies seen in Belgium, France, the United Kingdom and the United States. These have elements of both social and employment policy, and are designed to support low-income families while stimulating employment [OECD (1999*c*); OECD (2000*c*, editorial)].

Although, as shown above, expenditure on the Public Employment Service (PES) remains at a fairly low proportion of total active spending in most countries, it is increasingly seen as having a central role in the execution and monitoring of labour market programmes. More intensive assistance with job search has been found to be a particularly cost-effective form of active programme. It is inexpensive and evaluations from several countries demonstrate positive effects [Martin (2000)]. In addition, many countries are seeking ways of encouraging job search by placing more rigorous conditions on the receipt of benefits and monitoring more intensively the job-search behaviour of benefit recipients. The PES is thus seen as having an important role in the co-ordination of active and passive measures. A number of countries (*e.g.* France, Korea, the Netherlands, New Zealand, the United Kingdom and the United States) have adopted "one-stop shops" and similar initiatives to direct job-seekers more quickly to the most appropriate service [OECD (1999*b*); OECD (2001*b*)].[11]

Box 1.3. New measuring instruments for labour market programmes

The European Union Employment Strategy incorporates close monitoring of national labour market policy efforts. In response, EUROSTAT has begun the construction of a new database on Labour Market Policies. This builds on the LMP database of the OECD, adding more detailed information on the characteristics of labour market measures and on flows and stocks of participants. Thanks to its multidimensional structure, it allows an examination of expenditure data both by type of action and type of expenditure. It also provides data on participants both by type of policy action and by personal characteristics. The database also contains qualitative information on programmes to allow cross-classifications of measures according to a number of dimensions, such as the financing institution, the target group, the area of application, etc.

The methodology of the new EUROSTAT database has been developed in close co-operation with the OECD, which, in turn, is now adapting its data collection framework to mesh with that of EUROSTAT. This will avoid unnecessary duplication of data collection work within EU member states and will allow a more informative and coherent database to be established across all OECD countries. However, the OECD database will remain the only source of historical data on labour market programmes for OECD countries, and so particular care will be devoted to maintaining consistency with the existing series.

An important classification of the new database is by "type of action", which replaces the present categorisation of programmes. It comprises one base category: general Public Employment Services; and nine broad categories of labour market programmes: 1) intensive counselling and job-search assistance; 2) training; 3) job rotation and job sharing; 4) employment incentives; 5) integration of the disabled; 6) direct job creation; 7) start-up incentives; 8) out-of-work income maintenance and support; and 9) early retirement. Another important classification, by "type of expenditure", refers both to the ways in which public funds are provided to target groups (*e.g.* periodic cash payments, goods and services, reduced social contributions, etc.) as well as to their direct recipients (*i.e.* participants in programmes, employers and service providers).

The trend towards a more active role for "passive" policies is also tending to weaken the distinction between active and passive measures that was one of the foundations of the OECD database. The revised database, currently under development, is designed to accommodate this trend, as well as to provide a basis for monitoring expenditures on new types of policy (see Box 1.3).

Conclusions

In 1992, governments in OECD countries announced their intention to transfer expenditure away from "passive" programmes of unemployment benefit payment and early retirement schemes towards "active" programmes designed to help the unemployed back into work. This section has shown that this intention was fulfilled, but only to a small extent. Between 1986 and 1998, OECD unemployment rose first to record post-war heights, and then fell back to its 1985 level. Over the same period, the average proportion of GDP devoted to active policies in OECD countries increased a little while, for passive policies, it decreased. As a result, the average proportion of labour market expenditure on active programmes rose very slightly, from 35.0% in 1986 to 37.3% in 1998. However, this rise was not seen in every country.

At the same time, experience with active labour market programmes has shown the importance of more careful design and much greater emphasis on rigorous short- and long-term evaluation. Some relatively inexpensive policies (notably assistance with and active encouragement of job-search) have been found to be among the most cost-effective for substantial numbers of the unemployed. Another widely accepted priority is to continue to integrate active and passive labour market programmes and to improve the delivery of "passive" unemployment and welfare benefits, so as to encourage active participation in the labour market. As a consequence, the distinction between "active" and "passive" programmes should become less important in future.

NOTES

1. As elsewhere in this chapter, economic growth "in 2000" refers to estimates of the growth between mid-year 1999 and mid-year 2000.
2. See for example *The Economist* (2001); Cordon (2001); Dobbins (2000); Pisani-Ferry (2000); and Dunne (2000).
3. The periods of growth are determined by the business cycle peaks and troughs estimated by the OECD and the Economic Cycle Research Institute, where possible. Unemployment peaks and troughs were used in the absence of such data for Finland, Luxembourg, the Netherlands and New Zealand (where an intermediary peak and trough in the 1980s has been ignored to create a longer series).
4. Although the unemployment rates in France and Spain are high relative to other OECD countries, their levels are comparable to those seen in the expansion periods of the 1980s. For Spain, data between 1998Q2 and 1999Q4 have been omitted due to a break in the vacancy data series. With respect to Ireland, although the current level of vacancies and unemployment cannot be compared to the previous expansionary period, the increasing levels of vacancies coupled with signs of increasing wage pressure may indicate the presence of labour market tightening and skilled-labour shortages. For Germany, the curve between 1982 and 1991 refers to western Germany, and so cannot be directly compared to the most recent expansionary period.
5. There is also a shift in the curves for Belgium and Luxembourg. For Belgium, a major reason is likely to be the success of the PES in increasing the proportion of job vacancies notified to it, through the technological changes mentioned in Box 1.1.
6. Communication from the French ministère de l'Emploi et de la Solidarité.
7. Communication from the Norwegian Ministry of Labour and Government Administration.
8. The emphasis in this section is on average expenditures among OECD countries, rather than the average expenditure for the OECD economy taken as a single unit. Thus all averages quoted, both for expenditures and unemployment rates, are unweighted, and differ from the weighted averages which may be found elsewhere. The unemployment figures are taken, where possible, from the OECD Standardised Unemployment Rates database, as these are more suitable for comparisons, both over time and between countries, than national rates. See OECD *Quarterly Labour Force Statistics* for an explanation of their construction.
9. The chart excludes Italy, for which data are available only from 1992. However, for 1992 onwards, the inclusion of Italy makes very little difference to the overall pattern.
10. However, there are also signs, in several countries, of increased efforts to monitor programmes and evaluate their results [see, for example, WZB (1997); OECD (1999*c*, 2000*d*)].
11. In Australia, a large proportion of the placement function of the PES has been contracted out to a variety of private and community organisations [OECD (2001*a*)].

Annex 1.A

Country groupings and estimations

Tables 1.A.1 and 1.A.2 show the country groupings employed for the expenditure and participation data and indicate where estimations were made.

Table 1.A.1. Regional groupings: expenditure data

Grouping	Countries	Period covered	ALMP forecasted/estimated values
OECD	Australia, Austria, Belgium, Canada, Denmark, Finland, France, Greece, Ireland, Japan, Luxembourg, Netherlands, New Zealand, Norway, Portugal, Spain, Sweden, Switzerland, United Kingdom and United States	1985-1998	Denmark 1985; Ireland 1992-93,1997-98; Japan 1985-86; Luxembourg 1998; Portugal 1985, 1997-1998; United States 1985
EU	Austria, Belgium, Denmark, Finland, France, Greece, Ireland, Luxembourg, Netherlands, Portugal, Spain, Sweden and United Kingdom	1985-1998	Denmark 1985; Ireland 1992-93,1997-98; Greece 1998; Luxembourg 1998; Portugal 1985, 1997-1998
North America	Canada and United States	1985-1998	United States 1985
Asia	Japan and Korea	1990-1998	Japan 1985-86
Nordic countries	Denmark, Finland, Sweden and Norway	1985-1998	Denmark 1985
Southern Europe	Greece, Spain and Portugal	1985-1998	Portugal 1985, 1997-1998
Eastern Europe	Czech Republic, Hungary and Poland	1993-1998	Poland 1997-1998
Central and Western Europe	Austria, Belgium, France, Ireland, Luxembourg, Netherlands, Switzerland and United Kingdom	1985-1998	Ireland 1992-93,1997-98; Luxembourg 1998
Oceania	Australia and New Zealand	1985-1998	–

– Not applicable.
Note: The unweighted averages shown in the tables and graphs cover only those countries for which data are available for all of the years shown.
Missing countries from OECD totals and other groupings: Czech Republic, Hungary, Italy, Korea, Mexico, and Poland (data start later); Germany (break in the series); Slovak Republic (member since 2000); Iceland and Turkey (no data).

Table 1.A.2. Country groupings: participant inflows

Grouping	Countries	Period covered	ALMP forecasted/estimated values
OECD 10	Australia, Canada, Denmark, Finland, France, Netherlands, Portugal, Spain, Sweden and Switzerland	1985-1998	Australia 1998; Canada 1985, 1997-1998; Denmark 1985, 1988; Finland 1985; Portugal 1997-1998; Sweden 1985-1986; Switzerland 1996-1997
OECD 16	Australia, Canada, Czech Republic, Denmark, Finland, France, Greece, Hungary, Korea, Mexico, Netherlands, Portugal, Spain, Sweden, Switzerland and United Kingdom	1992-98	Australia 1998; Canada 1985, 1997-1998; Denmark 1985, 1988; Finland 1985; Greece 1997-1998; Portugal 1997-1998; Sweden 1985-1986; Switzerland 1996-1997

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Chapter 2

WHEN MONEY IS TIGHT: POVERTY DYNAMICS IN OECD COUNTRIES

Summary

Despite substantial economic growth in the OECD area during recent decades, a significant portion of the population consists of individuals whose household income does not support living conditions considered adequate in their country of residence. Individuals living under such conditions are typically labelled as being in poverty, even if their physical subsistence needs can be met. Although the exact standards for assessing poverty vary from country to country, reducing the incidence and persistence of poverty is a goal shared by all. Attainment of this goal is complicated by the diversity of poverty experiences across individuals and countries. Many analyses of poverty focus on its level at one or a few points in time. This approach provides useful information about the extent of poverty and how it differs over time and across countries, but it typically says little about individual poverty experiences and therefore the best approach to poverty reduction. Some individuals experience only a single, short spell of poverty, while others are caught in a poverty trap. The shares of transitory versus persistent poverty may vary substantially across countries, as may the relationship of poverty persistence to personal, family, and social characteristics. The design of effective policies for ameliorating poverty depends on a detailed understanding of these patterns and relationships.

This chapter is intended to aid in the development of national policies to reduce poverty by examining the patterns and determinants of poverty incidence, transitions, and persistence – collectively referred to as "poverty dynamics." Although past work has investigated poverty dynamics across a number of OECD countries, the present work is distinguished by its inclusion of data for the larger number of European Union countries surveyed in the European Community Household Panel. The empirical analysis is organised according to the length of the period for which poverty persistence and transitions into and out of poverty can be followed, based on several available data sources. Short-run poverty dynamics are investigated for twelve EU member states, Canada, and the United States, using three-year panels. Longer-run poverty dynamics over a 6- to 8-year period also are analysed, albeit for a smaller number of countries (four) for which the requisite longitudinal data could be accessed. The short and long-panel data are used for tabulations and econometric analyses that describe the patterns of poverty dynamics and their relationships to key family and individual characteristics. These characteristics include features of the economic and social environment such as work attachment, availability of earnings and other income sources, family structure, education, age, and the structure of government taxes and transfers.

Among key findings, the analyses reveal the seeming paradox that poverty is simultaneously fluid and characterised by long-term traps. The typical poverty spell is short and many short spells appear to represent transitory setbacks for persons with adequate income over the longer term. However, the typical year spent in poverty is lived by persons who experience multiple years of poverty and whose long-term incomes are below the poverty threshold on average, even though their yearly income may periodically exceed the poverty threshold. In all countries, persistent poverty is closely associated with the lack of workers in households and households with a single adult and children. However, given the relatively small shares of such households in the population, much time spent in poverty is nonetheless associated with working households or households characterised by more traditional forms of family structure. Movements in and out of poverty are more frequently associated with changes in employment status rather than changes in family structures, although the two are closely related. In EU member countries, but less so in the United States, public taxes and transfers are closely related to poverty transitions and persistence. Compared to the EU member states, poverty transitions in the United States and Canada appear more closely related to changes in family

structure, and a greater share of total time spent in poverty in the United States is experienced by households with substantial work attachment.

The strong relationship between employment status and poverty transitions and persistence is in line with the general thrust of employment-oriented social policy. However, the high incidence of poverty among working households indicates the need for policies that improve employment retention and enhance movement up job ladders for individuals in households that exit poverty, in addition to policies emphasising job placement. The empirical analyses also confirm the finding of earlier studies that a more extensive welfare state reduces poverty in a single year, but extend that finding with evidence that these types of public transfers also tend to reduce poverty persistence. When these transfer payments take the form of in-work benefits, they can also reinforce incentives for increased employment.

Introduction

Tackling the problems of poverty and social exclusion is a high priority for OECD countries. Among the complexities that policy makers must confront are the widely varying experiences of individuals and the families to which they belong. Analysis of poverty typically focuses on the poverty population at one or a few points in time. Although useful for tracking the broad evolution of poverty over time, such figures obscure large differences across individuals in their economic histories and prospects, the diversity of paths into and out of poverty that they might face, and the resulting differences across individuals in the length of time spent in poverty. For some, poverty is transitory. Other individuals, however, are in a poverty trap, implying a low standard of living and an elevated risk of social exclusion over a prolonged period.

Public policies assuring minimum consumption levels and reintegration into the economic mainstream may be desirable for all those in poverty, whether their expected stay is short or long. However, to be effective, policies aimed at combating poverty must be based on a clear understanding of individual poverty experiences. This includes accurately characterising spells of poverty in terms of their typical duration, understanding the economic needs and prospects of individuals at risk of poverty and also understanding their likely response to assistance. To that end, this chapter analyses the "dynamics" of poverty, including the duration of poverty spells and the frequency and types of movements into and out of poverty. This analysis is intended to provide more comprehensive comparisons of the incidence, intensity and persistence of income poverty across different OECD countries. Differences in poverty experiences across population groups within individual countries are also analysed. Finally, the determinants of these patterns are explored, especially in so far as they can inform the assessment of alternate policy strategies for combating poverty.

The empirical analysis is organised according to the length of the period for which poverty persistence and transitions into and out of poverty can be followed. Section I sets the stage for the empirical analysis that follows, defining the key issues to be addressed and describing the definitions and data sources used to measure income poverty and its dynamics. Section II analyses poverty dynamics over a three-year period, the longest time period for which longitudinal data are available for a sizeable number of OECD countries. Even over this short period, a dynamic view of poverty offers important new insights. Longer-run poverty dynamics are analysed in Section III, albeit for a smaller number of countries for which the requisite longitudinal data could be accessed. This analysis sheds further light on the extent and causes of long-lasting poverty, as well as the factors facilitating – or impeding – durable escapes from poverty.

Main findings

The chapter's main findings are:

- The analysis of poverty dynamics suggests an overall paradox: poverty is simultaneously fluid and characterised by long-term traps. Most poverty spells are short and many short spells appear to represent transitory set-backs for persons with adequate income over the longer-term. However, the typical year spent in poverty is lived by persons who experience multiple years of poverty and whose long-term incomes are less than one-half the national median value. Repeat spells help to explain this apparent paradox, since most individuals who exit poverty in a given year will re-enter it within a short time frame. While relatively few persons are continuously poor for an extended period of time, most individuals with poverty experience in a given year receive a multi-year income stream that does not lift them above poverty-level income standards on

average. Accounting for these patterns noticeably increases the measured persistence of poverty.

- The two faces of poverty are evident in all of the countries analysed, but their relative importance varies. In general, countries with higher poverty rates, as conventionally measured (*i.e.* with respect to annual incomes), are also characterised by greater poverty persistence. This means that a longer-run view of poverty tends to accentuate, rather than mute, international differences in poverty. In the three-year panels, 44% of the annual-income poor in Denmark (the lowest poverty rate country) also had three-year average income below the poverty line as compared with 89% in the United States (the highest poverty rate country). In the longer panels, the persistence of poverty and its concentration within the population is greatest for the United States. Canada, the United Kingdom and Germany exhibit lower persistence and concentration than the United States, although persistence and concentration are quite high in Germany when poverty measurement is based on income received prior to government taxes and transfers.

- The main patterns of poverty incidence and persistence are robust to the use of alternative poverty scales based on different adjustments for family size and poverty thresholds. Adopting a higher poverty threshold increases poverty incidence and persistence, but cross-country comparisons are little affected by the use of alternative *relative* poverty scales. Adoption of an *absolute* poverty standard would substantially alter cross-country comparisons, to the advantage of countries with high average incomes, but it is questionable whether such an approach can be meaningfully implemented using the datasets analysed in this chapter.

- The profile of households at above-average risk of experiencing poverty is qualitatively similar in all countries, with the risk being elevated for households in which the head is female, young, a single parent or has not finished upper secondary schooling, as well as for households in which no adult is employed. Moreover, in most of the countries analysed, children face higher risks of poverty than adults. The concentration of poverty on the most vulnerable groups tends to rise with the persistence of poverty. Since the high-risk groups often represent only a small share of the total population, lower-risk household types (*e.g.* those with a male head or one or more workers) can nonetheless account for a majority of all persons in poverty.

- Many of the working-age households poor in a given year contain no employed adults, but the overlap between employment and poverty is considerably increased when intermittent work over a multi-year period is considered. This suggests that low-paying and precarious jobs better characterise the experience of many poor households than persistent exclusion from the labour market.

- Transitions in and out of poverty are often coincident with job-related changes, such as changes in the number of workers in a household or the number of months worked during the year. Changes in family structure are less frequently coincident with these transitions. However, poverty entries associated with a decrease in the number of workers frequently are due to a worker leaving the household, rather than a continuing household member losing a job (loss of a worker happens approximately one-third of the time in EU member countries and nearly two-thirds of the time in the United States). In EU member countries, but not the United States, changes in public transfer income play an important role in causing poverty transitions.

- Regression analyses that control for household and individual characteristics confirm the importance of employment-related and demographic characteristics for poverty transitions and persistence. Regressions using the long-run panels reveal that individuals most prone to poverty based on measurable characteristics will spend more than half of a given 6-8 year period in poverty. Despite the importance of household and individual characteristics for determining relative poverty risks within a country, the regression analyses for the short-run panels reveal substantial variation in poverty dynamics across countries, which are little affected by controlling for international variation in the distribution of these poverty-related characteristics.

- Simple cross-country correlation analysis suggests that a more extensive welfare state, as well as directing a higher share of social spending to low-income households, contributes to decreased poverty persistence, in addition to the well-established effectiveness of these programmes at lowering cross-sectional poverty. There is also some evidence that a higher share of low-paid employment in total employment may increase poverty persistence, while higher union density may decrease it. International differences in employment and unemployment rates do not appear to play much of a role in explaining differences in poverty persistence.

- Among the four countries for which requisite data are available, the tax and transfer system reduces poverty the most in Germany, followed by Canada, the United Kingdom and the United States. This reduction is most pronounced among the retirement-age population in each country. In the United States, government taxes and transfers have virtually no effect on poverty rates among individuals in working-age households, when evaluated using the chapter's base-case definition of poverty as income less than half the national median value. However, the anti-poverty effectiveness of these fiscal policies would be greater if it were evaluated using a lower poverty standard, such as the official US poverty line.

I. Overview of the issues and empirical approach

A. Issues to be addressed

This chapter builds upon several recent OECD studies of income inequality and poverty, which are part of the broad upsurge of research on these topics motivated by concerns that economic inequality is rising. The available evidence shows that income inequality has increased recently in many OECD countries, with rising employment polarisation and increased earnings dispersion accounting for an important part of this trend [Förster (2000); Gregg and Wadsworth (1996); Nolan and Hughes (1997)]. But national experiences are by no means uniform, and differences in the distribution of employment and earnings also play an important role in explaining international differences in overall income inequality and the incidence of poverty in cross-sectional data [Oxley *et al.* (1999); Smeeding, Rainwater and Burtless (2000)].

While most studies continue to rely on cross-sectional data or longitudinal data for a single country, Duncan *et al.* (1993, 1995) and Oxley *et al.* (2000) undertook internationally comparative analysis of poverty *dynamics* using longitudinal micro data. These authors identify large, year-to-year movements into and out of poverty for the six to eight relatively wealthy countries in their samples. This turnover implies that cross-sectional poverty rates can be misleading, understating the share of the population experiencing poverty at least once over a multi-year period and overstating the share of the population that is persistently poor.

The empirical analysis in Sections II and III below examines poverty dynamics for a larger number of countries than is analysed by Duncan *et al.* (1993, 1995) and Oxley *et al.* (2000) and looks at several issues in greater depth. Particular attention is devoted to analysing the links between labour markets and poverty dynamics, because the deterioration in earnings and job security for certain groups of workers (*e.g.* those with low educational attainment) appears to have contributed to a rise in the number of the "working poor" in some OECD countries [Keese *et al.* (1998); Nolan and Marx (1999); Mishel, Bernstein and Schmitt (2001)]. A second motivation for analysing these links is the increased emphasis that OECD governments are placing on "employment-oriented social policy", that is, programmes supporting increased employment as a core strategy for reducing poverty and social exclusion [OECD (2000)].

Focusing too exclusively on employment-related events and short-run poverty dynamics, however, could obscure the persistent nature of poverty for key population groups. In their seminal work on this topic using American data, Bane and Ellwood (1986) found that most poor individuals at a point in time are in the midst of a long spell of poverty, and that certain family structures (such as single motherhood) greatly increase the risk of persistent poverty. Moreover, upon exiting poverty, an individual's income may exceed the poverty threshold by only a small amount, and for only a short period of time. Accordingly, the analyses in this chapter emphasise the *persistence* and *cumulative impact* of poverty, in addition to its *dynamics*.

The ultimate purpose of the chapter is to inform debate concerning the nature, causes and remedies for income poverty in OECD countries. Key questions include whether the burden of poverty is borne relatively equally across the population or concentrated among small subgroups. If individual poverty experiences largely reflect transitory income variation associated with employment instability, then policies such as unemployment benefits, job placement services and macroeconomic policy may be the best remedy. On the other hand, to the extent that poverty is concentrated among groups that face enduring obstacles to employment – such as workers lacking basic skills or single mothers with children – policies such as "second-chance" adult education and subsidised child-care may be more effective. Accordingly, the impacts of employment experience and family structure on poverty dynamics are analysed in detail. Finally, the persistence of poverty may depend in part on the structure of tax and transfer policies, with the possibility of dependence on transfers being a key concern [Gallie and Paugam (2000); Lindbeck (1995*a*, *b*)]. Thus, a final set of questions centres on how tax and transfer policies affect the incidence and dynamics of poverty. In order to address these issues, three-year panel data have been assembled for fourteen countries, along with longer panels for a smaller number of countries.

B. Measuring poverty and its dynamics

The unit of analysis adopted is the individual, but each individual's poverty status is assessed in terms of the adequacy of the total income available to the household of which he or she is a member.[1] The primary income variable used in the analysis is annual, disposable (*i.e.* after direct taxes and public transfers) money income. In order to adjust for family size, annual disposable income is divided by the modified OECD equivalence scale.[2] The resulting "equivalent" income measure is an estimate of potential consumption for each individual in a household[3] and individuals are defined as being in poverty if their equivalent disposable income falls below 50% of the median of the distribution of equivalent disposable income in a country. (See Box 2.1 for a discussion of the interpretation of *relative* poverty measures, such as that adopted here, and how they differ from *absolute* poverty measures.)

The equivalence scale and poverty threshold adopted here are to some extent arbitrary. However, these choices – or minor variations of them – are common in the research literature [*e.g.* CBS (2000); Layte *et al.* (2000*a*); Oxley *et al.* (2000)] and they facilitate comparison of the results in Sections II and III with those reported in previous studies. Given variation across countries in family sizes and the density of the income distribution around the poverty threshold of 50% of median income,

Box 2.1. Relative *versus* absolute poverty measures

A key choice in defining poverty is specifying the income threshold below which persons are classified as being poor. This chapter uses a *relative* poverty threshold, which is set at an income value equal to half the national median value. In other words, individuals are included in the poverty population if their available income is substantially lower than that of a typical person in their country of residence. The main alternative is to set the poverty threshold at the minimum income required to afford an adequate *absolute* standard of living. Absolute poverty standards are commonly used in the context of developing countries. For example, the World Bank uses the concept "extreme poverty", which is defined as having an income below 1 USD per day, a threshold thought to approximate the minimum resources required for physical survival.* Some OECD countries also use absolute poverty measures (*e.g.* the official US poverty line). Others have adopted a relative definition, such as 60% of average income, the standard used by Eurostat and some EU member states.

The chapter's analysis of poverty dynamics is affected by the choice to use a relative, rather than absolute, poverty measure. International comparisons of poverty are very sensitive to this choice when national average income values differ. Moving to an absolute poverty measure would reduce poverty in higher income countries relative to that in lower income countries. Since poverty persistence is positively correlated with the level of annual poverty, an absolute measure would also reduce poverty persistence in higher income countries relative to that in lower income countries.

At a practical level, it does not appear that an absolute poverty measure can be implemented reliably with the datasets used in this chapter. The major difficulty is that income levels are much less comparable across countries than are relative incomes within a single country [Eurostat (2000*b*)]. For example, income underreporting in the European Community Household Panel (ECHP) appears to differ between countries. If PPP prices are used to convert an absolute poverty threshold into different national currencies, poverty estimates are inflated in countries with greater underreporting. (Tabulations not reported suggest that this is a severe problem for several ECHP countries.) A second difficulty is that the cash income concept available in these datasets is not well suited for comparison of absolute living standards, because it does not account for international differences in the provision of non-market benefits, such as public health care, housing or education. For these and related reasons (*e.g.* limitations to using PPP prices to compare living standards), internationally comparative research on poverty in developed countries almost always adopts a relative measure of poverty.

There are also theoretical justifications for using a relative measure of poverty when analysing the dynamics of low income and social exclusion in developed countries. In order to participate fully in the social life of a community, individuals may need a level of resources that is not too inferior to the norm in that community. For example, the clothing budget that allows a child not to feel ashamed of his school attire is much more closely related to national living standards than to the strict requirements for physical survival. Also, relative income poverty – particularly if persistent – is associated with elevated risks of deprivation (*e.g.* inadequate diet and housing) and self-assessed economic stress (*e.g.* having troubles making ends meet or being behind on making payments) [Layte *et al.* (2000*b*); Whelan *et al.* (1999)]. Finally, from a normative perspective, it may be considered unfair for members of a community to benefit unequally from a general increase in prosperity. Such relative comparisons raise complex social and normative issues, but the associated relative poverty measures provide a useful construct for assessing economic performance. However, when making international comparisons of poverty and its dynamics, it must be borne in mind that the same relative poverty threshold (*e.g.* half median income) may correspond to different absolute standards of living.

* The first of seven international development goals adopted by the United Nations was to halve the share of people living in extreme poverty between 1990 and 2015 [World Bank (2001)].

the cross-country comparisons and poverty dynamics may be sensitive to the measures used. However, past research suggests that most qualitative comparisons will not be greatly affected [Förster (2000); Oxley *et al.* (1999)]. This issue is investigated in Annex 2.B by applying alternative equivalence scales and poverty thresholds to assess the robustness of the main analysis results. Most of the qualitative results discussed in the text are quite robust across these variations.

Because this chapter focuses on poverty dynamics, it is especially important to define measures of poverty that account for poverty transitions and persistence. Two basic types of measures are used in the empirical analyses in Sections II and III. Consistent with past work, various measures of the number of years individuals remain poor, as well as the rates at which they enter and exit poverty, are examined. These standard measures are supplemented by a different, relatively new concept that accounts for income streams over longer periods than a single year. This measure, referred to below as "permanent-income poverty", is defined by averaging income levels over multiple years and comparing average income with the average poverty threshold over the same period. Individuals whose average income falls below the average poverty threshold are identified as "permanent-income poor", implying that their income stream over periods longer than a year (up to 8 years in Section III) is insufficient to maintain an adequate living standard. This measure is motivated by the permanent-income hypothesis, according to which living standards are more closely related to "permanent-income" (*i.e.* income "smoothed" over a relatively long period) than to income in a single year.[4] For example, the income of some individuals exiting poverty in any given year may exceed the poverty threshold by only a small amount and for only a short period of time.[5] For such an individual, if the time spent in poverty is at an income level substantially below the poverty threshold, the short period spent above the poverty threshold may not indicate the attainment of a level of purchasing power that enables a sustained escape from poverty. In Sections II and III, this measure of long-term poverty is combined with standard measures of poverty transitions and persistence to provide a fuller analysis of the burden of income poverty than can be achieved through use of the annual poverty rate alone.

C. Data sources

In order to analyse these issues, longitudinal ("panel") data are required that allow the equivalent household incomes of a representative sample of persons to be followed over a multi-year period. Information about the labour market status of all household members is also required, if the link between poverty dynamics and employment and earnings is to be studied. Until recently, longitudinal data sufficient for studying these issues have been available for only a few OECD countries.[6]

Longitudinal data suitable for the analysis of poverty dynamics have recently become available for a larger and more diverse group of OECD countries. The analysis in Sections II and III is based on data from two major sources:

- *The European Community Household Panel (ECHP)* provides three waves of data (reporting incomes for the years 1993-1995) for twelve of the fifteen EU member countries [Eurostat (1997, 2000*a*)].[7] The ECHP represents an advance in the harmonisation and comparability of panel data from different countries, because the participating country surveys were developed with reference to a common set of technical specifications.
- A research group at Cornell University has assembled panel data for four countries, harmonised them and made them available to researchers. Their *Cross-National Equivalent Files (CNEF)* provide panel data for Canada, Germany, the United Kingdom and the United States [Burkhauser *et al.* (2000)].[8] Two noteworthy features of the CNEF data are *i)* they contain more waves of data (6-19 years) than the panel available from the ECHP and *ii*) they provide reliable estimates of household income prior to direct taxes and public transfers (*i.e.* "market income"), as well as of disposable income after accounting for taxes and transfers.

A key advantage of the ECHP data is its broad country coverage which – in conjunction with other data sources – enables comparative analyses of short-run poverty dynamics across a broader and more diverse group of OECD countries. In addition to the ECHP data, three-year extracts from the longer CNEF panels for Canada and the United States are used in the analysis of shorter-run poverty dynamics, further increasing the diversity of the country sample.

A key shortcoming of the national panels from the ECHP is the limited number of waves. A second shortcoming is that they do not provide a reliable pre-fiscal income measure. The CNEF data are, thus, extremely valuable for providing long panels that enable more comprehensive and detailed analyses of poverty dynamics, both for pre- and post-fiscal income. In addition to enabling poverty dynamics to be analysed over longer periods, these data enable comparisons of the effects of national tax and transfer systems by providing the appropriate income variables defined identically. The analysis of longer-run poverty dynamics in Section III accordingly

compares results using two income variables for each country: equivalent *disposable* income ("post-fisc"), defined as income after accounting for household size, direct taxes paid and public transfers received (*i.e.* the income variable used to study short-run dynamics in Section II); and equivalent *market* income ("pre-fisc"), which is income after accounting for household size, but prior to taxes and transfers. The poverty threshold for *both* income variables is set at 50% of the median of the distribution of equivalent disposable (post-fisc) income, since the distribution of post-fisc income better reflects prevailing consumption patterns.

International comparisons of income distribution using cross-sectional data raise many difficulties of comparability that have been analysed in detail [Atkinson *et al.* (1995); The Canberra Group (2001)]. Making such comparisons using data from different longitudinal surveys raises addition difficulties that have yet to be studied nearly as extensively. Five potentially important difficulties, which need to be borne in mind when interpreting the empirical results in Sections II and III, are:

- Panel data are subject to attrition which may result in nonrepresentative samples and, hence, biased estimates. *Attrition bias* may be particularly acute for the ECHP, since attrition rates are quite high for some of the participating countries (the largest example being 25% attrition between waves 1 and 2 for the United Kingdom) and the poverty population appears to drop out of the sample at a disproportionate rate in most of these countries. External validation checks are somewhat reassuring concerning the size of resulting biases in cross-sectional estimates of poverty incidence in waves 2 and 3 [CBS (2000); Eurostat (2000*b*)], but attrition bias appears more severe for estimates based on samples of individuals present in *all* three waves of ECHP (see Annex 2.A.). Accordingly, single-year poverty measures in this chapter generally are estimated using independent, cross-sectional samples, while the multi-year measures of poverty dynamics are necessarily estimated using multi-wave samples. Estimates based on the *conditional* distributions of spell lengths and rates of poverty entry and exit may not be as strongly affected by attrition bias as are *unconditional* "headcounts" of the number of persons who are poor.[9] Unfortunately, it is not possible to verify that this is indeed the case.
- Although extensive efforts have been made to harmonise the data across countries, differences remain since the underlying survey instruments and data collection protocols differ. The problem of *incomplete harmonisation* is probably worse for comparisons between countries across different data sources (*e.g.* between CNEF-based estimates for Canada and ECHP-based estimates for Italy) than for comparisons between countries from any single data source (*e.g.* comparisons between ECHP-based estimates for Germany and Portugal). However, there appears to be significant international differences in the extent to which household incomes are underreported in the ECHP.[10]
- Reporting errors in the income variables may create spurious transitions into and out of poverty. It is difficult to assess the extent to which *measurement error* causes poverty persistence to be misestimated. However, the effect is likely to be smaller for measures based on estimates of permanent-income than for those based on year-to-year changes in poverty status.
- The time periods used to study poverty dynamics in the different countries are not fully comparable. The most important instance of *non comparable time periods* is that poverty dynamics for the United States are studied for an earlier period (*i.e.* the mid-1980s-1992) than that studied for the other countries, due to data consistency problems in the American data for more recent years.[11] Although the periods chosen are those for which business cycle conditions in the United States approximated those in the other countries studied, this difference means that the results do not reflect the impact on American poverty dynamics of recent reforms in welfare programmes and more generous in-work benefits (*i.e.* expansion of the Earned Income Tax Credit). On the other hand, the PSID data for income years after 1992 show greater poverty incidence and persistence in the United States, so that the use of these data would reinforce the comparative results for the United States. Exclusion of these data can be regarded as representing a somewhat conservative approach to the assessment of American poverty.
- The data sources and methods used here mean that certain facets of poverty dynamics are not examined. Very short poverty spells are missed, since poverty is analysed at annual frequencies, and poverty among the homeless and institutionalised populations is not considered.

II. Poverty dynamics over three years

This section focuses on short-run poverty dynamics in twelve EU member states, Canada and the United States. The estimates of poverty dynamics reported

here are based on a three-year observation window (1993-1995 for most of the countries). Use of such a short period implies several important caveats for the analysis results. First, the multi-year statistics reported may be subject to attrition bias since they are calculated from samples consisting of persons interviewed in three consecutive waves of the corresponding panel dataset. Second, the poverty dynamics observed over the three-year periods analysed here may not generalise to other three-year periods, when business-cycle conditions differ.[12] A final caveat concerns the truncation of poverty spells. Total *completed* spell lengths cannot be observed for persons poor in either the first or third years of the panel, since these spells may extend beyond the frames of the observation window. As a result, the analysis here is better understood as pertaining to the experience of poverty over a fixed, three-year period, rather than as a full analysis of poverty spell dynamics. The analysis of longer panels in Section III provides a richer picture of poverty dynamics over a longer period, including the prevalence of repeat spells.

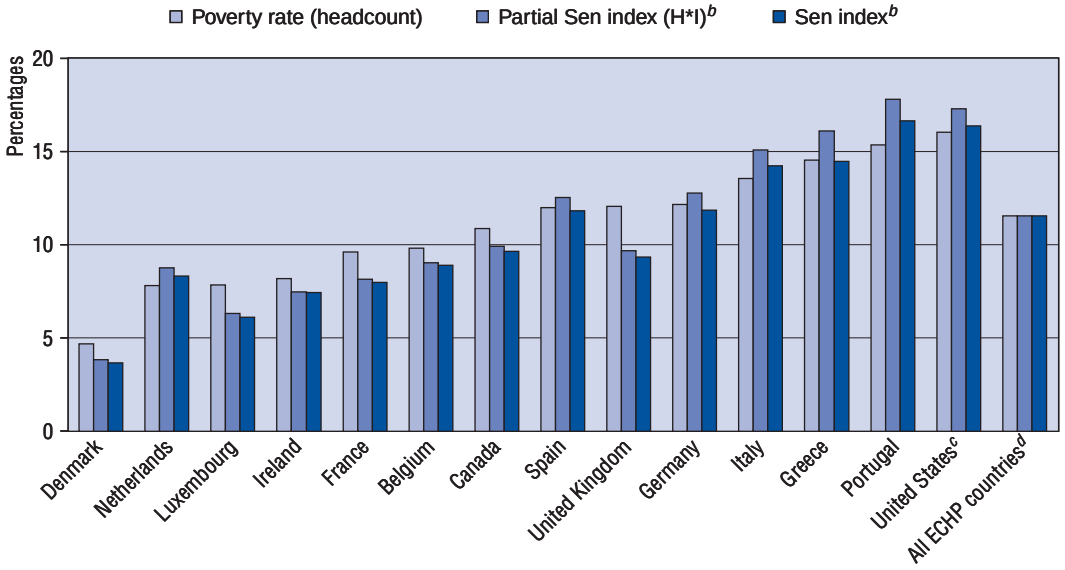
A. Poverty incidence over three years

Cross-sectional poverty rates: the baseline

Chart 2.1 displays poverty rates based on annual income data. For the EU member states, these "headcount" rates range from a low of 4.7% of the population in Denmark to a high of 15.3% in Portugal (values reported in Table 2.1). The United States is just above the higher end of the range, at 16%, while Canada and the larger EU member states (France, Germany, Italy and the United Kingdom) are in between the extremes.

The standard "headcount" measure of poverty can be supplemented by modified poverty measures, based on the work of Sen (1976), which incorporate information on the intensity of poverty at a point in time. Accordingly, two additional poverty measures are reported in Chart 2.1, namely a "partial Sen index" that multiplies the headcount by the average percentage gap between the incomes of individuals in poverty and the poverty threshold, and the full Sen index, which also incorporates the Gini coefficient for the incomes of the poor.[13] The latter two indices are

Chart 2.1. **Alternative single-year poverty measures,[a] average values for 1993-1995**



ECHP: European Community Household Panel.
Note: Countries are ranked from left to right by increasing poverty rates.
a) See text for the definition of the three poverty measures.
b) Normalized so that the value for all countries is equal to the headcount for all countries.
c) Data refer to 1987-1989.
d) Calculated as population-weighted averages of the national figures for all ECHP countries.
Sources: ECHP, waves 1994, 1995 and 1996 for EU countries; SLID for Canada; PSID for the United States.

Table 2.1. **Alternative poverty rates, 1993-1995**

	Number of observations[a]	Annual poverty rate[b]	Poor at least once	Always poor[c]	Permanent-income poverty[c, d]
		Percentages			
Belgium	7 515	9.8	16.0	2.8 (0.17)	5.2 (0.32)
Denmark	5 710	4.7	9.1	0.8 (0.08)	1.8 (0.20)
France	15 470	9.6	16.6	3.0 (0.18)	6.6 (0.40)
Germany	10 748	12.1	19.2	4.3 (0.22)	8.1 (0.42)
Greece	13 114	14.5	25.1	6.5 (0.26)	12.2 (0.49)
Ireland	10 187	8.2	15.3	1.3 (0.08)	5.3 (0.35)
Italy	18 372	13.5	21.5	5.6 (0.26)	10.4 (0.48)
Luxembourg	2 467	7.8	12.7	2.2 (0.17)	5.1 (0.40)
Netherlands	10 942	7.8	12.9	1.6 (0.12)	4.5 (0.35)
Portugal	12 832	15.3	24.2	7.8 (0.32)	13.4 (0.56)
Spain	17 538	12.0	21.3	3.7 (0.17)	8.7 (0.41)
United Kingdom	8 713	12.1	19.5	2.4 (0.12)	6.5 (0.34)
ECHP average[e]	**133 608**	**11.7**	**19.2**	**3.8 (0.20)**	**7.9 (0.41)**
Canada	32 687	10.9	18.1	5.1 (0.28)	8.9 (0.49)
United States[f]	7 325	16.0	23.5	9.5 (0.40)	14.5 (0.62)

ECHP: European Community Household Panel.

a) Number of persons present in all three waves of the panel data. The larger number of observations available in the three separate cross-sectional samples was used to calculate annual poverty rates.

b) The poverty rate is the number of individuals having equivalent household disposable income below 50% of the median equivalent household disposable income. This is calculated separately for years 1993-1995 and then averaged.

c) Figures in brackets show the ratio of the number of persons with the indicated poverty status to the number of persons ever poor.

d) Percentage of the sample for whom average (equivalent) income over the three years falls below the poverty line over this period, *i.e.* the sum of equivalent income across the three years is less than the sum of the poverty threshold income across the three years.

e) Calculated as population-weighted averages of the figures for all ECHP countries.

f) Data refer to 1987-1989.

Source: ECHP, waves 1994, 1995 and 1996 for EU countries; SLID for Canada; PSID for the United States.

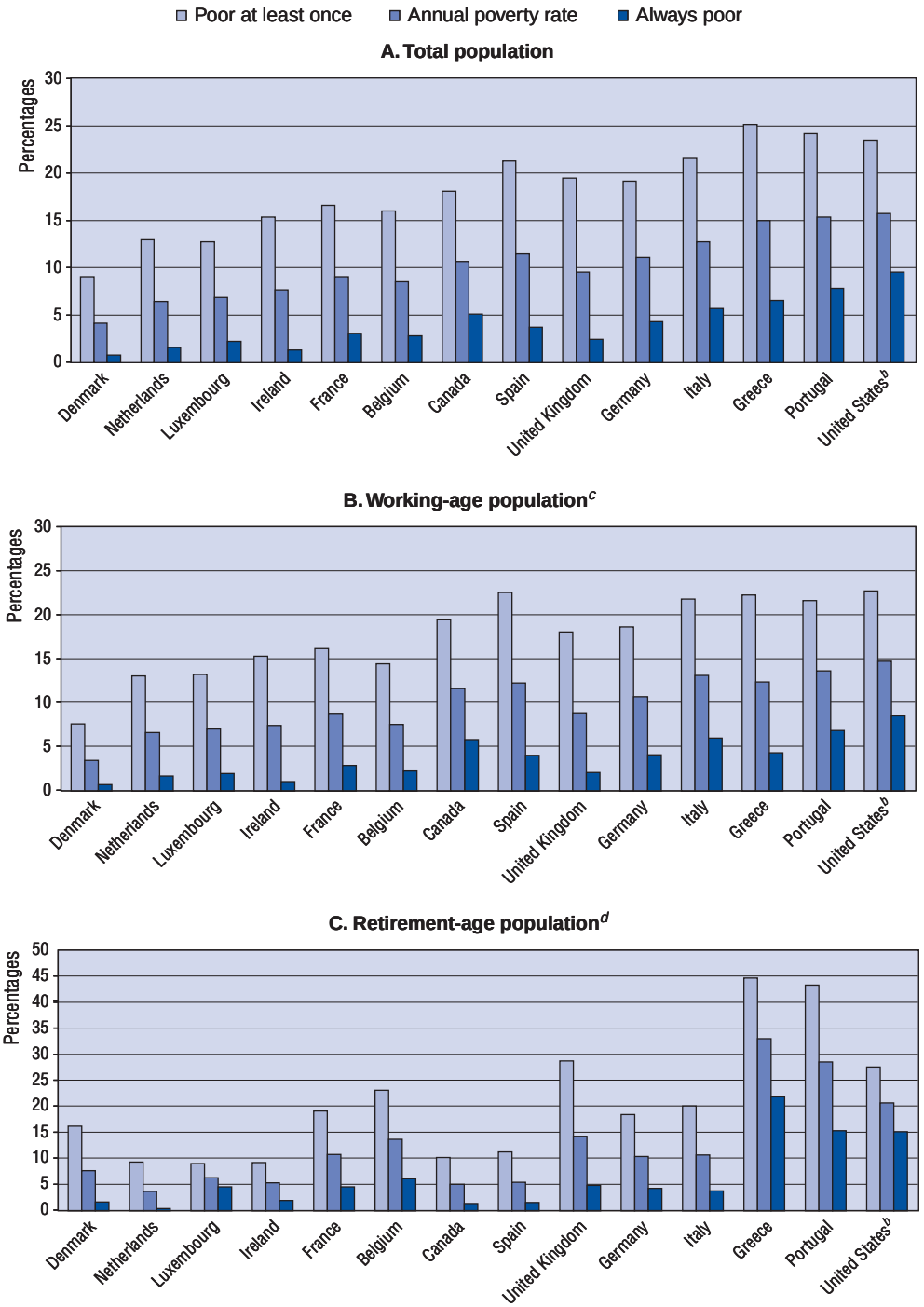
normalised so that their value equals the value of the headcount for the full-pooled (all-country) sample.[14] Broad cross-country comparisons are not much affected by moving to the more comprehensive indices, which take account of poverty intensity, but there is a tendency for average intensity to be higher in countries with a higher headcount poverty rate (correlation of 0.65). Accordingly, incorporating information on the poverty income gap into the poverty index tends to accentuate international differences in the estimated severity of poverty (the cross-country variance for the partial Sen index is 1.7 times larger than that for the headcount rate).

Multi-year measures of poverty incidence

Table 2.1 juxtaposes the annual headcount poverty rate with two alternative rates incorporating basic information on the dynamics of poverty over a three-year period. The ECHP sample average poverty rate[15] of approximately 12% reflects the fact that nearly 20% of the sample experienced poverty at least once during 1993-1995. However, only about 4% of the population in the EU member states, or about one-fifth of those who experience poverty at least once, are in poverty for all three years.

The "always-poor" group is much smaller than the "ever-poor" group in all countries, indicating that many poverty spells are short (Chart 2.2). However, the relative size of these groups varies due to international differences in the persistence of poverty. The ratio of the "always-poor" rate to the "ever-poor" rate ranges from under 10% in Denmark and the Netherlands to 32% in Portugal and 40% in the United States (Table 2.1). The general pattern is for spells to be more persistent in countries with higher annual poverty rates, so that international rankings are much the same across the three measures, but (proportional) differences are substantially greater for the share of the population poor in all three years. Finally, cross-country comparisons of poverty incidence and persistence are substantially different for the retirement-age population (*i.e.* those living in household with a head aged 65 years or older) than for the working-age population (Chart 2.2, Panels B and C). These differences reflect changes in the relative importance of different income sources (*e.g.* earnings and pensions) over the life course, but the net effect can be either to increase or lower poverty incidence and persistence, depending on national circumstances. In addition to breakdowns by age of the household head, breakdowns by age of the individual also are of interest. Probably the most important group in this regard is children, as discussed in Box 2.2.

Chart 2.2. Alternative multi-year poverty rates, 1993-1995[a]



Note: Countries are ranked from left to right by increasing annual poverty rates for the total population, as reported in Table 2.1.
a) Poverty rates are calculated using the sample of persons present in all three waves.
b) Data refer to 1987-1989.
c) Head of household 15 to 64 years of age.
d) Head of household 65 years or older.
Sources: ECHP, waves 1994, 1995 and 1996 for EU countries; SLID for Canada; PSID for the United States.

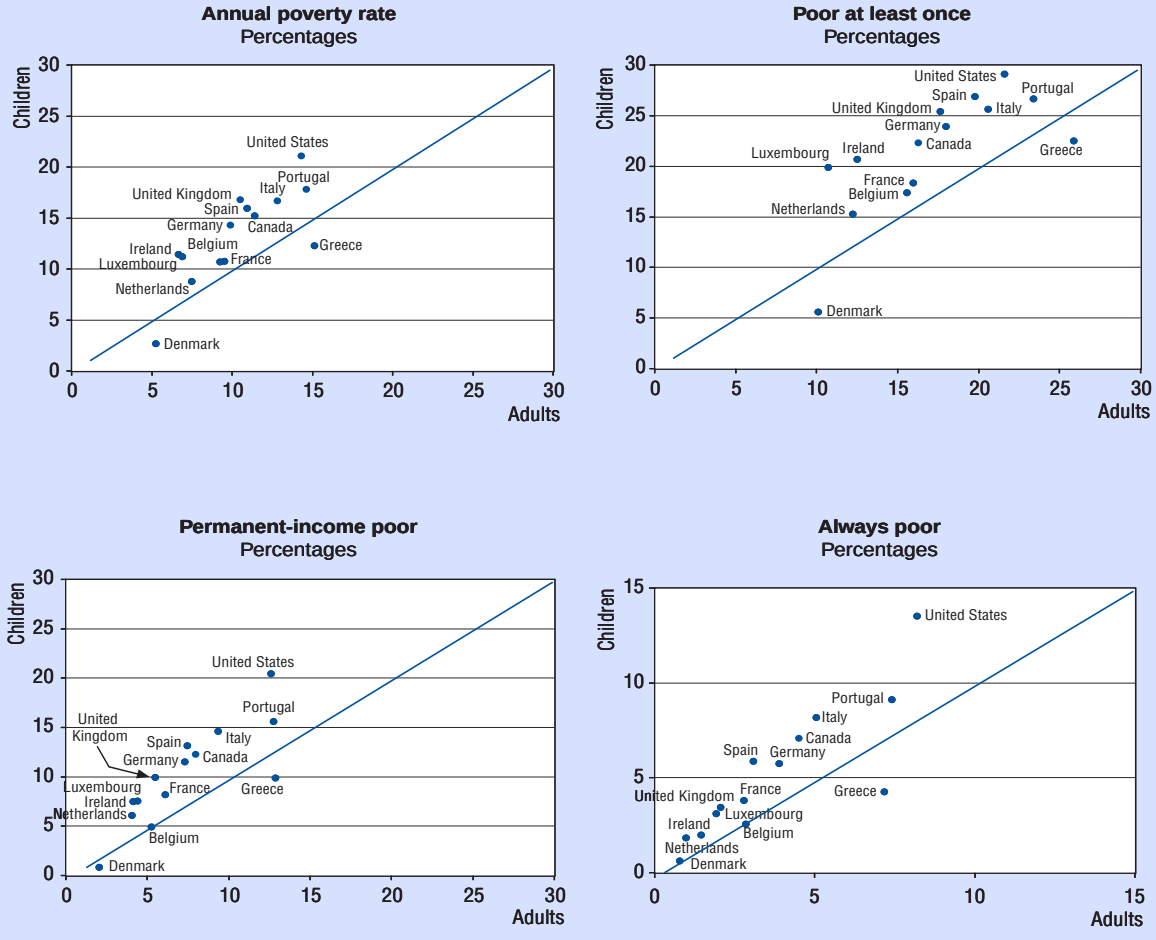
Box 2.2. Child poverty

Among broad population groups whose poverty experience can be examined separately, perhaps the most important is children. As noted by Bradbury *et al.* (2000), separate concern about child poverty is based on several straightforward considerations. Children represent a country's future, which suggests an economic basis for investment in their well-being. Moreover, children's vulnerability and inability to respond to market incentives argue strongly in favour of collective action and direct transfers to maintain their living standards.

Although cross-country variation in child poverty rates has been a topic of study for some time, it is only recently that cross-country comparisons of the *dynamics* of child poverty have begun to appear. The key early contribution was Duncan *et al.* (1993), which focused on families with children using data from the mid-1980s for eight countries. More recently, the various contributions in Bradbury *et al.* (2001), analyse data on child poverty in a variety of countries, from a comparative perspective.

The data used here also enable separate analyses of child poverty. Although a complete analysis is not within the scope of this chapter, the large country sample available here can be exploited to provide highly informative basic tabulations regarding child poverty dynamics. These tabulations are provided in the accompanying chart, which compares child poverty with adult poverty, using the four key poverty measures from Table 2.1. The first panel compares annual poverty rates between the child and adult populations, in each of the 14 countries included in the analysis of short-run poverty dynamics. The subsequent panels display analogous comparisons for three measures of poverty dynamics over three years: "poor at least once", "permanent-income poor", and "always poor".

Child *versus* adult poverty over three years[a]



a) Children are persons aged 17 and younger in the first wave (each wave for the annual poverty rate).
Sources and definitions: See Table 2.1.

Box 2.2. **Child poverty** *(cont.)*

Points lying above the 45-degree diagonal line indicate a child poverty rate that exceeds the adult rate. The child poverty rate exceeds the adult rate in nearly all cases. Moreover, the excess poverty risk faced by children appears to increase with a country's adult or overall poverty rate: the vertical distance above the diagonal line is greater for countries with higher adult poverty rates. On the other hand, the excess poverty risk faced by children does not appear to be more pronounced for the more persistent forms of poverty (permanent-income poverty and always-poor status). In other words, it would appear that, once poor, poverty dynamics are similar for children and adults.

These tabulations suggest that a focus on child poverty is justified by relatively high poverty rates and average poverty persistence experienced by the child population in most countries, in addition to broader economic and social arguments concerning the role and position of children in society. This conclusion is reinforced by the regression analyses reported in Sections II and III, which indicate that the relatively high poverty risks faced by children remain even after controlling for the effects of related variables (such as family structure).

A "permanent-income" measure of poverty, based on the adequacy of income averaged over the three years of the panel,[16] provides a less reassuring view of poverty persistence than that offered by tabulations of persons continuously poor over the period. For the ECHP countries, this measure of "permanent-income poverty" (final column of Table 2.1) averages about 41% of the ever-poor rate and 67% of conventional headcount poverty. The relative incidence of permanent-income poverty is higher in Canada than in the ECHP countries, and higher still in the United States. In the latter country, permanent-income poverty is 62% of the ever-poor rate and nearly as high as conventional headcount poverty (14.5% *versus* 16%), suggesting that a very high proportion of the persons observed in poverty in any single year lack the financial resources to support an adequate standard of living, at least over the three-year horizon used here.

Chart 2.3 presents a combined view of these two faces of poverty persistence: the relatively low risk of being continuously poor over a multi-year period (the lowest segment of the 100% bar) versus the greater risk that permanent income is too low to support an adequate living standard, even if income periodically rises above the poverty line (sum of the two lower segments in the 100% bars). While the permanent-income poor group is significantly larger than the always-poor group in all countries, the share of persons ever poor who are permanent-income poor varies widely, from one in five in Denmark to over 60% in the United States. Among persons poor during part of the three-year period, but escaping permanent-income poverty (the two upper segments in the 100% bars), a large share nonetheless have very modest incomes. For about one-third of this group, income averaged over the three years is below 60% of median equivalent income (third segment in the 100% bars).[17] Again, international differences are pronounced. The share of persons ever poor with average incomes of at least 60% of the median ranges from over 50% in Denmark to under 20% in the United States.

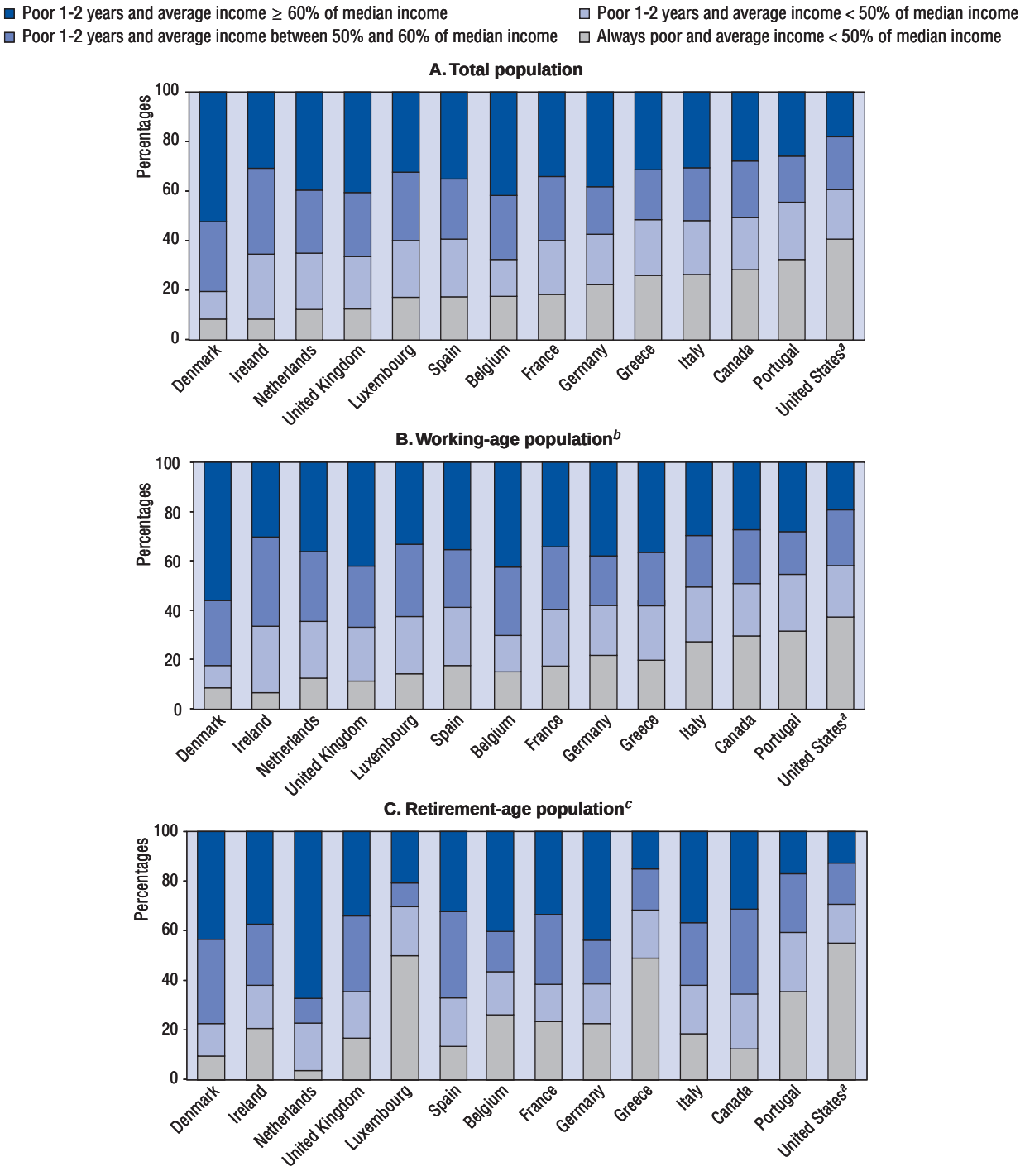
B. Short-run dynamics

Entry and exit rates

Table 2.2 lists entry and exit rates from poverty (relative to the "at-risk" populations) and the average duration of poverty for spells sampled during the three-year period. On average across all countries, about 5% of the population not previously poor enter poverty each year. Not surprisingly, the risk of falling into poverty tends to be higher in countries with more poverty (correlation of 0.85). Nonetheless, much of the population appears largely exempt from the risk of poverty in all countries. Across the ECHP sample and in Canada, nearly two-thirds of those entering poverty previously had an income of at least 60% of median equivalent income, meaning they experienced a significant year-to-year decline in income but may have permanent-incomes significantly above the poverty threshold.

Annual exit rates from poverty average 46% in the ECHP, exceeding 50% in four EU member states. By contrast, the exit rate in Canada is about 36%, and in the United States less than 30% of persons in poverty escape each year. As a general pattern, the exit rate is lower in countries with higher annual poverty rates (correlation of –0.81), consistent with the earlier finding that lower cross-sectional poverty is associated with less poverty persistence. Parallel to the finding for entries, the majority of persons exiting poverty experience significant income gains. Equivalent income rises above 60% of the median for 70% of poverty exiters in the ECHP sample, for 67% of exiters in the United States, and for 62% of exiters in

Chart 2.3. **Poverty duration and 3-year average income of persons ever poor, 1993-1995**



Note: Countries are ranked by increasing rate of the always poor for the total population.
a) Data refer to 1987-1989.
b) Head of household 15 to 64 years of age.
c) Head of household 65 years or older.
Sources: ECHP, waves 1994, 1995 and 1996 for EU countries; SLID for Canada; PSID for the United States.

Table 2.2. **Gross rates of entry and exit and average duration of poverty, 1993-1995**

	Annual poverty rate	Yearly rate of entry[a]	Yearly rate of exit[b]	Average duration[c]
	Percentages			
Belgium	9.8	4.7 (71.9)	48.2 (78.8)	1.6
Denmark	4.7	3.1 (76.2)	60.4 (74.6)	1.4
France	9.6	4.6 (54.6)	46.9 (64.9)	1.6
Germany	12.1	5.1 (70.3)	41.1 (71.5)	1.7
Greece	14.5	6.5 (55.2)	38.8 (73.2)	1.8
Ireland	8.2	5.0 (62.2)	54.6 (58.9)	1.5
Italy	13.5	5.3 (60.4)	40.6 (72.0)	1.8
Luxembourg	7.8	3.6 (62.1)	47.4 (60.3)	1.6
Netherlands	7.8	4.2 (66.1)	55.7 (77.1)	1.5
Portugal	15.3	5.4 (55.9)	37.0 (66.0)	1.9
Spain	12.0	5.9 (67.3)	49.6 (70.3)	1.6
United Kingdom	12.1	6.0 (62.5)	58.8 (69.1)	1.5
ECHP average[d]	**11.7**	**5.2 (63.4)**	**46.1 (70.2)**	**1.7**
Canada	10.9	4.8 (63.2)	36.4 (62.2)	1.8
United States[e]	16.0	4.5 (57.3)	29.5 (66.6)	2.0

ECHP: European Community Household Panel.
a) Number of persons entering poverty between t and t + 1, as a share of the population not in poverty in t, averaged over the period. Figures in brackets show the percentage of entries for which prior equivalent income was at least 60% of the median.
b) Number of poor in t who exit poverty in t + 1, as a share of the population in poverty in t, averaged over the period. Figures in brackets show the percentage of exits resulting in equivalent income of at least 60% of the median.
c) Average number of years for those with poverty experience.
d) Calculated as population-weighted averages of the national figures for all ECHP countries.
e) Data refer to 1987-1989.
Source: ECHP, waves 1994, 1995 and 1996 for EU countries; SLID for Canada; PSID for the United States.

Canada. Lower exit rates generate longer durations, but the short observation window means that the average duration of poverty varies within a narrow band, from 1.4 to 2.0 years per poverty spell.

Total years in poverty and permanent-incomes of persons ever poor

Table 2.3, Panel A provides more detailed information about the duration of poverty than is embodied in the average duration. The left panel displays the simple spell distribution, or share of total spells lasting one year, two years, or three years. Most spells are short. About half of persons in the ECHP countries and Canada who were ever poor during 1993-1995 experienced only a single year of poverty (37% for the United States).[18] However, as indicated in the right panel, longer spells account for a large share of the total time spent in poverty: spells of three years account for over one-third of the total time spent in poverty in ECHP countries, despite less than one fifth of the persons ever poor having been persistently poor. Across countries, the share of all poverty years attributable to persistently poor individuals generally increases with the annual poverty rate (correlation of 0.87). In the United States, 60% of the total years spent in poverty are attributable to persons persistently poor, compared with a share of under 20% in Denmark.

Similar conclusions are reached when the distribution of permanent-income is analysed in the same way (Table 2.3, Panel B). The majority of persons experiencing poverty are not permanent-income poor in most of the countries (Portugal and the United States being the exceptions). However, a majority of the years spent in poverty are attributable to the permanent-income poor in almost all countries (only in Denmark is the share significantly below 50%). The concentration of poverty years on the permanent-income poor rises strongly with the annual poverty rate (correlation of 0.96).

In sum, the descriptive analysis of three-year poverty dynamics suggests an overall paradox: poverty is both highly fluid and characterised by long-term traps. There is much movement into and out of poverty, with most spells being short and most of the persons who ever enter poverty not experiencing long-term financial deprivation. At the same time, a significant number of people are trapped in long-run poverty. Although it is not unusual for their incomes periodically to exceed the poverty threshold, their incomes averaged over the longer term are low. In most OECD countries, this group accounts for over one-half of the total years spent in poverty (as measured by annual income).

Table 2.3. **Distribution of poverty duration and permanent income for persons ever poor, 1993-1995**

Percentages

A. Duration of poverty

	Annual poverty rate	Share of persons staying in poverty			Share of total years spent in poverty attributable to persons with 1 to 3 years in poverty		
		1 year	2 years	3 years	1 year	2 years	3 years
Belgium	9.8	57.5	25.2	17.4	35.9	31.5	32.6
Denmark	4.7	71.6	20.1	8.3	52.4	29.4	18.2
France	9.6	54.9	26.8	18.3	33.6	32.8	33.6
Germany	12.1	48.6	29.2	22.2	28.0	33.6	38.4
Greece	14.5	47.1	27.0	25.9	26.3	30.2	43.5
Ireland	8.2	59.3	32.4	8.3	39.8	43.5	16.8
Italy	13.5	48.8	25.0	26.2	27.5	28.2	44.3
Luxembourg	7.8	55.0	27.9	17.1	33.9	34.4	31.6
Netherlands	7.8	62.8	25.1	12.1	42.0	33.6	24.4
Portugal	15.3	41.7	26.0	32.3	21.9	27.2	50.9
Spain	12.0	55.6	27.1	17.3	34.4	33.5	32.0
United Kingdom	12.1	65.4	22.3	12.3	44.6	30.3	25.1
ECHP average[a]	**11.7**	**53.9**	**26.2**	**19.9**	**32.4**	**31.5**	**36.0**
Canada	10.9	47.0	24.8	28.2	26.0	27.4	46.7
Unites States[b]	16.0	36.9	22.5	40.6	18.1	22.1	59.8

B. Permanent income

	Permanent-income poverty rate	Share of persons with three-year average equivalent income of:			Share of total years spent in poverty attributable to persons with three-year average equivalent income of:		
		At least 60% of the median	At least 50% but less than 60% of the median	Less than 50% of the median	At least 60% of the median	At least 50% but less than 60% of the median	Less than 50% of the median
Belgium	5.2	41.8	25.7	32.4	30.4	20.4	49.3
Denmark	1.8	52.4	28.1	19.5	41.4	25.5	33.1
France	6.6	34.1	25.8	40.1	22.2	19.9	57.9
Germany	8.1	38.3	19.3	42.5	25.5	14.3	60.2
Greece	12.2	31.3	20.2	48.5	19.2	14.2	66.6
Ireland	5.3	30.7	34.8	34.5	25.1	28.1	46.8
Italy	10.4	30.7	21.3	48.1	18.7	15.3	66.0
Luxembourg	5.1	32.3	27.7	40.0	21.9	23.0	55.1
Netherlands	4.5	39.7	25.4	34.9	28.5	21.4	50.1
Portugal	13.4	25.8	18.7	55.5	14.8	12.1	73.0
Spain	8.7	35.2	24.1	40.7	23.6	18.6	57.8
United Kingdom	6.5	40.5	25.9	33.6	29.6	21.2	49.2
ECHP average[a]	**7.9**	**35.7**	**22.9**	**41.4**	**23.7**	**17.3**	**59.1**
Canada	8.9	27.8	22.8	49.4	19.6	13.6	66.8
Unites States[b]	14.5	18.1	20.0	61.9	11.4	10.9	77.7

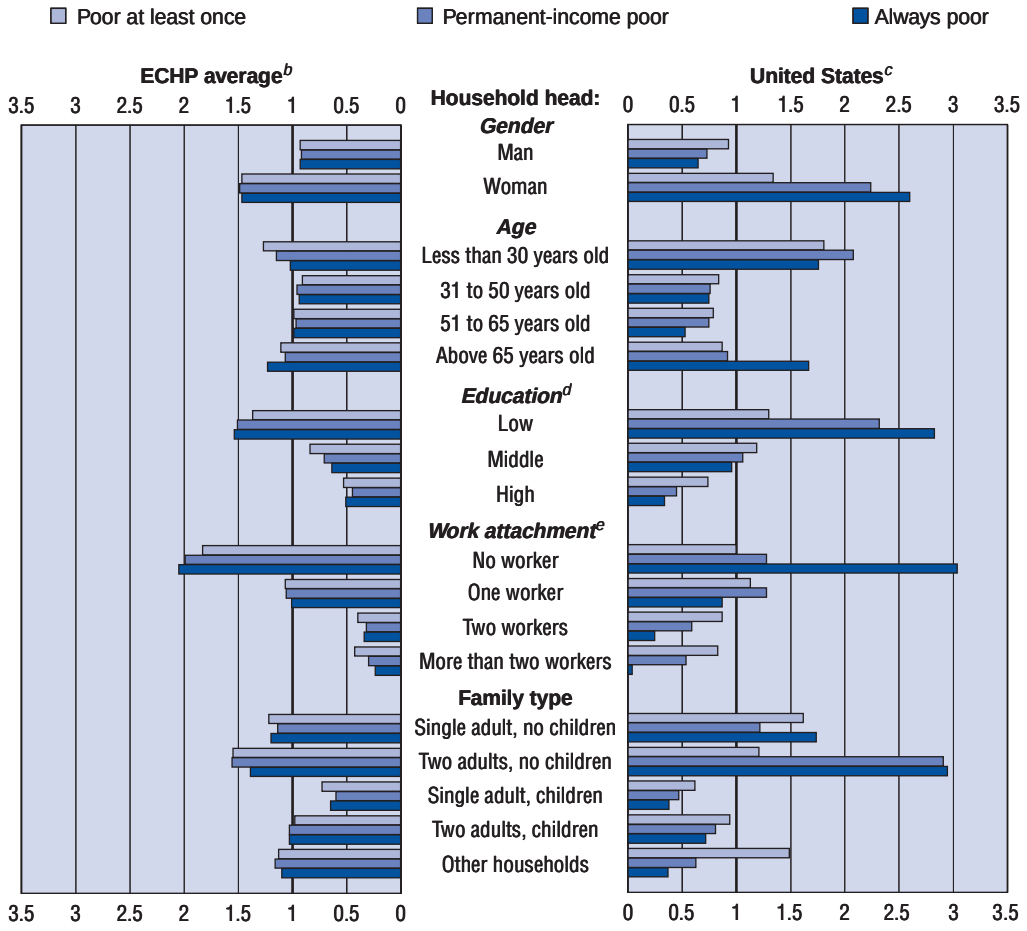
ECHP: European Community Household Panel.
a) Calculated as population-weighted averages of the national figures for all ECHP countries.
b) Data refer to 1987-1989.
Source: ECHP, waves 1994, 1995 and 1996 for EU countries; SLID for Canada; PSID for the United States.

C. Factors associated with short-run poverty dynamics

Poverty experience by household and work characteristics

This subsection examines how the burden of poverty – particularly permanent-income poverty – is distributed across different groups in the population. Chart 2.4 provides an overview of differences in the relative risk of poverty according to household characteristics (values above 1.0 reflecting above-average risks of poverty). These patterns are shown separately for the population-weighted ECHP sample of countries and the United States. In most respects, the profile of households at an above-average risk of experiencing poverty is similar in Europe and the United States: the risk of poverty is elevated for households in which the head is female, young,

Chart 2.4. Relative risks of short and long-term poverty for different population groups,[a] 1993-1995

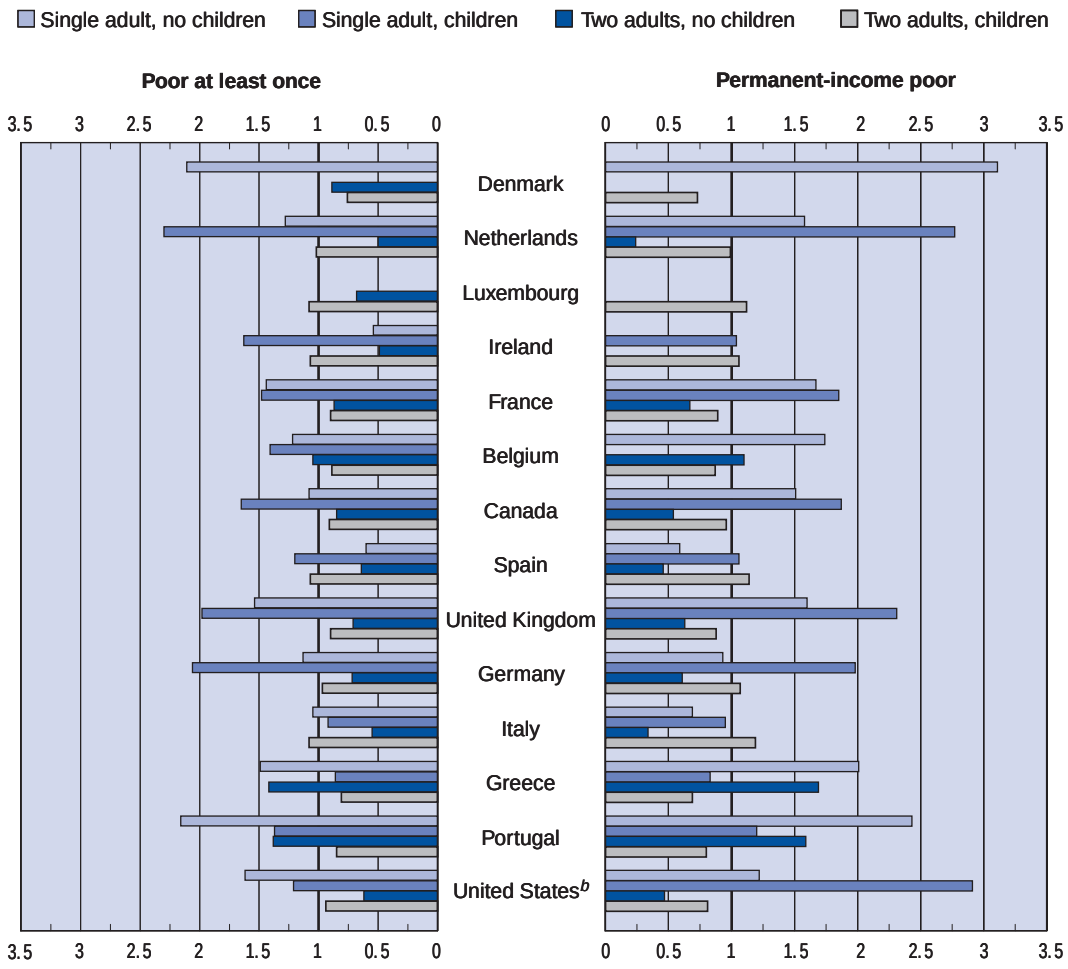


ECHP: European Community Household Panel.
a) Ratio of the poverty rate for the specified group to that for the entire population. Groups defined in terms of characteristics at the beginning of the period.
b) Calculated as population-weighted averages of the national figures for all ECHP countries.
c) Data refer to 1987-1989.
d) Low education is less than upper secondary education, middle is completed upper secondary education, high is tertiary-level education.
e) In the ECHP, an individual is classified as "employed" in a given year if the number of months employed equals or exceeds the number of months he spent not working. For the United States, the definition is based on having worked at least 1 000 hours in a given year.
Sources: ECHP, waves 1994, 1995 and 1996 for EU countries; PSID for the United States.

a single parent or has not finished upper secondary schooling, as well as for households in which no adult is employed for a significant part of the year.[19]

Comparing the ECHP and United States risk profiles in Chart 2.4 suggests that the association between household characteristics and increased poverty risk is stronger in the United States, particularly so for the risk of being permanent-income poor or always poor. However, this is partially due to offsetting differences in the risk profiles of different EU member states. There is considerable variation in demographic risk profiles among the EU member countries, some of which reflect poverty concentrations similar to those observed for the United States. For example, the risk of poverty for single-adult families with children is about double the average risk for the entire population in Germany, the Netherlands, and the United Kingdom, as well as in the United States (Chart 2.5). Similarly, the extent to which low educational attainment elevates the risk of poverty is

Chart 2.5. **Relative risks of short and long-term poverty by family type,[a] 1993-1995**

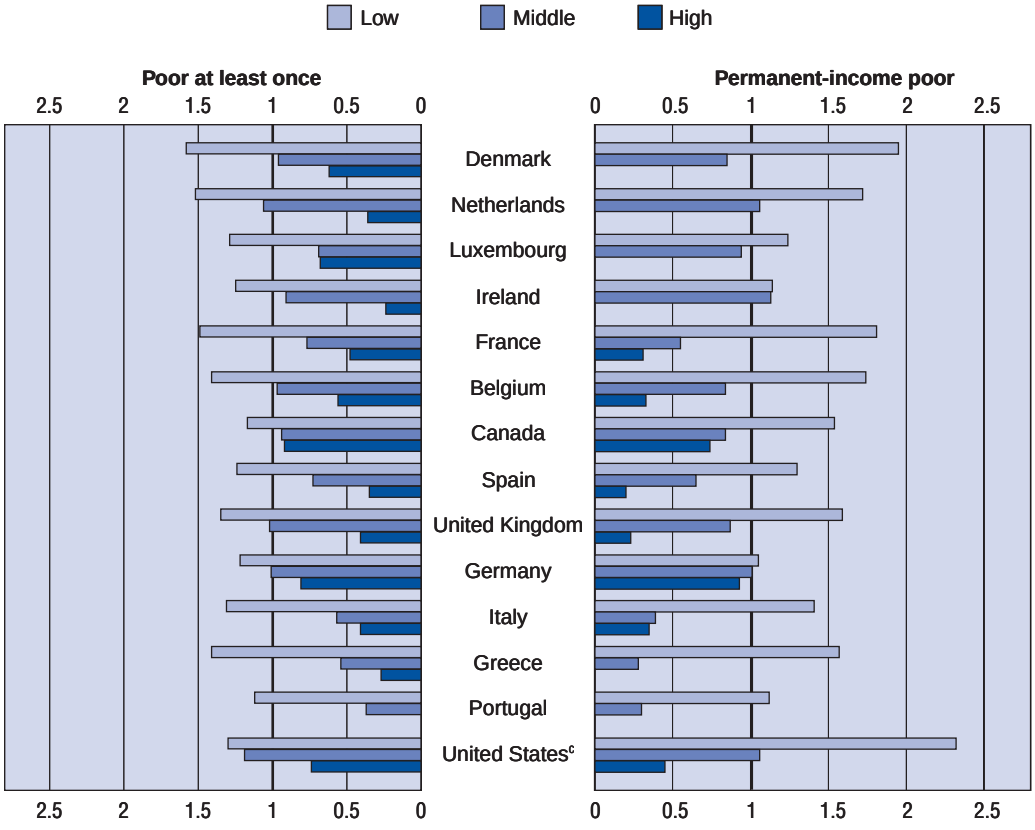


Note: Countries are ranked in descending order by average annual poverty rate as reported in Table 2.1.
Values not reported when fewer than 30 observations are available.
a) Ratio of the poverty rate for the specified group to that for the entire population.
b) Data refer to 1987-1989.
Sources: ECHP, waves 1994, 1995 and 1996 for EU countries; SLID for Canada; PSID for the United States.

nearly as strong in many EU member states as in the United States, while this association is virtually absent in Germany (Chart 2.6).

These data can inform policy design by identifying the composition of the poverty population, including significant differences in the household characteristics between the permanent-income poor and the short-term poor. Table 2.B.1 (in Annex 2.B) provides country-by-country tabulations of the distribution of the household characteristics over the total population and four measures of poverty intensity over three years: non-poor, poor one year, permanent-income poor, and always poor. These distributions reflect the combined impacts of differential poverty risks and the demographic composition of the total population. One important lesson that emerges is that household types with above-average poverty rates can nonetheless constitute a small share of the population of concern for anti-poverty programmes. For example, persons living in female-headed and single-parent households are everywhere a minority of the poverty population, despite facing elevated risks.[20] Consequently,

Chart 2.6. **Relative risks of short and long-term poverty by educational attainment of head,[a, b] 1993-1995**



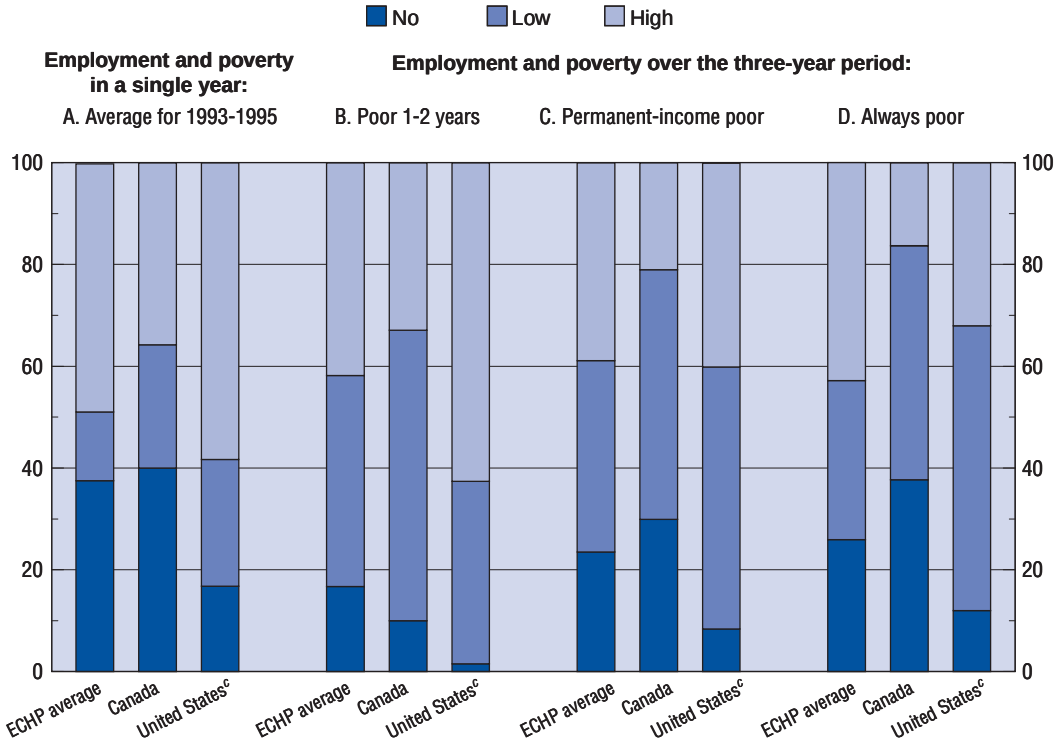
Note: Countries are ranked in descending order by average annual poverty rate as reported in Table 2.1.
Values not reported when fewer than 30 observations are available.
a) Ratio of the poverty rate for the specified group to that for the entire population.
b) Low education is less than upper secondary education, middle is completed upper secondary education, high is tertiary level education.
c) Data refer to 1987-1989.
Sources: ECHP, waves 1994, 1995 and 1996 for EU countries; SLID for Canada; PSID for the United States.

in targeting anti-poverty measures it is important not to focus exclusively on "high-risk" populations. Households with a male head and those with one or more workers do not show up among the high-risk groups, yet they account for the majority of the permanent-income poor population in EU member states and the United States.[21]

Due to intermittent employment, the overlap between work and poverty is larger when labour market attachment is assessed over a multi-year period, rather than being assessed exclusively at the beginning of the period. Chart 2.7 contrasts the extent of "working poverty" in a single year (Panel A), with the greater overlap between employment and poverty incidence over three years. For the working-age population, even the permanent-income poor and the always poor are unlikely to live in households in which no adult worked for pay, although they are more likely to report low employment levels (*e.g.* intermittent or part-time employment). Thus, the extent of working poverty appears to be greater than has been suggested by previous research based on cross-sectional data [Nolan and Marx (1999); OECD (1997)] and many poor households are characterised by low-paid or precarious employment, rather than persistent exclusion from the labour market.

Analysis of differences in poverty risk and persistence for different types of households can inform policy making in another way. Namely, these differences represent critical evidence for understanding the factors causing poverty. The analyses in the next three subsections examine these links: documenting family- and job-related events associated with individual poverty transitions; assessing correlations between national measures of poverty and the

Chart 2.7. **Overlap between poverty and employment among working-age households,[a, b] 1993-1995**



ECHP: European Community Household Panel.
a) Head of household 18 to 64 years of age.
b) High level of employment is defined as at least the equivalent of one full-time, full-year worker, with two months of part-time employment considered to equal one full-time month. In panel A, this criteria is applied for a single year, but in panels B-D, it must hold for all three years. Low level of employment is defined as all other households with positive employment.
c) Data refer to 1987-1989.
Sources: ECHP, waves 1994,1995 and 1996 for EU countries; SLID for Canada; PSID for the United States.

economic, demographic and institutional context; and reporting econometric models that examine poverty risk factors and durations in a multivariate context.

Events coincident with poverty entry and exit

Family structure, job status and other individual characteristics are clearly related to the risks of falling into and remaining in poverty. This subsection uses the three-year panels to analyse the relationships among transitions. Tables 2.4 (family-related events), 2.5 (job-related events) and 2.6 (family- and job-related events) display tabulations of the frequency with which changes in family structure or job status are coincident with entries and exits to and from poverty. The first two of these tables examine these two types of events independently, while the third takes account of the close interrelationship that often exists between them. This events-based analysis complements that in the previous subsection, which examined associations between household characteristics at the beginning of the period and subsequent poverty experience.

For the ECHP countries, 25% of entries into poverty and 15% of exits coincided with events such as marriages, births or the establishment of a new family (Table 2.4). Family-related events are more frequently observed in Canada and the United States, coinciding with 41% of entries and 31% of exits in Canada, and 37% of entries and 27% of exits in the United States. In EU member states as a group, Canada, and the United States, separation/divorce is the most common family-related event associated with poverty entry, but only in Canada and the United States is marriage associated with an important share of exits. It is also notable that the strong majority of

Table 2.4. Frequency of family-related events associated with poverty transitions, 1993-1995

Entries

	Number of observations	Percentage of total entries associated with: No change in family structure[a]	New born child[b]	More members in family[c]	Less members in family[d]	Separation/ divorce[e]	Newly established family[f]	Other changes
Belgium	632	83.5	–	–	(2.2)	(4.3)	(1.7)	–
Denmark	339	61.0	–	15.6	–	(7.3)	9.6	–
France	1 285	72.9	(2.0)	3.4	3.1	9.1	6.8	(2.7)
Germany	936	78.4	(3.0)	(2.7)	(1.8)	7.2	(3.0)	(3.9)
Greece	1 481	78.6	(1.7)	3.4	4.8	6.9	2.1	(2.4)
Ireland	784	67.7	5.5	4.1	6.5	5.3	(2.0)	(8.9)
Italy	1 702	74.4	2.8	(0.9)	5.1	6.3	2.9	(7.5)
Luxembourg	185	68.3	–	–	(5.8)	(8.8)	–	–
Netherlands	848	71.4	(3.4)	4.2	3.7	5.0	5.7	(6.5)
Portugal	1 315	77.7	3.5	2.5	6.0	4.5	(2.1)	(3.7)
Spain	1 897	74.7	3.2	(1.5)	6.0	6.7	(1.0)	(6.9)
United Kingdom	1 015	74.1	4.1	3.9	3.6	8.5	(2.6)	(3.1)
ECHP average[g]	**12 419**	**75.3**	**3.0**	**2.7**	**3.8**	**7.3**	**3.3**	**4.7**
Canada	2 182	58.8	4.3	1.6	3.7	12.6	12.9	6.0
United States[h]	564	62.6	8.8	2.5	4.2	10.9	8.8	2.3

Exits

	Number of observations	Percentage of total exits associated with: No change in family structure[a]	New born child[b]	More members in family[c]	Less members in family[d]	Marriage[i]	Newly established family[f]	Other changes
Belgium	573	90.1	(2.6)	–	–	(3.1)	–	–
Denmark	262	79.3	–	–	(5.4)	(7.3)	–	–
France	1 333	85.6	(1.5)	(1.5)	4.6	4.4	–	–
Germany	954	88.7	–	–	4.0	(2.2)	–	–
Greece	1 566	81.3	(1.9)	(1.7)	5.7	3.6	(0.7)	(5.0)
Ireland	655	79.2	7.3	–	5.6	(4.2)	–	–
Italy	2 045	79.8	2.4	2.2	2.7	5.3	(1.0)	(6.5)
Luxembourg	183	75.8	–	–	(12.5)	(5.9)	–	–
Netherlands	684	76.4	–	(1.9)	11.7	5.4	–	–
Portugal	1 696	82.4	2.2	1.8	2.9	(1.6)	(1.0)	(8.1)
Spain	2 084	83.3	(0.8)	1.6	3.9	4.2	(1.2)	(5.0)
United Kingdom	1 062	87.9	(1.8)	(1.1)	(2.8)	3.8	–	–
ECHP average[g]	**13 097**	**84.8**	**1.6**	**1.4**	**3.8**	**3.8**	**0.6**	**4.0**
Canada	1 980	68.5	2.5	1.7	5.2	8.9	4.5	8.6
United States[h]	698	73.0	1.4	2.9	12.2	8.1	1.3	1.3

ECHP: European Community Household Panel.
– Estimates not reported due to fewer than 10 obervations.
(Estimates based on less than 30 observations).
a) Same head, same size.
b) No split, no change in marital status, same head, more children.
c) No split, no change in marital status, same head, more members (same number or fewer children).
d) No split, no change in marital status, same head, fewer members.
e) There is a spouse/partner (woman) in t – 1 and not in t.
f) Split-off household and a child/other relative becomes head or spouse.
g) Calculated as population-weighted averages of national figures for all ECHP countries, except in cases where the national estimate for exactly one country has not been reported due to fewer than 10 observations of data. In such cases, the ECHP average is calculated excluding that country.
h) Data refer to 1987-1989.
i) There is a spouse/partner in the household in t and not in t – 1.
Sources: ECHP, waves 1994, 1995 and 1996 for EU countries; SLID for Canada; PSID for the United States.

Table 2.5. **Frequency of job-related events associated with poverty transitions**

Entries

	Number of observations	Percentage of total entries associated with: Fewer workers[a]	*Of which:* Head	*Of which:* Spouse	Less months at work[b]	*Of which:* Head	*Of which:* Spouse	Earnings decrease by at least 10%[c]	Other
Belgium	608	30.7	55.8	17.5	5.0	(54.3)	–	21.5	42.8
Denmark	339	32.9	57.2	36.4	11.3	(49.1)	–	22.8	32.9
France	1 285	21.5	41.5	39.5	11.7	67.4	(16.6)	25.7	41.2
Germany	907	24.6	36.0	35.3	9.0	79.3	–	31.5	34.9
Greece	1 479	37.4	41.0	29.7	6.9	56.0	(23.1)	32.3	23.4
Ireland	784	36.4	56.1	(6.1)	6.7	(32.3)	(25.1)	20.2	36.6
Italy	1 702	34.9	32.9	24.8	6.1	59.8	(21.0)	26.5	32.5
Luxembourg	184	33.8	–	–	(13.5)	(88.1)	–	35.9	(16.8)
Portugal	1 308	47.6	43.1	25.8	4.7	73.3	–	18.3	29.5
Spain	1 896	42.9	51.7	15.7	15.4	63.2	18.5	29.5	12.1
United Kingdom	1 015	27.0	34.1	38.8	7.9	74.4	–	25.2	40.0
ECHP average[d]	**11 507**	**30.3**	**40.2**	**29.1**	**9.2**	**68.6**	**14.9**	**27.4**	**33.1**
Canada	2 182	30.0	66.5	29.5	22.3	69.3	27.1	36.0	11.7
United States[e]	564	42.3	54.8	42.1	20.5	78.0	39.3	30.6	6.6

Exits

	Number of observations	Percentage of total exits associated with: More workers[a]	*Of which:* Head	*Of which:* Spouse	More months at work[b]	*Of which:* Head	*Of which:* Spouse	Earnings increase by at least 10%[c]	Other
Belgium	553	22.7	68.0	32.9	10.3	(32.0)	(27.4)	26.4	40.5
Denmark	262	22.8	63.8	(32.7)	18.6	(55.3)	–	40.5	18.1
France	1 329	32.5	63.8	28.6	12.8	60.6	(11.4)	30.3	24.4
Germany	928	25.5	50.5	25.6	4.2	(60.0)	–	31.6	38.7
Greece	1 566	31.1	55.2	24.4	7.9	53.6	36.7	40.9	20.1
Ireland	655	35.0	48.6	(7.1)	12.3	39.7	–	27.8	24.9
Italy	2 038	30.4	42.7	20.7	8.7	46.8	(13.0)	30.4	30.5
Luxembourg	182	18.9	(46.9)	(43.4)	(11.8)	–	–	45.4	(23.9)
Portugal	1 689	48.0	52.6	23.0	10.9	43.1	(11.7)	25.1	16.0
Spain	2 081	41.8	66.4	16.4	14.1	62.0	15.5	33.7	10.5
United Kingdom	1 062	26.6	71.2	32.9	7.8	81.0	(18.6)	26.9	38.7
ECHP average[d]	**12 345**	**30.9**	**58.2**	**24.5**	**9.1**	**59.7**	**15.7**	**30.6**	**29.5**
Canada	1 980	29.4	72.2	29.3	23.1	77.2	36.6	35.2	12.4
United States[e]	698	30.5	39.6	42.3	29.8	71.9	34.1	32.7	7.1

ECHP: European Community Household Panel.
– Estimates not reported due to fewer than 10 observations.
(Estimates based on less than 30 observations).
a) In the ECHP, an individual is classified as "employed" in a given year if the number of months employed equals or exceeds the number of months he/she spent not working. For Canada and the United States, the definition is based on having worked at least 1 000 hours in a given year.
b) No change in the number of workers. Canadian and United States values are based on annual hours worked having changed by at least 160 in the indicated direction.
c) No change in the number of workers nor in months worked.
d) Calculated as population-weighted averages of national figures for all ECHP countries, except in cases where the national estimate for exactly one country has not been reported due to fewer than 10 observations of data. In such cases, the ECHP average is calculated excluding that country.
e) Data refer to 1987-1989.
Source: ECHP, waves 1994, 1995 and 1996 for EU countries; SLID for Canada; PSID for the United States.

Table 2.6. Frequency of family and job-related events associated with poverty transitions

Entries

	Number of observations	Percentage of total entries associated with:					
		Change in family structure	Fewer workers[a]	Largest decrease in:			Other
				Earnings[b]	Transfers[b]	Capital and other income[b]	
Belgium	632	16.5	20.7	18.1	33.3	7.2	4.2
Denmark	339	39.0	15.2	13.5	26.0	–	–
France	1 285	27.1	10.8	21.7	35.3	3.1	1.9
Germany	936	21.6	15.9	27.2	26.0	7.5	1.8
Greece	1 481	21.4	25.6	29.8	8.8	9.9	4.5
Ireland	784	32.3	21.0	17.3	22.7	5.0	1.7
Italy	1 702	25.6	21.4	24.1	23.2	3.9	1.8
Luxembourg	185	31.7	(15.6)	27.1	20.3	–	–
Netherlands	848	28.6	. .	37.5	32.3	–	–
Portugal	1 315	22.3	35.5	17.6	17.9	3.8	2.8
Spain	1 897	25.3	30.1	22.4	17.5	4.1	0.6
United Kingdom	1 015	25.9	16.2	17.5	32.9	5.8	1.7
ECHP average[c]	**12 419**	**24.8**	**18.4**	**21.7**	**25.6**	**5.2**	**4.4**
Canada	2 182	41.2	9.3	26.1	16.9	6.4	0.2
United States[d]	564	37.5	15.0	27.6	2.8	16.5	0.7

Exits

	Number of observations	Percentage of total exits associated with:					
		Change in family structure	More workers[a]	Largest increase in:			Other
				Earnings[b]	Transfers[b]	Capital and other income[b]	
Belgium	573	9.9	18.2	17.0	41.5	[13.4]	
Denmark	262	20.7	16.3	29.2	27.6	–	–
France	1 333	14.4	26.9	22.4	29.6	3.1	3.7
Germany	954	11.3	21.9	26.7	32.0	[8.1]	
Greece	1 566	18.7	22.2	38.0	15.8	3.3	2.0
Ireland	655	20.8	27.7	20.6	29.9	–	–
Italy	2 045	20.2	23.6	29.2	24.2	[2.8]	
Luxembourg	183	24.2	(10.1)	29.4	23.7	–	–
Netherlands	684	23.6	. .	33.2	41.2	–	–
Portugal	1 696	17.6	41.2	16.0	22.0	2.4	1.0
Spain	2 084	16.7	34.5	30.6	15.2	[2.9]	
United Kingdom	1 062	12.1	20.5	23.7	40.3	[3.4]	
ECHP average[c]	**13 097**	**15.2**	**24.2**	**25.4**	**27.9**	**2.0**	**5.3**
Canada	1 980	31.5	15.6	25.5	19.6	7.5	0.4
United States[d]	698	27.0	19.1	36.8	3.8	13.2	0.1

ECHP: European Community Household Panel.
. . Data not available.
– Estimates not reported due to fewer than 10 obervations.
(Estimates based on less than 30 observations).
[Combined value for "Capital and other income" and "Other"].
a) No change in family structure.
b) No change in family structure nor in the number of workers.
c) Calculated as population-weighted averages of the national figures for all ECHP countries.
d) Data refer to 1987-1989.
Source: ECHP, waves 1994, 1995 and 1996 for EU countries; SLID for Canada; PSID for the United States.

poverty transitions do not coincide with a change in family structure in any of the countries.[22]

Table 2.5 lists job-related events that might cause poverty transitions and shows that there is a strong association. The link appears to be particularly strong in the United States. For example, in the United States, 31% of poverty exits coincided with an increase in the number of workers in the household, another 30% with an increase in the number of months worked (with an unchanged number of workers), and 33% with an earnings increase of at least 10% (despite no changes in the number of workers or months worked). A near mirror-image picture is observed for entries into poverty, except that changes (here, reductions) in annual months worked among the employed is less common (21%). The principal difference between the ECHP countries and the United States is that changes in months worked among the employed much less frequently accompany poverty transitions in the former (6% of transitions *versus* 21-30%).[23]

Are, therefore, family-related events a less important cause of poverty transitions than job-related events? This issue is complex, since family- and job-related changes can be closely related (or even two sides of the same coin, as when divorce reduces the number of workers in a household). In order to probe further whether job-related events are indeed more important than family-related events, Table 2.6 looks at the two types of changes in concert. A lower-bound estimate of the impact of job-related events is produced by first identifying all households with a change in family structure and then calculating job-related events only for the remaining subsample (*i.e.* those with a stable family structure). The effect is to substantially reduce the relative importance of changes in the number of workers in the household, particularly for entries into poverty (the shares falling from 30% to 18% in the ECHP on average and, much more dramatically, from 30% to 9% in Canada and from 42% to 15% in the United States). In other words, in about one-half or more of the cases in which a reduction in the number of workers coincides with the beginning of a poverty spell, the precipitating event was a worker leaving the household or a related family event, rather than job loss by a continuing family member.

Nonetheless, Table 2.6 confirms that year-to-year changes in earnings often accompany poverty transitions in households where there is no change in either family structure or the number of workers. Earnings account for the largest change in income in the majority of such transitions in the United States. Earnings changes are also important in Canada and the ECHP countries, but public transfer payments play an important role as well. In the ECHP countries, changes in transfer payments account for the largest share of the change in income for more poverty transitions than do changes in earnings. The importance of changes in transfers for poverty transitions in Europe is in marked contrast to the situation in the United States and suggests that the more extensive welfare state characteristic of most European countries affects poverty dynamics, in addition to its well-documented effect in lowering the cross-sectional incidence of poverty [Förster (2000); Smeeding *et al.* (2000)]. Canada is somewhat of an intermediate case, with the contribution of transfers lying between that in the EU and in the United States. Interestingly, in the EU, Canada, and the United States, reductions in transfer payments are nearly as important for poverty entries as are increases in transfer payments for exits.

Correlates of cross-country differences in poverty

The preceding analysis demonstrates significant differences in short-run poverty dynamics, both across population groups within countries and across OECD countries. However, more sophisticated statistical tools are required to characterise this variation adequately and better identify the underlying causal relationships. This and the following subsections present some components of such an analysis. The preceding analysis identified a number of *individual* demographic and labour market factors that should be incorporated into an econometric analysis of poverty dynamics. However, that analysis provides only partial guidance as to the *macro* factors that may also account for international differences in poverty dynamics and need to be taken into account. The cross-country correlations reported in Table 2.7, which are based on aggregate data for the fourteen countries referred to in the preceding analyses, help identify such factors.[24]

Consistent with public transfer payments playing an important role in poverty status, all seven measures of poverty incidence and persistence are strongly negatively correlated with the two measures of social spending generosity and the measure of the extent to which this spending is targeted to low-income households (13 of 14 of these correlations are statistically significant despite the small sample size). Several other factors are also identified as potentially affecting the overall extent of poverty. Higher GDP per capita is significantly correlated with lower poverty intensity in a single year, while a higher share of low-educated adults is correlated with higher poverty intensity. However, neither factor is significantly related to poverty persistence. By contrast, the share of low-paid in total employment (as well as its persistence) is positively correlated with all four measures of poverty persistence, but this correlation is statistically significant only for the ratio of permanent-income poverty rate to the

Table 2.7. Correlations of national measures of poverty with measures of the economic, demographic and institutional context

ECHP countries, Canada and the United States

Panel A. Poverty measures correlated with employment and unemployment

Poverty measures	Employment/ population ratio, total	Employment/ population ratio, women	Share of working-age households with no employment	Standardised unemployment rate	Unemployment rate for men aged 25 to 54	Unemployment rate for women aged 25 to 54
Single-year measures						
Poverty rate	–0.068	–0.103	–0.418	0.021	–0.106	0.011
Intensity	–0.227	–0.284	–0.369	0.050	–0.184	0.154
Sen index	–0.108	–0.151	–0.485*	0.016	–0.154	0.043
Three-year measures						
Permanent-income poverty	–0.102	–0.142	–0.556**	0.005	–0.135	0.019
Ratio of permanent-income to single-year poverty	–0.266	–0.293	–0.591**	0.073	–0.036	0.090
Ratio of always poor to ever poor	0.149	0.106	–0.559**	–0.233	–0.359	–0.197
1-exit rate	0.012	–0.029	–0.476	–0.193	–0.321	–0.137

Panel B. Poverty measures correlated with wage setting and social expenditure

Poverty measures	Low-pay share	Average cumulative years in low-paid employment	Union density	Public social expenditure as % of GDP	Share of general government transfers received by the three bottom deciles of the income distribution for the working-age population	Gross replacement rates for unemployment benefits
Single-year measures						
Poverty rate	0.365	0.830**	–0.551*	–0.638**	–0.452	–0.820**
Intensity	0.027	0.243	–0.362	–0.358	–0.582*	–0.512*
Sen index	0.270	0.686	–0.506	–0.610**	–0.554*	–0.767**
Three-year measures						
Permanent-income poverty	0.384	0.712	–0.532*	–0.685**	–0.562*	–0.737**
Ratio of permanent-income to single-year poverty	0.484*	0.530	–0.614**	–0.705**	–0.541*	–0.598**
Ratio of always poor to ever poor	0.294	0.584	–0.400	–0.577**	–0.507	–0.546**
1-exit rate	0.314	0.434	–0.405	–0.553**	–0.598*	–0.521*

Panel C. Poverty measures correlated with income distribution and population characteristics

Poverty measures	GDP per capita in PPPs	Income Gini coefficient for total population	Income Gini coefficient for working-age population	Dependency ratio for 1990	Incidence of lone-parent families	Share of population 25 to 64 years of age not having finished upper secondary education
Single-year measures						
Poverty rate	–0.304	0.836**	0.823**	0.001	–0.001	0.264
Intensity	–0.424	0.436	0.439	–0.232	–0.221	0.472
Sen index	–0.348	0.813**	0.801**	–0.054	–0.048	0.372
Three-year measures						
Permanent-income poverty	–0.334	0.822**	0.807**	–0.031	–0.100	0.375
Ratio of permanent-income to single-year poverty	–0.285	0.728**	0.750**	–0.039	–0.219	0.439
Ratio of always poor to ever poor	0.027	0.571*	0.572*	–0.242	0.190	0.111
1-exit rate	0.041	0.559*	0.579*	–0.234	0.134	0.123

* Significant at the 10% level.
** Significant at the 5% level.

Source: Employment and unemployment measures: OECD (2000), *Employment Outlook*; Low-pay share: OECD Earnings Structure Database; Average cumulative years in low-paid employment: OECD (1997), *Employment Outlook*, Chapter 2; Union density: OECD (1997), *Employment Outlook*, Chapter 3; Public social expenditure: OECD Social Expenditure Database; Replacement rates: OECD (1999), *Benefit Systems and Work Incentives*; GDP per capita: OECD Analytical Database; Gini coefficients: Förster, M.F. (2000); Dependency ratio and incidence of lone parent families: OECD (2000*a*); Education measure: OECD (2000), *Education at a Glance*: OECD *Indicators*.

annual poverty rate. This measure of poverty persistence also falls significantly as union density rises, perhaps due to the association between higher unionisation and wage compression[OECD (1997)]. No significant correlations are found between aggregate employment and unemployment rates on the one hand and any of the poverty measures on the other. This demonstrates that some of the strong associations found at the micro-level, such as that between higher household employment and a lower risk of poverty, may be weaker at the macro level. More sophisticated statistical techniques are used in the next subsection to simultaneously account for micro and macro factors affecting poverty dynamics.

Econometric models

To further explore the relationship between short-run poverty and related characteristics, econometric models of poverty transitions are estimated using the three-year panel data. The intent of these models is two-fold. First, multivariate techniques are used to better isolate the independent effects of different variables affecting poverty transitions. The variables controlled for are measured in the first year of the sample only, and they include age of the individual and the household head, the head's educational attainment, number of workers in the household, family structure, and country (the exact list is provided in Table 2.8). The second aim is to assess the extent to which international differences in the distribution of these characteristics account for the cross-country differences in poverty dynamics documented earlier in this section.

The models are estimated using maximum likelihood for a logit specification, which is commonly used to model the effects of explanatory variables on an outcome variable that has only two possible discrete outcomes.[25] Equations are estimated over the entire pooled (all country) ECHP sample, for three separate dependent variables: the incidence of poverty exits, the incidence of permanent-income poverty among the sample of individuals ever poor, and the incidence of "always poor" among the sample of individuals ever poor. These dependent variables were chosen to provide a concise assessment of the effects of the independent variables (including country effects) on both dynamics and short-term persistence. The estimated coefficients are then used to form predicted probabilities of the different outcomes for individuals defined by specified combinations of characteristics.

The results of these analyses, in Table 2.8, indicate large and significant effects of the explanatory variables on the measured poverty outcomes. The magnitude of these effects are measured by listing the predicted probability for an individual with the specified characteristics, relative to the predicted probability for the reference person (see the table notes for the definition of the reference person). In general, the measured characteristics substantially affect the exit probability and probabilities of long-term poverty, with some variation in the effects across the different outcomes. The exit rates are affected most by the education of the household head, whereas the probability of permanent-income poverty and always-poor status are affected most by the number of workers in the household at the start of the three-year period. In the extreme, a child in a family with a low education head and no workers faces an exit probability that is about 14 percentage points (27%) lower and probabilities of permanent-income poverty and always-poor status that are 27 percentage points (73%) and 21 percentage points (148%) higher than the reference person. Somewhat surprisingly, however, individuals in households consisting of a single adult with children have significantly higher exit probabilities and lower probabilities of long-term poverty than an individual in a reference family (two adults with children).[26]

As indicated by the estimated country effects at the bottom of the Table 2.8, the measured poverty outcomes vary substantially across countries. Controlling for related characteristics has little effect on the estimated country effects: the correlations between the unconditional (unadjusted) country effects and the conditional (regression-adjusted) country effects are high, ranging from 0.80 to 0.95 across the three outcomes listed. Conditional on individual characteristics, Denmark, Ireland and the United Kingdom exhibit high poverty exit rates and low rates of permanent poverty, and Portugal and Italy exhibit low exit rates and high rates of permanent poverty. Correlations between the regression-adjusted country effects and the macro variables analysed in the previous section are similar to those reported in Table 2.7, suggesting that some of these variables affect poverty dynamics in ways that are not mediated by the individual and household variables controlled for in these regressions.

III. Poverty dynamics over longer periods

A. Data

Longer-run poverty dynamics are now examined using data from the Cross-National Equivalent Files (CNEF). These files include data from the Canadian Survey of Labor and Income Dynamics (SLID), the German Socio-Economic Panel (GSOEP) the British Household Panel Survey (BHPS), and the United States Panel Study of Income Dynamics (PSID). Eight-year panels were constructed covering income years 1985-1992 for the United States and 1990-1997 for Germany and the United

Table 2.8. Estimated impact on poverty persistence over three years of individual and family characteristics and country of residence[a] (ECHP countries only)

Percentage rates implied by multivariate logistic regressions[b]

	Exit rate (annual)	Permanent-income poor given ever poor	Always poor given ever poor
	(1)	(2)	(3)
Reference person[c]	50.3	37.1	14.4
Age of person (reference person = working age)			
Child (less than 18 years)	45.0***	42.9***	17.6***
Retirement age (older than 65 years)	52.8*	33.4***	13.1
Age of head (reference person = 31-50 years)			
Young adult (30 years or younger)	55.0***	33.3***	12.0***
Older working age (51-65 years)	51.5	35.5*	13.6
Retirement age (older than 65 years)	46.4***	36.9	14.8
Education of head (reference person = medium)			
Low (less than upper secondary degree)	43.7***	46.8***	20.8***
High (tertiary degree)	57.0***	30.5***	12.7*
Number of workers in household (reference person = one)			
None	48.3***	48.4***	21.8***
Two or more	52.4*	23.7***	9.3***
Family structure (reference person = two adults with children)			
Single adult, no children	45.4***	36.7	16.9***
Two adults, no children	52.4*	30.8***	12.6***
Single adult with children	52.9**	31.8***	12.1***
Other family types	53.3***	35.5	13.0***
Extreme case[d]			
Child in family with low education head and no workers	36.8***	64.1***	35.7***
Country (reference person = ECHP average)			
Belgium	54.0*	25.2***	11.0***
Denmark	66.5***	17.1***	5.0***
France	51.6	34.0**	12.5
Germany	40.2***	44.6***	20.5***
Greece	45.3***	41.4***	18.0***
Ireland	62.1***	24.5***	4.1***
Italy	44.8***	42.1***	20.7***
Luxembourg	54.6	31.9	11.3
Netherlands	54.9**	48.9***	15.8**
Portugal	39.6***	51.3***	24.9***
Spain	53.6***	33.8***	12.1***
United Kingdom	64.4***	27.7***	7.7***
Number of observations	30 081	26 256	26 256
Log likelihood	–20 051.7	–17 073.4	–13 031.0
Likelihood ratio test for all coefficients [Chi-square (24)]	1 094.0***	1 937.3***	1 797.3***
Likelihood ratio test for country effects [Chi-square (11)]	626.1***	772.5***	954.1***
Relative variation of adjusted country effects[e, f]	1.04	1.27	1.16
Correlation of adjusted and unadjusted country effects[f]	0.95	0.80	0.91

ECHP: European Community Household Panel.

* , ** and *** denote differences from the reference person that are statistically significant at 10%, 5% and 1% levels respectively.

a) Characteristics measured in the first sample year.

b) Fitted probabilities from logistic regression models estimated by maximum likelihood using data for 1993-1995.

c) The reference person is a working-age adult living in a family with two adults and children. The household contains one worker and its head has a medium-level education and is between the ages of 31 and 50 years. The reference person is allocated across ECHP countries according to their population weights.

d) The extreme case differs from the reference person by the characteristics indicated.

e) Ratio of the coefficient of variation for the adjusted country effects to the coefficient of variation for the unadjusted country effects.

f) Unadjusted country effects are cross-country differences in mean values of the three poverty measures. Adjusted country effects are differences in the fitted poverty measures for a reference person as defined in note *c*).

Sources: ECHP, waves 1994, 1995 and 1996.

Kingdom; the data for Canada were limited to a six-year panel covering income years 1993-1998.

The choice of sample years was dictated by several practical considerations. Primary among these was the comparability of the results in terms of panel duration and economic conditions during the analysis years. As noted earlier, the American PSID data are available through income year 1996. However, due to changes in survey procedures and data processing delays, the data for income years 1993-1996 are not fully comparable to data from the earlier years. As a result of these PSID data issues, a 1990s American panel that is comparable to the German and British panels is not feasible. To the extent that poverty dynamics in the United States changed between the 1980s and 1990s, this may pose problems of comparability. However, tabulations from the US Census Bureau and other sources suggest that the poverty rate was not that different in the United States between the late 1980s and the mid to late 1990s, which suggests that using American data from the earlier period is not too problematic.[27]

As noted earlier, household income data in the CNEF files are available in "pre-fisc" and "post-fisc" forms. Pre-fisc (market) income is income prior to the payment of direct taxes or receipt of public transfers. Post-fisc (disposable) income refers to income net of direct taxes paid and public transfers received. This latter variable provides an income definition that is essentially identical to the ECHP income variable. For both income variables, household size and associated economies of scale in consumption are incorporated by dividing income by the OECD modified equivalence scale. Individuals are identified as being in poverty if their family's equivalent disposable income falls below 50% of the median of the distribution of equivalent disposable income in their country of residence. The same threshold, based on the distribution of equivalent disposable income, is used to define the poverty line for calculations involving disposable and market income. The CNEF files also provide detailed information on employment and family characteristics, which are exploited below.

B. Poverty incidence and duration

Table 2.9 displays poverty rates and the incidence of permanent-income and short-term poverty, with separate panels for the total population and individuals in working-age and retirement-age households.[28] In general, post-fisc poverty is lowest in Germany, followed by Canada, the United Kingdom, and the United States.[29] The impact of the tax and transfer system is quite large in Germany and Canada. In Germany, for the population as a whole, the poverty rate is higher by about a factor of three when market (pre-fisc) income is used compared with disposable (post-fisc) income. Most of this difference arises within the German retirement-age population: the annual average poverty rate is higher by a factor of ten when the pre-fisc measure is compared with post-fisc income. Poverty in the United Kingdom and the United States also is higher when measured in pre-fisc terms than in post-fisc terms, although the difference for these two countries is not as pronounced as it is for Germany and Canada. In the United States, the tax and transfer system has almost no effect on poverty rates for individuals in working-age households. However, for individuals in retirement-age households, public redistribution reduces poverty more in the United States than in the United Kingdom. Despite the substantial redistributional effects of public taxes and transfers for retirement-age households, poverty rates based on post-fisc income are higher for individuals in retirement-age households than for individuals in working-age households in all of these countries except Canada.

Table 2.9 also indicates that the incidence of poverty is high in the United Kingdom and the United States, with about 30-40% of the population experiencing at least one year of poverty during the 8-year panel, depending on which income measure is used. Poverty incidence is lower in Canada and Germany, although these countries exhibit an especially high incidence of poverty among individuals in retirement-age households based on the pre-fisc income measure.

The final two columns of Table 2.9 provide an initial indication of the extent of poverty persistence in the four countries. In general, the share of "always-poor" individuals relative to the average annual poverty rate is low in Germany and the United Kingdom, although not when using the pre-fisc income measure in Germany. The share of "always-poor" individuals is higher in the United States and Canada than in the other two countries. Using the post-fisc income measure, the ratio of "always poor" to the annual poverty rate ranges from a low of about 15% in the United Kingdom to a high of 27% in the United States. Perhaps most striking is the high incidence of permanent-income poverty relative to the average annual poverty rates in all four countries. The number of individuals whose long-term average income falls below the average poverty threshold is about 45% to 100% as large as the number of poor individuals in a given year, depending on the country and the income measure used. This indicates the importance of developing measures of poverty persistence that incorporate income streams accruing over periods longer than one year.

Table 2.10 displays entry and exit rates from poverty, with separate panels for individuals in working-age and retirement-age households. These rates are calculated as the incidence of transition relative to the "at risk" population. In general, higher poverty rates are associated with higher

Table 2.9. Alternative poverty rates in the longer panels: Canada, Germany, the United Kingdom and the United States

A. Total population

	Number of individuals[a]	Annual poverty rate[b]	Poor at least once	Always poor	Permanent-income poverty[c]
		Percentages			
Canada, 1993-1998					
Post-fisc	29 883	11.5	23.8	3.0	8.3
Pre-fisc	29 883	24.7	38.3	12.7	20.6
Germany, 1990-1997					
Post-fisc	5 491	9.6	17.4	1.0	4.1
Pre-fisc	5 491	27.7	38.8	12.9	19.9
United Kingdom,[d] 1990-1997					
Post-fisc	8 179	15.1	31.2	2.2	9.8
Pre-fisc	8 179	20.1	48.4	2.7	12.4
United States, 1985-1992					
Post-fisc	6 243	16.8	34.0	4.5	12.5
Pre-fisc	6 243	21.0	38.2	7.6	16.0

B. Working-age population[e]

	Number of individuals[a]	Annual poverty rate[b]	Poor at least once	Always poor	Permanent-income poverty[c]
		Percentages			
Canada, 1993-1998					
Post-fisc	24 803	12.4	25.0	3.3	9.0
Pre-fisc	24 803	19.8	32.8	8.1	14.9
Germany, 1990-1997					
Post-fisc	4 301	9.4	17.5	0.9	4
Pre-fisc	4 301	16.1	24.9	3.3	7.3
United Kingdom,[d] 1990-1997					
Post-fisc	6 441	14.7	30.4	2.4	9.6
Pre-fisc	6 441	18.3	47.4	2.1	10.7
United States, 985-1992					
Post-fisc	5 137	15.7	33.9	3.9	11.9
Pre-fisc	5 137	15.9	33.0	4.8	12.0

C. Retirement-age population[f]

	Number of individuals[a]	Annual poverty rate[b]	Poor at least once	Always poor	Permanent-income poverty[c]
		Percentages			
Canada, 1993-1998					
Post-fisc	3 650	6.9	12.7	0.4	2.7
Pre-fisc	3 650	54.3	68.1	45.0	56.6
Germany, 1990-1997					
Post-fisc	982	9.9	16.4	1.6	4.7
Pre-fisc	982	67.9	84.3	50.2	66.8
United Kingdom,[d] 1990-1997					
Post-fisc	1 397	15.1	33.9	2.0	11.5
Pre-fisc	1 397	24.6	52.3	5.2	19.8
United States, 1985-1992					
Post-fisc	863	18.8	38.6	8.5	17.5
Pre-fisc	863	39.1	68.8	24.2	40.0

a) Number of persons present in all waves of the panel data. The larger number of observations available in the separate cross-sectional samples for each year was used to calculate annual poverty rates.
b) The poverty rate is the number of individuals having equivalent household disposable income below 50 per cent of the median equivalent household disposable income. This is calculated separately for each year and then averaged.
c) Percentage of the sample for whom average (equivalent) income falls below the average poverty line over the indicated period *i.e.*, the sum of equivalent income is less than the sum of the poverty threshold income.
d) Data refer to Great Britain only.
e) Head of household 15 to 64 years of age (throughout the panel).
f) Head of household 60 years or older (throughout the panel).
Source: Canada: SLID; Germany: GSOEP; United Kingdom: BHPS; United States: PSID.

Table 2.10. **Gross rates of entry and exit and average duration of poverty: Canada, Germany, the United Kingdom, and the United States**

	Annual poverty rate	Yearly rate of entry[b]	Yearly rate of exit[c]	Average duration[d]
	A. Working-age population[a]			
	Percentages			
Canada, 1993-1998				
Post-fisc	12.4	4.5	33.7	2.6
Pre-fisc	19.8	5.0	24.1	3.1
Germany, 1990-1997				
Post-fisc	9.4	2.7	45.0	1.9
Pre-fisc	16.1	3.4	24.9	2.6
United Kingdom,[e] 1990-1997				
Post-fisc	14.7	5.3	34.5	2.3
Pre-fisc	18.3	9.1	39.0	2.0
United States, 1985-1992				
Post-fisc	15.7	5.1	30.0	2.5
Pre-fisc	15.9	5.0	26.8	2.5
	B. Retirement-age population[f]			
	Annual poverty rate	Yearly rate of entry[b]	Yearly rate of exit[c]	Average duration[d]
	Percentages			
Canada, 1993-1998				
Post-fisc	6.9	2.2	51.4	1.8
Pre-fisc	54.3	10.5	6.0	4.9
Germany, 1990-1997				
Post-fisc	9.9	2.4	39.0	2.2
Pre-fisc	67.9	17.2	6.4	5.4
United Kingdom,[e] 1990-1997				
Post-fisc	15.1	6.2	34.2	2.2
Pre-fisc	24.6	10.4	30.0	2.4
United States, 1985-1992				
Post-fisc	18.8	6.4	17.9	3.0
Pre-fisc	39.1	14.1	11.4	3.8

a) Head of household 15 to 64 years of age (throughout the panel).
b) Number of persons entering poverty between t and t + 1, as a share of the population not in poverty in t, averaged over the period.
c) Number of poor in t who exit poverty in t + 1, as a share of the population in poverty in t, averaged over the period.
d) Average length of poverty spells for spells of positive duration (years).
e) Data refer to Great Britain only.
f) Head of household 60 years or older (throughout the panel).
Source: Canada: SLID; Germany: GSOEP; United Kingdom: BHPS; United States: PSID.

entry rates, lower exit rates, and corresponding longer average duration. The main exception to this pattern is found for individuals in working-age households in the United Kingdom based on pre-fisc income (Panel A, sixth row). For example, the annual poverty rate for this group is somewhat higher than the corresponding rates (post-fisc and pre-fisc) for the same group in the United States. However, the entry and exit rates for this group in the United Kingdom are high and the average duration of poverty is low compared to the corresponding figures for the United States. This finding suggests that poverty based on the market income distribution is a more transitory phenomenon in the United Kingdom than in the United States. The impact of direct taxes and transfer payments on poverty dynamics also varies, particularly for the working-age population. For this group, post-fisc poverty is less persistent than pre-fisc poverty in Canada and Germany, about equally persistent in the United States, and somewhat more persistent in the United Kingdom.

Table 2.11 provides a breakdown of spell durations similar to that from Table 2.3 for the ECHP data, for the working-age and retirement-age populations. However, given the longer time span of the CNEF files, the poverty spells here are divided into more duration categories. In addition, the measure of duration is a standard spell-based measure, rather than a person-based measure: spells are defined as continuous time spent in poverty (with multiple

Table 2.11. **Poverty spell durations for persons ever poor: Canada, Germany, the United Kingdom and the United States**

Percentages

A. Working-age population[a]

	Annual poverty rate	Share of poverty spells lasting:[b]				Share of total years in poverty for spells lasting:[b]			
		1 year	2 to 3 years	4 to 6 years	7 to 8 years	1 year	2 to 3 years	4 to 6 years	7 to 8 years
Canada, 1993-1998									
Post-fisc	12.4	59.3	29.1	11.6	–	22.1	28.5	49.5	–
Pre-fisc	19.8	52.3	30.6	17.1	–	15.4	23.0	61.7	–
Germany, 1990-1997									
Post-fisc	9.4	65.4	21.3	7.8	5.5	33.9	24.9	19.2	22.0
Pre-fisc	16.1	44.7	31.7	12.6	11.0	16.9	27.4	22.5	33.2
United Kingdom,[c] 1990-1997									
Post-fisc	14.7	48.7	31.4	11.7	8.3	21.4	31.6	22.4	24.5
Pre-fisc	18.3	58.0	27.5	9.1	5.4	29.3	32.0	20.3	18.4
United States, 1985-1992									
Post-fisc	15.7	46.3	28.4	14.4	10.9	18.7	26.4	24.8	30.1
Pre-fisc	15.9	45.2	29.3	12.7	12.8	17.7	26.3	21.2	34.8

B. Retirement-age population[d]

	Annual poverty rate	Share of poverty spells lasting:[b]				Share of total years in poverty for spells lasting:[b]			
		1 year	2 to 3 years	4 to 6 years	7 to 8 years	1 year	2 to 3 years	4 to 6 years	7 to 8 years
Canada, 1993-1998									
Post-fisc	6.9	72.1	23.0	4.9	–	39.5	30.5	30.0	–
Pre-fisc	54.3	26.5	23.0	50.5	–	3.4	6.8	89.8	–
Germany, 1990-1997									
Post-fisc	9.9	60.1	23.1	10.0	6.8	27.9	24.4	22.7	25.0
Pre-fisc	67.9	18.6	15.4	14.4	51.6	3.5	7.0	13.1	76.5
United Kingdom,[c] 1990-1997									
Post-fisc	15.1	52.7	27.6	13.6	6.0	23.2	28.9	28.6	19.3
Pre-fisc	24.6	49.8	27.1	14.2	9.0	20.0	25.9	27.1	27.0
United States, 1985-1992									
Post-fisc	18.8	48.3	19.9	13.6	18.2	15.4	15.0	20.8	48.8
Pre-fisc	39.1	36.0	21.9	12.2	29.9	9.0	13.1	15.1	62.8

– Not applicable.
a) Head of household 15 to 64 years of age (throughout the panel).
b) Poverty spell duration measured as consecutive years in poverty (individuals may have repeat spells).
c) Data refer to Great Britain only.
d) Head of household 60 years or older (throughout the panel).
Source: Canada: SLID; Germany: GSOEP; United Kingdom: BHPS; United States: PSID.

spells possible per person), rather than total years spent in poverty for each person (as in the earlier analyses of short-term poverty). The left-side panel, which decomposes spells by duration, indicates that most spells are of short duration in all four countries. Spells of one year account for about 35-65% of all spells (excluding several figures for the retirement-age population). In general, higher poverty rates imply a greater incidence of long spells.

Despite the high share of short spells among total spells, the right-side panel of Table 2.11 shows that the total amount of time spent in poverty is quite heavily weighted towards long spells. Using the pre-fisc income measure for individuals in working-age households (Panel A), about one-third of the total time spent in poverty in Germany and United States is spent in spells of 7-8 years. The corresponding share for post-fisc income is only slightly lower in the United States, but falls to approximately one-fifth in Germany. In Canada, about half or more of the total time in poverty is spent in spells of 4 to 6 years (the upper limit in the SLID panel).

C. Long-term poverty transitions and repeat spells

In analyses above, a "permanent-income" measure of poverty was used, based on smoothing yearly income receipts over periods longer than a year. This measure serves the dual purpose of averaging out transitory income fluctuations and accounting for the poverty gap, or amount by which income falls short of the poverty threshold. As such, the permanent-income poverty measure

provides a more accurate indication of the burden of persistently low income than do standard measures based purely on yearly income.

The permanent-income poverty measure also relates to the incidence of repeat spells. Using a standard spell-based measure of poverty experience, an individual who is in poverty for 3 years, out for 1 year, and then back in for 4 years would be recorded having two spells of poverty, lasting 3 and 4 years. However, this pattern suggests persistent poverty in living standards over the entire period. To fully understand the persistence of poverty, an assessment of the incidence of repeat spells is necessary. Alternatively, one can examine "permanent exits" from poverty, defined as a poverty exit in a year that is not followed by a return spell of poverty.

Table 2.12 displays tabulations of (total) yearly exits, repeat spells, and permanent exits. The second column of the table displays standard exit rates, as defined in Table 2.10. In order to allow repeat spells to be observed, the sample for estimation of these rates is restricted to years 2-4 of each country panel (and years 2-3 in Canada, for which only six years of data are available). Exits followed by repeat spells are thus possible during 6 years of the 8-year panels, and choosing the first three measured exit years allows for a significant number of repeat spells to occur.[30] The third column of Table 2.12 lists the incidence of repeat spells, which are calculated as a share of exits in each year of this restricted sample. The final column lists the permanent exit rate, as defined in the preceding paragraph, calculated as a share of individuals in poverty.

The results in Table 2.12 indicate that less than one-half of exits from poverty are permanent in the sense that they do not result in a return to poverty within a relatively short time frame. Probably the most striking finding is the uniformity of this result across countries and the two income measures. For the three countries with 8-year panels, among individuals exiting poverty in a given year, about 55% to 65% of individuals from working-age households and about 65% to 85% of individuals from retirement-age households will return to poverty within 3 to 6 years. The incidence of repeat spells is more limited in the Canadian panel, but this is largely due to this panel's shorter length. Thus, as the final column of the table indicates, the share of the poverty population whose income prospects improve significantly from one year to the next is quite low. For example, within the working-age population in each country, only 10% to 20% of the poverty population in each year leaves poverty without returning within the next 2 to 6 years.

The importance of repeat spells, as documented in Table 2.12, suggests that the burden of poverty is best understood by focusing on total time spent in poverty rather than consecutive years. The tabulations displayed in Table 2.13 illustrate this point by comparing poverty duration figures based on these alternative measures of duration, using the post-fisc income measure. In general, measuring poverty duration as total years per person rather than continuous spell lengths increases the average duration slightly for Canada but about a year for the three other countries, for which 8-year panels are available; this represents a substantial increase relative to a continuous-spell average of about 2 to 3 years. The final two columns of the table show that the share of poverty durations of 4 years or more is substantially higher when poverty duration is measured as total years per person rather than continuous spell lengths. The impact of repeat spells on total years would be even greater if a longer period were analysed.

Using the continuous spell measure of poverty, Table 2.14 provides information on how the burden of poverty is distributed across individuals in households with different degrees of employment attachment or different family structures. The sample is again restricted to individuals from working-age households, and post-fisc income is used. The characteristics are defined in the first year of the panel. The results indicate that the burden of poverty – as measured by average poverty rates, average time in poverty, and the share of total time spent in poverty – falls heavily on households with no worker and households with a single adult and children present. For example, the share of total time in poverty accounted for by households consisting of a single adult with children is about two to three times as great as that group's population share in each of the four countries. Some important variation is evident across countries, however. Compared to the other three countries, a much larger proportion of poverty time in the United States is accounted for by individuals from families with one of more workers at the start of the panel: 77.4% in the United States, versus 48.0% in Canada, 58.1% in Germany and 49.5% in the United Kingdom. This result suggests that poverty is a greater problem among working families in the United States, and that policies to lift the earnings prospects of low-paid workers may be more effective there than in Canada, Germany or the United Kingdom.

D. Econometric models of expected duration and permanent-income poverty

The preceding analyses have identified important relationships between household and individual characteristics and the expected duration and severity of poverty experiences. In addition, the results in Tables 2.12-2.13 indicated that due to the incidence of repeat poverty spells, poverty persistence is better represented by total time in

Table 2.12. **Repeat poverty spells and permanent exits:[a] Canada, Germany, the United Kingdom and the United States**

	A. Working-age population[b]			
	Number of observations	Yearly exits[c] (%)	Repeat spells[d] (%)	Yearly permanent exits[e] (%)
Canada, 1993-1998				
Post-fisc	5 597	34.8	43.8	19.6
Pre-fisc	9 879	24.2	39.2	14.7
Germany, 1990-1997				
Post-fisc	506	42.0	57.0	18.1
Pre-fisc	982	24.7	50.9	12.1
United Kingdom,[f] 1990-1997				
Post-fisc	2 603	33.3	55.9	14.7
Pre-fisc	2 629	34.2	66.6	11.4
United States, 1985-1992				
Post-fisc	2 528	29.8	52.8	14.1
Pre-fisc	2 251	29.6	59.6	12.0
	B. Retirement-age population[g]			
	Number of observations	Yearly exits[c] (%)	Repeat spells[d] (%)	Yearly permanent exits[e] (%)
Canada, 1993-1998				
Post-fisc	405	52.5	24.0	39.9
Pre-fisc	4 263	6.4	54.2	2.9
Germany, 1990-1997				
Post-fisc	154	40.6	64.9	14.3
Pre-fisc	1 766	7.0	83.8	1.1
United Kingdom,[f] 1990-1997				
Post-fisc	578	37.0	70.6	10.9
Pre-fisc	1 005	32.2	74.8	8.1
United States, 1985-1992				
Post-fisc	455	19.0	77.8	4.2
Pre-fisc	977	12.4	83.1	2.1

a) Figures tabulated based on first half-sample; see text for explanation.
b) Head of household 15 to 64 years of age (throughout the panel).
c) Calculated as a share of the population in poverty.
d) Calculated as a share of exits.
e) Exits not resulting in a repeat spell, calculated as a share of the population in poverty.
f) Data refer to Great Britain only.
g) Head of household 60 years or older (throughout the panel).
Source: Canada: SLID; Germany: GSOEP; United Kingdom: BHPS; United States: PSID.

poverty (including the incidence of permanent-income poverty) than by the more standard measure of continuous poverty duration. To further identify the relationships between key characteristics and the persistence of poverty, multivariate regression models are estimated. These analyses complement the short-panel regression analyses by providing information regarding how the modelled characteristics affect expected poverty duration over longer periods. The sample periods are the same as those used for the preceding long-panel analyses, which included eight-year panels for Germany, the United Kingdom, and the United States, and a six-year panel for Canada.

The models estimated are ordered logit models for total time in poverty, and bivariate logit models for the incidence of permanent-income poverty. Ordered models are used to estimate the relationship between a set of explanatory variables and an outcome variable whose values can be represented as a limited number of discrete integers. These integer categories represent the realised categorical outcomes for an unobserved continuous (latent) variable, with higher integer values corresponding to higher values of the latent variable. In the context of total years in poverty, the latent variable can be thought of as cumulative time in poverty, with the realised values corresponding to observed years in poverty. The dependent variable used here includes zero years in poverty as a separate category, thereby ranging in value from zero to eight (six for Canada). The estimated coefficients indicate the

Table 2.13. **Distribution of continuous spells and total time in poverty: Canada, Germany, the United Kingdom and the United States**

Post-fisc income

A. Working-age population[a]

	Average duration[b]	Share of total years in poverty for periods of:			
		1 year	2 to 3 years	4 to 6 years	7 to 8 years
Canada, 1993-1998					
Continuous spells[c]	2.6	22.1	28.5	49.5	–
Total time[d]	2.8	12.2	28.3	59.6	–
Germany, 1990-1997					
Continuous spells[c]	1.9	33.9	24.9	19.2	22.0
Total time[d]	2.8	14.6	27.1	29.6	28.7
United Kingdom,[e] 1990-1997					
Continuous spells[c]	2.3	21.4	31.6	22.4	24.5
Total time[d]	3.4	8.1	22.7	35.9	33.4
United States, 1985-1992					
Continuous spells[c]	2.5	18.7	26.4	24.8	30.1
Total time[d]	3.5	8.6	18.4	34.6	38.4

B. Retirement-age population[f]

	Average duration[b]	Share of total years in poverty for periods of:			
		1 year	2 to 3 years	4 to 6 years	7 to 8 years
Canada, 1993-1998					
Continuous spells[c]	1.8	39.5	30.5	30.0	–
Total time[d]	2.0	27.7	34.9	37.4	–
Germany, 1990-1997					
Continuous spells[c]	2.2	27.9	24.4	22.7	25.0
Total time[d]	3.3	9.2	19.5	37.3	34.0
United Kingdom,[e] 1990-1997					
Continuous spells[c]	2.2	23.2	28.9	28.6	19.3
Total time[d]	3.6	7.3	21.5	38.6	32.6
United States, 1985-1992					
Continuous spells[c]	2.9	15.4	15.0	20.8	48.8
Total time[d]	4.1	5.7	16.1	23.5	54.8

– Not applicable.
a) Head of household 15 to 64 years of age (throughout the panel).
b) Average number of years in poverty for those with poverty experience.
c) Poverty spell duration measured as consecutive years in poverty (individuals may have repeat spells).
d) Poverty duration measured as total years in poverty during the period.
e) Data refer to Great Britain only.
f) Head of household 60 years or older (throughout the panel).
Source: Canada: SLID; Germany: GSOEP; United Kingdom: BHPS; United States: PSID.

effects of the explanatory variables on the probability of observing an outcome in categories indexed by higher rather than lower integer values. Because zero years in poverty is included as a separate category, the estimated coefficients indicate the effects on poverty incidence and poverty duration. The estimated coefficients are then used to predict expected total years in poverty for individuals with different characteristics. The incidence of permanent-income poverty is modelled using a bivariate logit model similar to that used for the regression analyses of short-run poverty, and the estimated coefficients are used to fit probabilities of permanent-income poverty for individuals defined by specified combinations of characteristics. The explanatory variables are identical to those used in the regression analyses from the short-run panels: age of the individual and household head, the head's educational attainment, number of workers in the household, family structure, and country. Both models are estimated using maximum likelihood.[31]

Panels A-D of Table 2.15 list the regression results for Canada, Germany, the United Kingdom, and the United States, respectively. The results largely confirm those from the short-panel regression analyses of exit rates and the probabilities of permanent-income poverty and always-poor status, as displayed in Table 2.8. Individuals who are

Table 2.14. **Poverty rates and time in poverty by work and family characteristics**[a, b]

Working-age population,[c] post-fisc income

	Sample share	Annual poverty rate	Average time in poverty[d]	Share of total time in poverty[e]
Canada, 1993-1998	**100.0**	**10.6**	**2.9**	**100.0**
Work attachment				
No worker	14.5	38.6	3.8	51.9
One worker	41.2	8.6	2.5	33.2
Two workers or more	44.3	3.3	2.0	14.8
Family type				
Single adult, no children	5.6	20.1	3.9	10.2
Two adults, no children	19.2	5.0	2.3	9.3
Single adult, children	10.4	23.0	3.3	22.4
Two adults, children	60.8	9.2	2.8	52.9
Other	4.0	13.1	2.6	5.2
Germany, 1990-1997	**100.0**	**6.0**	**2.8**	**100.0**
Work attachment				
No worker	7.4	34.0	3.4	42.0
One worker	57.6	5.1	2.7	48.7
Two workers or more	35.0	1.6	1.6	9.4
Family type				
Single adult, no children	11.9	10.3	3.1	20.4
Two adults, no children	11.2	3.4	2.9	6.4
Single adult, children	9.7	18.3	3.3	29.6
Two adults, children	62.1	3.7	2.3	38.0
Other	5.1	6.7	2.4	5.7
United Kingdom,[f] 1990-1997	**100.0**	**12.9**	**3.4**	**100.0**
Work attachment				
No worker	13.7	47.1	4.8	50.5
One worker	42.2	11.4	2.8	37.1
Two workers or more	44.2	0.0	2.3	12.4
Family type				
Single adult, no children	4.1	12.4	3.4	4.0
Two adults, no children	15.7	5.3	2.9	5.9
Single adult, children	9.6	35.6	4.4	26.9
Two adults, children	68.6	11.6	3.2	62.0
Other	2.1	8.0	2.2	1.2
United States, 1985-1992	**100.0**	**14.5**	**3.5**	**100.0**
Work attachment				
No worker	6.4	54.5	5.4	24.6
One worker	48.8	16.2	3.5	54.4
Two workers or more	44.8	7.0	2.6	21.0
Family type				
Single adult, no children	9.5	13.7	3.1	8.9
Two adults, no children	12.3	6.5	3.1	5.3
Single adult, children	11.4	36.4	4.7	29.4
Two adults, children	65.5	12.4	3.3	55.4
Other	1.4	11.1	2.1	1.0

a) Characteristics defined at the beginning of the period.
b) Sample restricted to persons present in all waves.
c) Head of household 15 to 64 years of age (throughout the panel).
d) Average number of years for those with poverty experience.
e) Share of total time in poverty by individuals with the indicated characteristics; figures sum to 100% across work or family type categories.
f) Data refer to Great Britain only.
Source: Canada: SLID; Germany: GSOEP; United Kingdom: BHPS; United States: PSID.

children and are from families in which the head is young, has low educational attainment, is single, and in which there are few workers face more years in poverty and a greater probability of permanent-income poverty than do other individuals. The number of workers in the family has the most pronounced effect on the poverty outcomes listed. In contrast to the short-panel analyses, however, individuals in families headed by a single adult with children face significantly higher poverty risks than do individuals in two-parent families. Children face greater risks of poverty

Table 2.15*a*. **Estimated effects of individual and family characteristics on total time in poverty and the probability of permanent-income poverty: Canada, 1993-1998**[a]

Estimates from multivariate regressions

	Expected total time in poverty (years)[b]	Permanent-income poor (probability as percentage rate)[c]
Reference person[d]	0.5	6.3
Age of person (reference person = working age)		
Child (less than 18 years)	0.6**	6.6
Retirement age (older than 65 years)	0.5	6.3
Age of head (reference person = 31-50 years)		
Young adult (30 years or younger)	0.7***	7.6*
Older working age (51-65 years)	0.5	6.0
Retirement age (older than 65 years)	0.2***	3.0***
Education of head (reference person = medium)		
Low (less than upper secondary degree)	0.8***	11.1***
High (tertiary degree)	0.3***	4.1***
Number of workers in household (reference person = one)		
None	1.7***	30.3***
Two or more	0.3***	2.4***
Family structure (reference person = two adults with children)		
Single adult, no children	0.6*	6.8
Two adults, no children	0.3***	1.9***
Single adult with children	0.8***	8.1**
Other family types	0.7***	6.5
Extreme cases[e]		
Child in family with young single head	1.1***	10.1***
Child in family with young single head, head low education, no workers in family	3.5***	57.8***
Number of observations	20 431	20 431
Log likelihood	–16 326.8	–4 539.3

* , ** and *** denote differences from the reference person that are statistically significant at 10%, 5% and 1% levels respectively.

a) Characteristics measured in the first sample year.

b) Based on fitted probabilities from an ordered logit model of total years spent in poverty (0 to 6), estimated by maximum likelihood.

c) Fitted probabilities from a logit model estimated by maximum likelihood.

d) The reference person is a working-age adult living in a family with two adults and children. The household contains one worker and its head has a medium-level education and is between the ages of 31 and 50 years.

e) The extreme cases differ from the reference person by the characteristics indicated.

Source: SLID.

Table 2.15*b*. Estimated effects of individual and family characteristics on total time in poverty and the probability of permanent-income poverty: Germany, 1990-1997[a]

Estimates from multivariate regressions

	Expected total time in poverty (years)[b]	Permanent-income poor (probability as percentage rate)[c]
Reference person[d]	0.2	1.2
Age of person (reference person = working age)		
Child (less than 18 years)	0.2***	2.0
Retirement age (older than 65 years)	0.1*	1.5
Age of head (reference person = 31-50 years)		
Young adult (30 years or younger)	0.4***	2.3
Older working age (51-65 years)	0.1*	0.6
Retirement age (older than 65 years)	0.1*	0.4**
Education of head (reference person = medium)		
Low (less than upper secondary degree)	0.4***	3.4**
High (tertiary degree)	0.2***	0.4*
Number of workers in household (reference person = one)		
None	0.9***	6.5***
Two or more	0.1***	0.1
Family structure (reference person = two adults with children)		
Single adult, no children	0.2	1.9
Two adults, no children	0.1***	0.7
Single adult with children	0.4***	4.0***
Other family types	0.2	0.7
Extreme cases[e]		
Child in family with young single head	1.1***	11.8***
Child in family with young single head, head low education, no workers in family	4.7***	68.3***
Number of observations	5 490	5 490
Log likelihood	–3 736.3	–697.6

* , ** and *** denote differences from the reference person that are statistically significant at 10%, 5% and 1% levels respectively.

a) Characteristics measured in the first sample year.

b) Based on fitted probabilities from an ordered logit model of total years spent in poverty (0 to 8), estimated by maximum likelihood.

c) Fitted probabilities from a logit model estimated by maximum likelihood.

d) The reference person is a working-age adult living in a family with two adults and children. The household contains one worker and its head has a medium-level education and is between the ages of 31 and 50 years.

e) The extreme cases differ from the reference person by the characteristics indicated.

Source: GSOEP

Table 2.15*c*. **Estimated effects of individual and family characteristics on total time in poverty and the probability of permanent-income poverty: United Kingdom,[a] 1990-1997[b]**

Estimates from multivariate regressions

	Expected total time in poverty (years)[c]	Permanent-income poor (probability as percentage rate)[d]
Reference person[e]	0.7	4.9
Age of person (reference person = working age)		
Child (less than 18 years)	1.1***	7.5***
Retirement age (older than 65 years)	0.8	9.8**
Age of head (reference person = 31-50 years)		
Young adult (30 years or younger)	1.5***	11.1***
Older working age (51-65 years)	0.6**	2.7***
Retirement age (older than 65 years)	0.4***	1.5***
Number of workers in household (reference person = one)		
None	2.5***	35.4***
Two or more	0.3***	1.0***
Family structure (reference person = two adults with children)		
Single adult, no children	0.6*	4.8
Two adults, no children	0.3***	1.5***
Single adult with children	1.1***	5.4
Other family types	0.3***	0.8***
Extreme cases[f]		
Child in family with young single head	2.9***	17.7***
Child in family with young single head, no workers in family	5.6***	69.6***
Number of observations	8 127	8 127
Log likelihood	–8 695.2	–1 743.0

* , ** and *** denote differences from the reference person that are statistically significant at 10%, 5% and 1% levels respectively.

a) Data refer to Great Britain only.

b) Characteristics measured in the first sample year. Data include no information on the household head's educational attainment.

c) Based on fitted probabilities from an ordered logit model of total years spent in poverty (0 to 8), estimated by maximum likelihood.

d) Fitted probabilities from a logit model estimated by maximum likelihood.

e) The reference person is a working-age adult living in a family with two adults and children. The household contains one worker and its head is between the ages of 31 and 50 years.

f) The extreme cases differ from the reference person by the characteristics indicated.

Source: BHPS

Table 2.15*d*. Estimated effects of individual and family characteristics on total time in poverty and the probability of permanent-income poverty: United States, 1985-1992[a]

Estimates from multivariate regressions

	Expected total time in poverty (years)[b]	Permanent-income poor (probability as percentage rate)[c]
Reference person[d]	1.1	8.3
Age of person (reference person = working age)		
Child (less than 18 years)	1.5***	14.4***
Retirement age (older than 65 years)	1.2	8.8
Age of head (reference person = 31-50 years)		
Young adult (30 years or younger)	2.0***	16.6***
Older working age (51-65 years)	0.8***	6.3
Retirement age (older than 65 years)	0.7***	5.2
Education of head (reference person = medium)		
Low (less than upper secondary degree)	2.5***	25.5***
High (tertiary degree)	0.5***	2.7***
Number of workers in household (reference person = one)		
None	2.9***	32.9***
Two or more	0.6***	3.3***
Family structure (reference person = two adults with children)		
Single adult, no children	1.1	7.9
Two adults, no children	0.5***	2.9***
Single adult with children	1.8***	17.1***
Other family types	1.1	3.4*
Extreme cases[e]		
Child in family with young single head	3.5***	45.5***
Child in family with young single head, head low education, no workers in family	7.0***	94.5***
Number of observations	6 143	6 143
Log likelihood	–6 825.4	–1 561.7

* , ** and *** denote differences from the reference person that are statistically significant at 10%, 5% and 1% levels respectively.

a) Characteristics measured in the first sample year.

b) Based on fitted probabilities from an ordered logit model of total years spent in poverty (0 to 8), estimated by maximum likelihood.

c) Fitted probabilities from a logit model estimated by maximum likelihood.

d) The reference person is a working-age adult living in a family with two adults and children. The household contains one worker and its head has a medium-level education and is between the ages of 31 and 50 years.

e) The extreme cases differ from the reference person by the characteristics indicated.

Source: PSID.

in general in all four countries, although the effect is small in Canada and Germany. The table also lists poverty risks for individuals with combinations of characteristics that all increase the risk. The first extreme case – a child in a family with a young single head – combines adverse demographic characteristics, which leads to a substantial net increase in poverty risk. The inclusion of earnings-related characteristics in the final row – head's education and the number of workers in the household – is associated with especially large increases in poverty risks. In each of the four countries, an individual defined by the complete set of extreme (poverty-inducing) characteristics is very likely to spend more than half of the sample period in poverty and faces a risk of permanent-income poverty that is greater than 50%. In the United States, such an individual is likely to spend 7 of the 8 sample years in poverty and almost certainly face a long-term living standard that is below the poverty threshold on average.

Conclusions

The chapter's analysis of poverty dynamics suggests an overall paradox that has important implications for policy making: poverty is both fluid and characterised by long-term traps. Most poverty spells are short and many short spells appear to represent transitory set-backs for persons with adequate income over the longer-term. However, the typical year spent in poverty is lived by persons who experience multiple years of poverty – often as a consequence of repeat spells – and whose long-term incomes are less than one-half the national median value. While relatively few persons are continuously poor for an extended period of time, many of those observed in poverty in a given year are permanent-income poor. Although the two faces of poverty are evident in all of the countries analysed, countries with higher poverty rates as conventionally measured (*i.e.* with respect to annual incomes), are also characterised by greater poverty persistence. Anti-poverty programmes need to reflect this fundamental heterogeneity within the poverty population, while also taking account of differences in national starting points.

Family structure, job status and other individual characteristics are clearly related to the risks of falling into and remaining in poverty. These relationships can inform policy design, but it is important to distinguish between *transitions* in labour market and demographic status that are associated with poverty transitions, and enduring labour market and demographic *states* that are associated with persistent poverty. For example, although job loss and gain appear to be associated with many poverty transitions, female headship and low education appear to be more strongly associated with persistent poverty. A complicating factor is that countries differ significantly in the extent to which poverty – especially persistent poverty – is concentrated on these "high-risk" groups, due to variations in both the strength of the association between these characteristics and poverty risks and the sizes of these groups relative to the total population. One important lesson that emerges is that household types with above-average poverty rates can nonetheless constitute a small share of the population of concern for anti-poverty programmes. For example, persons living in female-headed and single-parent households are everywhere a minority of the poverty population, despite facing elevated risks. Consequently, in targeting anti-poverty measures it is important not to focus exclusively on "high-risk" populations. Households with a male head and those with one or more workers do not show up among the high-risk groups, yet they account for the majority of the permanent-income poor population in EU member states, Canada and the United States.

The empirical analyses show that changes in employment status are associated with many poverty transitions and that the extent to which the working-age poor – including the permanent-income poor – work is considerably increased when intermittent work over a multi-year period is taken into account. This is in line with the general thrust of employment-oriented social policy, but also suggests that these policies should not be limited to the objective of placing poor adults into jobs. Many of the poor hold low-paid jobs or cycle between short-lived jobs and non-employment, rather than being continuously excluded from the labour market. Accordingly, an effective employment-oriented social policy should also pursue the objects of insuring income adequacy among working households, improving employment retention among poverty exiters, and helping low-paid workers to move up job ladders. As regards income adequacy, the empirical analysis confirms the finding of earlier studies that a more extensive welfare state, as well as directing a greater share of social spending to low-income households, reduces poverty in a single year, but extend that finding with evidence that these types of public transfers also t end to decrease poverty persistence. When these transfer payments take the form of in-work benefits, they can also reinforce incentives for increased employment. Much less is known about how to improve employment retention or minimise low-pay traps [Freedman (2000)]. Measures targeted directly at low-income individuals in low-paid or precarious jobs, such as access to training, clearly deserve attention, but indirect measures encouraging high levels of labour demand and better paying jobs may also make an important contribution to an overall strategy to ameliorate poverty.

NOTES

1. This approach is standard in the research literature [see Oxley *et al.* (2000) and the sources cited there]. Studying poverty dynamics at the level of individuals has two advantages. The first advantage is normative: when assessing the extent of poverty, larger families receive greater weight than smaller families. The second advantage is analytical: the poverty status of individuals can be traced over time, whereas it is often unclear how to define changes over time in the poverty status of family units when family structure changes (*e.g.* through marriage or divorce).
2. This scale was introduced by Hagenaars *et al.* (1994) and allocates a weight of 1.0 to the first adult in the household, a weight of 0.5 to all additional household members aged 14 years and over, and a weight of 0.3 to all children under the age of 14 years.
3. Household equivalised income has several potentially important limitations as an estimate of potential consumption. First, it implicitly assumes that household resources are shared equally among all members of the household. Second, no account is taken of consumption not requiring market purchases, such as publicly funded consumption (*e.g.* health care or educational services available free of charge to all citizens) or consumption based on transfers made within extended families.
4. Two limitations of the permanent-income poverty measure should be noted. First, families may not always be able to insulate current consumption levels from temporarily low incomes, even if income averaged over multiple years appears to be adequate. Second, the empirical analysis in this chapter uses simple averages of income over 3- to 8-year periods to estimate permanent income. A fuller analysis would adopt a longer time horizon, incorporate time discounting and differentiate between predictable and unpredictable changes in income.
5. Using a long panel from the United States, Stevens (1999) found that many individuals who exit poverty undergo repeat spells within a relatively short time frame.
6. For example, Oxley *et al.* (2000) analysed data for only six, relatively high-income OECD countries: Canada, Germany, the Netherlands, Sweden, the United Kingdom and the United States.
7. Austria joined the ECHP in the second wave and Finland in the third wave. Sweden does not participate in the ECHP.
8. The underlying surveys are the Survey on Labour and Income Dynamics (SLID) for Canada, the German Socio-Economic Panel (GSEOP) for Germany, the British Household Panel Survey (BHPS) for the United Kingdom, and the Panel Study of Income Dynamics (PSID) for the United States. For these files, the CNEF staff have analysed and recoded key variables to provide consistent definitions across the surveys. Observations corresponding to the low-income oversample for the United States and the foreign oversample for Germany were excluded from the analyses presented here. Note that the BHPS data do not include Northern Ireland and that country references to the United Kingdom in Section III of this chapter should be understood as referring to data for Great Britain only.
9. This will be the case if attrition affects the short-term poor about as strongly as the persistently poor. *A priori*, it is not clear which group would be the most difficult to track. The former are undergoing important changes in their economic status, which may be associated with events such as marriage and migration that reduce the probability of successful re-interview. However, the latter will tend to be under greater economic stress, which may interfere with continuing survey participation.
10. Among the ECHP countries, underreporting of incomes appears to be greater in several southern countries. For this and additional reasons, Eurostat (2000*b*) cautions against making international comparisons of income levels estimated from the ECHP.
11. Although the American data are available through income year 1996, the data for income years 1993-1996 are based on the PSID early-release files. These require more pre-analysis and cleaning than the final-release PSID files. In addition, the PSID switched to telephone and computer-aided survey techniques beginning in survey year 1993 (income year 1992), which may have affected the pattern of income reporting. Examination of the PSID data revealed that the variance of income and measured poverty rates increased sharply beginning in the first year of the early-release files (income year 1993), which suggests lack of panel comparability across the final-release and early-release files.
12. In all of the sample countries, business-cycle conditions are roughly similar during the periods considered, corresponding to an economic expansion.
13. See Sen (1976) for discussion. Letting H = the headcount (percentage of the population in poverty), I = the percentage average poverty income gap, and G = the Gini coefficient for incomes of the poor, the Sen index P is:
$P = H[I + (1 – I)G]$.
14. Without this normalisation, the units of measurement of the partial and full Sen indices would not be comparable to that of the headcount poverty rate.
15. The ECHP averages are calculated as population-weighted averages of the individual country figures.
16. More precisely, the "permanent-income poverty" rate is defined as the share of individuals whose average income in the three years is below the average of the poverty thresholds

in the three years. In more formal terms, such a measure also would account for the extent of inflation during the sample period; however, auxiliary tabulations verified that in practice accounting for inflation has only a small impact on measured permanent-income poverty. Also, the permanent-income approach to consumption and well-being accounts for discounting based on interest rates, under the assumption that capital markets enable unconstrained borrowing and lending by households. This assumption may be problematic for households at risk of poverty.

17. Eurostat has adopted 60% of median equivalent disposable income as its primary poverty threshold.

18. There is a slight imprecision here in speaking of "spell durations", since some of the persons with two years of poverty may have had two one-year spells during the three-year period (*i.e.* in the first and third years). Furthermore, completed spell lengths are underestimated because no adjustment is made for either left or right truncation bias.

19. For simplicity, household characteristics are measured at the start of the period (*i.e.* 1993 for the ECHP countries and Canada and 1987 for the United States). Some of these characteristics can change over the course of the three-year period, as is emphasised in the next subsection, which analyses the links between changes in family- and job-related characteristics and changes in poverty status.

20. These two groups do, however, account for over 40% of the always poor in the United States. There is, of course, considerable overlap between the two groups.

21. There is considerable variation among the ECHP countries in the overlap between employment and poverty. In five of these countries (Belgium, Denmark, France, Ireland and the United Kingdom), a majority of the permanent-income poor are members of households in which no adult worked for a major part of 1993.

22. The sharp differences between the figures tabulated using the ECHP and those for Canada and the United States, using the CNEF, may be due in part to differences in survey design. For example, the ECHP may not track families that split as closely as the PSID and SLID. Auxiliary tabulations indicated similar overall rates of family structure change in the ECHP and CNEF samples for countries present in both samples (Germany and the United Kingdom), although the CNEF shows more family structure changes associated with poverty transitions for those countries.

23. It is possible that this difference is due – at least in part – to differences between the ECHP and the PSID and SLID in the survey questions used to estimate annual months worked. Employment tabulations from the ECHP are based on information concerning months spent on different activities, whereas employment tabulations from the PSID and SLID are based on a variable measuring hours worked.

24. The motivation for identifying relevant macro factors is not simply that of correct model specification in the econometric analysis of the micro-data. It is also possible that indirect policies, such as enhancing the overall employment rate in a country, might be an important component of a comprehensive anti-poverty strategy.

25. The independent variables are measured as indicator ("dummy") variables that take the value 0 or 1. Although other functional forms (most notably the probit) also are commonly used to estimate such models, the estimation results for dependent variables with expected values that do not lie close to 0 or 1 (such as those here) are relatively insensitive to functional form. Maddala (1983), Chapter 2, discusses estimation of logit and related models.

26. The above-average poverty rates of single-parent families in Chart 2.4 appear to result from their typically lower employment.

27. Tabulations from the United States Current Population Survey Annual Demographic Supplement indicate that the United States poverty rate was about three-fourths of a point to a point higher on average during income years 1993-97 than it was during income years 1985-89. See Dalaker (1999) for official US Census Bureau tabulations, or Daly and Valletta (2000).

28. For the longer panels, working-age households are defined as those where the head is under 65 and retirement-age households as those where the head is 60 or older. Because these age restrictions are imposed *throughout* the sample frame, some observations do not appear in either sub-sample. The age cut-offs were chosen to distinguish between the two sub-samples as clearly as possible while maintaining reasonable behavioural assumptions.

29. Except for the annual poverty rate, which is calculated based on individuals present in the eight separate cross-section samples, these calculations are restricted to individuals present in all eight waves of the panels. Due to sample attrition, the annual poverty rates are lower when the sample is restricted to individuals present in all waves, with the difference being especially large for Germany (see the results in the second column of Table 2.14). For Germany and the United States, the annual poverty rates reported here are close to those reported in Oxley *et al*. (2000), based on a similar sample period. However, the annual poverty rate for the United Kingdom reported in Oxley *et al.* is higher than that reported here. This difference may arise in part because the income data for the United Kingdom used by Oxley *et al*. did not account for tax payments, whereas the data for the United Kingdom used here account for direct taxes based on the methodology described in Bardasi *et al*. (1999).

30. Repeat spells become more likely as the sampling window lengthens. Note that restricting the sample to exits occurring in the first three years means that the exit rates reported in column 2 of Table 2.12 differ slightly from those in Table 2.10.

31. Greene (1997, Chapter 19) describes estimation of the ordered logit model. A probit specification also could be used, but the results are unlikely to be sensitive to this choice.

Annex 2.A

External validation of poverty estimates from the ECHP data

Section I.C noted a number of potentially serious data quality problems that could bias the chapter's analysis of poverty dynamics. Several of these issues are assessed here through comparison of annual poverty rates estimated using the ECHP data and estimates derived from other data sources. Eurostat has sponsored external validation studies of the ECHP which find that annual poverty rates calculated from the second wave are reasonably similar to estimates calculated using the poverty definition and data source preferred by national statistical authorities, in four of the five countries for which data were available [CBS (1999, 2000)]. Table 2.A.1 presents additional comparisons along these lines, which are based on a relatively consistent poverty definition and which shed light on the extent of attrition bias that results from analysing persons in all three waves of the ECHP.

Comparison of the first two columns of Table 2.A.1 provides evidence that attrition is a significant problem in the ECHP. Annual poverty rates calculated using the three waves as independent cross-sectional samples are higher in most of the countries than those calculated for persons in all three waves. Attrition bias appears to be largest in the United Kingdom, where annual poverty calculated for the longitudinal sample is 2.6 percentage points lower than the cross-sectional estimate. The United Kingdom is also the country with the highest sample attrition rates, especially between the first and second waves. Disproportionate attrition among the poverty population appears to be less pronounced in the other ECHP countries and completely absent in Greece and Portugal. As noted in the text, annual poverty rates reported in the body of the chapter are always calculated using each wave of the panel as an independent cross-sectional sample so as to avoid attrition bias. The multi-year measures of poverty dynamics are necessarily estimated using longitudinal samples. However, they need not be affected by attrition bias in the same way as are estimates of annual poverty since what matters here are differences in attrition rates between persons experiencing poverty. When CNEF data for Germany and the United Kingdom are used to calculate estimates of three-year poverty dynamics analogous to the ECHP estimates reported in Section II, the estimates differ somewhat, but most qualitative patterns remain (*e.g.* the United Kingdom still has below-average poverty persistence compared with other countries having a similar level of annual poverty).

Columns 3 and 4 of Table 2.A.1 report cross-sectional annual poverty rates from two alternative data sources, namely, the OECD questionnaire on distribution of income [Förster (2000)] and the Luxembourg Income Study (LIS) [Smeeding *et al*. (2000)]. The main value of these comparisons is to gauge the reliability of the net household income variable in the ECHP relative to that available in alternative data sources that have been more extensively evaluated

Table 2.A.1. **Alternative annual poverty rate estimates for the ECHP country sample**[a]

	ECHP data for 1993-1995[b]		Alternative data sources	
	Separate cross-sectional sample for each year	Persons in all three waves	OECD questionnaire on distribution of household incomes[c]	Luxembourg Income Study (LIS)[d]
Belgium	9.8	8.5	7.8	5.5
Denmark	4.7	4.1	5.0	7.1
France	9.6	9.0	7.5	7.4
Germany	12.1	11.1	9.4	7.5
Greece	14.5	15.0	13.9	. .
Ireland	8.2	7.6	11.0	. .
Italy	13.5	12.7	14.2	13.9
Luxembourg	7.8	6.9	. .	3.9
Netherlands	7.8	6.4	6.3	7.9
Portugal	15.3	15.4	. .	. .
Spain	12.0	11.5	. .	10.4
United Kingdom	12.1	9.5	10.9	13.2

ECHP: European Community Household Panel.
a) Poverty rates defined as per cent of persons having equivalised household income below 50% of the median value.
b) Separate poverty rates were calculated for each year and then averaged.
c) Values for either 1994 or 1995.
d) Value for a single year in the 1990s.
Source: ECHP, waves 1994, 1995 and 1996; Förster (2000), Table 5.1; Smeeding *et al*. (2000), Table A-1.

or contain larger samples. It should be noted, however, that only in the LIS does the definition of net household income include near-cash, public benefits, and the methods used to estimate direct taxes paid by households differ considerably across the three data sources. The poverty rate estimates based on the two alternative sources differ somewhat, both with respect to each other and with respect to estimates based on ECHP data. However, there does not appear to be any uniform bias in ECHP poverty rates, since they can be higher or lower than those from the other two sources. Furthermore, the overall ranking of countries is quite consistent across the different data sources.

Several implications follow for the chapter's analysis of poverty dynamics. First, estimates of the level of annual poverty are quite sensitive to the choice of data source and the precise definition and methods used to measure net household income. (This sensitivity is greatly magnified if a common, absolute poverty line is used in all countries.) Second, the larger cross-country differences in poverty rates calculated using the ECHP appear, nonetheless, to be qualitatively informative. Finally, very little can be said about whether ECHP data accurately reflect poverty dynamics, conditional on having experienced poverty. Evaluation of the quality of these estimates remains as an important topic for future research.

Annex 2.B

Robustness of poverty estimates across alternative equivalence scales and income thresholds

Table 2.B.1 presents tabulations for six key measures of poverty incidence and persistence, using four alternative definitions of poverty. The first column presents estimates using the chapter's base-case definition. Columns 2-4 present estimates calculated using different equivalence scales and income thresholds. These results are useful for assessing the robustness of the empirical results in Sections II-III. Using the square-root equivalence scale to adjust for family size, as has been done in several recent OECD studies [Förster (2000); Oxley *et al.* (1999, 2000)], produces estimates that are very close to those obtained using the modified OECD equivalence scale. By contrast, varying the poverty threshold substantially alters the level of poverty, since setting a higher income threshold causes more persons to fall below it. Poverty persistence also tends to increase with the poverty threshold. Nonetheless, the qualitative results that have been emphasised in the chapter's analysis prove quite robust to variations in the poverty threshold. When the poverty measures in Table 2.B.1 are correlated across two different thresholds, the average correlation is nearly 0.95 and almost all of the correlations exceed 0.90. In other words, international comparisons of relative poverty incidence or persistence are little affected by these variations in how poverty is defined. The profile of persons most at risk of poverty is similarly robust.

Table 2.B.1. **Robustness of poverty estimates across different equivalence scales and income thresholds, 1993-1995**

		50% median income, OECD equivalence scale	50% median income, square root equivalence scale	40% median income, OECD equivalence scale	60% median income, OECD equivalence scale
		(1)	(2)	(3)	(4)
Belgium	Annual poverty rate	9.8	9.0	5.1	15.8
	Poor at least once	16.0	14.9	9.1	23.5
	Always poor	2.8	2.5	1.1	5.8
	Permanent poor	5.2	5.0	2.0	10.6
	Entry rate	4.7	4.3	2.8	6.9
	Exit rate	48.2	49.5	56.8	40.8
Denmark	Annual poverty rate	4.7	4.7	2.4	9.1
	Poor at least once	9.1	9.2	4.7	15.9
	Always poor	0.8	0.7	0.1	2.6
	Permanent poor	1.8	2.1	0.9	5.4
	Entry rate	3.1	3.1	1.7	5.3
	Exit rate	60.4	64.4	72.8	46.5
France	Annual poverty rate	9.6	8.6	4.9	16.4
	Poor at least once	16.6	15.1	9.4	25.7
	Always poor	3.0	2.5	0.8	7.3
	Permanent poor	6.6	5.5	2.3	12.8
	Entry rate	4.6	4.2	2.6	6.7
	Exit rate	46.9	49.9	62.8	35.8
Germany	Annual poverty rate	12.1	11.6	7.8	17.2
	Poor at least once	19.2	18.4	12.9	26.1
	Always poor	4.3	4.0	2.2	7.1
	Permanent poor	8.1	7.7	4.2	13.0
	Entry rate	5.1	4.8	3.5	7.0
	Exit rate	41.1	42.0	47.1	35.4
Greece	Annual poverty rate	14.5	14.0	10.3	20.6
	Poor at least once	25.1	24.3	18.7	33.2
	Always poor	6.5	5.9	4.0	10.7
	Permanent poor	12.2	11.2	7.6	18.5
	Entry rate	6.5	6.1	4.5	8.7
	Exit rate	38.8	41.5	42.8	33.4
Ireland	Annual poverty rate	8.2	8.4	3.9	18.5
	Poor at least once	15.3	15.9	7.2	29.8
	Always poor	1.3	2.0	0.3	7.8
	Permanent poor	5.3	5.3	1.7	15.9
	Entry rate	5.0	4.4	2.6	7.7
	Exit rate	54.6	50.7	55.6	37.9
Italy	Annual poverty rate	13.5	11.7	8.6	20.6
	Poor at least once	21.5	18.9	14.6	30.9
	Always poor	5.6	4.3	2.8	10.3
	Permanent poor	10.4	8.0	5.5	17.0
	Entry rate	5.3	4.6	3.5	7.4
	Exit rate	40.6	44.3	49.2	34.1
Luxembourg	Annual poverty rate	7.8	8.0	3.7	15.6
	Poor at least once	12.7	12.9	6.4	22.9
	Always poor	2.2	2.9	0.9	7.2
	Permanent poor	5.1	4.9	1.6	12.4
	Entry rate	3.6	3.4	2.0	5.3
	Exit rate	47.4	45.2	54.7	34.2
Netherlands	Annual poverty rate	7.8	7.5	4.7	13.0
	Poor at least once	12.9	12.1	8.1	20.1
	Always poor	1.6	1.6	0.7	4.3
	Permanent poor	4.5	4.4	1.7	9.3
	Entry rate	4.2	3.8	2.7	5.8
	Exit rate	55.7	53.7	59.7	44.1

Table 2.B.1. **Robustness of poverty estimates across different equivalence scales and income thresholds, 1993-1995** *(cont.)*

		50% median income, OECD equivalence scale	50% median income, square root equivalence scale	40% median income, OECD equivalence scale	60% median income, OECD equivalence scale
		(1)	(2)	(3)	(4)
Portugal	Annual poverty rate	15.3	15.6	10.0	21.6
	Poor at least once	24.2	23.7	17.2	32.1
	Always poor	7.8	8.3	3.8	12.4
	Permanent poor	13.4	13.7	7.4	19.7
	Entry rate	5.4	4.9	3.9	7.5
	Exit rate	37.0	33.5	47.0	30.0
Spain	Annual poverty rate	12.0	11.4	7.5	19.2
	Poor at least once	21.3	20.6	14.2	31.0
	Always poor	3.7	3.5	1.9	8.3
	Permanent poor	8.7	7.8	4.4	15.7
	Entry rate	5.9	5.7	4.1	8.3
	Exit rate	49.6	51.1	56.0	39.7
United Kingdom	Annual poverty rate	12.1	12.2	5.9	19.4
	Poor at least once	19.5	19.4	10.9	28.2
	Always poor	2.4	2.7	0.5	6.3
	Permanent poor	6.5	6.7	1.8	13.1
	Entry rate	6.0	5.7	3.4	8.1
	Exit rate	58.8	56.0	74.1	43.6
ECHP average	Annual poverty rate	11.7	11.0	6.9	18.1
	Poor at least once	19.2	18.1	12.2	27.7
	Always poor	3.8	3.5	1.7	7.7
	Permanent poor	7.9	7.2	3.7	14.0
	Entry rate	5.2	4.9	3.3	7.3
	Exit rate	46.0	47.2	54.4	37.4
Canada	Annual poverty rate	10.9	11.8	6.1	17.1
	Poor at least once	18.1	19.1	11.7	25.6
	Always poor	5.1	5.5	2.1	9.5
	Permanent poor	8.9	9.7	4.6	15.2
	Entry rate	4.8	5.0	3.5	6.3
	Exit rate	36.4	35.2	46.1	28.2
United States	Annual poverty rate	16.0	16.5	10.4	22.2
	Poor at least once	23.5	23.8	16.5	30.4
	Always poor	9.5	10.0	5.4	14.3
	Permanent poor	14.5	14.9	8.8	21.2
	Entry rate	4.5	4.6	3.7	6.1
	Exit rate	29.5	27.8	35.1	23.2

ECHP: European Community Household Panel.
Source: See Table 2.1.

Annex 2.C

Characteristics of the non-poor, 1-year poor and 3-year poor: detailed table

Table 2.C.1 provides detailed information on the demographic characteristics, work attachment and educational attainment of persons never poor, poor one year, permanent-income poor, and poor three years during 1993-1995.

Table 2.C.1. Characteristics of the non-poor, shorter-term poor and longer-term poor, 1993-1995

Household characteristics[a]		Belgium					Denmark					France				
		Total population	Non-poor	Poor at least once	Permanent-income poor	Always poor	Total population	Non-poor	Poor at least once	Permanent-income poor	Always poor	Total population	Non-poor	Poor at least once	Permanent-income poor	Always poor
Head gender	Man	85.1	86.6	77.5	74.8	69.2	87.6	88.4	79.2	69.3	(67.8)	86.6	87.8	80.1	76.6	75.8
	Woman	14.9	13.4	22.5	25.2	30.8	12.4	11.6	20.8	30.7	(32.2)	13.4	12.2	19.9	23.4	24.2
Head age	Less than 30 years old	10.5	10.5	10.7	10.9	(9.9)	14.2	13.4	22.8	(31.8)	(28.7)	13.5	12.5	18.4	19.1	15.1
	31 to 50 years old	56.0	57.5	47.9	41.4	43.6	55.5	57.1	40.4	35.7	–	54.9	56.6	45.8	45.6	45.9
	51 to 65 years old	19.2	18.9	20.6	20.4	(15.8)	17.2	17.5	13.4	[32.5]	–	18.6	18.2	20.7	21.0	19.9
	Above 65 years old	14.3	13.0	20.7	27.4	30.6	13.1	12.0	23.4		(26.2)	13.0	12.6	15.0	14.4	19.1
Work attachment[b]	No worker	27.9	22.6	56.2	67.6	76.5	21.6	18.8	49.4	72.4	86.1	24.4	19.5	49.1	62.1	63.9
	One worker	33.2	33.3	32.8	28.2	17.9	30.2	30.1	31.2	(20.3)	–	38.6	38.3	39.8	33.4	33.7
	Two workers	36.8	41.6	[11.0]	–	–	42.6	45.4	14.8	–	–	34.9	39.8	10.0	3.5	–
	More than two workers	2.1	2.4		–	–	5.6	5.7	(4.6)	–	–	2.2	2.5	(1.1)	(1.1)	–
Family type	Single adult, no children	11.5	11.0	14.0	19.9	23.7	15.3	13.6	32.3	47.8	(48.8)	10.3	9.4	14.8	17.1	16.9
	Two adults, no children	19.9	19.7	21.0	22.0	19.7	26.3	26.6	23.5	(12.5)	–	20.2	20.7	17.5	13.6	15.7
	Single adult, children	8.1	7.5	11.5	(7.6)	(7.2)	5.4	5.5	(4.1)	–	–	6.8	6.1	10.1	12.5	13.6
	Two adults, children	56.8	57.9	50.8	[50.6]	[49.4]	51.5	52.8	39.4	37.4	(42.4)	58.5	59.6	52.8	52.0	47.5
	Other households	3.7	3.9	(2.7)			1.4	1.5	–	–	–	4.3	4.2	4.9	4.8	6.4
Education level[c] *of head*	Low	35.9	33.3	50.7	62.4	64.7	25.7	24.3	40.5	50.0	(73.6)	39.8	36.1	59.4	71.9	72.8
	Middle	32.4	32.6	31.6	27.2	25.1	39.4	39.6	37.7	33.6	–	40.2	41.9	31.0	21.9	21.9
	High	85.1	86.6	77.5	74.8	69.2	34.9	36.2	21.7	(16.4)	–	20.0	21.9	9.6	6.1	(5.3)

Household characteristics[a]		Germany					Greece					Ireland				
		Total population	Non-poor	Poor at least once	Permanent-income poor	Always poor	Total population	Non-poor	Poor at least once	Permanent-income poor	Always poor	Total population	Non-poor	Poor at least once	Permanent-income poor	Always poor
Head gender	Man	86.2	87.9	79.1	80.6	84.2	90.6	91.5	88.1	85.8	81.6	85.9	86.7	81.5	80.4	70.6
	Woman	13.8	12.1	20.9	19.4	15.8	9.4	8.5	11.9	14.2	18.4	14.1	13.3	18.5	19.6	(29.4)
Head age	Less than 30 years old	12.2	11.0	17.3	14.2	13.2	9.8	10.2	8.6	6.3	4.0	15.0	14.7	16.1	17.4	(12.4)
	31 to 50 years old	48.8	49.2	46.9	53.5	53.6	51.8	55.3	41.5	35.5	26.3	56.6	55.2	64.4	64.2	61.6
	51 to 65 years old	25.8	26.5	22.9	20.4	19.8	25.8	25.3	27.4	26.6	27.5	18.2	19.1	13.1	11.6	(11.0)
	Above 65 years old	13.2	13.3	12.9	11.8	13.4	12.6	9.3	22.5	31.6	42.3	10.2	11.0	6.3	6.9	(15.0)
Work attachment[b]	No worker	24.0	20.1	40.7	37.1	39.0	18.5	14.1	31.7	39.9	52.4	28.4	22.8	59.1	55.9	81.1
	One worker	39.2	40.1	35.5	36.9	31.2	51.9	50.5	56.1	53.4	43.2	44.5	46.2	35.0	40.8	(18.9)
	Two workers	31.8	34.4	20.8	22.3	26.6	25.8	30.8	10.7	5.6	[4.4]	21.4	24.5	4.3	–	–
	More than two workers	5.0	5.5	3.0	3.7	(3.2)	3.8	4.6	1.6	(1.0)		5.7	6.5	1.5	–	–
Family type	Single adult, no children	13.8	13.4	15.6	12.8	11.6	5.4	4.6	8.1	10.9	15.8	6.5	7.0	3.5	(3.9)	–
	Two adults, no children	24.3	25.9	17.4	14.9	16.5	14.8	12.7	21.0	24.9	31.5	7.6	8.3	3.8	(5.0)	–
	Single adult, children	5.1	3.8	10.5	10.0	(7.0)	4.8	5.0	4.1	4.0	(3.1)	9.2	8.2	15.0	9.6	(23.3)
	Two adults, children	52.1	52.5	50.7	56.0	61.1	58.1	61.8	47.0	40.2	29.3	67.0	66.2	71.5	70.8	62.1
	Other households	4.8	4.5	6.0	6.3	(3.8)	16.9	15.9	19.8	20.0	20.4	9.7	10.3	6.2	10.8	–
Education level[c] *of head*	Low	22.7	21.5	27.6	23.9	22.3	58.2	50.2	82.3	91.7	96.2	54.6	52.3	67.9	62.3	83.4
	Middle	48.3	48.2	48.7	49.0	44.9	23.6	27.2	12.8	6.6	2.7	31.4	31.8	28.7	35.4	–
	High	29.1	30.3	23.7	27.2	32.8	18.2	22.6	4.8	(1.6)	(1.1)	14.1	15.9	3.4	(2.3)	–

Household characteristics[a]		Italy					Luxembourg					Netherlands				
		Total population	Non-poor	Poor at least once	Permanent-income poor	Always poor	Total population	Non-poor	Poor at least once	Permanent-income poor	Always poor	Total population	Non-poor	Poor at least once	Permanent-income poor	Always poor
Head gender	Man	87.7	88.3	85.7	88.0	88.3	89.4	90.4	81.9	78.7	76.2	87.2	89.0	75.2	70.2	75.4
	Woman	12.3	11.7	14.3	12.0	11.7	10.6	9.6	18.1	21.3	(23.8)	12.8	11.0	24.8	29.8	(24.6)
Head age	Less than 30 years old	10.2	9.9	11.2	10.2	12.7	12.3	11.9	15.5	(16.8)	–	13.2	11.7	23.5	27.2	29.0
	31 to 50 years old	50.6	51.3	48.1	51.1	50.6	55.9	55.1	61.7	53.7	61.4	55.8	56.9	48.6	46.4	44.0
	51 to 65 years old	26.0	25.4	28.4	29.0	28.1	20.5	21.3	14.8	(15.6)	–	17.7	17.6	18.2	20.1	[27.0]
	Above 65 years old	13.2	13.5	12.3	9.7	8.6	11.3	11.8	(8.0)	(13.9)	–	13.2	13.7	9.7	(6.3)	
Work attachment[b]	No worker	20.7	18.0	30.9	31.1	33.2	18.8	17.7	26.6	41.4	(47.6)	..	..	..	..	..
	One worker	43.1	39.9	54.5	57.5	58.0	45.4	44.0	54.5	46.2	52.4	..	..	..	..	..
	Two workers	29.9	34.8	12.1	10.7	7.9	30.4	32.2	[18.8]	–	–	..	..	..	..	..
	More than two workers	6.3	7.3	2.6	(0.8)	(0.9)	5.5	6.1		–	–	..	..	..	..	..
Family type	Single adult, no children	6.8	6.7	7.1	4.7	(3.6)	9.4	9.5	(8.7)	–	–	13.1	12.6	16.8	20.7	(26.9)
	Two adults, no children	14.3	16.0	7.8	4.8	3.6	19.8	20.7	13.5	(19.9)	–	26.3	28.1	13.2	6.4	(7.0)
	Single adult, children	6.0	6.1	5.5	5.7	7.3	4.9	4.5	(8.1)	–	–	5.1	4.2	11.8	14.2	–
	Two adults, children	60.0	58.6	64.9	71.7	73.4	51.6	51.1	55.7	57.7	56.4	54.8	54.6	56.1	54.4	57.0
	Other households	13.0	12.5	14.7	13.1	12.1	14.2	14.3	14.0	(10.9)	–	0.7	0.5	(2.1)	(4.3)	–
Education level[c] *of head*	Low	60.1	55.3	78.7	84.7	86.5	51.7	49.5	66.9	64.0	52.3	18.4	17.0	28.0	31.7	24.7
	Middle	30.9	34.4	17.7	12.1	10.9	29.4	30.7	20.4	27.5	[47.7]	60.5	59.9	64.4	63.8	[75.3]
	High	8.9	10.3	3.7	3.2	(2.6)	18.9	19.8	12.8	(8.5)		21.1	23.0	7.6	(4.5)	

Table 2.C.1. **Characteristics of the non-poor, shorter-term poor and longer-term poor, 1993-1995** *(cont.)*

		Portugal					Spain					United Kingdom				
		Total population	Non-poor	Poor at least once	Permanent-income poor	Always poor	Total population	Non-poor	Poor at least once	Permanent-income poor	Always poor	Total population	Non-poor	Poor at least once	Permanent-income poor	Always poor
Head gender	Man	88.2	90.0	82.5	81.5	81.0	87.9	88.0	87.3	87.9	83.6	84.9	88.0	72.5	66.9	62.7
	Woman	11.8	10.0	17.5	18.5	19.0	12.1	12.0	12.7	12.1	16.4	15.1	12.0	27.5	33.1	37.3
Head age	Less than 30 years old	10.0	10.7	7.8	4.5	3.6	13.1	12.6	14.8	12.0	13.6	15.2	14.1	19.9	22.8	16.9
	31 to 50 years old	52.8	54.6	47.4	48.5	47.5	51.1	50.7	52.5	58.1	55.1	51.5	52.9	45.7	45.4	46.6
	51 to 65 years old	25.3	25.8	23.5	24.3	25.7	24.7	24.2	26.8	25.2	26.7	19.5	20.8	14.1	10.5	(9.1)
	Above 65 years old	11.9	8.9	21.2	22.7	23.2	11.1	12.5	5.9	4.7	4.5	13.7	12.2	20.2	21.3	27.3
Work attachment[b]	No worker	16.4	8.3	41.8	47.6	49.9	23.7	18.9	41.4	49.2	50.0	24.5	17.6	53.1	65.5	68.8
	One worker	32.7	31.0	38.3	39.9	40.5	48.7	48.7	48.7	45.8	45.7	32.1	31.3	35.4	30.7	26.7
	Two workers	37.7	45.1	14.7	10.8	7.2	23.7	27.8	8.5	4.1	[4.3]	37.0	43.6	9.8	[3.8]	–
	More than two workers	13.1	15.6	5.2	(1.7)	(2.4)	3.9	4.6	1.3	(0.8)		6.4	7.5	(1.6)		–
Family type	Single adult, no children	3.7	2.3	8.0	9.0	10.9	3.8	4.2	2.3	2.3	(3.5)	11.3	9.8	17.4	18.1	25.7
	Two adults, no children	11.1	9.7	15.3	17.7	17.0	11.2	12.3	7.2	5.1	(4.4)	23.9	25.6	16.9	15.0	17.8
	Single adult, children	6.8	6.0	9.3	8.2	6.8	6.5	6.2	7.8	6.9	9.5	7.8	6.0	15.5	18.1	14.6
	Two adults, children	60.9	63.8	51.6	48.7	49.9	62.5	61.3	67.1	71.3	68.9	52.5	53.8	47.5	46.2	[41.8]
	Other households	17.5	18.1	15.8	16.5	15.4	15.9	16.0	15.6	14.4	13.6	4.5	4.9	2.7	(2.6)	
Education level[c] *of head*	Low	86.4	83.1	96.5	97.0	97.9	66.8	62.4	83.0	87.0	88.2	41.0	37.5	55.4	65.1	70.5
	Middle	7.7	9.2	2.8	[3.0]	[2.1]	14.2	15.3	10.3	9.2	7.6	33.2	33.1	34.0	28.9	[29.5]
	High	5.9	7.6	(0.7)			19.0	22.4	6.6	3.8	4.3	25.8	29.5	10.7	6.0	

		All ECHP countries					Canada					United States[d]				
		Total population	Non-poor	Poor at least once	Permanent-income poor	Always poor	Total population	Non-poor	Poor at least once	Permanent-income poor	Always poor	Total population	Non-poor	Poor at least once	Permanent-income poor	Always poor
Head gender	Man	86.7	88.1	80.7	80.5	80.9	87.2	90.0	79.7	75.9	64.2	82.2	87.5	76.1	60.2	53.7
	Woman	13.3	11.9	19.3	19.5	19.1	12.8	10.0	20.3	24.2	35.8	17.8	12.5	23.9	39.8	46.3
Head age	Less than 30 years old	12.6	11.9	15.8	14.5	13.0	14.6	13.4	18.4	17.3	25.7	17.0	13.0	30.7	35.3	29.9
	31 to 50 years old	51.7	52.7	47.5	49.9	49.1	63.2	64.0	61.0	62.6	53.7	50.7	53.7	42.6	38.3	38.1
	51 to 65 years old	22.7	22.8	22.4	21.9	22.1	18.4	18.3	18.1	18.0	19.5	19.4	21.2	15.4	14.5	10.3
	Above 65 years old	13.0	12.7	14.2	13.8	15.8	3.8	4.2	2.5	2.2	1.1	13.0	12.2	11.2	11.9	21.7
Work attachment[b]	No worker	23.3	18.6	42.6	46.4	47.7	19.1	12.6	35.6	51.8	67.6	18.0	13.4	18.0	23.1	54.6
	One worker	39.6	38.9	42.3	41.9	40.0	39.9	40.9	39.1	37.6	27.1	42.0	41.4	47.2	53.6	36.5
	Two workers	32.1	36.8	13.0	10.2	11.0	35.8	40.6	20.2	9.8	5.2	35.1	39.4	30.6	20.6	8.7
	More than two workers	5.0	5.7	2.1	1.5	1.2	5.3	5.9	5.2	0.8	0.1	5.0	5.8	4.2	2.7	0.2
Family type	Single adult, no children	9.8	9.3	12.0	11.2	11.8	6.5	5.7	7.0	9.9	15.3	13.1	11.0	21.2	16.0	22.7
	Two adults, no children	19.6	20.8	14.2	11.8	12.8	24.3	26.3	20.7	13.0	7.0	21.2	24.2	13.2	9.9	8.1
	Single adult, children	6.3	5.5	9.8	9.8	8.8	10.1	7.8	16.6	18.9	27.8	10.0	6.4	12.2	29.1	29.5
	Two adults, children	56.5	56.8	55.2	58.1	58.1	54.3	55.5	49.5	52.2	44.5	54.0	56.6	50.9	44.0	39.1
	Other households	7.8	7.5	8.8	9.0	8.6	4.9	4.7	6.2	6.1	5.4	1.7	1.8	2.6	1.1	0.6
Education level[c] *of head*	Low	43.1	39.5	58.9	65.1	66.4	30.4	27.5	35.5	46.7	54.5	17.7	11.9	23.1	41.0	50.1
	Middle	35.5	36.9	29.8	25.2	22.8	15.7	15.8	14.8	13.3	18.4	35.8	35.2	42.6	38.1	34.3
	High	21.3	23.7	11.3	9.7	10.8	53.9	56.8	49.8	40.0	27.1	46.5	52.9	34.4	20.9	15.6

ECHP: European Community Household Panel.
. . Data not available.
– Estimates not reported due to fewer than 10 observations.
(Estimates based on less than 30 observations).
[Combined value for the two categories].
a) Characteristics defined at the begining of the period.
b) In the ECHP, an individual is classified as "employed" in a given year if the number of months employed equals or exceeds the number of months he spent not working. For Canada and the United States, the definition is based on having worked at least 1 000 hours in a given year.
c) Low education is less than upper secondary education, middle is completed upper secondary education, high is tertiary level education.
d) Data refer to 1987-1989.
Source: ECHP, waves 1994, 1995 and 1996 for EU countries; SLID for Canada; PSID for the United States.

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Chapter 3

THE CHARACTERISTICS AND QUALITY OF SERVICE SECTOR JOBS

Summary

The share of employment in services continued to rise in virtually all OECD countries over the 1990s, approaching nearly three-quarters of all jobs in several countries. This has coincided with significant change in the types of jobs being created. In several countries, the incidence of part-time and temporary work rose and, in some, there was a decline in job stability. A few countries also experienced a long-run rise in earnings inequality. These developments have led to a vigorous debate about the quality of service sector jobs. Therefore, this chapter explores the relationship between changes in employment by sector and changes in the characteristics and quality of the jobs that are being created.

Jobs vary considerably across sectors when compared in terms of the incidence of part-time and temporary work arrangements, average length of job tenure, and the incidence of training. But there is also a striking variation in these job characteristics across countries and over time. The fact that differences in employment structures account for relatively little of this variation suggests that other factors play an important role. These factors include various institutional settings such as the strength of employment protection legislation, the degree of collective bargaining coverage, the existence of statutory wage floors, etc., as well as the distribution of worker characteristics within each country by age, gender and skill level.

Comparisons of job quality based on measures of working conditions, job satisfaction and pay, reveal no simple dichotomy between the goods-producing sector and the service sector. Good jobs are not primarily located in the former and bad jobs in the latter. Jobs in hotels and restaurants generally rank poorly across a range of job quality measures. On the other hand, jobs in the goods-producing sector are more likely to be associated with poor working conditions than in many service industries and with lower levels of job satisfaction.

A number of key findings emerge from the analysis of employment levels and growth by wage level. First, the higher overall employment rate in the United States than in most other OECD countries cannot be solely attributed to a "surplus" of low-paying service jobs; in most instances, it has more high-paying service jobs as well. Second, while strong growth in service sector employment in the United States over the 1990s was accompanied by some growth in low-paid jobs, a much larger expansion took place in jobs in relatively high-paying occupations and industries. Third, Europe experienced slower growth in employment at all wage levels, but with considerable variation across countries. As in the United States, employment grew fastest in high-paying jobs in most European countries.

The configuration of policies that will be appropriate for each country in terms of addressing issues of job quality will depend on its initial situation. Countries with a relatively high incidence of jobs involving low pay and poor working conditions can provide income supplements for low-paid workers and can seek to reduce differences in entitlements between workers in "standard" and "non-standard" jobs. Ultimately policies are required which encourage individuals and firms to invest more in skills acquisition. On the other hand, for countries wishing to improve their employment performance, the solution is not simply to stimulate job creation in poorly-paid service sector jobs but to implement a broad range of policies designed to stimulate employment more generally.

Introduction

As documented in last year's chapter on the service economy [OECD (2000)], the share of employment in services continued to rise in virtually all OECD countries over the 1990s, approaching nearly three-quarters of all jobs in several countries. This has coincided with a number of significant changes in the types of jobs that are being created which has led to a vigorous debate about the quality of service sector jobs. In many countries, the incidence of part-time and temporary work has risen over time [OECD (1996, 1999)] and, in some, there has been a decline in job stability [OECD (1997)]. A few countries have also experienced a long-run rise in earnings inequality, most notably in the United States [OECD (1996)].

Last year's chapter on services also included a sectoral analysis of the characteristics of workers by age, gender and educational attainment. This chapter is mainly concerned with the characteristics of jobs as such, and how they have been affected by the shift in employment from manufacturing to services. Of course, both job and worker characteristics are intimately related. In fact, perceptions about job quality are likely to be strongly influenced by how well workers are matched with their job. That is, on the extent to which a job's skill requirements, working arrangements, pay and hours of work correspond to the jobholder's own skills, preferences and expectations. Thus, the same job may be considered bad by one worker but good by another worker. This interrelationship between the characteristics of workers and the characteristics of their jobs means that any measure of job quality needs to be interpreted with caution before a job can be classified as being either "bad" or "good". For example, a part-time job may involve either a voluntary or involuntary choice and so in-and-of itself is neither a good nor a bad job.

Given these difficulties in measuring job quality, the main purpose of this chapter is not simply to identify poor jobs as such, and where they are found, but to explore more generally the relationship between changes in the distribution of employment by sector and changes in the types of jobs that are being created. There are a number of questions that the chapter seeks to answer. Are there systematic differences in the types of characteristics that are associated with jobs in each sector? How has the growth of service sector employment contributed to differences over time and across countries in the characteristics and quality of jobs? Is there a trade-off between job quality and employment performance?

As a starting point, the first section surveys the current structure of goods-producing and service sector jobs according to a number of objective job characteristics, including the incidence of part-time and temporary work, average job tenure and the incidence of training. It then examines the extent to which differences in these job characteristics between countries and over time can be explained by variations in the distribution of employment by sector. As discussed in the section, there are a number of potential problems in using these job characteristics as proxy measures of job quality. Therefore, job quality is measured more directly in Section II based on the perceptions of jobholders themselves of their working conditions and job satisfaction. Using these measures, the quality of jobs is compared between sectors, but within countries. A complementary and perhaps broader way of measuring job quality is to simply look at how much a job pays. Section III first examines earnings differentials by sector. This is followed by a comparison across countries of employment levels and job growth in terms of whether jobs are low-paid, medium-paid or high-paid. The final section draws together the main results and considers some implications for policy.

Main findings

The chapter's main findings are:

- The incidence of part-time work is substantially higher in the service sector than in the goods-producing sector, but the incidence of temporary work is more uniform across both sectors. Average job tenure varies considerably within the service sector, but on the whole is somewhat lower than in the goods-producing sector. The incidence of continuing vocational training, on the other hand, is higher in the service sector, especially in the producer and social service sectors.
- Differences in employment structure appear to account for only a small part of the large variation across countries and over time in the overall incidence of part-time and temporary work and in average job tenure. Other factors, such as institutional settings and workforce characteristics, would appear to be more important in accounting for this variation.
- Comparisons of job quality based on measures of working conditions, job satisfaction and pay, reveal no simple dichotomy between the goods-producing sector and the service sector. Each has both good and bad jobs and the ranking of sectors, both at the broad sectoral level and at a more detailed level, varies according to which measure of job quality is used. Within the service sector, however, some jobs in the personal services sector are consistently of poorer quality than jobs in either the goods-producing sector or the rest of the service sector. On

the other hand, agricultural and construction jobs often have poorer working conditions as well.

- The United States has a higher overall employment rate than in many other OECD countries not just because it has a higher proportion of its working-age population employed in poorly-paid service sector jobs. It also has a higher proportion employed in service jobs that are well paid on average.
- Job growth in most countries over the 1990s, including the United States, took place principally in high-paying service sector jobs rather than low-paying ones. However, despite strong growth in some countries, Europe as a whole experienced slower employment growth than the United States at all wage levels.
- The implications for policy will depend on the initial situation of countries. Countries with a high incidence of poor quality jobs need ultimately to focus on measures to improve education and training. In other countries, where there is more of a concern to improve employment performance the solution is not simply to increase the provision of low-wage service jobs, but to lower barriers to job creation more generally.

I. Part-time work, temporary work, job tenure and training

A. Sectoral classification

The analysis in this section uses the same sectoral classification as was used in last year's chapter on services [OECD (2000)]. Nine broad sectors are identified comprising 21 sub-sectors. The correspondence between these sectors and the ISIC rev. 3 and NACE rev. 1 codes is shown in Table 3.A.1. This classification was also used for the analysis of earnings differentials by sector in Section II. However, due to data constraints, it was not possible to use this same classification uniformly throughout the chapter. Therefore, for the analysis of working conditions, job satisfaction and employment by wage levels in Sections II and III, the sectoral breakdown is based primarily on industries at the one-digit level according to ISIC rev. 3.

B. Incidence of part-time and temporary work

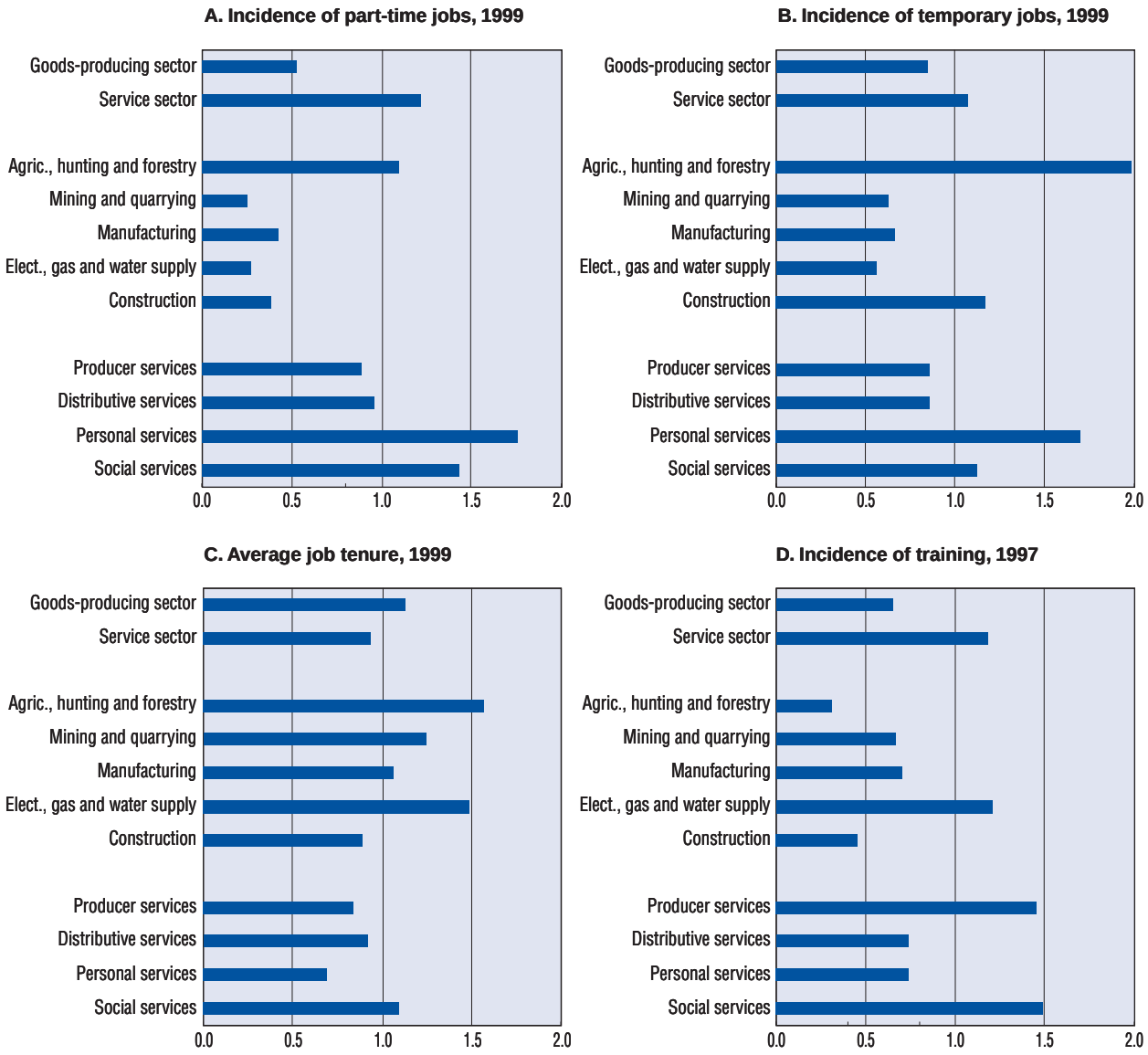
The rise in the number of "atypical" or "non-standard" jobs, such as part-time and temporary jobs, has been of particular concern for several commentators who have seen this trend as a sign of a decline in job quality [*e.g.* Letourneux (1998); Mishel *et al.* (2001)]. But, as pointed out in OECD (1999), it is not always clear that part-time jobs are necessarily inferior to full-time jobs. Only a minority of all part-time workers appears to be working part-time involuntarily, and, while part-time workers earn less on average than full-time workers in most countries, this can be partly accounted for by lower average skill levels or non-pecuniary advantages. In the case of temporary jobs, they may serve as a useful entry point into more permanent work for younger and less-skilled workers. Nevertheless, some part-time and temporary jobs are particularly badly paid and involve poor working conditions with limited career prospects.[1] So it is of interest to see whether these types of working arrangements tend to be concentrated in the same sectors in different countries and whether they are particularly prevalent in the service sectors.

On average across OECD countries, part-time work is a much more common form of working arrangement in the service sector than in the goods-producing sector (Chart 3.1, Panel A).[2] This pattern is observed in all countries, except Korea, although the gap between the two sectors varies considerably from country to country (Table 3.B.1). In general, the incidence of part-time work is highest in personal services followed by social services. In several countries, part-time work accounted for more than one-third of all jobs in personal services in 1999 (and just over one-half in the Netherlands). At a more detailed level, part-time work in most countries tends to be most common in domestic services followed by education, recreation and cultural services, hotels and restaurants, other personal services and health services. The incidence of part-time work also tends to be relatively high in retail trade but this is offset within the distributive services by lower rates in wholesale trade and in transport and communication. Within the good-producing sector, part-time work is only relatively common in the agricultural sector.

How well do these sectoral differences in the incidence of part-time work correlate with the rate of involuntary part-time work in each sector? Data for the United States indicate that if anything the correlation may be negative rather than positive [Meisenheimer II (1998)]. For example, the rate of involuntary part-time work (*i.e.* as a proportion of all part-time employment in each sector) was 34% in manufacturing but only around 17% in the service sector as a whole. Thus, a higher incidence of part-time employment in one sector than another may not necessarily indicate that the proportion of all workers in that sector who are working part-time involuntarily is also higher.

Temporary jobs are more evenly spread across both the goods-producing and service sectors (Chart 3.1,

Chart 3.1. **Various job characteristics by broad sector, OECD average**[a]



a) For each sector, each job characteristic is shown as a ratio to the average value across all sectors. The countries included in the OECD average for each measure are shown in Tables 3.B.1-3.B.4, as well as the year the data refer to in those instances where data for 1999 in Panels A-C were not available.
Sources: See Tables 3.B.1-3.B.4.

Panel B). Within the goods-producing sector, temporary work appears to be a particularly common form of work arrangement in agriculture and construction, but somewhat less common in manufacturing. Within the service sector, the incidence of temporary work in the personal services sector is well above the national average in all countries (Table 3.B.2). Within personal services, temporary work is a particularly common form of work arrangement in recreational and cultural services and in hotels and restaurants. It is also mostly above the national average in social services in most countries, boosted by a relatively high incidence in education, miscellaneous social services and health. As for part-time work, the incidence of temporary work also tends to be relatively high in retail trade, but somewhat lower in the other distributive service sectors.

Interpreting these differences across sectors and countries is complicated by the fact that temporary employment potentially covers a range of different types of work arrangements. In addition to employment under a fixed-term contract, temporary employment can include seasonal and casual work and working under contract for a temporary work agency. These different types of arrangements may not all imply the same degree of precariousness. Moreover, countries differ in their coverage and definitions of these arrangements.

These differences will not only affect the overall incidence of temporary work across countries but also its relative incidence across sectors within countries. For example, around 23% of employees in Australia considered themselves to be casual workers in 2000 but only around 4% reported that they were working under a fixed-term contract employment (Table 3.B.2).[3] Compared with a higher-than-average incidence of casual employment in the distributive and personal services sector, the incidence of fixed-term employment is below average in both sectors, considerably so in the distributive service sector. The relative incidence of fixed-term contracts is also considerably lower in agriculture and manufacturing than the incidence of casual work. For France, the incidence of temporary agency working in the first half of 1999 was only 3% compared with an incidence of 14% under a more inclusive measure of temporary employment. In contrast to the pattern for all forms of temporary employment, the relative incidence of temporary agency working is substantially lower in the service sector and much higher in the goods-producing sector, especially in manufacturing.

C. Job tenure

Another aspect of jobs concerns job stability as captured by average job tenure. This is typically measured by the length of time workers have been in their current job or with their current employer, and so refers to continuing spells of employment rather than to completed spells. There are a number of factors that suggest that there is probably a positive relationship between tenure and job quality. First, earnings tend to be positively correlated with average job tenure even after controlling for other factors affecting earnings differentials. Second, involuntary job loss often entails a loss of earnings not only because of lost income during a period of unemployment but also because earnings may be subsequently lower in a new job. Therefore, all other things equal, jobs with higher turnover will tend to be associated with greater job insecurity. But again, this indicator needs to be interpreted with caution. Not all short-tenure jobs reflect conditions that are imposed by employers, they can also reflect the preferences of jobholders themselves and may be compensated for by higher rates of pay. Moreover, previous OECD work found little direct relationship between job tenure and job insecurity – a rise in perceptions of job insecurity had not generally been matched by a decline in job stability [OECD (1997)]. It was suggested that this might partly be because job tenure is influenced by job insecurity itself, and, that while job stability may not have changed much, the consequences of job separation may have worsened.

Average tenure is somewhat lower in general in the service sector than in the goods-producing sector (Chart 3.1, Panel C). This pattern holds for all countries, but with a much larger gap between the two broad sectors occurring in Greece, Australia and Switzerland (Table 3.B.3). Average job tenure is particularly low in personal services in all countries. In social services, on the other hand, it is on par or higher in most countries than in manufacturing. At a more detailed level, job tenure tends to be highest (and higher than in manufacturing) in public administration, communications and education. It is lowest in domestic services, hotels and restaurants and in business and professional services. Within the good-producing sector, average tenure tends to be relatively low in the construction industry and relatively high in agriculture and in public utilities.[4]

D. Training

The incidence of continuing vocational training provides a rough indicator of opportunities for career development and advancement. In fact, this is one of the few indicators of job quality where service jobs consistently come out ahead of jobs in the goods-producing sector (Chart 3.1, Panel D). On average, across the countries shown in Table 3.B.4, the probability of a worker receiving continuing vocational training during a given period of time is almost one-fifth higher than the national average for workers in services and around one-third lower for workers in the goods-producing sector. Within the service sectors, the incidence of training is highest in producer and social service sectors and lowest in the distributive and personal services sectors. But even for these latter two sectors, the incidence of training in at least one of the sectors is higher than in manufacturing in the majority of countries.

These results for training might at first seem somewhat anomalous given the results for some of the other characteristics of jobs. Part-time work is much more prevalent in the service sector than the goods-producing sector, and yet there is evidence that part-time workers typically receive less training on average than full-time workers [OECD (1999)]. Average job tenure is also somewhat lower and job turnover higher in services than in goods production. Given that, all other things equal, the

pay-off to firm-specific training will be lower for an employer when labour turnover is relatively high, this would tend to lower the incidence of training in the service sector relative to the goods-producing sector. The fact that more training occurs per employee in the service sector than the goods-producing sectors suggests that the gap between the two sectors is probably even higher for workers with similar characteristics.

There are a number of possible reasons for this result. These include the relationship between training and educational attainment and the sectoral impact of technological change. There is in general a positive association between educational attainment and the incidence of training [OECD (1999)]. As workers in the service sector have a higher level of educational attainment, on average, than those in the goods-producing sector [OECD (2000)], this would partly explain the higher incidence of training in the service sector. A related reason may be the greater retraining requirements imposed by technological change on some sectors than on others. For instance, the incidence of working with computers and other forms of information technology (IT) appears to be higher in certain service sectors (notably in the producer service sectors and for government workers in the social service sector) than in manufacturing.[5] Thus, the IT revolution may require more frequent and widespread retraining to take place in these service sectors than in manufacturing.[6]

E. Accounting for country differences in job characteristics

Sectoral differences in part-time and temporary work and in average job tenure partly reflect differences in the average characteristics of workers in each sector. For example, part-time work is considerably more common among women workers in general than among men, irrespective of the sector they each work in. Average tenure also tends to be lower for younger workers and women than for older workers and men. Therefore, it is of some interest to examine the extent to which job quality and worker characteristics are correlated across sectors.

In Panel A of Table 3.1, correlation coefficients are shown between various aspects of jobs and characteristics of workers when measured separately in each of nine broad sectors and pooled across countries.[7] Each measure of job quality (incidence of part-time and temporary work and average job tenure) is shown as a ratio of its value for each sector divided by the national average. This is done in order to abstract from country differences in the absolute levels of these measures. The question being asked here is to what extent sectoral, rather than country, variations in job quality are related to sectoral differences in worker characteristics.

Not surprisingly, the incidence of part-time and temporary work tends to be higher in sectors that have a higher-than-average proportion of workers that are women and younger workers. The incidence of part-time

Table 3.1. **Correlates of sectoral and country differences in various job characteristics, 1998**

Correlation coefficients[a]

	Part-time incidence	Temporary incidence	Average job tenure
A. Correlations across countries and 9 sectors[b]			
Gender	0.79**	0.25*	–0.33**
Age	0.34**	0.30**	–0.60**
Education	0.01	0.43**	0.12
Occupation	–0.48**	0.14*	0.46**
Part-time incidence	1		
Temporary incidence	0.42**	1	
Average job tenure	–0.28**	0.06	1
B. Correlations across countries only[c]			
Employment share in services	0.53**	–0.32	–0.55*

a) ** and * mean statistically significant at 1 % and 5 % levels respectively.
b) *Gender*, *age*, *education* and *occupation* refer to the proportion of all workers in each sector that are, respectively: women; aged less than 25; low-skilled (ISCED 0-2); and blue-collar workers (ISCO 6-8). In order to abstract from country differences in levels, each of these variables and the job characteristic measures have been normalised by dividing the value for each sector by the corresponding national value for all sectors. The nine sectors correspond to the sectoral breakdown shown in Chart 3.1 and Tables 3.B.1-3.B.3 (see Annex 3.A for further details).
c) The employment share in services refers to the share of service sector employment in total employment. The other variables are as defined as in Panel A but refer to national averages and to levels rather than to ratios.
Source: EU countries, European Labour Force Survey (data supplied by EUROSTAT); for the United States, OECD estimates based on microdata from the Current Population Survey (outgoing rotation group file and, for temporary workers, contingent workers supplement); and for the other countries, data supplied by national statistical authorities based on their national labour force surveys.

work is negatively correlated with the incidence of blue-collar work (which can be partly attributed to a higher incidence of blue-collar work among men than among women) but is not correlated with the level of educational attainment. Temporary work, on the other hand, appears to be more common in sector with a relatively high proportion of workers with few educational qualifications. Average job tenure tends to be lower in sectors that employ relatively more women and youth and higher in sectors employing relatively more blue-collar workers. However, apart from the relationship between part-time work and gender and between tenure and age, the size of the correlation coefficients indicates that the characteristics of workers shown in Table 3.1 account for less than one-half of the variation across sectors.

The results in Panel A of Table 3.1 also indicate to what extent variations in different job characteristics tend to be associated within the same sectors. Sectors with a high incidence of part-time work tend to be associated with a high incidence of temporary work and, to a lesser extent, with lower average job tenure. However, there does not appear to be any association across sectors between the importance of temporary work and average job tenure.

Of course, the characteristics of workers in each sector will reflect both labour supply and demand factors. Workers with different characteristics will have different preferences with respect to the sector they wish to work in and the type of working arrangements. There are likely to be differences across sectors in the skill requirements of firms and in their needs with respect to flexibility in hiring and firing. Institutional factors will in turn affect both these labour supply and demand decisions. Disentangling the separate influence of these factors in accounting for sectoral differences in various job characteristics is not simple.

Country comparisons can provide some useful information on this issue. In fact, there are substantial differences across countries that need to be accounted for. For example, in 1999, the overall incidence of part-time employment ranged from a low of under 6% in the Czech Republic to a high of just over 30% in the Netherlands (Table 3.B.1). A similar variation across countries can also be observed for the overall incidence of temporary work and to a lesser degree for average job tenure (Tables 3.B.2 and 3.B.3). If demand factors alone are driving sectoral differences in various job characteristics then country differences in employment structure would tend to account for much of this variation across countries at the economy-wide level.

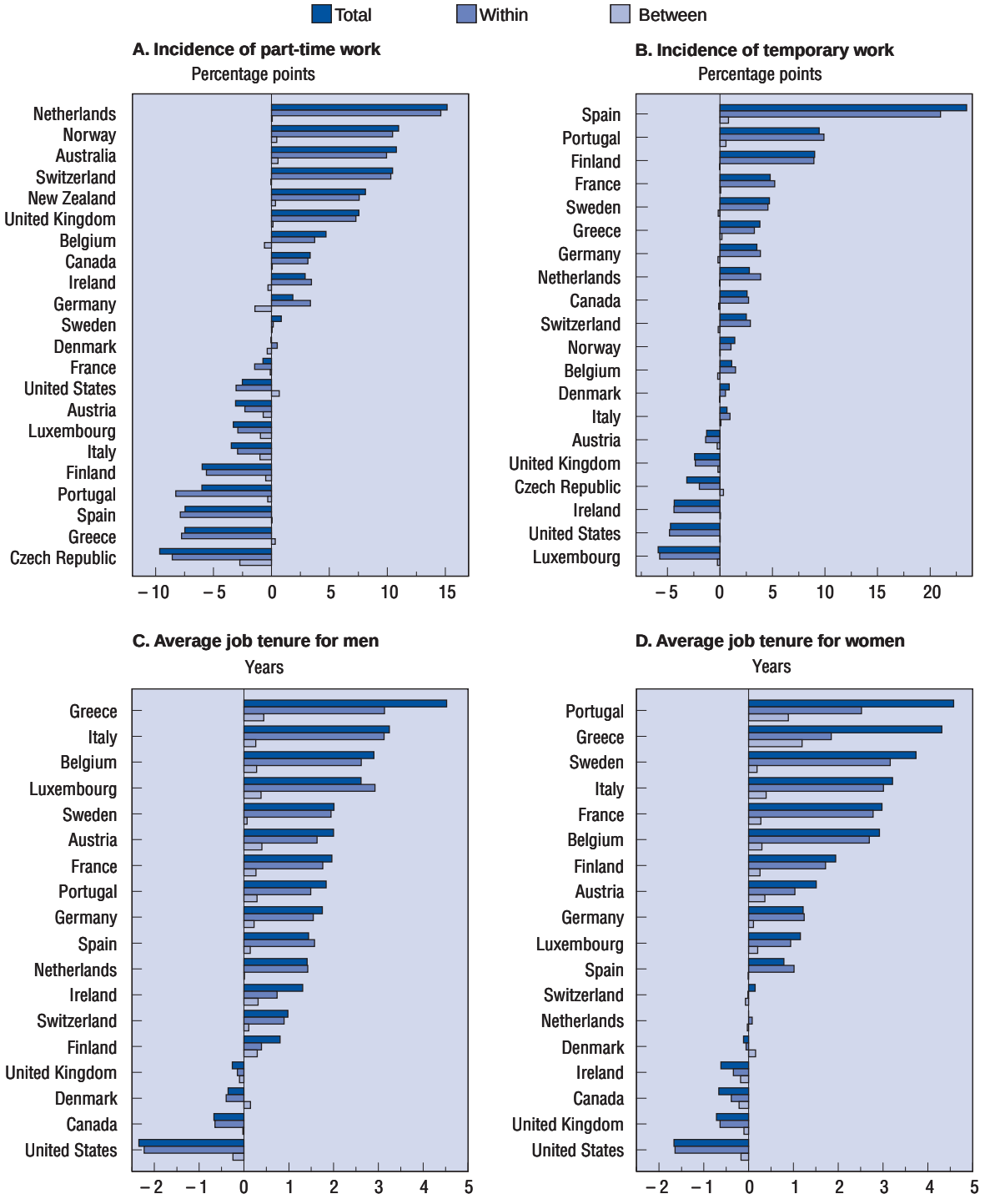
At a broad level, there is a reasonably strong and positive correlation across countries between the overall incidence of part-time work and the overall employment share in the service sector (Table 3.1, Panel B). Average job tenure also tends to be lower in countries with a higher employment share in services.

A deeper analysis of country differences in employment structures at a more detailed sectoral level (*i.e.* for the 21 sectors shown in Annex 3.A) can be carried out within a simple shift-share framework. The results are reported in Chart 3.2. For each job chracteristic, the overall difference between each country and the (weighted) average for all countries at the economy-wide level is first calculated. This difference is then decomposed into "between", "within" and "interaction" effects.[8] The first effect reflects differences in employment structure between each country and the "average" country, while the second reflects differences between countries in each job characteristic for the same sectors. The third effect captures the effect of interactions between both differences in employment structure and in each job characteristic.

In the case of part-time work, differences in employment structure ("between" effects) account for a relatively small proportion of the overall difference in incidence between each country and the "average" country. If each country had the same structure as on average across all countries, but all else was unchanged, then the overall incidence of part-time employment would change by one percentage point or less in all countries except the Czech Republic and Germany. Most of the difference between countries appears to stem from the "within" effect, *i.e.* the incidence of part-time work tends to be uniformly higher or lower across all sectors in one country than in another.

A similar result is also recorded for the incidence of temporary employment. Again, the "between" effect accounts for around one percentage point or less of the overall difference between each country and the "average" country. In the case of average job tenure, the "between-sector" effect in some countries accounts for a significant part of the overall difference in tenure across countries, but even so the contribution is almost always much smaller in magnitude than that of the "within-sector" effect. For example, job tenure for women is almost 4.5 years higher in Greece than on average in other countries. Of this, differences in employment structure account for just over one year whereas differences within each sector account for almost two years. In contrast, average job tenure for both men and women in the United States is well below the average for other countries, but again this is mainly accounted for by lower average job tenure in all sectors rather than because it has a higher employment share in services.

Chart 3.2. Accounting for differences across countries in various job characteristics[a]



a) For each job characteristic, "total" refers to the difference between each country and the (weighted) average for all countries at the economy-wide level; "between" refers to the contribution of differences in employment structure; and "within" refers to the contribution of differences across countries within each sector. Countries have been ranked by the size of the overall difference for each job characteristic. The data refer to 1999 for all countries, except Austria (1995 for average job tenure) and the Czech Republic and Canada (1998 for all measures).

Sources: See Tables 3.B.1-3.B.3.

F. Changes over time in part-time, temporary work and job tenure

The analysis has concentrated on a snapshot of various job characteristics at a point-in-time. As such, it cannot provide answers to questions such as whether the growth of employment in the service sector has contributed to changes in these characteristics or not. For instance, the incidence of part-time work is generally much higher in the service industries than in the goods-producing industries. However, a shift of jobs into the service sectors need not necessarily lead to, or account for, a rise in the part-time employment share at the level of the whole economy. If the incidence of part-time work falls in all sectors, the overall share may also fall despite a compositional shift of employment into sectors with a higher-than-average incidence of part-time work.

A more dynamic perspective on the relationship between changes over time in the sectoral distribution of employment and changes in various job characteristics can be provided by using the same type of shift-share analysis as was used to account for differences across countries. The results are reported in Chart 3.3. As before, changes over time in the overall share of part-time, temporary employment and average job tenure can be decomposed into "between", "within" and "interaction" effects.[9] If employment shifts into the service sector were the principal reason for observing changes at the economy-wide level, the between-sector contribution would tend to be much greater than the within-sector contribution.

In the case of part-time employment (Chart 3.3), there has been a substantial rise in its incidence in several countries. For example, in Australia, Belgium, Ireland and Japan it has risen by over 5 percentage points. Employment shifts between sectors have tended to push up the overall incidence of part-time work in all countries except Japan, Korea, the Netherlands and Spain. But this has been by less than one percentage point in all countries, except for Australia. Changes within sectors generally account for a much larger proportion of the overall change.

The rise in the share of temporary jobs in total employment has been less pronounced in most countries than the rise in the part-time employment share, except for substantial rises in Belgium, France and Spain. In all cases, between-sector effects account for less than one percentage point of the overall change in the temporary-employment share. Where the temporary-employment share has risen significantly, the within-sector effect largely dominants the between-sector effect.

In the case of average job tenure, no consistent trends over time emerge. Job tenure rose in some countries and fell in others, although women in most of the countries shown in Chart 3.3 did experience rising tenure. In virtually all countries, and particularly for men, employment shifts between sectors have had a negative but small impact on average tenure. In contrast, changes in average job tenure within sectors have generally had a positive impact, especially for women.

To summarise, differences in employment structure appear to account for only a small part of the variation across countries and over time in average job tenure and the overall incidence of part-time and temporary employment. Thus, general institutional, economic and social changes that tend to affect all sectors have probably been more important factors rather than the shift of employment out of goods production and into services. These include the strength of employment protection legislation, the degree of collective bargaining coverage, the existence of statutory wage floors, etc., as well as the distribution of worker characteristics in terms of age, gender and skill level.

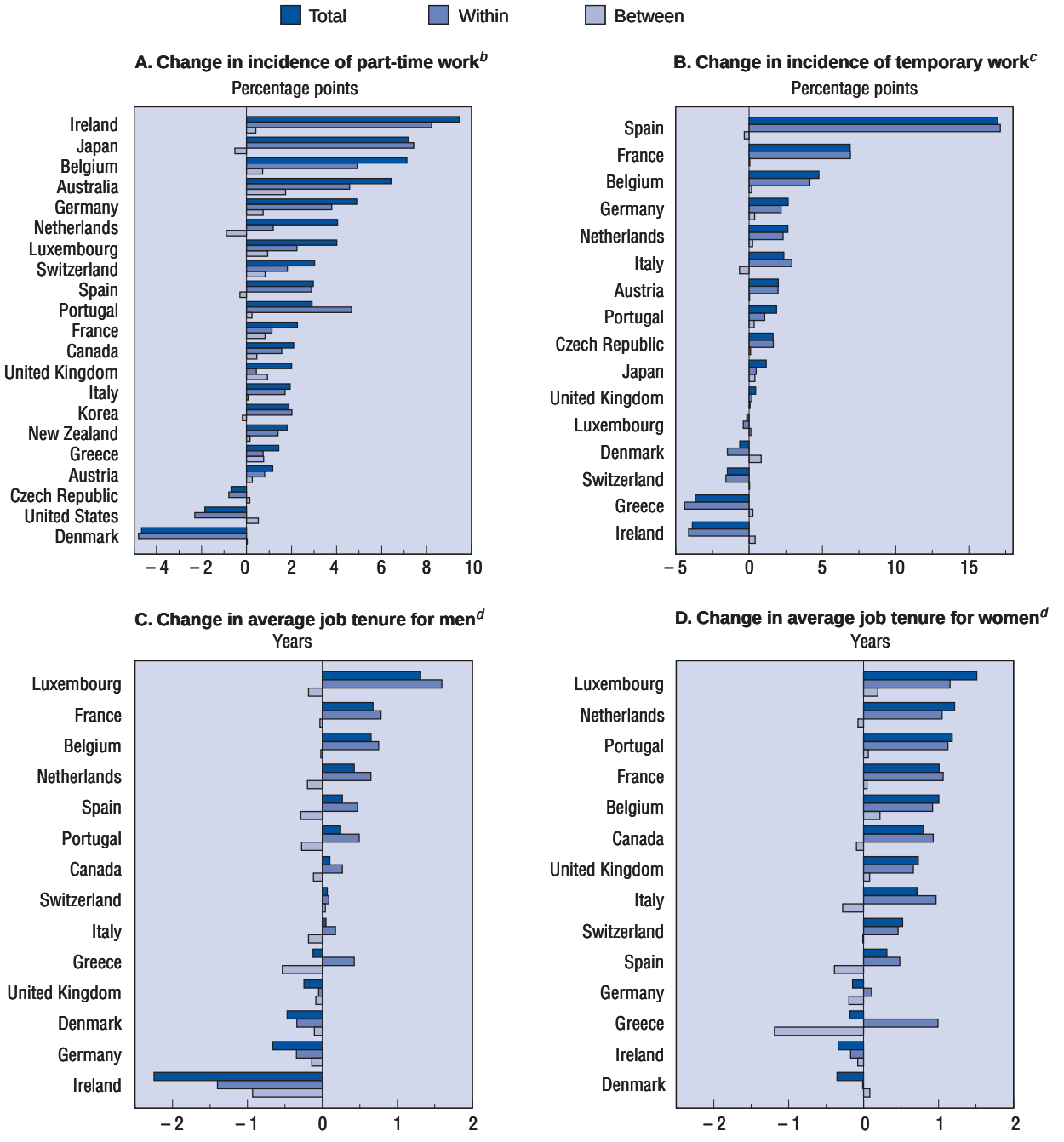
II. Working conditions and job satisfaction

A. Working conditions

The various job characteristics described so far provide only very indirect measures of job quality. As an alternative to these indirect measures, more direct measures are provided by surveys of working conditions. In these types of surveys, jobholders are typically asked a number of questions about various aspects of their working conditions covering the work environment, the nature of the tasks performed in the job, the degree of job autonomy, etc. These surveys can potentially provide a useful insight into differences across sectors in the types of job tasks being performed and whether they involve relatively poor or relatively good working conditions.[10] However, it is not evident how to derive an aggregate measure of job quality from the potentially wide array of information on working conditions that is available. Moreover, not all countries have these types of surveys, and there can be large differences in the type of questions that are asked in those that do.

In order to minimise these potential problems, the analysis mainly draws upon the results of the *European Survey on Working Conditions* [European Foundation (1997)], which provides a useful source of comparable data for European Union countries (see Box 3.1).

Chart 3.3. Accounting for changes over time in various job characteristics[a]



a) For each country, "total" refers to the change over time for each job characteristic at the economy-wide level; "between" refers to the contribution of shifts in the employment structure; and "within" refers to the contribution of changes within each sector. Countries have been ranked by the size of the overall change in each job characteristic.

b) The data refer to: 1992-1998 for Korea and New Zealand; 1992-1999 for Germany, Italy and Switzerland; 1995-1999 for Austria; 1987-1998 for Canada; 1993-1998 for the Czech Republic; 1984-1998 for Japan; and 1987-1999 for all other countries.

c) The data refer to: 1992-1999 for Germany, Italy and Switzerland; 1995-1999 for Austria; 1993-1998 for the Czech Republic; 1984-1998 for Japan; and 1987-1999 for all other countries.

d) The data refer to: 1992-1998 for Canada; and to1992-1999 for all other countries.

Sources: See Tables 3.B.1-3.B.3.

Box 3.1. Measuring working conditions

The *European Survey on Working Conditions* is specifically designed to monitor working conditions as perceived by respondents. The second survey was conducted in each of the fifteen countries of the European Union at the end of 1995/beginning of 1996 in close collaboration with Eurostat and National Statistical Offices. A fairly small, but representative, sample of the employed population aged 15 and over was surveyed. Around 1 000 persons were interviewed in each country (500 in Luxembourg, 2 000 in Germany). The survey is described in more detail in European Foundation (1997).

A wide range of information on working conditions is available from the survey. For the purposes of this study, nine key aspects of *poor* working conditions have been identified and the incidence of workers reporting each aspect has been calculated. The definition of each type of working condition is described below and the relevant survey question upon which it is based is given in parenthesis.

Unpleasant working conditions. For between one-half to all of the time, exposed in main job to at least one of the following: vibrations from hand tools or machinery; loud noise; high or low temperatures; breathing in vapours, fumes, dust or dangerous substances; handling dangerous products; or radiation such as X rays, radioactive radiation, welding light or laser beams (Question 14*a-g*).

Unpleasant work tasks. For between one-half to all of the time, main job involves at least one of the following: painful or tiring positions; carrying or moving heavy loads; short repetitive tasks; repetitive hand or arm movements; or wearing personal protective equipment (Question 15*a-e*).

Monotonous work. Main job involves monotonous tasks (Question 23*f*).

Not in a secure job. Persons replying that they do not have a secure job (Question 20*f*).

Working antisocial hours. Usually work at least once a month either at night or on Sundays or work shifts or irregular hours (Questions 18*a*, *b* and 19).

Limited working-time flexibility. Cannot take a break when wanted and not free to decide when to take holidays or days off (Question 20*b*, *c*).

Limited work autonomy. Not able to choose or change either the order of tasks, work methods or work speed (Question 22*a-c*).

No additional benefits. Over and above their statutory entitlements, do not receive any of the following additional benefits: sick child leave; maternity leave; parental leave; or child day care (Question 30*a-d*).

Work-related health problems. Absence of 5 days or more over the past 12 months due to health problems caused by main job (Question 32).

Broad differences in working conditions between the goods-producing sector and the service sector are shown for each EU country in Table 3.2. The same information is shown at a more detailed sectoral level for the EU as a whole in Chart 3.4. In both the table and the chart, the data refer to the percentage of workers that report experiencing a particular type of working conditions. Higher values indicate less favourable working conditions.

In Table 3.2, no clear-cut distinction emerges between the two sectors. Nevertheless, there are several areas where working conditions appear to be distinctly less favourable in the goods-sector than in the service sector, but none where the opposite is true. In almost all countries, jobs in the goods-producing sector appear to be more likely to be associated with unpleasant working conditions or work tasks than in the service sector. On average for the EU, they also appear to offer less work autonomy. However, this result does not hold for all individual EU countries. For the other aspects of working conditions, apart from "antisocial" hours of work, they also appear to be less favourable on average in the EU in the goods-producing sector than in the service sector. But these differences are either relatively small and/or do not hold for every country.

Within the service sector, the hotel and restaurant and transport and communications sectors stand out as generally having less favourable work conditions than other service industries (Chart 3.4). Working conditions in these two sectors also tend to be as bad as or less favourable than in the goods-producing sector. For instance, a higher proportion of workers in these sectors report working "antisocial" hours and having no additional benefits than do workers in manufacturing. The prevalence of jobs involving unpleasant work tasks, monotonous work, limited work autonomy or limited working-time flexibility is also roughly similar. In addition, the proportion of workers not feeling secure in their jobs is higher in the hotel and restaurant sector than in

Table 3.2. **Working conditions in Europe by broad sector, 1995/96**[a]

Percentage of workers in each sector experiencing each type of working condition

	Unpleasant working conditions		Unpleasant work tasks		Monotonous work		Working antisocial hours		Limited working-time flexibility	
	Goods-producing sector	Service sector	Goods-producing sector	Service sector	Goods-producing sector	Service sector	Goods-producing sector	Service sector	Goods-producing sector	Service sector
Austria	62	29	72	52	34	27	23	22	60	52
Belgium	41	22	66	50	35	36	27	20	50	55
Denmark	46	26	62	48	46	36	21	23	26	40
Finland	58	29	74	66	57	41	44	39	31	46
France	62	36	79	65	55	45	17	24	40	42
Germany	52	20	66	42	41	29	19	17	69	54
Greece	83	43	84	70	58	59	27	28	38	49
Ireland	52	28	65	53	52	55	25	27	37	45
Italy	44	33	63	57	41	42	15	19	33	38
Luxembourg	53	24	61	40	42	34	32	18	37	39
Netherlands	50	27	74	63	41	28	21	23	46	47
Portugal	59	32	79	66	47	40	17	29	41	40
Spain	65	36	79	62	63	60	16	22	47	58
Sweden	58	26	70	47	37	23	24	17	25	43
United Kingdom	53	38	72	65	66	67	23	28	40	39
European Union	**55**	**30**	**71**	**57**	**49**	**44**	**19**	**22**	**48**	**46**

	Limited work autonomy		Work-related health problems		Not in a secure job		No additional benefits[b]	
	Goods-producing sector	Service sector	Goods-producing sector	Service sector	Goods-producing sector	Service sector	Goods-producing sector	Service sector
Austria	54	49	13	7	14	11	21	13
Belgium	43	34	9	5	15	21	35	24
Denmark	37	30	3	3	15	12	53	41
Finland	41	45	10	5	24	26	56	50
France	50	41	5	5	40	34	36	33
Germany	64	49	12	8	19	10	18	14
Greece	42	51	8	4	40	28	31	18
Ireland	42	45	2	1	14	11	34	26
Italy	52	42	2	3	21	16	25	18
Luxembourg	59	42	7	5	9	12	34	18
Netherlands	32	35	8	7	19	15	27	18
Portugal	45	35	11	5	30	34	24	17
Spain	60	43	6	5	26	25	36	29
Sweden	40	42	4	5	25	28	75	80
United Kingdom	40	39	3	3	23	19	30	27
European Union	**52**	**43**	**7**	**5**	**24**	**20**	**29**	**25**

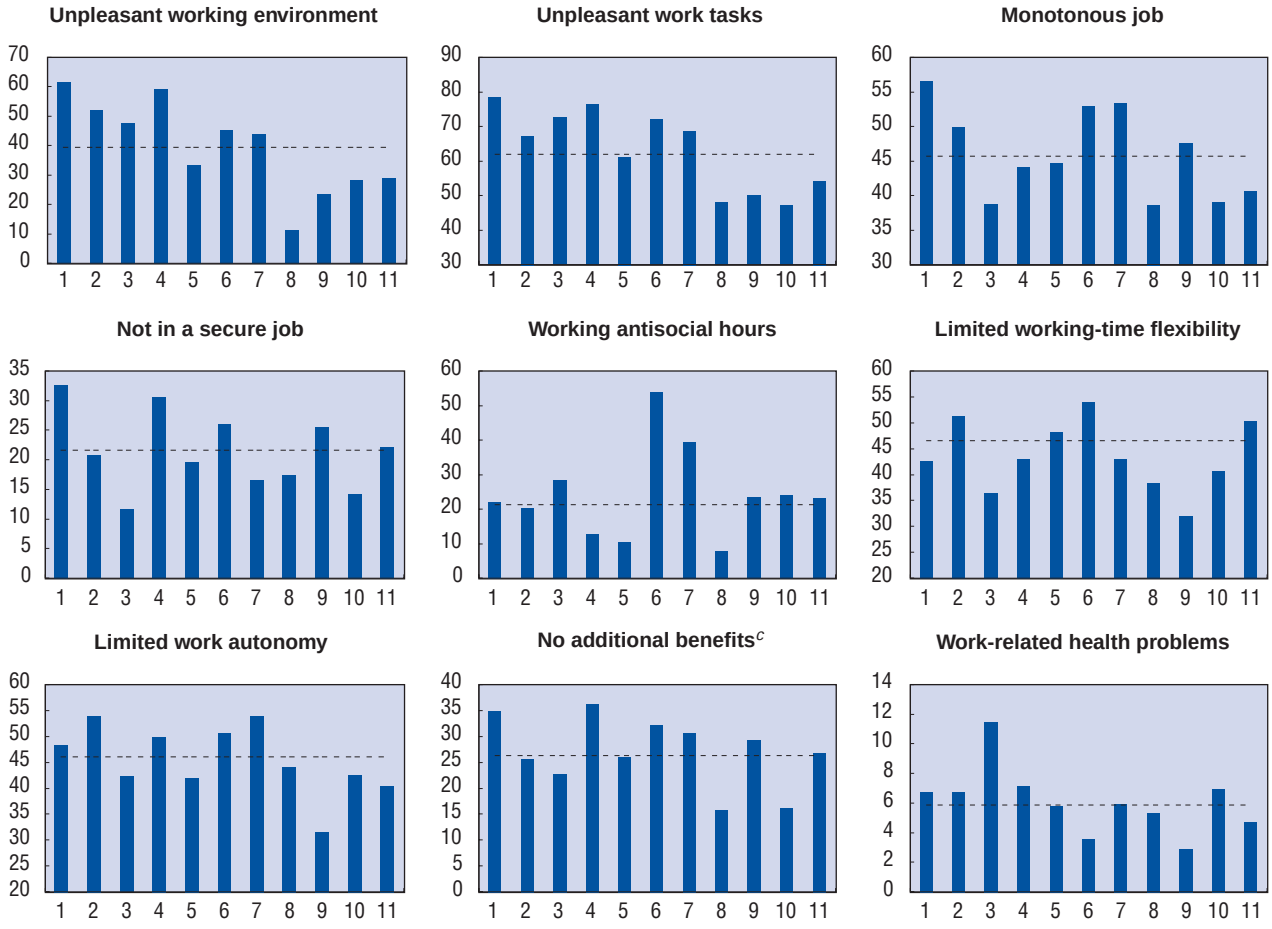
a) See Box 3.1 in text for definition of each type of working condition. A higher value indicates less favourable working conditions.
b) Data refer to wage and salary earners only.
Source: OECD estimates based on microdata from the Second European Survey on Working Conditions (1995/96).

manufacturing, although the proportion is lower than in agriculture and construction. At the other end of the scale, workers in financial intermediation appear to have some of the most favourable working conditions, closely followed by workers in public administration, and in real estate and business activities.

In Table 3.3, averages are presented across the nine different aspects of working conditions as a convenient way of summarising broad differences in poor working conditions across sectors. The absolute value of the incidence of each working condition does not in itself convey any information about the comparative value that workers themselves place on these working conditions. Therefore, it would be meaningless to simply average these absolute values across the different types of working conditions. Instead, two alternative methods of averaging are presented. The first consists of calculating the ratio of the incidence of each type of working condition in each sector to the overall incidence for all sectors and then averaging these ratios. The second

Chart 3.4. **Working conditions in Europe by sector, 1995**[a, b]

Percentage of workers in each sector experiencing each type of working condition



a) See Box 3.1 in text for definition of each type of working condition. A higher value indicates less favourable working conditions.
b) The dashed line in each chart represents the average across all sectors.
c) Data refer to wage and salary earners only.
Source: OECD calculations based on results from the Second European Survey of Working Conditions.

consists of ranking sectors for each type of working condition separately and then ranking the average of these ranks. Both types of averaging implicitly assign an equal weight to each type of working condition. In reality, of course, they will be valued differently and these valuations will differ across workers. Nevertheless, these averages provide a useful way of summarising whether sectors can be distinguished between those with generally more favourable working conditions and those with generally less favourable conditions.

As it turns out, both procedures produce similar results. On average, the risk of facing poor working conditions appear to be lower in many service sectors than most goods-producing sectors, particularly in financial intermediation, real estate and business activities and public administration. The least favourable conditions appear to be in hotels and restaurants, agriculture, construction, manufacturing and transport and communications.

Table 3.3. **Averages across a range of working conditions in Europe by sector, 1995/96**[a]

	Average of ratios[b]	Ranking of ranks[c]
Goods-producing sector	**1.12**	. .
Agriculture (A + B)	1.23	11
Mining and manufacturing (C + D)	1.09	8
Electricity, gas, water (E)	1.07	5
Construction (F)	1.15	10
Service sector	**0.93**	. .
Wholesale and retail (G)	0.90	6
Hotels and restaurants (H)	1.26	9
Transport and communications (I)	1.14	7
Financial intermediation (J)	0.71	1
Real estate and business activities (K)	0.85	2
Public administration (L)	0.86	3
Other services (M – Q)	0.93	4

. . Data not applicable.
a) The data refer to averages across nine different aspects of working conditions (see text and Box 3.1). A higher value indicates less favourable working conditions.
b) Simple average of the ratio for each type of working conditions of the incidence in each sector relative to the average incidence for all sectors.
c) Ranking of the average rank for each sector based on its value for each type of working conditions.
Source: OECD estimates based on microdata from the Second European Survey on Working Conditions (1995/96).

It is difficult to compare these results with those for other countries outside of the EU because of differences in the way each country gathers information on working conditions. In one study for Canada, the average number of a range of monetary and non-monetary benefits that are received by employees in each sector is reported [Statistics Canada (1998)]. In 1995, employees in public administration, finance and communications received considerably more benefits on average than employees in the manufacturing sector while employees in retail trade, hotels and restaurants and other personal services sectors received considerably fewer. Employees in other service sectors received either a similar or slightly small number of benefits on average than in manufacturing but far more than in agriculture and construction. The results were based on the 1995 Survey of Work Arrangements. The non-monetary benefits include working a regular daytime schedule (or other schedule by choice), being in a permanent job, having access to flexitime and stating a preference for working the same hours for the same pay rather than fewer hours for less pay or more hours for more pay. The monetary benefits include being covered by various pension and health plans and entitlements to paid sick leave and paid vacation.

For the United States information is available on the prevalence of flexitime and shift work [Beers (2000)]. In 1997, flexitime arrangements were generally more prevalent in all broad service sub-sectors than in goods-producing sectors, apart from agriculture. A less clear distinction emerges in the case of shift work and other non-regular daytime schedules where the prevalence of these arrangements is much higher in several service sectors, such as hotels and restaurants, transport and other personal services, than in the manufacturing sector.

B. Job satisfaction

Another way of trying to measure job quality more directly is to simply ask people whether they are satisfied with their jobs or not. However, considerable care is required in interpreting the results of this type of subjective measure in the context of international comparisons. There can be subtle differences between countries in the way questions about job satisfaction are asked and interpreted. There are also likely to be systematic country differences in the way people respond to these types of subjective questions. Even within the same country, it is not entirely clear what precise aspect of job quality is being captured by questions about job satisfaction. Being satisfied with one's job may be an important benefit of a job but answers to questions about job satisfaction are probably also reflecting the extent to which a range of expectations about pay, working conditions and career prospects are realised in practice.[11]

Bearing in mind these qualifications, the relative degree of job satisfaction by sector is reported in Table 3.4 according to the results of the European Working Conditions Survey (EWCS) and the European Community Household Panel (ECHP) Survey. Two measures are shown. The first is the average of satisfaction scores reported in each sector (higher values indicate greater satisfaction). However, a simple average of ordinal values is implicitly assigning the same weight to each possible response when there is no reason to believe that a score of 4 indicates twice as much satisfaction as a score of 2.

Table 3.4. **Job satisfaction in Europe by sector, 1994-1996**

	European Survey on Working Conditions[a]		European Community Household Panel[b]	
	Average level of satisfaction[c]	Proportion very satisfied[d]	Average level of satisfaction[c]	Proportion very satisfied[d]
Goods-producing sector	**3.03**	**26.2**	**4.21**	**11.6**
Agriculture (A + B)	2.86	22.8	4.03	13.4
Industry (C + D + E)	3.07	27.2	4.25	11.3
Construction (F)	3.03	25.5	4.19	11.5
Service sector	**3.18**	**34.8**	**4.41**	**14.8**
Wholesale and retail (G)	3.09	31.5	4.23	12.9
Hotels and restaurants (H)	3.07	24.6	4.11	12.0
Transport and communications (I)	3.09	27.9	4.28	10.9
Financial intermediation (J)	3.18	35.2	4.47	14.1
Real estate and business activities (K)	3.21	37.8	4.46	15.1
Public administration (L)	3.27	39.5	4.50	14.3
Other services (M – Q)	3.24	38.1	4.49	17.1
All sectors	**3.12**	**31.6**	**4.33**	**13.8**

a) The data refer to replies to question 36 of the survey: On the whole are you very satisfied, fairly satisfied, not very satisfied or not at all satisfied with your main job?
b) The data refer to the variable PK001 of the survey: satisfaction with work or main activity. The level of satisfaction is scored as 1 for not satisfied through to 6 for fully satisfied. Only replies from persons in employment were taken into account.
c) Weighted average of job satisfaction scores (*i.e.* 1 for least satisfied category, 2 for the next level of satisfaction and so on).
d) Proportion of workers reporting highest level of job satisfaction.
Source: OECD estimates based on microdata from the Second European Survey on Working Conditions (1995-1996) and the 1994-1996 waves of the European Community Household Panel Survey.

Therefore, the second measure shows the proportion of workers in each sector reporting the highest level of satisfaction. The results are fairly similar across the two surveys and suggest that, on average across EU countries, job satisfaction tends to be higher in the service sector than in the goods-producing sector. However, this is not uniformly the case throughout the service sector. Workers in hotels and restaurants report relatively low levels of satisfaction while the highest levels are reported in real estate and business activities, public administration and other social and personal services. Workers in transport and communications also report relatively low levels of job satisfaction.

To some extent these sectoral differences in job satisfaction may reflect compositional differences in the characteristics of workers. All other things equal, there is some evidence that women tend to report higher levels of job satisfaction than men and that there is a U-shaped relationship between age and job satisfaction [Clark (1997); Clark and Oswald (1996)]. Therefore, a more detailed analysis is required of whether these sectoral differences remain once allowance is made for differences across sectors in the composition of employment according to various worker characteristics.

In Table 3.5, the results are shown of regressing reported levels of job satisfaction from the two surveys against sector of employment, as well as against various other job and worker characteristics that are likely to influence job satisfaction.[12] The coefficients on the sector variables are reported relative to manufacturing. A positive coefficient for a particular sector indicates that, all other things equal, job satisfaction is higher in that sector. It could be argued that job characteristics such as part-time and temporary status, average job tenure, firm size, earnings and, possibly, occupation, should not be included in the regression since they also represent different aspects of job quality. However, it is interesting to examine whether there are sectoral differences in other unobserved factors that are associated with job satisfaction. Therefore, the regression results in Table 3.5 are shown both with and without controls for these job characteristics.

Both the ECHP and EWCS results in Table 3.5 (Model 2) suggest that, after controlling for a range of worker characteristics (and unobservable factors affecting cross-country differences), job satisfaction tends to be higher in most other sectors than in manufacturing. This is broadly in line with the results in Table 3.4. Interestingly enough, the ECHP results also suggest that, even after controlling for sectoral differences in a range of job characteristics (Model 1), there are still other aspects of jobs which are associated with lower levels of job satisfaction in manufacturing than in other sectors. However, these differences are less important than when only worker characteristics are controlled for. These unobserved aspects of

Table 3.5. **Job satisfaction by sector, controlling for job and worker characteristics**[a]

	European Community Household Panel		European Survey on Working Conditions	
	Model 1[b]	Model 2[c]	Model 1[b]	Model 2[c]
Agriculture (A + B)	0.03	–0.11	–0.10	–0.16
Mining and/or electricity, gas and water (C/E)	0.08	0.11	0.07	0.22
Construction (F)	0.03	–0.02	–0.15	–0.11
Wholesale and retail (G)	0.02	0.03	–0.07	0.03
Hotels and restaurants (H)	–0.05	–0.05	0.03	–0.01
Transport and communications (I)	0.01	0.04	0.00	0.08
Financial intermediation (J)	0.05	0.15	–0.03	0.12
Real estate and business activities (K)	0.05	0.09	–0.02	0.20
Public administration (L)	0.15	0.22	0.18	0.34
Other services (M – Q)	. .	. .	0.12	0.28
Education (M)	0.21	0.31	. .	. .
Health and social work (N)	0.25	0.30	. .	. .
Other social and personal services (O – Q)	0.05	0.01	. .	. .
Controls for worker characteristics	Yes	Yes	Yes	Yes
Controls for job characteristics	Yes	No	Yes	No
Controls for fixed country effects	Yes	Yes	Yes	Yes
Number of observations	77 377	81 788	10 080	11 489

. . Data not available.

a) For the questions on job satisfaction and the possible replies see Table 3.4. The coefficients reported in the table are the results of an ordered probit regression where the dependent variable is the job satisfaction score of each individual. The independent variables include variables for sector of employment (with manufacturing as the reference sector) and other job characteristics (earnings – ECHP only, occupation, part-time status, permanent status, firm size, average job tenure). Variables for various worker characteristics (gender, education – ECHP only, marital status, presence of dependent children) and for country and year (ECHP only) effects are also included. A positive coefficient indicates that relative to the manufacturing sector job satisfaction is higher all else equal and *vice versa*. All reported coefficients are significant at the 1 per cent level.

b) Full model with all job and worker characteristics included.

c) Reduced model without any variable for job characteristics, apart from sector of employment.

Sources: OECD estimates based on microdata from the Second European Survey on Working Conditions (1995/96) and the 1994-1996 waves of the European Community Household Panel Survey.

jobs are probably related to the results reported earlier on working conditions that showed poorer conditions in manufacturing in a number of dimensions than elsewhere. The EWCS results are somewhat different in that after controlling for both job and worker characteristics, job satisfaction appears lower in a number of service sectors than in manufacturing. However, unlike the ECHP, the EWCS does not contain information on education and earnings and so these characteristics could not be controlled for.

III. Pay levels as a measure of job quality

Another important job characteristic that may be more directly linked to job quality is the rate of pay that is associated with a job. Invariably, studies of earnings differentials find that rates of pay are highly correlated with the level of skill required in the job, whether measured by formal educational qualifications, tenure in the job and overall work experience or by more direct measures in terms of knowledge requirements and the complexity involved in carrying out the job.[13] Within the same sector more highly-paid employees tend to have better working conditions than lower-paid employees in the sense of working in less physically demanding or noisy jobs and/or with greater autonomy in their work schedules. This suggests that better quality jobs can be proxied by those with higher pay.[14]

While knowing what a job pays may be a useful way of assessing job quality, there are a number of potential problems with comparing earnings across sectors and countries (see Box 3.2). In order to improve comparability, earnings are reported as hourly earnings for all workers, when available, otherwise to earnings of full-time workers only. To the extent possible, the earnings data for the European countries are drawn from harmonised sources such as the European Structure of Earnings Survey and the European Community Household Panel. Earnings differentials across sectors are also shown relative to earnings of manufacturing workers, as earnings data for this sector are available in all countries. Nevertheless, not all of the various problems of comparability can be fully resolved, and the reported results should only be taken as providing a broad indication, as opposed to precise estimates, of differences across sectors and countries in earnings differentials.

Box 3.2. Comparing earnings differentials across countries

International studies of earnings differentials usually need to confront a number of problems concerning data comparability.

First, there are substantial differences across countries in the way earnings are defined and in the way the data are collected. The earnings data may or may not include overtime pay and other regular and irregular bonuses. These components of pay can differ in importance both across countries and sectors.

Second, not all countries regularly collect earnings data on individuals (as opposed to total wage and salary payments) across all sectors of the economy. This is often the case for countries relying on establishment surveys or administrative data as their main source of earnings data. Information is often lacking for public administration, education, health and other social and personal services.

Third, not all countries report earnings data on an hourly basis. This can hamper comparisons across sectors. A sector with a relatively high incidence of part-time work will tend to record relatively low earnings if earnings are measured on a weekly, monthly or annual basis, irrespective of whether hourly rates of pay are high or not in that sector.

Finally, different survey instruments are used to collect earnings data. Administrative data and establishments surveys tend to report more accurately both earnings and hours paid for than household surveys, but their sectoral coverage can be limited, small firms are sometimes excluded and they may not cover very low-paid workers for other reasons. The coverage of household surveys tends to be better but at the cost of greater reporting error with respect to earnings, hours worked and sector of employment.

A. Overall earnings differentials across sectors

Table 3.6 provides a summary of earnings differentials across sectors relative to manufacturing. For those countries for which earnings data are available covering all sectors, average earnings in the service sector are slightly higher or around the same as in the goods-producing sector in most countries. The main exceptions are Australia and the United States. In Australia earnings for full-time workers are substantially higher in the service sector than in the goods-producing sector. In contrast, relative earnings for American service workers are substantially lower.[15]

Within the goods-producing sector, average earnings tend to be highest in electricity, gas and water and lowest in construction and agriculture. Within the service sector, jobs in producer services record the highest average earnings in most countries followed by social services. Average earnings are lower in distributive services than in manufacturing in most countries, with the notable exceptions of Portugal and Italy, and lower still in personal services.[16]

B. The distribution of jobs by broad wage levels

So far the distribution of earnings in each sector has been ignored. The level of average earnings may be the same in any two sectors, but with a very different dispersion of earnings. Consequently, one sector may have a higher incidence of low-paying jobs and/or higher incidence of high-paying jobs than in the other sector. One way to take account of sectoral differences in earnings distribution is to divide up sectors by occupational groups. It is then possible to look at how the earnings of similar groups of workers in terms of occupational status vary across sectors and countries although of course this ignores the dispersion of earnings within these occupational groups. In the following analysis, employment in each country has been divided up into 13 sectors (see Table 3.7) and into a number of broad occupations varying from 4 to 7 according to sector. In total, some 76 separate sector/occupation categories are identified (see Table 3.C.1). These categories are then ranked on the basis of average hourly earnings for workers in each category in 1995 and assigned to three groups (low, medium or high paid) of equal size on the basis of employment shares (see Annex 3.C for further details).[17]

In Table 3.7, the sectoral composition of jobs in each of these three wage groups is shown for the EU and the United States (a breakdown by occupation as well is provided in Tables 3.C.1 and 3.C.2 for the EU countries and 3.C.3 for the United States). In both economies, the service sector accounts for the lion's share of low-paid jobs, but it also accounts for a large majority of high-paid jobs as well. This is hardly surprising as the service sector accounts for a large majority of all jobs. In fact, in both economies, the service sector accounts for a higher share of high-paying jobs than its share of all jobs. Service-sector jobs are somewhat over-represented in low-paying jobs but only in Europe and only by a small amount. In both economies, service sector jobs are under-represented in medium-paying jobs, especially in Europe.[18]

Table 3.6. Earnings differentials by sector of employment[a]

Ratio of average earnings in each sector to average earnings in manufacturing

	Goods-producing sector						Service sector				
	Total	Agriculture, hunting and forestry	Mining and quarrying	Manufac-turing	Electricity, gas and water supply	Construc-tion	Total	Producer services	Distributive services	Personal services	Social services
A. Data based on partial coverage of sectors[b]											
Austria	. .	. .	1.08	1.00	1.32	1.05	. .	1.01	0.93	. .	. .
Belgium	. .	. .	0.92	1.00	1.37	0.85	. .	1.13	0.91	. .	. .
Denmark	. .	. .	1.30	1.00	1.27	1.02	. .	1.18	0.98	. .	. .
Finland	. .	. .	0.88	1.00	1.11	0.99	. .	1.09	0.97	. .	. .
France	. .	. .	1.07	1.00	1.18	0.94	. .	1.06	0.87	. .	. .
Greece	. .	. .	1.15	1.00	1.26	. .	. .	. .	0.89	. .	. .
Italy	. .	. .	0.99	1.00	1.36	1.09	. .	1.31	1.21	. .	. .
Luxembourg	. .	. .	. .	1.00	. .	0.80	. .	1.15	0.86	. .	. .
Netherlands	. .	. .	. .	1.00	1.26	0.99	. .	0.96	0.91	. .	. .
Portugal	. .	. .	1.22	1.00	2.39	1.05	. .	2.14	1.46	. .	. .
Spain	. .	. .	1.29	1.00	1.45	0.84	. .	1.18	0.91	. .	. .
Sweden	. .	. .	1.13	1.00	1.14	1.02	. .	1.08	0.97	. .	. .
United Kingdom	. .	. .	1.29	1.00	1.31	1.03	. .	1.15	0.85	. .	. .
B. Data based on complete coverage of sectors[c]											
Australia	1.08	0.95	1.39	1.00	3.08	1.14	1.32	1.42	1.12	0.94	1.43
Canada	1.03	0.79	1.34	1.00	1.47	1.08	0.98	1.04	0.89	0.71	1.17
Czech Republic	1.02	0.81	1.19	1.00	1.25	1.04	1.07	1.37	1.06	0.93	0.93
France	0.97	0.69	1.16	1.00	1.30	0.85	1.02	1.22	0.95	0.73	1.03
Hungary	0.96	0.69	1.27	1.00	1.37	0.76	1.04	1.44	1.02	0.66	1.00
Netherlands	1.00	0.80	1.47	1.00	1.32	0.99	0.99	1.02	0.90	0.84	1.11
New Zealand	0.96	0.77	1.10	1.00	1.24	0.92	0.97	1.12	0.87	0.79	1.05
Poland	1.07	1.01	1.64	1.00	1.32	1.06	1.04	1.35	1.04	0.97	0.95
Switzerland	0.98	0.80	1.00	1.00	1.08	0.91	1.00	1.13	0.93	0.80	1.04
United States	0.98	0.60	1.10	1.00	1.26	0.94	0.91	1.11	0.83	0.61	1.00

. . Data not available.

a) The data in Panel A refer to: 1994 for France; 1996 for Sweden; and 1995 for all other countries. The data in Panel B refer to: 1999 for Hungary, the Netherlands and the United States; and 1998 for all other countries. The data refer to hourly earnings for all countries except for Australia, France (Panel B), Hungary and Poland where they refer to weekly or monthly earnings for full-time employees only.

b) The data exclude establishments with less than 10 employees.

c) The data for Hungary and Poland exclude establishments employing less than, respectively, 5 and 6 employees.

Source: For Panel A, the data were provided by EUROSTAT based on the European Structure of Earnings Survey. For Panel B, except for the United States, the data were provided by each country's national statistical authority based on the following sources: national labour force surveys for Australia, Canada, France, New Zealand and Switzerland; and national establishment surveys for the Czech Republic, Hungary, the Netherlands and Poland. For the United States, the data are OECD estimates based on microdata from the Current Population Survey (Outgoing Rotation Group file).

At a more detailed sectoral level, low-paid jobs tend to be concentrated in wholesale and retail trade and in hotels and restaurants. These sectors account for just over two-fifths of all low-paid jobs in the EU and just under one-third in the United States. In both economies, the relative risk of being in a low-paying job is particularly high for workers in hotels and restaurants (and wholesale and retail trade in Europe) and agriculture. There is substantial similarity between the EU and the United States in the relative incidence of high paying jobs by sector.

In general, America shows a greater clustering of both low-paid and high-paid jobs into fewer industry/occupation categories than is the case in Europe (Tables 3.C.1 and 3.C.3). This may reflect a narrower earnings distribution in most Europe countries than in the United States, which results in a broader spectrum of categories being included in each wage group. It may also simply reflect the fact that there is considerable diversity across countries in the relative ranking of pay by industry and occupation. As can be seen in Table 3.C.2, while there is some consistency across European countries in the types of jobs that are classed as being high-paid, there is greater diversity for low-paid jobs.

C. Employment rates by wage level

Last year's chapter on services [OECD (2000)] pointed to a considerable gap in overall employment rates (*i.e.* the proportion of the working-age population in employment) between the United States and Europe which could mainly be accounted for by a much larger

— Table 3.7. **Sectoral distribution of jobs by wage level in the European Union and in the United States, 1999**[a] —

	Percentage of all jobs at each wage level (low/medium/high) in each sector						Incidence of pay at each wage level (low/medium/high) in each sector relative to the overall incidence					
	Low paid		Medium paid		High paid		Low paid		Medium paid		High paid	
Industries (ISIC-Rev. 3)	EU	USA	EU	USA	EU	USA	EU	USA	EU	USA	EU	USA
Goods-producing sector	**26.4**	**26.6**	**54.0**	**31.5**	**21.9**	**20.1**	**0.8**	**1.0**	**1.6**	**1.2**	**0.6**	**0.8**
Agriculture (A + B)	11.3	6.9	2.3	0.0	0.4	0.5	2.5	2.7	0.5	0.0	0.1	0.2
Mining and utilities (C + E)	0.0	0.0	1.2	1.8	2.2	2.8	0.0	0.0	1.0	1.2	1.9	1.8
Manufacturing (D)	10.4	17.5	34.6	14.3	16.2	13.5	0.5	1.2	1.7	0.9	0.8	0.9
Construction (F)	4.6	2.2	15.9	15.4	3.1	3.2	0.6	0.3	2.0	2.3	0.4	0.5
Service sector	**73.6**	**73.4**	**46.0**	**68.5**	**78.1**	**79.9**	**1.1**	**1.0**	**0.7**	**0.9**	**1.2**	**1.1**
Wholesale and retail (G)	30.6	17.9	6.4	28.8	9.1	4.5	2.0	1.1	0.4	1.7	0.6	0.3
Hotels and restaurants (H)	10.2	14.6	0.8	4.0	1.5	0.0	2.5	2.4	0.2	0.6	0.4	0.0
Transport and communications (I)	3.5	0.0	6.4	10.1	8.0	6.6	0.6	0.0	1.1	1.9	1.3	1.2
Financial intermediation (J)	0.1	0.0	3.7	6.7	6.3	7.9	0.0	0.0	1.1	1.4	1.8	1.6
Real estate and business activities (K)	6.1	10.6	6.8	2.2	12.0	19.7	0.7	0.9	0.8	0.2	1.4	1.8
Public administration (L)	2.1	0.0	6.2	3.0	12.1	2.4	0.3	0.0	0.9	1.7	1.7	1.4
Education (M)	3.3	7.6	2.5	0.4	14.3	15.2	0.5	0.9	0.4	0.1	2.1	1.9
Health and social work (N)	7.5	15.3	10.8	3.6	9.7	14.1	0.8	1.4	1.2	0.3	1.0	1.2
Community, social and personal (O + P + Q)	10.2	7.3	2.4	9.6	5.1	9.5	1.7	0.8	0.4	1.1	0.9	1.1
Total	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**1.0**	**1.0**	**1.0**	**1.0**	**1.0**	**1.0**

a) For each country, jobs (*i.e.* employment in 76 industry/occupation cells) are ranked on the basis of average hourly earnings in 1995 and then placed into three groups of equal size in terms of employment shares. The EU data are weighted averages of all EU countries except Luxembourg and Sweden.

Sources: OECD calculations based on data from the European Community Household Panel Survey and the European Labour Force Survey for Europe and on data from the Current Population Survey (Outgoing Rotation Group file) for the United States.

service sector in the United States. The fact that employment rates in some low-paying personal services sectors are much higher in the United States than on average in Europe, has prompted some calls for measures to expand employment in these sectors in Europe. But to what extent can the overall employment gap be accounted for by a deficit of low-paid jobs in Europe?

To answer this question, jobs for each country were again classed into three broad wage groups (low, medium and high). Jobs (*i.e.* industry/occupation cells) in every country were assigned to the same wage group as the equivalent job in the United States based on its wage and employment structure for 1999. Thus, the comparison becomes one of looking at jobs that are low-, medium- or high-paying by American standards and seeing whether employment in these jobs relative to the working-age population is higher or lower in other OECD countries than in the United States. The issue is whether the higher employment rate in the United States relative to many other countries principally occurs in jobs that are poorly paid by American standards.

As it turns out, America has a job "surplus" relative to most countries, not just in low-paying jobs but equally in high-paying jobs. This can be seen in Table 3.8 which shows the difference in employment rates between the United States and the European Union by sector and broad wage level, and in Chart 3.5 which makes the same comparison by wage level only but for a wider range of OECD countries.[19] In 1999, the overall employment rate gap between the United States and EU countries was 13.7 percentage points. Around 7.5 percentage points can indeed be accounted for by higher American employment in relatively low-paying jobs. However, almost 8 percentage points of the overall gap can also be accounted for by higher American employment in relatively well paid jobs. The United States actually appears to have a small job "deficit" in medium-paid jobs. These results should perhaps not be too surprising. Earnings inequality in the United States is generally much higher than in most European countries, with a larger gap in earnings relative to median workers both for high-paid and low-paid workers [OECD (1996); Bardone *et al.* (1998)]. In combination with its higher overall employment rate, this implies that America must have relatively more jobs than Europe at both ends of the wages scale.

It can also be seen from Table 3.8 that these differences in employment rates at each wage level are not evenly spread across the sectors. Within services, higher American employment rates in low-paying jobs in wholesale and retail trade and in hotels and restaurants account for over 4 percentage points of the US-EU gap.[20] Outside

of these sectors, higher United States employment rates in well-paid jobs are fairly evenly spread across the business and social service sectors, except for public administration where there are relatively fewer jobs overall in the United States than in Europe.

Within the EU average, there are some individual country differences in the size of the jobs deficit compared with the United States and its distribution by sector (Chart 3.5 and Table 3.C.4). The overall jobs deficit is particularly large in Italy and Spain (between 23 to 24 percentage points compared with a gap of 13.7 percentage points for the EU as a whole). It is non-existent in Denmark and relatively small in Sweden, the Netherlands and the United Kingdom. However, the same broad patterns generally hold in each country, as for the EU as a whole, with respect to comparisons of employment rates at each wage level. Thus, a higher overall employment rate in the United States than in most European countries cannot be solely attributed to the fact that it has generated far more low-paying service jobs. The United States has also been more successful at generating jobs in relatively high-paying occupations in both the goods-producing and service sectors, although this is true to a much lesser extent in Finland, the Netherlands and the United Kingdom.

Outside of the EU, the United States actually has a jobs deficit in comparison with Switzerland, but only in medium-paid jobs. It has a particularly large jobs surplus in comparison with Hungary, almost as large as in comparison with Italy and Spain.

D. Employment growth by wage level

Looking into employment growth by wage level can help to throw some light on at least two important issues. First, it helps to answer the question as to whether the expansion of the service sector has been accompanied by growth in low-paid jobs. Second, it can help to clarify whether there is any obvious trade-off between the quantity and quality of jobs in terms of comparing employment performance across countries.

As already seen (Section III.A), the extent to which service sector jobs are low paid in comparison with goods-producing jobs varies both across the different service sub-sectors within countries as well as across countries for the service sector as a whole. Employment shares have risen fastest in most countries in the producer and social service sectors [OECD (2000), Table 3.C.1], and these sectors appear to pay relatively well on average (Table 3.6). This may suggest that in most countries relatively high-paid jobs have expanded at a faster pace than low-paying ones. Whether this is the case or not will also depend on the extent to which job growth (job declines) have been greater (smaller) in higher-paying jobs within each sector than low-paying ones. Therefore, in the

Table 3.8. **The US-EU employment rate gap by wage level and sector, 1999**[a]

Percentage points

Industries (ISIC-Rev. 3)	Wage level			
	Low paid	Medium paid	High paid	All wage levels
Goods-producing sector	**0.0**	**–2.6**	**1.1**	**–1.6**
Agriculture (A + B)	–0.8	. .	0.0	–0.9
Mining and utilities (C + E)	. .	0.2	0.3	0.4
Manufacturing (D)	0.7	–2.4	0.4	–1.3
Construction (F)	0.2	–0.4	0.4	0.2
Service sector	**7.5**	**0.8**	**6.9**	**15.2**
Wholesale and retail (G)	2.3	1.5	–0.6	3.2
Hotels and restaurants (H)	1.9	0.4	. .	2.2
Transport and communications (I)	0.1	0.0	0.3	0.3
Financial intermediation (J)	. .	0.5	1.0	1.6
Real estate and business activities (K)	0.4	0.7	2.2	3.3
Public administration (L)	. .	–1.6	–1.4	–3.0
Education (M)	1.0	–0.5	1.4	1.9
Health and social work (N)	1.3	–1.0	2.3	2.6
Community, social and personal (O + P + Q)	0.5	1.0	1.6	3.1
Total	**7.5**	**–1.8**	**7.9**	**13.7**

. . Not applicable (*i.e.* no broad occupations in the US for the given industry have average earnings at the given wage level).

a) For each country, jobs (*i.e.* employment in 76 industry/occupation cells) are assigned to the same broad wage groups as the equivalent job in the United States. For the United States, jobs are first ranked on the basis of average hourly earnings in 1999 and then placed in one of three wage groups (low, medium, high) of equal size in terms of employment shares.

Source: OECD estimates based on data from the European Labour Force Survey for Europe and on data from the Current Population Survey (Outgoing Rotation Group file) for the United States.

following analysis, the same methodology is used as in Section III.B to classify jobs by broad wage levels (low, medium, high) based on each country's own structure of wages and employment in 1995. Employment changes over time are then traced out for each group of jobs.[21]

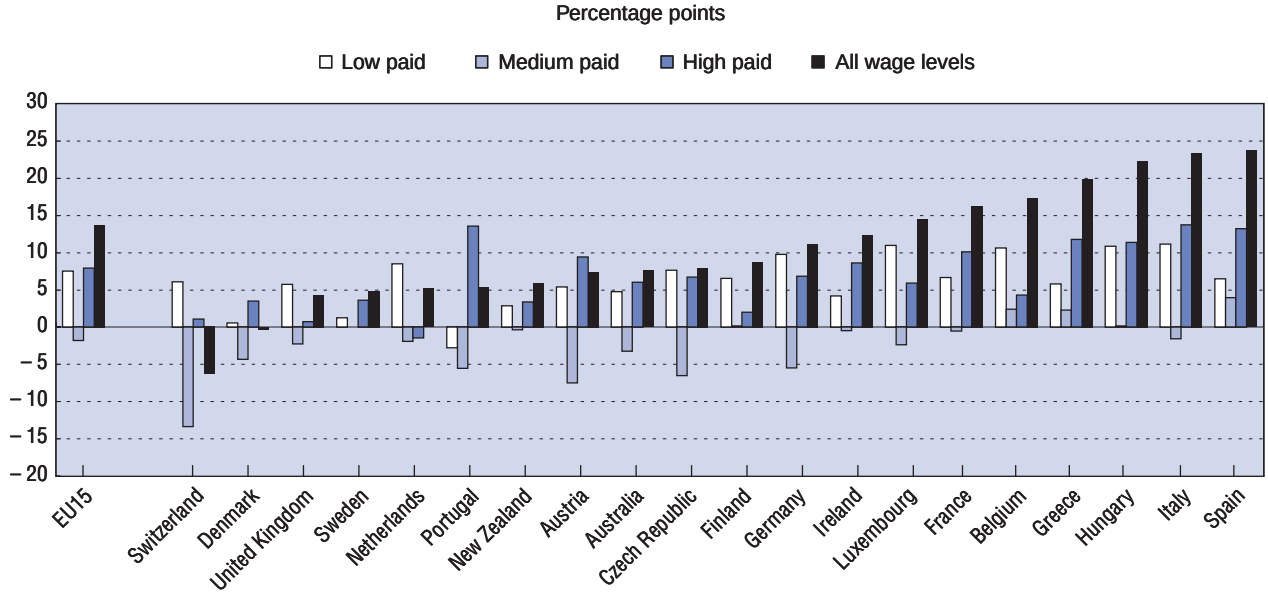
In the case of the United States, it can be seen that employment growth over the period 1989 to 1999 has been much more substantial in jobs that are relatively high-paid on average than in jobs that are low or medium paid on average (Chart 3.6, Panel A).[22] This result is broadly similar to the results reported in Ilg (1996) and Ilg and Haugen (2000), although both studies found that employment growth in low-paying jobs was faster than for medium-paying ones.[23]

Of course, it is possible that this picture underestimates the extent to which low-wage employment has risen in the United States. Earnings inequality has risen substantially over time in the United States [OECD (1996)], and there may have been a rise in earnings dispersion for individual workers within each of the industry/occupation categories underlying this analysis. It could be, therefore, that a growing proportion of workers in each broad wage group is in fact receiving relatively low wages. This possibility can be examined by looking at the proportion of all workers who earn either below two-third of median hourly earnings (*i.e.* low-paid workers) or more than one-and-a-half times median earnings (*i.e.* high-paid workers). The results in Chart 3.6 (Panel B) suggest that the incidence of low pay has fallen slightly over the 1990s matched by stability or a small rise in the incidence of high pay.

The distribution of job growth in other OECD countries over the 1990s by broad wage levels can also be carried out using the same methodology. The results are shown in Chart 3.7.[24]

The European pattern of job growth by wage level has been similar to one for the United States. In both, there has been more substantial growth in jobs that are relatively high-paid on average than in those categories that are low- or medium-paid on average.[25] This pattern holds for most EU countries and for Switzerland.[26] However, with the notable exceptions of Ireland, the Netherlands and Spain, job growth in Europe has been slower at all wage levels than in the United States. In general, these results suggest that neither in the United States nor in European countries has a disproportionate part of growth in service sector employment been occurring in jobs that are on average low-paid.[27]

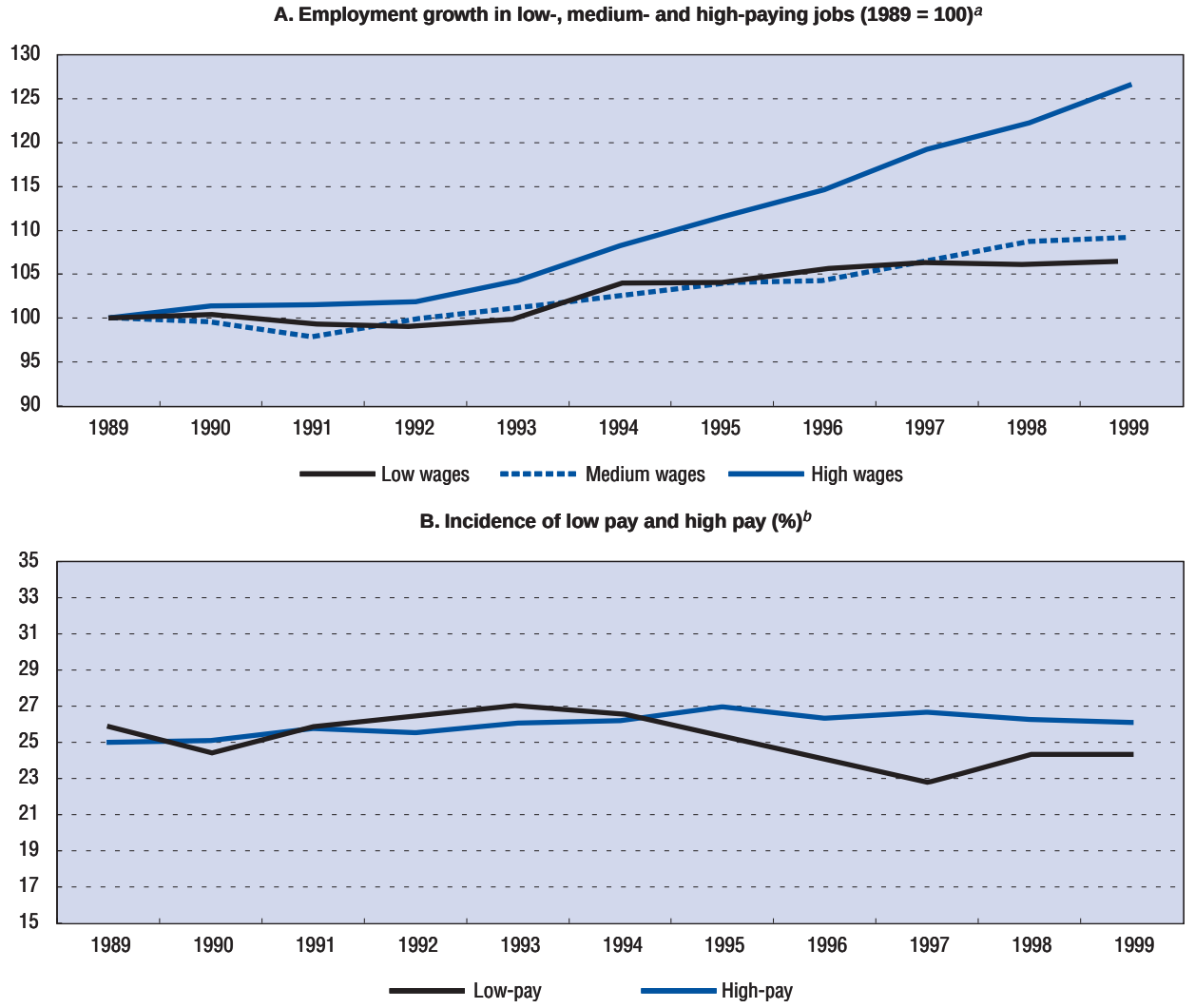
Chart 3.5. **Employment rate gap between the United States and other OECD countries by wage level, 1999**[a]



a) For each country, jobs (*i.e.* employment in 76 industry/occupation cells) are assigned to the same broad wage groups as the equivalent job in the US. For the US, jobs are first ranked on the basis of average hourly earnings in 1999 and then placed in one of three wage groups (low, medium, high) of equal size in terms of employment shares. The data refer to 1998 for Australia, the Czech Republic, Hungary and New Zealand. Individual countries are ranked in ascending order by the size of their overall employment rate gap with the United States.

Sources: OECD estimates based on data from the European Labour Force Survey for EU countries, the Current Population Survey (Outgoing Rotation Group file) for the United States and national labour force surveys for other countries.

Chart 3.6. **Employment trends in the US by wage level, 1989-1999**



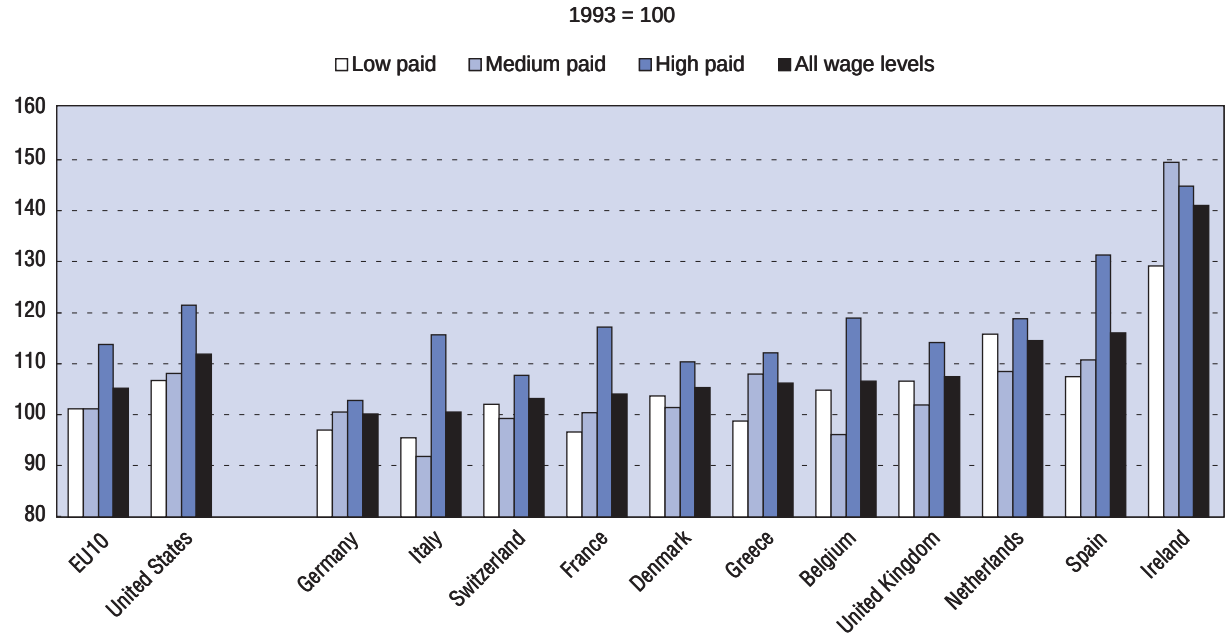
a) Jobs (*i.e.* employment in 76 industry/occupation cells) have been ranked on the basis of hourly earnings in 1995 and then placed into three groups of equal size in terms of employment shares.
b) The incidence of low pay (high pay) refers to the proportion of all workers earning less than (more than) two-thirds of (one-and-a-half times) median hourly earnings.
Source: OECD calculations based on data from the Current Population Survey (Outgoing Rotation Group file).

Conclusions

There are systematic differences across sectors in some job characteristics such as in the incidence of part-time work, in average job tenure and in the incidence of training. However, it is not clear that this can be ascribed to innate differences between jobs in the service sector and those in the goods-producing sector. Even within the service sector there is considerable variation in these job characteristics. There is also considerable variation across countries and over time at the economy-wide level, and little of this variation appears to be accounted for by country differences or within-country shifts in the distribution of employment by sector.

More direct measures of job quality also fail to reveal any simple dichotomy between the goods-producing sector and the service sector; good jobs are not primarily located in the former and bad jobs in the latter. Service sector jobs

Chart 3.7. **Employment growth by wage level in OECD countries, 1993-1999**[a]



a) For each country, jobs (*i.e.* employment in 76 industry/occupation cells) are ranked on the basis of average hourly earnings in 1995 and then placed into three groups of equal size in terms of employment shares. The growth in employment in the same jobs at each level is then calculated. The EU averages exclude Austria, Finland, Luxembourg, Portugal and Sweden. Countries are ranked in ascending order by their overall growth in employment.

Sources: OECD estimates based on data from the European Community Household Panel Survey and the European Labour Force Survey for EU countries, the Swiss Labour Force Survey for Switzerland and on data from the Current Population Survey (Outgoing Rotation Group file) for the United States.

cover the entire spectrum of job quality in terms of working conditions, job satisfaction and pay.[28] Jobs in hotels and restaurants and in some other personal services sectors score poorly across a range of job quality measures while those in financial services and in public administration generally score quite highly. On the other hand, agricultural and construction jobs often have poorer working conditions as well. But this high degree of heterogeneity across sectors also reflects the range of job quality within each sector.Within each sector, jobs with poor working conditions and low pay co-exist with those having good working conditions and high pay. Ultimately, what a job pays is more closely linked to occupation rather than to sector. Managers and professional workers in almost all sectors have jobs that are high paid on average while workers in elementary occupations generally have jobs that are low paid on average.

There also does not appear to be any simple trade-off between job quality and employment performance. While the United States has a higher proportion of its working-age population employed in low-paying jobs than in most other OECD countries, it also has a higher proportion employed in high-paying jobs. Moreover, the continued growth of service sector employment in all countries over the 1990s has not been driven by an expansion of low-paid jobs. In most countries, including the United States, employment grew more rapidly in high-paying jobs than in low-paying or medium-paying ones.

The configuration of policies that will be appropriate for each country in terms of addressing issues of job quality will depend on its initial situation. On the one hand, for those countries with a relative high incidence of jobs involving low pay and poor working conditions, a range of options exist. Low wages can be propped up with income supplements. The entitlements of part-time and temporary workers or workers in small firms can be reviewed in relation to the entitlements of full-time and permanent workers and workers in larger firms. But these measures need to be balanced against the risk of reducing job opportunities for less-skilled and less-experienced workers. Ultimately, policies are required which encourage individuals and firms to invest more in skills acquisition. On the other hand, for countries wishing to improve their employment performance, the solution is not simply to stimulate job creation in poorly-paid service sector jobs but to implement a broad range of policies designed to

stimulate employment more generally. This may involve reviewing barriers to employment for low-skilled workers such as high labour costs as a result of high statutory minimum wages and/or high social security charges. But it will also depend on improving product-market competition, stimulating entrepreneurship more generally and achieving sustained economic growth. In either case, it is difficult to lay the blame on either too many low-quality service sector jobs or too few. The quality and quantity of jobs in the service sector depend on institutional settings and labour market policies that affect employment in all sectors.

NOTES

1. For example, in March 2000, a significantly higher proportion of temporary workers than permanent workers in the EU reported being exposed to a range of poor working conditions. These included carrying heavy loads, working in painful positions, working at high speed, making repetitive movements, having no control over the pace of work or not having received training, etc. [Merllié and Paoli (2001)]. In some countries, non-wage benefits for part-time workers are lower than for full-time workers even on a *pro rata* basis, and the incidence of job-related training for part-timers appears to be lower than for full-timers even after controlling for a range of job and worker characteristics [OECD (1999)].

2. Country differences in the overall incidence of part-time and temporary work will be affected by how these characteristics are measured. In order to improve the comparability of the results, part-time work in this study is not based on self-assessment, but is defined for most countries as usual weekly hours of work of less than 30 hours. There are some national differences in the way permanent versus temporary jobs are defined [OECD (1996)]. This may limit somewhat the comparability of the overall incidence of temporary work, but should affect less the comparisons of the relative incidence of temporary work in different sectors.

3. See Murtough and Waite (2000) and Campbell and Burgess (2001) for a more detailed examination of the different types of working arrangements in Australia and the characteristics of the workers involved.

4. These data on average tenure can be heavily influenced by a relatively small number of workers with long tenure. Some sectors may record a high turnover of labour, but nevertheless have a core group of workers who remain in the same job for a considerable length of time. In this case, average job tenure will still tend to be quite high but will mask considerable job instability and job insecurity for some groups of workers. However, when the incidence of jobs with short-term tenure (of less than 12 months) and with long-term tenure (10 years and over) is measured (not shown), the sectoral pattern is by and large very similar to the pattern observed for average job tenure, *i.e.* short-tenure jobs are more prevalent in sectors with low average job tenure, and long-tenure jobs are more common in sectors with high average job tenure.

5. According to the Second European Survey of Working Conditions [European Foundation (1997)], the proportion of EU workers in 1995 whose job involves working with computers at least half of the time, in financial intermediation, real estate and business activities, and public administration was, respectively, 68, 42 and 32% compared with 26% in manufacturing.

6. Goux and Zamora (2001) report for France that computer training courses accounted for just over a quarter of all training courses that were paid for by enterprises in 1999.

7. Occupation is shown in Table 3.1 as a worker characteristic. It could be argued that it is more a characteristic of a worker's job. Nevertheless, it is interesting to see to what extent other aspects of jobs are correlated with occupation.

8. If s^c refers to the overall incidence of part-time or temporary employment or to average job tenure in country c and s^a to the average for all countries then the difference $(s^c - s^a)$ can be decomposed into the following three components:

$$\sum_i (e^c{}_i - e^a{}_i) \times s^a{}_i \qquad (1)$$

$$\sum_i (s^c{}_i - s^a{}_i) \times e^a{}_i \qquad (2)$$

$$\sum_i (e^c{}_i - e^a{}_i) \times (s^c{}_i - s^a{}_i) \qquad (3)$$

where i refers to sector i and e refers to the employment share in sector i. The interaction effect turns out to be generally quite small and so is not separately shown in Chart 3.2.

9. The decomposition is the same as in note 8, except s^a and e^a here refer to job quality and the employment share, respectively, for the same country in the earlier period. As before, the interaction effect is not separately shown in Chart 3.3 since it is generally quite small.

10. There is some element of subjectivity involved in these questions about working conditions that may affect comparisons across countries. For example, what constitutes "monotonous tasks" may not be precisely defined and may instead rely on each respondent's judgement about what this means.

11. See Clark (1997).

12. An ordered probit regression model was used in each case with controls for country and year effects in addition to controls for various worker and job characteristics.

13. The importance of these more direct measures of skill for explaining variations in wages across jobs is shown in Pierce (1999).

14. One potential problem with using pay as a proxy for job quality is raised by the theory of compensating differentials. This theory suggests that for similar jobs in terms of skill requirements, those jobs with poorer working conditions, *e.g.* dirtier or involving a more intense rhythm of work, will be compensated by higher rates of pay than those with better working conditions. In other words, based on pay alone, the job with poorer working conditions may well be classed

as being a better quality job than the one with better working conditions. However, even in this case, the higher level of pay may itself be a source of extra "utility" in terms of conferring greater social status, say, than a lower-paid job and so may still be correctly indicating a better quality job. It is not clear how important these compensating differentials are in practice. In a recent American study by Pierce (1999), a negative rather than a positive wage premium is reported for jobs that were physically more demanding than other jobs that were identical in other observable respects. However, the same study does report a positive wage premium for jobs involving greater work risks. But both these dimensions of jobs account for only a very small part of the overall variation in wages across jobs. Other factors appear to be much more important such as the knowledge required for carrying out a job, and the complexity involved, as well as a worker's occupation and industry of employment.

15. Germany is not shown in Table 3.6 as hourly earnings data at a detailed level for the service sector are not generally available. However, using a mixture of microcensus and social security data for Germany, Freeman and Schettkat (2001) suggest that inter-industry wage differentials are quite similar in both western Germany and the United States.

16. The much higher level of average earnings in Portugal and Italy in the distributive service sector relative to the manufacturing sector may be due to the fact that the data for these two countries are based on an establishment survey which excludes establishments with less than 10 employees. These excluded establishments will typically have lower-than-average earnings in comparison with larger establishments.

17. A similar exercise has been carried out for the United States by Ilg (1996) and Ilg and Haugen (2000) using 90 industry/occupation categories.

18. It should be remembered that these comparisons are based on average wages for industry/occupation cells and so do not refer to wages of individual workers. For instance, some workers may have a low wage despite a relatively high average wage for all workers in the same industry/occupation class as them.

19. As in the preceding analysis, 76 separate industry/occupation cells are identified. However, for every country, these cells are assigned to the same broad wage groups as the equivalent cell in the United States based on its wage and employment structure for 1999. The results appear to be relatively insensitive to the year chosen to categorise jobs by broad wage groups. Similar results are obtained using 1995 instead of 1999 as the reference year. It should be recalled, however, that because of difficulties in comparing sectoral and occupational data across countries, these results should not be taken as precise estimates but as indicating broad differences between the United States and other OECD countries.

20. The results of detailed case studies of differences in employment structures in retail between France and the United States are reported in Jany-Catrice and Baret (2001).

21. There are a number of limitations that should be borne in mind when interpreting the results of this analysis. First, some employment changes within each group may be due to spurious fluctuations in the reported industry/occupation cell that a person is working in. However, unless there have been major changes in the underlying survey (such as in its methodology, design or industry/occupation classifications), this should not affect longer-run trends. Second, the analysis uses a fixed reference year to classify jobs by wage level but these broad wage differentials between jobs may change over time which may shift the composition of these wage groups. But this should not greatly affect the analysis over a relatively short time span.

22. The actual increase in employment for each broad grouping should be only taken as an indication of the order of magnitude of job growth rather than as a precise estimate. There are various statistical breaks, notably in 1990 and 1994, because of the introduction of new population benchmarks and other changes in the survey methodology underlying the data. However, while these breaks affect absolute levels, they are less likely to have affected the relative difference between the three broad groups in terms of job growth.

23. The methods used in both studies and in this chapter to class jobs by wage level are broadly comparable. However, there are a number of differences that may account for the divergence in some of the results between these studies and the chapter. One important difference is that in these studies jobs were classed on the basis of weekly earnings rather than hourly earnings. Thus, many part-time workers were classed as low paid irrespective of their hourly rate of pay. Another difference is that the breakdown of jobs by industry and occupation in these studies is also somewhat finer than the one used in this chapter.

24. The data refer to job growth over the 6-year period between 1993 and 1999. Comparable European data on employment by industry and occupation are generally not available prior to 1993.

25. A similar pattern of higher-than-average employment growth in more skilled occupations and in high-education sectors is reported for EU countries by the European Commission (2000). A similar finding for Australia is also reached in the Joint Governments' Submission (2001) based on an analysis of average earnings and total hours worked by very detailed occupations. They find that from 1986 to 2000 growth was consistently strongest in high-paid jobs. Over the period 1986-1995, this was followed by growth in low-paid jobs and, over the period 1996-2000, by growth in medium-paid jobs.

26. Gubian and Ponthieux (2000) obtain a somewhat different result for France. They find that the employment share of low-skilled jobs rose slightly between 1994 and 2000, following a substantial decline since at least 1984. They link this small improvement to the various measures taken since 1993 to lower employer social security charges for low-paid workers. Their study, however, is not directly comparable with the results of the analysis used in this chapter since they classify jobs by occupation only rather than using wage levels to rank jobs and a classification of jobs by both sector and occupation. Moreover, their study examines job growth for employees only and they are looking at a more restrictive group of low-skilled workers, accounting for under 25% of employees between 1994 and 2000. In this chapter, on the other hand, employment growth is examined for all workers, and the low-paid group accounts for roughly one-third of the total.

27. Freeman and Schettkat (2001) provide a long-run comparison of job growth in the United States and western Germany over

the period 1970 to 1995. They also find that job growth in the United States mainly took place at both the low and high ends of the wage scale whereas for Germany there was a slight decline in low-wage jobs, a stagnation in high-wage jobs and modest growth in jobs just below the mean wage. They also dismiss the conjecture that service sector employment growth has been concentrated in low-wage industries. Finally, they are unable to find much evidence linking the different patterns of employment growth between the United States and Germany with differences in wage structures and changes in relative wages by sector.

28. Meisenheimer II (1998) reaches a similar conclusion for the United States based on a comparison across sectors of pay, employee benefits, job security, occupational structure and occupational safety.

Annex 3.A

Sectoral classification

For the data on part-time and temporary work, job tenure, training and earnings (Table 3.6 only), the sectoral classification is the same as was used in last year's chapter on services [OECD (2000)]. The correspondence between these nine broad sectors and sub-sectors and the ISIC rev. 3 and NACE rev. 1 codes (at the 2-digit level) is shown in Table 3.A.1. Elsewhere the sectoral breakdown is primarily based on industries at the one-digit level according to ISIC rev. 3.

Table 3.A.1. Definition of sectors used in analysis of part-time and temporary employment, job tenure and training

Sector	ISIC rev. 3/NACE rev. 1
Agriculture, hunting and forestry	01, 02, 05
Mining and quarrying	10 to 14
Manufacturing	15 to 37
Electricity, gas and water supply	40 to 41
Construction	45
Producer services	
Business and professional services	71 to 74
Financial services	65, 67
Insurance	66
Real estate	70
Distributive services	
Retail trade	50, 52
Wholesale trade	51
Transportation	60 to 63
Communication	64
Personal services	
Hotels and restaurants	55
Recreational and cultural services	92
Domestic services	95
Other personal services	93
Social services	
Government proper	75, 99
Health services	85
Educational services	80
Miscellaneous social services	90 to 91

Annex 3.B

Job characteristics by sector and country: detailed tables

The data corresponding to Chart 3.1 at an individual country level are shown below in Tables 3.B.1-3.B.4.

Table 3.B.1. Relative importance of part-time employment by sector, 1999[a]

	Ratio of incidence of part-time employment in each sector to average incidence for all sectors											Incidence in per cent All sectors
	Goods-producing sector						Service sector					
	Total	Agriculture, hunting and forestry	Mining and quarrying	Manufac-turing	Electricity, gas and water supply	Construc-tion	Total	Producer services	Distributive services	Personal services	Social services	
Australia[b]	0.49	0.90	0.10	0.38	0.15	0.49	1.18	0.87	1.18	1.48	1.24	26.2
Austria	0.50	0.81	0.79	0.48	0.21	0.33	1.28	1.35	1.28	1.62	1.12	12.3
Belgium	0.27	0.57	0.16	0.26	0.21	0.22	1.30	0.64	0.73	1.39	1.90	20.1
Canada[c]	0.51	0.97	0.18	0.47	0.11	0.47	1.21	0.99	1.11	1.81	1.15	18.7
Czech Republic[c]	0.58	0.89	0.10	0.65	0.45	0.31	1.37	1.19	1.21	1.51	1.57	5.7
Denmark	0.49	0.78	. .	0.52	0.37	0.28	1.22	0.81	1.17	2.41	1.22	15.3
Finland	0.57	1.33	1.01	0.41	0.06	0.41	1.23	1.15	1.10	2.22	1.10	9.4
France	0.33	0.91	0.13	0.27	0.19	0.24	1.29	0.79	0.69	2.18	1.67	14.7
Germany	0.50	0.79	0.15	0.53	0.28	0.34	1.30	1.20	1.22	1.65	1.30	17.2
Greece	0.64	1.16	0.07	0.28	0.00	0.31	1.24	0.47	0.34	1.23	2.74	7.9
Ireland	0.34	0.61	. .	0.29	0.19	0.28	1.36	0.72	1.12	1.94	1.70	18.3
Italy	0.44	0.88	0.21	0.38	0.26	0.34	1.34	0.95	0.64	1.59	2.11	11.9
Japan[c, d]	0.88	1.76	. .	0.79	0.80	0.63	1.07	1.06	0.98	1.35	1.06	23.5
Korea[c, d]	1.15	1.88	0.19	0.58	0.18	1.46	0.90	0.63	0.64	0.93	1.67	6.8
Luxembourg	0.36	1.11	. .	0.27	0.58	0.34	1.21	0.75	0.79	2.05	1.55	12.1
Netherlands	0.43	0.83	0.32	0.44	0.28	0.21	1.10	0.73	1.00	1.64	1.25	30.5
New Zealand[c]	0.57	0.98	0.10	0.43	0.24	0.44	1.21	0.94	1.09	1.66	1.28	23.5
Norway[e]	0.52	0.92	0.27	0.53	0.30	0.32	1.17	0.69	1.01	1.46	1.37	26.4
Portugal	0.98	2.95	. .	0.29	0.28	0.26	1.02	0.87	0.57	1.95	0.96	9.4
Spain	0.41	0.86	0.24	0.38	0.28	0.17	1.36	1.34	0.86	2.85	0.99	7.9
Sweden	0.53	1.48	. .	0.45	0.20	0.36	1.18	0.83	1.05	1.68	1.30	16.2
Switzerland	0.51	0.90	. .	0.48	0.41	0.37	1.21	0.84	0.89	1.48	1.59	25.9
United Kingdom	0.34	0.74	0.11	0.33	0.26	0.29	1.25	0.78	1.21	1.94	1.34	22.9
United States	0.37	1.27	0.10	0.26	0.15	0.37	1.22	0.80	1.17	2.18	1.13	12.9
OECD average[f]	**0.53**	**1.10**	**0.25**	**0.42**	**0.27**	**0.38**	**1.22**	**0.89**	**0.96**	**1.76**	**1.43**	**16.5**

. . Data not available.
a) Part-time employment refers to usual weekly hours of work of less than 30, except where noted otherwise.
b) Part-time work refers to employed persons whose usual and actual weekly hours of work are less than 35.
c) 1998 instead of 1999.
d) Part-time employment refers to actual weekly hours of less than 35. Sanitation services and activities of membership organisations (ISIC-Rev. 3 sectors 90 and 91) are included in personal services instead of social services.
e) Part-time employment includes persons who usually work between 30 and less than 37 hours per week and who declare themselves to be working part-time.
f) Unweighted average of countries shown in table.
Source: EU countries, European Labour Force Survey (data supplied by EUROSTAT); for the United States, OECD estimates based on outgoing rotation group microdata from the Current Population Survey; and for the other countries, data supplied by national statistical authorities based on their national labour force surveys.

Table 3.B.2. **Relative importance of temporary employment by sector, 1999**[a]

	Ratio of incidence of temporary employment in each sector to average incidence for all sectors											Incidence in per cent All sectors
	Goods-producing sector						Service sector					
	Total	Agriculture, hunting and forestry	Mining and quarrying	Manufac-turing	Electricity, gas and water supply	Construc-tion	Total	Producer services	Distributive services	Personal services	Social services	
Australia[b]	0.75	1.98	0.08	0.54	0.25	1.04	1.07	0.83	1.31	1.77	0.68	23.3
Australia[b]	0.54	0.38	2.09	0.39	1.83	0.45	1.13	0.88	0.29	0.89	2.25	4.2
Austria	1.06	1.55	0.73	0.85	0.82	1.55	0.97	0.69	0.96	1.87	0.81	7.9
Belgium	0.71	1.80	1.25	0.72	0.56	0.50	1.12	0.91	0.52	2.35	1.38	10.3
Canada[c]	0.91	3.03	0.72	0.53	0.65	1.94	1.04	0.96	0.73	1.32	1.20	11.8
Czech Republic[c]	0.79	0.98	0.62	0.83	0.69	0.62	1.19	1.00	0.80	1.25	1.65	6.0
Denmark	0.97	2.53	. .	0.69	0.65	1.41	1.01	0.59	0.77	1.58	1.21	10.1
Finland	0.79	1.72	0.84	0.63	0.31	1.10	1.09	0.73	0.70	1.43	1.40	18.2
France	0.96	1.52	0.18	0.89	0.52	1.16	1.02	0.83	0.80	1.21	1.18	14.0
France[d]	2.00	0.25	0.85	2.10	0.76	2.32	0.45	0.52	0.63	0.17	0.11	3.0
Germany	0.92	1.97	0.63	0.76	0.83	1.19	1.05	0.85	0.86	1.36	1.20	12.7
Greece	1.07	2.98	0.44	0.66	0.23	1.97	0.97	0.74	0.66	2.58	0.65	13.0
Ireland	0.69	1.02	1.35	0.53	0.48	1.05	1.15	0.69	1.01	2.31	1.01	4.9
Italy	0.99	3.71	0.30	0.63	0.50	1.40	1.01	0.86	0.87	1.88	0.93	9.9
Japan[c, e]	0.72	1.97	. .	0.64	0.24	0.86	1.15	0.94	1.11	1.81	0.84	11.4
Luxembourg	0.56	2.16	. .	0.41	0.00	0.75	1.12	0.83	1.11	1.53	1.21	3.3
Netherlands	0.71	1.86	0.45	0.73	0.55	0.39	0.89	0.79	0.85	2.38	0.67	12.0
Norway	0.71	1.64	0.34	0.63	0.91	0.69	1.09	0.61	0.73	1.43	1.41	10.6
Portugal	0.91	1.69	0.95	0.65	0.64	1.41	1.07	1.14	1.02	1.48	0.91	18.7
Spain	1.24	1.87	0.64	0.87	0.44	1.88	0.86	0.76	0.92	1.22	0.66	32.7
Sweden	0.57	1.28	0.26	0.52	0.15	0.74	1.16	0.86	0.84	1.96	1.30	13.9
Switzerland	0.85	1.97	. .	0.61	0.99	1.34	1.06	0.84	0.84	1.48	1.21	11.7
United Kingdom	0.72	1.46	0.76	0.60	1.07	1.00	1.10	0.98	0.60	1.57	1.42	6.8
United States[f]	0.81	2.46	0.60	0.50	0.72	1.41	1.06	1.18	0.53	1.16	1.38	4.5
OECD average[g]	**0.84**	**1.96**	**0.62**	**0.66**	**0.55**	**1.15**	**1.06**	**0.85**	**0.84**	**1.68**	**1.10**	**12.2**

. . Data not available.

a) The data refer to wage and salary workers only.

b) The data for the first row for Australia refer to workers who are not entitled to paid holiday leave and/or paid sick leave and who considered themselves to be casual workers. These data are not strictly comparable with the data for the other countries as they include a substantial proportion of workers who appear to be in an "ongoing" job with no fixed finishing date. The data for the second row refer to workers with a fixed-term contract. In both cases, the data refer to 2000.

c) 1998 instead of 1999.

d) The data refer to temporary work agency employment only.

e) Sanitation services and activities of membership organisations (ISIC-Rev. 3 sectors 90 and 91) are included in personal services instead of social services.

f) The data for the United State refer to "contingent" workers *i.e.* all workers who expect their work will end in the near future for economic (as opposed to personal) reasons.

g) Unweighted average of countries shown in table, including first row only for Australia and France.

Source: For Australia, ABS, *Employment Arrangements and Superannuation*, April to June 2000, Cat. No. 6361.0; EU countries, European Labour Force Survey (data supplied by EUROSTAT) and, for France (second row), "Le Travail Temporaire au Premier Semestre 2000 : Nouvelle Accélération", *Premières Informations*, DARES, No. 08.1, February, 2001; for the United States, OECD estimates based on microdata from the "contingent workers" supplement to the Current Population Survey; and for the other countries, data supplied by national statistical authorities based on their national labour force surveys.

Table 3.B.3. **Sectoral differences in average job tenure, 1999**[a]

	Ratio of average tenure for each sector to average tenure for all sectors											Level (years) All sectors
	Goods-producing sector						Service sector					
	Total	Agriculture, hunting and forestry	Mining and quarrying	Manufac-turing	Electricity, gas and water supply	Construc-tion	Total	Producer services	Distributive services	Personal services	Social services	
Australia[b]	1.22	1.72	1.20	1.11	1.66	1.10	0.92	0.80	0.87	0.78	1.16	6.9
Austria[c]	1.12	1.65	1.30	1.01	1.51	0.90	0.92	0.93	0.88	0.76	1.03	10.6
Belgium	1.02	1.27	1.04	1.04	1.37	0.83	0.99	0.88	0.97	0.80	1.09	11.7
Canada[d]	1.13	1.74	1.11	1.04	1.70	0.91	0.94	0.83	0.90	0.61	1.21	8.1
Denmark	1.07	1.54	0.97	1.01	1.54	0.97	0.97	1.00	0.94	0.71	1.02	8.5
Finland	1.13	1.53	1.16	1.09	1.71	0.77	0.93	0.85	0.95	0.69	1.01	10.1
France	1.09	1.33	1.35	1.09	1.44	0.90	0.96	0.87	0.92	0.63	1.12	11.2
Germany	1.07	1.33	1.61	1.11	1.38	0.83	0.96	0.88	0.94	0.69	1.08	10.3
Greece	1.28	1.84	0.90	0.83	1.13	0.92	0.81	0.76	0.82	0.56	0.95	13.3
Ireland	1.14	1.98	1.42	0.88	1.98	0.79	0.92	0.75	0.90	0.56	1.24	9.4
Italy	0.97	1.27	1.12	0.93	1.28	0.85	1.02	0.93	1.01	0.76	1.16	12.1
Luxembourg	1.16	1.65	1.43	1.37	1.40	0.74	0.95	0.82	0.93	0.73	1.10	10.9
Netherlands	1.20	1.62	1.39	1.12	1.73	1.11	0.93	0.81	0.86	0.74	1.10	9.6
Portugal	1.11	1.93	0.82	0.90	1.14	0.61	0.90	0.73	0.91	0.74	1.03	11.8
Spain	1.02	1.39	1.13	1.08	1.48	0.62	0.99	0.91	0.97	0.70	1.23	10.1
Sweden	1.11	1.48	1.48	1.06	1.47	1.04	0.96	0.79	0.92	0.61	1.10	11.5
Switzerland	1.25	1.88	1.49	1.14	1.04	1.06	0.90	0.84	0.96	0.81	0.92	9.4
United Kingdom	1.17	1.78	1.27	1.11	1.46	1.15	0.94	0.85	0.87	0.68	1.12	8.3
United States[e]	1.19	0.88	1.48	1.28	1.88	0.85	0.94	0.79	0.91	0.59	1.18	6.7
OECD average[f]	**1.13**	**1.57**	**1.25**	**1.06**	**1.49**	**0.89**	**0.94**	**0.84**	**0.92**	**0.69**	**1.10**	**10.0**

a) The data refer to employees, except for Canada and Australia where they refer to all persons in employment.
b) The data refer to 2000 and are OECD estimates. The original data refer to the distribution of employed persons by tenure intervals. Average tenure has been calculated by using the mid-point of each closed interval and assuming a mid-point of 27.5 years for the group with tenure of 20 years and over.
c) The data refer to 1995.
d) The data refer to 1998.
e) The data refer to 2000.
f) Unweighted average of countries shown in table.

Source: For Australia, ABS, *Labour Mobility, Australia,* August 2000, Cat. No. 6209.0; EU countries, European Labour Force Survey (data supplied by EUROSTAT); for the United States, OECD estimates based on microdata from the "Job Tenure" supplement to the Current Population Survey; and for the other countries, data supplied by national statistical authorities based on their national labour force surveys.

Table 3.B.4. **Relative importance of continuing vocational training by sector, 1997**[a]

	Ratio of incidence of training in each sector to average incidence for all sectors											Incidence in per cent All sectors
	Goods-producing sector						Service sector					
	Total	Agriculture, hunting and forestry	Mining and quarrying	Manufac-turing	Electricity, gas and water supply	Construc-tion	Total	Producer services	Distributive services	Personal services[b]	Social services[c]	
Austria	0.72	0.43	0.47	0.80	1.38	0.45	1.13	1.21	0.94	0.69	1.43	7.9
Belgium	0.58	0.38	1.80	0.55	1.69	0.44	1.19	1.48	0.75	0.90	1.38	3.4
Denmark	0.60	0.15	0.91	0.65	1.43	0.39	1.17	1.28	0.74	1.06	1.35	18.4
Finland	0.70	0.67	0.28	0.77	1.00	0.41	1.14	1.53	0.71	0.97	1.30	18.0
France[d]	0.49	0.24	0.84	0.57	0.75	0.22	1.21	1.11	0.58	0.86	1.74	1.9
Germany	0.71	0.47	0.50	0.73	1.40	0.62	1.18	1.27	0.62	0.93	1.64	4.2
Greece	0.68	0.00	0.34	0.63	1.25	0.00	1.21	1.69	0.71	0.42	1.63	0.7
Hungary	0.50	0.21	0.48	0.56	0.79	0.33	1.32	2.11	0.78	0.94	1.64	4.2
Iceland	0.62	0.32	0.00	0.62	1.72	0.77	1.17	1.25	0.80	0.83	1.42	14.0
Ireland	0.77	0.22	0.82	0.86	1.20	0.59	1.11	1.52	0.60	0.55	1.46	6.6
Italy	0.46	0.20	0.58	0.50	1.21	0.25	1.33	1.17	0.74	0.65	1.87	3.8
Luxembourg	0.63	0.00	0.00	1.02	0.00	0.07	1.16	1.84	0.72	0.43	1.21	2.5
Netherlands	0.88	0.59	1.62	0.91	1.26	0.77	1.05	1.40	0.83	0.89	1.07	14.9
Norway	0.82	0.19	1.21	0.83	1.32	0.74	1.06	1.12	0.81	0.66	1.27	11.7
Portugal	0.38	0.11	0.77	0.41	0.59	0.31	1.36	2.24	0.68	0.40	1.85	3.2
Spain	0.38	0.22	0.00	0.46	1.08	0.21	1.34	1.37	0.61	0.79	2.10	3.1
Sweden	0.92	0.77	0.61	0.93	1.61	0.75	1.03	1.14	0.82	0.76	1.14	18.3
United Kingdom	0.71	0.37	0.93	0.69	1.61	0.67	1.11	1.12	0.65	0.73	1.54	14.2
OECD average[e]	**0.65**	**0.31**	**0.66**	**0.70**	**1.21**	**0.46**	**1.18**	**1.46**	**0.74**	**0.74**	**1.49**	**8.8**

. . Data not available.

a) The incidence of training refers to the proportion of employees aged 25 to 54 who had undertaken training in the past 4 weeks, where training refers to education or training for a reason other than secondary or initial vocational training.

b) Including sanitation services and activities of membership organisations (ISIC-Rev. 3 sectors 90 and 91).

c) Excluding sanitation services and activities of membership organisations (ISIC-Rev. 3 sectors 90 and 91).

d) The data refer to current training, while the reference period used by the other countries is any time during the previous 4 weeks.

e) Unweighted average of countries shown in table, excluding France.

Source: European Labour Force Survey (data supplied by EUROSTAT).

Annex 3.C

Employment by wage level: sources, methods and supplementary tables

This annex describes in more detail how the distribution of employment by wage level was calculated, and gives the sources and definitions for the underlying data. It also contains supplementary tables on the industry and occupational distribution of employment by wage level (corresponding to Table 3.7) and on the employment rate gap by wage level and industry between the United States and individual OECD countries (corresponding to Table 3.8 and Chart 3.5).

Methodology

The same methodology was used for all countries for which the distribution of employment by wage level was estimated.

First, the same 76 separate industry/occupation cells were identified for each country. These cells are based on ISIC and ISCO breakdowns at the one-digit level (see Table 3.C.1 for details). Some further aggregation of industries and occupations was required because of the relatively small sample size of the European Community Household Panel (used for EU countries), which meant that hourly earnings could not be calculated for some industry/occupation cells at the one-digit level.

For the analysis of the growth and distribution of employment by wage level, average hourly earnings were then calculated for each cell using hourly earnings data for each country for 1995. The analysis of the employment rate gap between the United States and other OECD countries uses the US wage structure to rank jobs by wage level and so hourly earnings data were calculated for 1999 for the United States only.

Finally, cells were assigned to one of three groups (low paid, medium paid and high paid) of roughly equal size in terms of employment shares. This was carried out by cumulating total employment in ascending order from low wage cells to high wage cells. A cell was assigned to a higher broad wage group if the difference between the cumulated running total and either one- or two-thirds of total employment accounted for more than half of the employment in that cell. Thus, employment at each broad wage level corresponds to roughly a third of total employment for the year used to rank cells by their average hourly earnings, but is greater or less than this in other years.

Sources and definitions

For the total employment data, the sources are the *European Labour Force Survey* for the EU countries (as provided by Eurostat), the *Current Population Survey* for the United States (as estimated by the OECD based on microdata from the Outgoing Rotation Group file) and national labour force surveys for the other countries (as provided by the national authorities). For some countries and for some years, either the industry or occupation of a relatively small proportion of employed persons was unknown. In these cases, an iterative procedure was used to assign these persons to an industry/occupation cell based on the proportions of persons in each industry and occupation for which this information was known. In the case of Ireland, employment by industry was available for 1999 but not by occupation. Therefore, this split was estimated based on the industry/occupation split in 1997.

For the data on hourly earnings data, the sources are the *European Community Household Panel* (ECHP) for the EU countries (as estimated by the OECD based on microdata from the ECHP), the *Current Population Survey* for the United States (as estimated by the OECD based on microdata from the Outgoing Rotation Group file) and the Swiss Labour Force Survey for Switzerland (as provided by the Swiss national statistical office).

For the United States, hourly earnings refer either to hourly earnings of employees paid by the hour or to usual weekly earnings of employees divided by their usual weekly hours of work. In all cases, the data refer to gross earnings. A number of adjustments to the data were made as suggested by Mishel *et al.* (2001). Individual observations were discarded where hourly earnings were either below $0.5 or above $100 in terms of 1989 CPI-U-X1 dollars and where reported usual weekly hours of work were outside of the range 1-99. Earnings were also imputed for the relatively small number of observations affected by top coding.

For the EU countries, hourly earnings refer to net monthly earnings (net only of social security contributions in the case of France) divided by usual weekly hours of work. In order to partially correct for possible spurious earnings observations and because of small sample sizes, the earnings data were derived by averaging across the 1994, 1995 and 1996 waves of the ECHP. The 1994 and 1996 data were deflated to 1995 wage levels by dividing through by the overall growth in average hourly earnings between these years and 1995.

For Switzerland, hourly earnings are calculated by dividing gross annual earnings by 52 and then by usual weekly hours of work. Individual observations were discarded where hourly earnings were either below CHF 2 or above CHF 200.

Table 3.C.1. Employment shares by wage level in the European Union, 1999[a]

Percentage of all jobs at each wage level (low/medium/high) in each industry/occupation cell

Industries (ISIC-Rev. 3)	**Occupations** (ISCO-88 codes)	Managers and professionals (1 + 2)	Technicians and assoc. prof. (3)	Clerks (4)	Service and sales workers (5)	Craft and trade workers (6 + 7)	Plant and machine operators (8)	Elementary occupations (9)	Clerks and service workers (4 + 5)	Manual workers (6 + 7 + 8 + 9)	Plant and elementary (8 + 9)	Total
Low-paid jobs												
Agriculture (A + B)		0.2	0.2						0.3	10.7		11.3
Mining and utilities (C + E)		0.0	0.0			0.0			0.0		0.0	0.0
Manufacturing (D)		0.0	0.0	0.0	0.8	5.1	0.0	4.4				10.4
Construction (F)		0.1	0.4			0.9	0.9	1.7	0.6			4.6
Wholesale and retail (G)		0.0	1.9	5.7	14.4	4.0	1.6	2.9				30.6
Hotels and restaurants (H)		0.8	0.1	0.2	7.5					1.6		10.2
Transport and communications (I)		0.0	0.0	0.1	0.2	0.0	2.7	0.5				3.5
Financial intermediation (J)		0.0	0.0						0.0	0.1		0.1
Real estate and business activities (K)		0.0	0.0	1.1	0.7	0.3	0.4	3.7				6.1
Public administration (L)		0.0	0.0	0.6	0.1	0.3	0.1	1.1				2.1
Education (M)		0.0	0.0	0.3	1.2					1.8		3.3
Health and social work (N)		0.0	0.0	1.2	4.9					1.5		7.5
Community, social and personal (O + P + Q)		0.0	0.7	0.3	4.2	0.6	0.5	3.8				10.2
Total		**1.0**	**3.2**	**9.5**	**33.9**	**11.3**	**6.2**	**18.3**	**0.9**	**15.7**	**0.0**	**100.0**
Medium-paid jobs												
Agriculture (A + B)		0.1	0.0						0.1	2.0		2.3
Mining and utilities (C + E)		0.0	0.2			0.4			0.2		0.4	1.2
Manufacturing (D)		0.0	0.4	4.1	0.8	15.2	14.1	0.0				34.6
Construction (F)		0.0	0.6			13.6	0.6	0.3	0.9			15.9
Wholesale and retail (G)		0.0	2.6	1.1	0.5	2.1	0.1	0.1				6.4
Hotels and restaurants (H)		0.4	0.1	0.2	0.0					0.1		0.8
Transport and communications (I)		0.0	0.0	3.6	0.4	0.5	1.4	0.6				6.4
Financial intermediation (J)		0.0	0.0						3.6	0.1		3.7
Real estate and business activities (K)		0.0	2.2	3.6	0.1	0.9	0.0	0.0				6.8
Public administration (L)		0.0	0.1	2.6	1.8	0.8	0.3	0.7				6.2
Education (M)		0.0	1.4	0.8	0.1					0.3		2.5
Health and social work (N)		0.0	5.9	1.2	2.7					1.0		10.8
Community, social and personal (O + P + Q)		0.0	0.2	1.2	0.1	0.3	0.1	0.5				2.4
Total		**0.5**	**13.6**	**18.5**	**6.3**	**33.7**	**16.6**	**2.2**	**4.8**	**3.5**	**0.4**	**100.0**
High-paid jobs												
Agriculture (A + B)		0.4	0.0						0.0	0.0		0.4
Mining and utilities (C + E)		0.5	0.4			0.7			0.3		0.2	2.2
Manufacturing (D)		8.0	6.4	1.8	0.0	0.0	0.0	0.0				16.2
Construction (F)		2.2	0.2			0.6	0.0	0.0	0.0			3.1
Wholesale and retail (G)		8.3	0.8	0.0	0.0	0.0	0.0	0.0				9.1
Hotels and restaurants (H)		1.4	0.1	0.0	0.0					0.0		1.5
Transport and communications (I)		2.0	1.9	1.3	0.1	0.5	2.1	0.0				8.0
Financial intermediation (J)		2.2	2.7						1.3	0.0		6.3
Real estate and business activities (K)		8.9	3.1	0.0	0.0	0.0	0.0	0.0				12.0
Public administration (L)		4.3	4.4	1.8	1.3	0.1	0.1	0.0				12.1
Education (M)		12.6	1.5	0.2	0.0					0.0		14.3
Health and social work (N)		6.8	2.8	0.1	0.0					0.0		9.7
Community, social and personal (O + P + Q)		3.4	1.3	0.4	0.0	0.0	0.1	0.0				5.1
Total		**61.2**	**25.8**	**5.5**	**1.4**	**1.9**	**2.3**	**0.1**	**1.6**	**0.0**	**0.2**	**100.0**

a) For each country, jobs (*i.e.* employment in 76 industry/occupation cells) are ranked on the basis of average hourly earnings in 1995 and then placed into three groups of equal size in terms of employment shares. The data are weighted averages of all EU countries except Luxembourg and Sweden.

Sources: OECD estimates based on data from the European Community Household Panel Survey and the European Labour Force Survey.

Table 3.C.2. **Location of jobs by wage level in the European Union, 1995**

Number of countries (out of a maximum of 13) in each industry/occupation cell by wage level

Industries (ISIC-Rev. 3)	**Occupations** (ISCO-88 codes)	Managers and professionals (1 + 2)	Technicians and assoc. prof. (3)	Clerks (4)	Service and sales workers (5)	Craft and trade workers (6 + 7)	Plant and machine operators (8)	Elementary occupations (9)	Clerks and service workers (4 + 5)	Manual workers (6 + 7 + 8 + 9)	Plant and elementary (8+9)	Total	As a % of max. possible cases
Low-paid jobs													
Agriculture (A + B)		3	4						9	12		28	54
Mining and utilities (C + E)		0	0			0			0		1	1	2
Manufacturing (D)		0	0	1	8	2	0	12				23	25
Construction (F)		1	1			2	4	9	5			22	28
Wholesale and retail (G)		0	1	8	12	9	10	12				52	57
Hotels and restaurants (H)		5	4	8	13					12		42	66
Transport and communications (I)		0	0	1	3	1	5	6				16	18
Financial intermediation (J)		0	0							5		5	10
Real estate and business activities (K)		0	0	4	10	5	6	13				38	42
Public administration (L)		0	0	2	1	2	3	6				14	15
Education (M)		0	1	3	10					9		23	35
Health and social work (N)		0	0	2	9					7		18	28
Community, social and personal (O + P + Q)		0	1	2	12	6	6	11				38	42
Total		**9**	**12**	**31**	**78**	**27**	**34**	**69**	**14**	**45**	**1**	**320**	**32**
As a per cent of maximum possible cases		5	7	26	67	26	37	76	27	69	8	32	
Medium-paid jobs													
Agriculture (A + B)		4	5						4	1		14	27
Mining and utilities (C + E)		0	1			6			5		5	17	26
Manufacturing (D)		0	2	10	5	11	13	1				42	46
Construction (F)		0	4			9	9	3	8			33	42
Wholesale and retail (G)		0	6	5	1	4	3	1				20	22
Hotels and restaurants (H)		4	7	4						1		16	25
Transport and communications (I)		0	0	6	6	6	6	6				30	33
Financial intermediation (J)		0	1						8	5		14	27
Real estate and business activities (K)		0	6	9	2	7	3					27	30
Public administration (L)		0	2	6	6	9	7	5				35	38
Education (M)		0	5	9	3					4		21	32
Health and social work (N)		0	7	10	4					6		27	42
Community, social and personal (O + P + Q)		0	2	9	1	7	5	2				26	29
Total		**8**	**48**	**68**	**28**	**59**	**46**	**18**	**25**	**17**	**5**	**322**	**33**
As a per cent of maximum possible cases		5	28	58	24	57	51	20	48	26	38	33	
High-paid jobs													
Agriculture (A + B)		6	4						0	0		10	19
Mining and utilities (C + E)		13	12			7			8		7	47	72
Manufacturing (D)		13	11	2	0	0	0	0				26	29
Construction (F)		12	8			2	0	1	0			23	29
Wholesale and retail (G)		13	6	0	0	0	0	0				19	21
Hotels and restaurants (H)		4	2	1	0					0		7	11
Transport and communications (I)		13	13	6	4	6	2	1				45	49
Financial intermediation (J)		13	12						5	3		33	63
Real estate and business activities (K)		13	7	0	1	1	4					26	29
Public administration (L)		13	11	5	6	2	3	2				42	46
Education (M)		13	7	1	0					0		21	32
Health and social work (N)		13	6	1	0					0		20	31
Community, social and personal (O + P + Q)		13	10	2	0	0	2	0				27	30
Total		**152**	**109**	**18**	**11**	**18**	**11**	**4**	**13**	**3**	**7**	**346**	**35**
As a per cent of maximum possible cases		90	64	15	9	17	12	4	25	5	54	35	

Notes and sources: See Table 3.C.1.

Table 3.C.3. **Employment share by wage level in the United States, 1999**[a]

Percentage of all jobs at each wage level (low/medium/high) in each industry/occupation cell

Industries (ISIC-Rev. 3)	**Occupations** (ISCO-88 codes)	Managers and professionals (1 + 2)	Technicians and assoc. prof. (3)	Clerks (4)	Service and sales workers (5)	Craft and trade workers (6 + 7)	Plant and machine operators (8)	Elementary occupations (9)	Clerks and service workers (4 + 5)	Manual workers (6 + 7 + 8 + 9)	Plant and elementary (8 + 9)	Total
Low-paid jobs												
Agriculture (A + B)		0.0	0.2						0.4	6.4		6.9
Mining and utilities (C + E)		0.0	0.0			0.0			0.0		0.0	0.0
Manufacturing (D)		0.0	0.0	0.0	0.0	0.0	14.8	2.7				17.5
Construction (F)		0.0	0.0			0.0	0.0	2.2	0.0			2.2
Wholesale and retail (G)		0.0	0.0	9.7	0.0	0.0	3.2	5.1				17.9
Hotels and restaurants (H)		0.0	0.0	1.8	11.0					1.8		14.6
Transport and communications (I)		0.0	0.0	0.0	0.0	0.0	0.0	0.0				0.0
Financial intermediation (J)		0.0	0.0						0.0	0.0		0.0
Real estate and business activities (K)		0.0	0.0	5.2	1.8	0.0	1.1	2.5				10.6
Public administration (L)		0.0	0.0	0.0	0.0	0.0	0.0	0.0				0.0
Education (M)		0.0	0.0	4.0	1.6					2.0		7.6
Health and social work (N)		0.0	0.0	4.8	8.6					1.9		15.3
Community, social and personal (O + P + Q)		0.0	0.0	4.0	0.0	0.0	0.8	2.6				7.3
Total		**0.0**	**0.2**	**29.4**	**22.9**	**0.0**	**19.9**	**15.1**	**0.4**	**12.2**	**0.0**	**100.0**
Medium-paid jobs												
Agriculture (A + B)		0.0	0.0						0.0	0.0		0.0
Mining and utilities (C + E)		0.0	0.0			0.0			0.7		1.0	1.8
Manufacturing (D)		0.0	0.0	4.2	0.5	9.6	0.0	0.0				14.3
Construction (F)		0.0	0.3			12.5	1.6	0.0	1.0			15.4
Wholesale and retail (G)		0.0	3.4	0.0	19.9	5.5	0.0	0.0				28.8
Hotels and restaurants (H)		3.9	0.1	0.0	0.0					0.0		4.0
Transport and communications (I)		0.0	0.0	3.3	0.0	0.0	5.5	1.3				10.1
Financial intermediation (J)		0.0	0.0						6.5	0.2		6.7
Real estate and business activities (K)		0.0	0.0	0.0	0.0	2.2	0.0	0.0				2.2
Public administration (L)		0.0	0.0	2.4	0.2	0.0	0.1	0.3				3.0
Education (M)		0.0	0.4	0.0	0.0					0.0		0.4
Health and social work (N)		0.0	3.6	0.0	0.0					0.0		3.6
Community, social and personal (O + P + Q)		0.0	0.0	0.0	8.5	1.1	0.0	0.0				9.6
Total		**3.9**	**7.8**	**9.9**	**29.2**	**30.9**	**7.2**	**1.6**	**8.3**	**0.2**	**1.0**	**100.0**
High-paid jobs												
Agriculture (A + B)		0.5	0.0						0.0	0.0		0.5
Mining and utilities (C + E)		1.2	0.2			1.4			0.0		0.0	2.8
Manufacturing (D)		10.5	3.0	0.0	0.0	0.0	0.0	0.0				13.5
Construction (F)		3.2	0.0			0.0	0.0	0.0	0.0			3.2
Wholesale and retail (G)		4.5	0.0	0.0	0.0	0.0	0.0	0.0				4.5
Hotels and restaurants (H)		0.0	0.0	0.0	0.0					0.0		0.0
Transport and communications (I)		3.0	1.2	0.0	0.4	1.9	0.0	0.0				6.6
Financial intermediation (J)		4.8	3.1						0.0	0.0		7.9
Real estate and business activities (K)		15.1	4.7	0.0	0.0	0.0	0.0	0.0				19.7
Public administration (L)		1.7	0.3	0.0	0.0	0.4	0.0	0.0				2.4
Education (M)		15.2	0.0	0.0	0.0					0.0		15.2
Health and social work (N)		14.1	0.0	0.0	0.0					0.0		14.1
Community, social and personal (O + P + Q)		8.7	0.8	0.0	0.0	0.0	0.0	0.0				9.5
Total		**82.5**	**13.4**	**0.0**	**0.4**	**3.7**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**100.0**

a) Jobs (*i.e.* employment in 76 industry/occupation cells) are ranked on the basis of average hourly earnings in 1995 and then placed into three groups of equal size in terms of employment shares.

Source: OECD estimates based on data from the Current Population Survey (Outgoing Rotation Group file).

Table 3.C.4. Employment rate gap between the United States and other OECD countries by wage level and sector, 1999[a]

Percentage points

	Australia	Austria	Belgium	Czech Republic	Denmark	Finland	France	Germany	Greece	Hungary	Ireland	Italy	Luxembourg	Netherlands	New Zealand	Portugal	Spain	Sweden	Switzerland	United Kingdom
Low paid																				
Goods-producing sector	**–0.1**	**–1.3**	**1.5**	**–2.9**	**–1.6**	**–1.5**	**–0.1**	**1.2**	**–4.9**	**–0.5**	**–3.1**	**–0.1**	**2.7**	**2.3**	**–3.7**	**–7.7**	**–1.8**	**–0.7**	**0.5**	**1.7**
Agriculture (A + B)	–1.4	–2.4	0.5	–1.7	–0.6	–2.4	–0.8	0.0	–7.8	–2.0	–3.6	–1.0	0.6	0.7	–3.7	–7.1	–2.0	–0.3	–2.2	0.9
Mining and utilities (C + E)	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .
Manufacturing (D)	1.4	0.9	0.6	–1.4	–0.9	0.5	0.2	0.9	2.6	1.2	1.4	0.7	2.0	1.3	0.2	0.1	0.7	–0.9	2.3	0.6
Construction (F)	0.0	0.2	0.4	0.1	–0.1	0.3	0.5	0.3	0.3	0.2	–0.8	0.2	0.1	0.4	–0.2	–0.6	–0.4	0.5	0.3	0.1
Service sector	**4.9**	**6.7**	**9.1**	**10.6**	**2.2**	**8.1**	**6.7**	**8.5**	**10.7**	**11.4**	**7.2**	**11.2**	**8.2**	**6.1**	**6.5**	**4.9**	**8.3**	**1.9**	**5.6**	**4.0**
Wholesale and retail (G)	0.5	1.9	2.5	3.1	2.0	3.5	2.4	2.2	3.2	3.5	2.4	3.3	2.5	1.3	1.4	2.1	2.5	2.6	1.8	1.6
Hotels and restaurants (H)	1.5	0.6	2.8	1.8	2.4	1.9	2.4	2.2	1.2	2.4	0.9	2.0	2.1	2.0	1.4	0.9	1.4	2.1	1.8	1.4
Transport and communications (I)	–0.1	0.0	–0.1	–0.1	–0.2	–0.1	0.1	0.1	0.1	0.0	0.1	0.1	0.0	0.0	–0.9	0.2	0.1	0.0	–0.3	0.0
Financial intermediation (J)	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .
Real estate and business activities (K)	0.0	0.2	0.6	0.9	0.2	–0.1	0.1	0.5	1.1	0.9	0.7	0.9	0.5	0.0	0.2	0.6	0.2	0.3	0.2	0.2
Public administration (L)	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .
Education (M)	0.7	1.4	1.2	0.8	0.8	0.9	0.8	1.4	1.6	0.7	0.9	1.3	1.5	1.4	1.0	0.4	1.5	0.6	1.2	0.1
Health and social work (N)	1.9	1.8	1.4	3.1	–3.5	1.0	0.4	1.5	2.9	2.7	1.9	3.0	1.8	0.5	2.8	1.9	2.6	–4.8	0.5	0.3
Community, social and personal (O + P + Q)	0.2	0.6	0.8	0.9	0.5	0.9	0.6	0.7	0.6	1.2	0.4	0.6	–0.2	1.0	0.7	–1.1	0.0	1.1	0.3	0.5
Total	**4.8**	**5.4**	**10.6**	**7.6**	**0.5**	**6.5**	**6.7**	**9.7**	**5.8**	**10.9**	**4.1**	**11.1**	**10.9**	**8.5**	**2.8**	**–2.7**	**6.5**	**1.2**	**6.0**	**5.7**
Medium paid																				
Goods-producing sector	**–0.3**	**–5.2**	**0.4**	**–7.4**	**–2.5**	**–1.4**	**–0.4**	**–5.4**	**–1.4**	**–3.6**	**–2.2**	**–3.0**	**–0.8**	**–0.5**	**–0.5**	**–9.0**	**–1.3**	**–0.1**	**–4.6**	**–1.5**
Agriculture (A + B)	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .
Mining and utilities (C + E)	–0.1	0.1	0.2	–0.4	0.2	0.1	0.2	0.1	0.1	–0.3	0.1	0.2	0.2	0.2	0.1	0.2	0.2	0.2	0.2	0.1
Manufacturing (D)	0.2	–4.0	–0.3	–5.1	–2.0	–1.7	–0.7	–4.3	–1.7	–4.1	–2.4	–3.4	0.0	–0.7	–0.6	–6.8	–1.1	–0.4	–3.5	–1.4
Construction (F)	–0.4	–1.3	0.5	–1.9	–0.7	0.1	0.0	–1.3	0.2	0.8	0.1	0.3	–1.0	–0.1	0.0	–2.4	–0.5	0.1	–1.4	–0.2
Service sector	**–2.9**	**–2.2**	**2.0**	**1.0**	**–1.8**	**1.5**	**–0.1**	**0.0**	**3.7**	**3.7**	**1.7**	**1.4**	**–1.6**	**–1.3**	**0.2**	**3.5**	**5.3**	**0.1**	**–8.7**	**–0.7**
Wholesale and retail (G)	–0.5	0.5	2.7	1.5	0.7	1.5	2.7	1.3	2.1	1.9	1.4	0.0	2.5	1.2	1.4	1.3	2.3	1.0	–1.5	1.4
Hotels and restaurants (H)	0.0	0.2	0.1	0.6	0.5	0.5	0.3	0.4	–0.1	0.7	–0.3	0.9	0.4	0.2	0.0	0.2	0.1	0.7	0.5	0.2
Transport and communications (I)	–0.5	–1.0	–0.2	–1.1	–0.4	–0.3	0.1	0.2	–0.1	–0.6	–0.5	0.5	–0.3	–0.5	1.1	0.9	0.3	–0.8	–0.6	–0.7
Financial intermediation (J)	0.3	–0.5	0.1	1.1	0.6	0.9	0.7	0.2	0.8	1.3	0.1	0.8	–0.9	0.9	0.5	0.9	0.8	1.4	–0.1	0.1
Real estate and business activities (K)	0.1	0.6	1.1	1.3	0.9	1.1	0.5	0.7	1.3	1.3	0.3	1.0	1.1	0.3	0.2	1.1	1.2	0.3	–0.4	–0.2
Public administration (L)	–1.3	–0.9	–2.7	–0.9	–1.2	–0.7	–2.4	–1.0	–1.7	–1.0	–1.1	–2.1	–2.8	–1.2	–1.0	–1.9	–1.2	–0.4	–1.4	–1.6
Education (M)	–0.1	–0.8	–0.3	–0.6	–0.5	–0.2	–1.2	–0.7	–0.1	–0.3	0.0	–0.2	–0.6	–0.3	–0.8	–0.8	–0.1	–0.6	–1.7	–0.4
Health and social work (N)	0.4	–1.6	–0.1	–0.9	–3.6	–1.9	–1.1	–2.0	0.1	–0.7	0.8	–0.6	–1.0	–3.0	0.2	0.4	0.6	–2.1	–3.0	–0.6
Community, social and personal (O + P + Q)	–1.3	1.2	1.4	0.1	1.3	0.7	0.4	0.9	1.4	1.2	1.1	1.2	0.1	1.0	–1.4	1.2	1.2	0.7	–0.6	1.0
Total	**–3.2**	**–7.4**	**2.4**	**–6.5**	**–4.3**	**0.1**	**–0.5**	**–5.4**	**2.3**	**0.1**	**–0.5**	**–1.5**	**–2.4**	**–1.9**	**–0.3**	**–5.5**	**3.9**	**0.0**	**–13.3**	**–2.2**

Table 3.C.4. Employment rate gap between the United States and other OECD countries by wage level and sector, 1999[a] *(cont.)*

Percentage points

	Australia	Austria	Belgium	Czech Republic	Denmark	Finland	France	Germany	Greece	Hungary	Ireland	Italy	Luxembourg	Netherlands	New Zealand	Portugal	Spain	Sweden	Switzerland	United Kingdom
High paid																				
Goods-producing sector	**2.2**	**1.4**	**1.0**	**–1.5**	**0.6**	**–0.5**	**1.6**	**–0.1**	**3.3**	**1.4**	**1.2**	**2.5**	**2.9**	**–0.4**	**1.6**	**2.1**	**2.7**	**0.4**	**–0.3**	**–0.4**
Agriculture (A + B)	0.1	0.0	0.0	–0.1	0.0	0.0	0.1	0.1	0.1	–0.2	0.1	0.0	0.1	–1.0	–0.1	0.0	0.0	0.1	0.0	–0.1
Mining and utilities (C + E)	0.2	0.2	0.3	–0.9	0.3	0.3	0.3	0.1	0.2	–0.3	0.4	0.4	0.4	0.4	0.5	0.2	0.4	0.3	0.2	0.3
Manufacturing (D)	1.6	0.6	0.3	–0.6	–0.2	–1.0	0.5	–0.6	2.4	1.3	0.7	1.6	2.0	0.1	0.6	1.7	1.8	–0.6	–1.1	–0.6
Construction (F)	0.4	0.6	0.4	0.1	0.5	0.2	0.7	0.3	0.6	0.5	0.0	0.5	0.4	0.2	0.5	0.2	0.5	0.6	0.5	0.0
Service sector	**3.8**	**8.0**	**3.3**	**8.2**	**2.9**	**2.5**	**8.5**	**6.9**	**8.4**	**10.0**	**7.4**	**11.2**	**3.0**	**–1.1**	**1.7**	**11.5**	**10.5**	**3.2**	**1.4**	**1.1**
Wholesale and retail (G)	0.0	–1.0	–1.3	–0.2	–0.9	–0.9	–0.5	–0.2	–2.4	0.2	–0.2	0.9	–0.4	–1.2	–1.7	–1.0	–0.9	–0.2	–0.7	–1.6
Hotels and restaurants (H)	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .
Transport and communications (I)	0.2	0.4	–0.2	–0.1	–0.4	–0.4	0.0	0.3	0.5	0.2	0.7	0.6	–0.2	0.2	–0.4	0.6	0.6	0.2	–0.1	0.0
Financial intermediation (J)	0.8	1.5	1.1	1.2	0.7	1.5	1.1	1.1	1.5	1.1	1.2	1.2	–1.9	0.1	1.0	1.6	1.5	0.8	–0.4	0.5
Real estate and business activities (K)	0.8	3.2	2.6	2.7	0.6	1.2	2.3	2.4	3.3	3.8	2.2	3.1	2.4	–0.3	0.7	3.7	3.6	0.3	0.2	0.6
Public administration (L)	–0.8	–1.9	–0.9	–1.6	–1.4	–1.1	–1.1	–2.7	–0.4	–1.1	–0.5	–0.6	–1.4	–2.4	–1.6	–0.7	–0.6	–1.5	–1.6	–1.1
Education (M)	0.5	1.3	–0.2	1.7	0.4	0.9	2.0	1.9	1.1	1.1	1.1	1.2	1.0	0.1	0.5	2.3	1.6	0.6	1.2	0.6
Health and social work (N)	1.3	2.9	0.6	3.0	2.3	0.0	2.9	2.6	2.9	3.1	1.1	2.8	2.7	1.1	2.1	2.9	2.6	1.6	1.9	1.0
Community, social and personal (O + P + Q)	0.8	1.5	1.5	1.5	1.5	1.2	1.7	1.4	1.9	1.7	1.8	2.1	0.7	1.2	1.1	2.0	2.0	1.4	0.9	1.0
Total	**6.0**	**9.4**	**4.3**	**6.7**	**3.5**	**2.0**	**10.1**	**6.8**	**11.7**	**11.3**	**8.6**	**13.7**	**5.9**	**–1.4**	**3.3**	**13.6**	**13.2**	**3.6**	**1.1**	**0.7**
All wage levels																				
Goods-producing sector	**1.8**	**–5.1**	**2.9**	**–11.9**	**–3.6**	**–3.5**	**1.1**	**–4.3**	**–3.0**	**–2.7**	**–4.0**	**–0.5**	**4.9**	**1.4**	**–2.6**	**–14.5**	**–0.4**	**–0.4**	**–4.5**	**–0.3**
Agriculture (A + B)	–1.4	–2.4	0.5	–1.8	–0.6	–2.4	–0.6	0.1	–7.7	–2.1	–3.6	–1.0	0.7	–0.4	–3.8	–7.1	–2.0	–0.2	–2.2	0.8
Mining and utilities (C + E)	0.1	0.4	0.6	–1.3	0.5	0.4	0.5	0.3	0.3	–0.6	0.5	0.5	0.6	0.7	0.6	0.4	0.6	0.5	0.5	0.4
Manufacturing (D)	3.1	–2.6	0.5	–7.1	–3.1	–2.2	0.1	–4.0	3.3	–1.6	–0.2	–1.1	4.0	0.6	0.2	–5.0	1.5	–1.8	–2.3	–1.4
Construction (F)	0.0	–0.5	1.4	–1.7	–0.4	0.7	1.2	–0.6	1.1	1.5	–0.7	1.0	–0.5	0.5	0.3	–2.8	–0.4	1.1	–0.6	0.0
Service sector	**5.7**	**12.4**	**14.4**	**19.7**	**3.3**	**12.1**	**15.1**	**15.5**	**22.8**	**25.0**	**16.3**	**23.8**	**9.6**	**3.7**	**8.5**	**19.9**	**24.0**	**5.2**	**–1.7**	**4.5**
Wholesale and retail (G)	0.0	1.4	3.9	4.4	1.8	4.2	4.5	3.3	2.9	5.6	3.6	4.1	4.6	1.3	1.1	2.5	4.0	3.4	–0.4	1.4
Hotels and restaurants (H)	1.6	0.8	2.8	2.4	2.9	2.5	2.7	2.6	1.1	3.0	0.6	2.8	2.5	2.2	1.4	1.0	1.5	2.8	2.3	1.7
Transport and communications (I)	–0.3	–0.5	–0.5	–1.3	–0.9	–0.8	0.2	0.5	0.5	–0.4	0.3	1.2	–0.5	–0.2	–0.1	1.7	1.1	–0.6	–1.0	–0.7
Financial intermediation (J)	1.1	1.0	1.3	2.2	1.3	2.4	1.8	1.3	2.3	2.4	1.2	2.0	–2.8	1.0	1.5	2.5	2.3	2.2	–0.5	0.6
Real estate and business activities (K)	0.9	4.0	4.3	4.9	1.7	2.2	3.0	3.6	5.7	6.0	3.1	5.0	4.0	0.0	1.1	5.4	5.0	0.9	0.0	0.6
Public administration (L)	–2.1	–2.8	–3.5	–2.6	–2.6	–1.8	–3.5	–3.7	–2.1	–2.2	–1.6	–2.8	–4.3	–3.6	–2.6	–2.5	–1.8	–2.0	–2.9	–2.7
Education (M)	1.2	2.0	0.7	1.9	0.8	1.7	1.5	2.6	2.6	1.4	2.1	2.3	2.0	1.2	0.7	1.9	3.0	0.6	0.8	0.4
Health and social work (N)	3.7	3.1	1.9	5.3	–4.9	–1.0	2.2	2.2	5.9	5.0	3.7	5.2	3.6	–1.4	5.1	5.3	5.8	–5.3	–0.6	0.7
Community, social and personal (O + P + Q)	–0.3	3.3	3.7	2.5	3.4	2.8	2.7	3.0	3.9	4.1	3.4	3.9	0.6	3.2	0.4	2.1	3.2	3.2	0.6	2.5
Total	**7.5**	**7.4**	**17.3**	**7.8**	**–0.3**	**8.6**	**16.2**	**11.1**	**19.8**	**22.3**	**12.3**	**23.3**	**14.5**	**5.2**	**5.8**	**5.4**	**23.7**	**4.8**	**–6.2**	**4.2**

. . Not applicable (*i.e.* no broad occupations in the US for the given industry have average earnings at the given wage level).

a) For each country, jobs (*i.e.* employment in 76 industry/occupation cells) are assigned to the same broad wage groups as the equivalent job in the United States. US jobs are first ranked on the basis of average hourly earnings in 1999 and then placed in one of three wage groups (low, medium, high) of equal size in terms of employment shares. The data refer to 1998 for Australia, the Czech Republic, Hungary and New Zealand.

Source: OECD estimates based on data from the European Labour Force Survey for the EU countries, the Current Population Survey (Outgoing Rotation Group file) for the United States and national labour force surveys for the other countries.

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Chapter 4

BALANCING WORK AND FAMILY LIFE: HELPING PARENTS INTO PAID EMPLOYMENT

Summary

This chapter looks at the work/family balance from a labour market viewpoint, complementing other OECD work on "family-friendly" social policies and early childhood education and care. The main policy concern addressed is that of encouraging a higher participation by mothers in paid employment. This is important to maintain their labour market skills, to ensure adequate resources for families and women living by themselves, and to make further progress towards gender equity. In addition, the skills of mothers will be increasingly needed in the labour market as the population of working age in most OECD countries begins to shrink. The chapter notes the probable relevance of the work/family relationship to fertility – the low fertility rates seen in most OECD countries will exacerbate shortfalls in labour supply if they continue.

The first part of the analysis documents changes in parental employment patterns. It shows that employment rates of mothers have increased rapidly over recent years, closing the gap with those of fathers. However, the increase has been concentrated on better-educated women, while rates of less-well-educated women have stagnated. A section on preferences for part-time employment shows its considerable attraction for mothers in many countries, despite the comparatively low levels of earnings and training it generally brings. Measured in terms of the earnings of men and women, the incentive for women to engage in paid employment has increased somewhat in recent years. However, a considerable gender wage gap remains. Many writers have linked this to the continuing imbalance in unpaid work and child-care carried out inside households, which the chapter documents using newly-available data from time-use surveys.

The policy analysis in the second part of the chapter concentrates on two main areas: tax-benefit policies; and what are commonly known as work/family reconciliation policies – policies for child-care and for maternity and child-care leave. In addition, there is a section on voluntary family-friendly arrangements in firms, a topic which has been relatively underdeveloped at the international level. The general approach is to develop summary indicators for each policy area. These are brought together at the end of the chapter and compared with the employment rates observed in different OECD countries. The international perspective leads to a number of findings of policy relevance. In countries with relatively well-developed systems of work/family reconciliation policies, women tend to have higher employment rates in their thirties (when their employment is most likely to be affected by child-rearing and child-care). This applies both to maternity leave and to formal child-care policies for very young children.

Introduction

This chapter examines the work/family balance from a deliberately restricted viewpoint – that of its impact on the numbers of parents, particularly mothers, in paid employment. This is not, of course, the only point of view that can be taken. Other relevant work is undertaken in the OECD work programmes on "Family-Friendly Social Policies" and "Early Childhood Education and Care" (see *www.oecd.org/els/social/ffsp* and *www.oecd.org/els/education/ecec*).

Increasing the employment rates of mothers is important for many reasons. The skills of women are increasingly needed in paid employment to face the challenge posed by the likely long-term shrinkage in the population of working age. Higher employment rates of mothers will help to ensure adequate resources for families, including lone-parent families, most of which are headed by women. Unless mothers maintain contact with the labour market their skills will tend to atrophy. In addition, an increase in the proportion of women in employment is necessary to respond to the increasing

demand for the independence and fulfilment that paid employment can bring to women, and to make further progress towards gender equity.

Getting the work/family balance right is, in turn, a vital for increasing the employment rates of mothers. Mothers cannot be expected to enter paid employment in sufficiently large numbers unless there are appropriate financial incentives to encourage them to do so, and unless parents can ensure adequate care for their children. Many parents wish to look after their children for some time themselves after child-birth. This needs to be accommodated in ways which strengthen family life and the sharing of household tasks and child-care activities between family members, and yet encourage and equip parents to move back into productive and fulfilling careers in paid employment when they are ready to do so. The challenge is to achieve more flexibility in career patterns in ways which both build human capital and encourage longer and deeper involvement by women in paid employment.

The work/family balance is also important for longer-term trends in population and labour supply. The likely shrinking of the population of working age in most OECD countries will become all the stronger and more difficult to arrest, if birth rates continue at their currently low levels. Fertility rates, measured according to conventional indicators of current trends, are below replacement level in all OECD countries. In some they are barely half that level. With the exception of only a very small number of countries, the trend has been for successive cohorts of women entering the labour force to have higher employment rates, but fewer children. While the reasons for this are still not clearly understood, it is plausible that improvements in the work/family balance could help to increase both current employment rates and fertility rates.

A large number of government policies affect the work/family balance. However, this chapter will concentrate on examining two key areas: *i*) the impact of tax-benefit policies at average levels of earnings; and *ii*) what are commonly known as work/family reconciliation policies – policies for child-care and leave for parents to look after their own children. They will be examined primarily from the point of view of their impact on the labour supply of parents.

The contribution of firms to the work-family balance is often forgotten, and yet is vital. It is at the level of the firm that the details of the reconciliation are worked out. In the worst cases, firms may discriminate against family members, or even deny them their rights under legislation. Long hours of work, which have become part of the culture of many companies, deny parents, particularly fathers, the opportunity of sharing in the upbringing of their children and work against gender equity. On the other hand, many firms have introduced so-called "family-friendly arrangements", going beyond existing legislation, which are designed to help employees with family responsibilities balance the different parts of their lives. The chapter looks at what is known about the incidence of these practices, and the extent to which firms' voluntary arrangements might complement those in national legislation.

A full evaluation even of this restricted range of policies, and of their interactions both with each other and with other policies, is not possible in the current state of knowledge and data. The main approach followed is to develop a set of summary indicators for the various policies mentioned above, and compare them with the actual levels of parental employment. In line with this, the information is presented according to country groupings. These follow the main geographical regions of the OECD: North America; Asia; Europe; and Oceania (Australia and New Zealand). Within OECD Europe, there are a number of sub-groups, drawing on the work of Fouquet *et al.* (1999), whose classification is based on the form of the social protection regime; the importance given to the family as a social institution; and the work patterns of women. Their groups comprise the "Nordic" countries of Denmark, Finland, Iceland, Norway and Sweden; the "Southern Europe" group of Greece, Italy, Portugal and Spain; the "Central" group of Austria, Germany and the Netherlands; and Ireland and the United Kingdom. In addition, the tables group together the Czech Republic, Hungary, Poland and the Slovak Republic; and the remaining three European Union countries: Belgium, France and Luxembourg.

The first section of the chapter documents the current state of parental employment in different OECD countries, noting the preferences expressed by families for different employment patterns and the changing balance of unpaid work within families. The next two sections discuss the impact of tax-benefit policies, and work/family reconciliation policies, respectively. This is followed by a discussion of the contribution of firms to the work/family balance. The comparison of policy indicators and national outcomes in Section V is followed by the Conclusions. Box 4.1 documents the relationship between employment rates and fertility rates outlined above.

Main findings

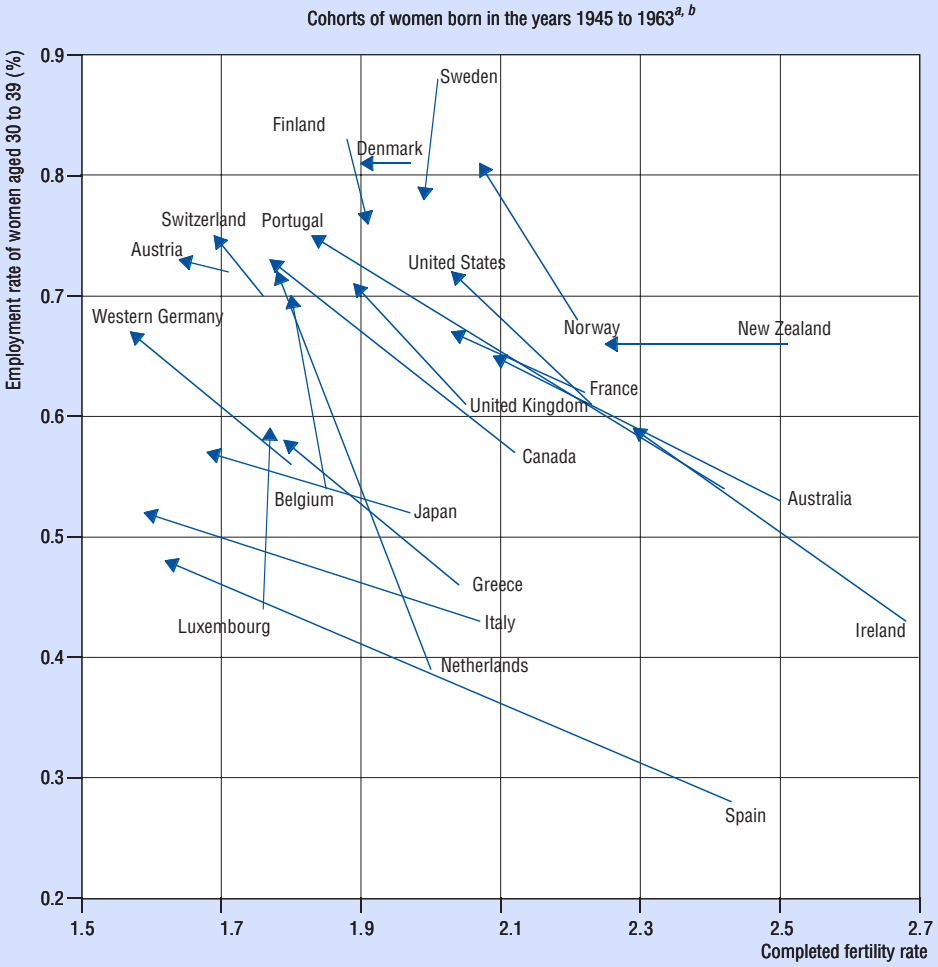
The main empirical findings are as follows:

- Employment rates of women, and of mothers with young children, have increased in almost all countries over the past ten years. They remain highest in

Box 4.1. Trends in fertility and trends in employment

The trend towards higher female employment rates has occurred at a time when fertility rates have been falling in most OECD countries. According to Lesthaeghe and Willems (1999), many economic theories of fertility link the two trends together. One school notes that increases in the employment rates and relative earnings of women have increased the opportunity costs of child-bearing. Another argues that high and rising consumption aspirations encourage both members of couple families to remain in full-time paid employment. The two theories are not inconsistent and both can be used to explain the delay in first births and lower fertility. In addition, owing to the lower stability of unions, potential mothers are facing an increased risk of becoming single parents, with the economic and social disadvantages this often brings. However, Murphy (1993) has argued that the causality may lie partly in the other direction – efficient modern contraceptive technology allows most women to avoid unwanted or unexpected pregnancies and engage more fully in the labour market. Other schools connect both changes in fertility and changes in employment to an increased emphasis on individual autonomy. Finally, some writers have pointed to the importance of cultural differences between countries, as reflected in their family employment patterns. Fertility levels in OECD countries have remained high mainly in countries where a major proportion of births occur outside marriage. These also tend to be countries where the employment levels of women are relatively high [Coleman (1999); Chesnais (1996); McDonald (2000); Esping-Andersen (1997); OECD (1999*a*)].

Chart 4.1. Trends in employment and trends in fertility, selected OECD countries



a) Data for Australia, Ireland, New Zealand and the United Kingdom are based upon cohorts aged 25-34 and 35-44; data for Finland concern those aged 30-34 and 35-44; data for Italy concern those aged 30-39 and data for Switzerland refer to cohorts aged 25-39.
b) The data shown cover the 1945 to 1963 cohorts, except for Austria, 1959-1963; Belgium, 1948-1962; Denmark, 1948-1963; Greece, 1950-1963; Ireland, 1949-1962; Italy, 1945-1961; Japan, 1945-1962; Luxembourg, 1948-1963; New Zealand, 1951-1962; Sweden 1952-1963; Switzerland, 1956-1963 and the United Kingdom, 1951-1963.

Sources: European Demographic Observatory; Statistics Canada for the CFR data; and OECD employment database.

Box 4.1. **Trends in fertility and trends in employment** *(cont.)*

Trends in fertility can be measured by the completed fertility rate (CFR), the average number of births born to a "cohort" of women, who were themselves born in the same year. Indicators of the level of fertility at a moment in time, such as the total fertility rate (the sum of the age-specific fertility rates for a single year) are strongly affected by the timing of births. This makes them an unreliable indication of trends in fertility. The CFR can be calculated precisely only for women who have reached the end of their child-bearing years. Strictly speaking this implies that precise estimates are only available for women born at least 50 years ago. However, a relatively small proportion of births occur after age 35, and very few after age 40, so that reasonably precise estimates of the CFR can currently be made for cohorts of women born up to 1960-1963.

Chart 4.1 compares the pattern of change in the CFR with the employment rate of women. Each arrow shows the change from the 1945 cohort to the 1963 cohort, unless otherwise stated. The horizontal axis shows estimates of the CFR supplied by the European Demographic Observatory and Statistics Canada. The vertical axis shows an estimate of the employment rate of the cohort in their thirties, when the impact of child-bearing on female employment tends to be at its peak [OECD (1988)].

The general pattern is a movement upwards and to the left – falling fertility and rising employment rates. This is particularly marked for the Southern European countries and Ireland. Sweden and Finland show relative stability – a small fall in the CFR, and a slight decline in the employment rate. Examination of data for the full set of cohorts between 1945 and 1962 shows that Luxembourg and the United States are the only countries where recent cohorts have achieved both an increase in completed fertility rates and an increase in employment rates compared with earlier cohorts.

Comparing changes in the CFR and the employment rate between the 1950 and 1962 cohorts (the longest period for which consistent data are available for 15 countries) reveals that countries with larger increases in the employment rate tend to have larger falls in fertility (the correlation is -0.6). Among the main outliers are Japan, with a strong decline in fertility and little increase in the employment rate (Italy presents a similar pattern over a shorter time period) and the Netherlands, where the strong increase in the employment rate has been accompanied by a relatively small fall in completed fertility.

According to Lesthaeghe (2000), recent developments in the number and timing of births suggest that completed fertility has been continuing to decline at a moderate pace throughout Europe and Oceania, with the exception of a slight and "probably temporary" recovery in Denmark, and sharp falls in Sweden, Ireland, the Czech Republic, Hungary, Poland and the Slovak Republic.

the Nordic countries; they are comparatively low in some of the Southern European countries, Korea, Mexico and Turkey.

- With the exception of the United States and Luxembourg, rises in female employment rates have occurred at the same time as declines in the completed fertility rate. There has been a tendency for countries with larger increases in female employment rates to show larger declines in the completed fertility rate.
- The proportion of smaller households – single people under 60, childless couples, and lone-parent families – has tended to increase in most OECD countries over the past fifteen years. The proportion of households with two or more children has fallen. In some countries this reflects a substantial increase in the proportion of women choosing to remain childless.
- Employment rates of mothers with a child under 6, while still well below those of fathers, are rising rapidly – the gap is closing at the rate of one percentage point per year, on average. Employment rates of well-educated mothers are far higher than those of less-well educated mothers in almost all countries, and the gap is tending to rise everywhere.
- In the European Union, around half of mothers with a child aged under 6 in employment work part-time. Most, but not all, of those not working would like to move into employment during the next few years, but many would choose to work part-time (of relatively long hours). Families with children under 6 considering themselves "well-off" work longer total hours than those who are "just managing", but both types would prefer to reduce their paid hours, to a similar level.
- Child-care and other unpaid household work are still unequally shared among partners, even when mothers are employed on a full-time basis in the labour market. There is some evidence of increasing involvement of fathers in child-care and other household tasks. However, this may be offset, in some countries, by the increase in the proportion of lone-parent families, mainly headed by women.
- Most OECD countries have moved towards systems of separate taxation of earnings of couples, partly in order to reduce disincentives to work for partners in couple families. However, part of this change has been offset by tax reliefs and benefits granted on a family basis.

- Increases in formal care arrangements in almost all countries have led to a little over a quarter of children under three being in formal child-care, on average for OECD countries, though there is considerable variation between them. The coverage for children between three years old and the mandatory school age averages three-quarters, with much less variation between countries.
- Increases in entitlement to maternity and child-care leave have occurred in almost all countries, with the maximum leave now available exceeding one year in at least eighteen countries. There are, however, large variations between countries, as regards the duration of benefits, and the degree of remuneration of maternity leave. Paternity leave and child-care leave reserved for fathers have been introduced in a number of countries in the past decade. However, with some notable exceptions, such as public sector arrangements offering full earnings replacement, fathers' take-up rates remain low.
- Many firms have introduced "family-friendly" arrangements to supplement legal provisions, though few have introduced a very large range of such arrangements. Employers in countries with the highest legal provision are least likely to provide such arrangements. However, the reverse is not true – voluntary arrangements by employers do not compensate for low levels of legal provision. In all countries, the likelihood of a family-friendly work environment increases with the size of the firm and the skills level of the employee, and is greater in the public sector.
- There is a positive relationship across countries between indicators of policies designed to improve the work/family reconciliation, on the one hand, and women's employment rates, on the other.

I. Parental employment patterns

A. Trends in paid employment

Changes in parental and, particularly, mothers' employment patterns over the past decade have occurred against the background of considerable changes in family structure (Table 4.A.1).[1] The numbers of couple families with three or more children, and often two or more children, have decreased. In some countries, there has been a rapid increase in the numbers of couple families with no children, reflecting an increase in the proportion of women who choose to remain childless [Coleman (1999)]. In three of the Southern European countries (Portugal is the exception), the data reflect the growing numbers of women who have only one child. Virtually all countries have seen a growth in lone-parent families, though the rise in the Southern European countries has been small. In addition, there has been a large increase in the proportion of people under 60 living on their own.

Table 4.1 shows the employment rates of parents, in particular mothers, in couple families and lone-parent families.[2] It is restricted to families with children under 6, for a number of reasons. While not all mothers with a child under 6 will wish, or indeed be able to take up paid employment, it is important that there is a sufficiently high employment rate for this group, because of the danger of loss of contact with the labour market, and decline in human capital. While not shown in the table, for several countries, the employment rates of mothers with a child under 6 are close to, or even higher than those with a child over 6. This is because women with children under 6 tend to be younger, and younger cohorts tend to have higher employment rates.

While the employment rate of mothers is much lower than that of fathers (54%, on average for the countries shown, as compared with well over 90% for fathers), the gap has been closing quite rapidly, at around one percentage point per year over the past decade. The increase is accounted for by gains in the high and medium educational groups. While the employment rate of mothers in the highest education group has now reached 70%, that in the lowest group has tended to stagnate at under 40%.[3] The employment rate of lone-parents (the vast majority of whom are women) is slightly higher, on average, than mothers in couple families. However, it shows considerably more variation, with particularly low figures in Ireland, Portugal, the Netherlands and the United Kingdom.

Table 4.2 shows trends in two family types: couple families with at least one child under 6 years old, and lone parents with a child under 6. The proportion of couple families of the "single breadwinner" type can be seen to have fallen considerably between 1989 and 1999 (roughly the same change can be seen for couple families with children aged 6 or over). The main reason for this decline stems from increases in the proportion of families with two full-time earners, though many countries have also seen considerable increases in the proportion of families with a full-time earner and a part-time worker. In line with the results reported in Table 4.1, there has been comparatively little change for families where neither partner has more than a comparatively low level of education. However, even for this group, the single breadwinner family represented less than half of all couple families with a child under 6 in 1999. Changes for lone-parents have been relatively small, though over half of lone parents with a child under 6 were in paid employment (often full-time) in 1999.

Table 4.1. **Employment rates in families[a] with child(ren) aged under 6, 1989 and 1999**

Percentages

		Employment rates in couple families					Employment rate of lone-parents	*Proportion of parents who are lone-parents*	Employment rate of all women without children aged 20-60	Employment rate of all mothers with child under 6
		Parents	Mothers by education level[b]			Mothers				
			High	Medium	Low					
North America										
Canada[c]	1999	78.1	80.7	72.9	48.4	70.0	68.3	*12.7*	. .	. .
	1989	76.1	77.3	65.5	46.7	64.3	64.6	*10.4*	. .	. .
United States	1999	77.4	. .	. .	. .	60.6	67.7	*24.6*	85.2	61.5
	1989	74.6	. .	. .	. .	55.7	47.5	*21.6*	79.9	54.0
Japan[d]	2000	. .	. .	. .	. .	33.3	. .	. .	. .	. .
	1990	. .	. .	. .	. .	35.9	. .	. .	. .	. .
Europe										
Finland	1998	74.2	. .	. .	. .	57.7	64.9	*16.8*	. .	58.8
	1995	68.4	. .	. .	. .	53.8	32.9	*18.7*	. .	53.3
Norway[e]	1999	. .	82.6	69.8	45.7	. .	. .	. .	. .	72.8
	1991	. .	80.8	63.1	43.3	. .	. .	. .	. .	65.3
Sweden[f]	2000	. .	. .	. .	. .	. .	64.6	. .	. .	77.8
	1990	. .	. .	. .	. .	. .	85.9	. .	. .	86.6
Greece	1999	71.3	69.4	41.0	33.4	48.4	63.2	*2.9*	43.2	48.6
	1989	68.3	59.1	34.2	32.0	41.4	66.5	*2.9*	40.4	41.5
Italy	1999	68.0	69.4	52.8	26.1	44.9	72.2	*3.9*	43.1	45.7
	1989	67.6	. .	. .	. .	40.7	65.5	*3.6*	38.0	41.3
Portugal	1999	80.6	92.5	85.8	63.7	70.2	82.9	*5.1*	62.0	70.6
	1989	75.1	90.3	74.8	56.3	59.1	68.1	*4.3*	49.2	59.0
Spain	1999	65.9	59.6	40.7	26.8	41.5	64.9	*2.2*	41.4	41.8
	1989	58.7	53.4	33.7	23.3	29.5	62.8	*1.9*	30.6	29.8
Poland	1999	68.2	. .	. .	. .	49.5	33.3	*4.6*	63.0	47.6
	1994	67.5	. .	. .	. .	47.5	37.2	*5.1*	58.1	49.9
Ireland	1997	64.5	62.3	47.5	23.8	45.5	35.2	*10.0*	58.3	44.4
	1989	52.4	46.1	29.4	13.1	25.8	20.6	*5.9*	50.6	25.3
United Kingdom	1999	75.1	70.3	60.3	32.2	61.3	36.8	*21.8*	74.3	55.8
	1989	66.5	58.9	46.0	39.2	45.3	27.5	*13.3*	70.8	42.7
Austria	1999	78.9	72.6	65.7	54.5	65.7	76.1	*9.0*	62.0	66.5
Germany	1999	70.9	62.4	50.1	28.7	51.4	49.7	*10.3*	67.3	51.1
	1991	69.3	56.7	48.7	37.2	49.4	62.0	*10.6*	65.0	42.6
Netherlands	1999	77.8	71.0	62.8	40.8	62.3	38.7	*6.6*	67.9	60.7
	1989	61.8	. .	. .	. .	32.5	22.7	*6.7*	52.9	31.7
Belgium	1999	68.9	84.7	70.2	42.6	71.8	49.2	*9.1*	58.3	69.5
	1989	75.8	73.0	65.0	38.9	57.8	40.9	*5.9*	43.8	56.7
France	1999	72.9	72.2	54.9	29.0	56.8	51.6	*8.7*	64.7	56.2
	1989	71.9	. .	. .	. .	52.2	60.8	*7.0*	60.6	52.6
Luxembourg	1999	70.4	55.3	44.5	42.1	46.1	74.1	*5.7*	59.5	47.4
	1989	66.7	42.6	35.1	34.5	35.9	59.1	*3.9*	43.9	36.6
Australia[g]	2000	. .	. .	. .	. .	48.0	30.2	. .	. .	45.0
	1990	. .	. .	. .	. .	44.1	. .	. .	. .	42.3

. . Data not available.
a) The information is restricted to families with no-one over 60. Children are defined as being under 20 and adults as 20 and over. Multi-family-households were excluded.
b) "High" means tertiary level, "Medium" is secondary level, "Low" is under secondary level.
c) For households with or without child(ren).
d) Mothers aged 25-54, children under 7. Data refer to February of the year.
e) Data by education level refer to all mothers of children under 6.
f) Mothers aged 25-54.
g) Data refer to households with children aged under 5.
Sources: Secretariat calculations on the basis of data supplied by EUROSTAT and national authorities.

Table 4.2. **Trends in employment patterns in key family types, all education levels**

Percentages

Couple families with a child under 6

	Proportion with man full-time, woman full-time				Proportion with man full-time, woman part-time				Proportion with man full-time, woman not working				Proportion with neither man nor woman working			
	1984	1989	1994	1999	1984	1989	1994	1999	1984	1989	1994	1999	1984	1989	1994	1999
United States	26.3	32.3	33.7	36.5	15.6	18.3	19.2	18.6	44.3	38.8	33.5	35.2	5.4	3.7	5.0	2.6
Greece	26.3	34.5	37.6	41.4	4.5	4.9	3.2	4.2	61.0	55.7	52.6	47.3	5.4	2.6	3.5	3.4
Italy	33.3	33.9	31.3	32.6	3.7	4.7	6.3	9.5	57.9	53.7	51.7	47.5	2.6	4.0	6.5	6.3
Portugal[a]	. .	56.0	54.3	60.7	. .	3.5	5.3	5.9	. .	35.1	30.1	25.9	. .	2.0	3.7	2.4
Spain[b]	. .	24.8	24.3	31.0	. .	3.3	4.0	6.9	. .	63.2	53.4	52.1	. .	5.7	12.8	5.8
Ireland[c]	11.4	16.9	25.4	29.6	3.6	5.3	9.6	11.4	67.0	56.6	43.1	41.8	15.1	16.5	14.8	10.9
United Kingdom	7.3	13.2	15.7	19.5	22.5	30.7	33.1	38.4	54.8	44.5	33.8	29.4	13.1	8.0	12.4	7.0
Austria[d]	. .	. .	38.6	29.0	. .	. .	21.6	30.7	. .	. .	30.7	30.1	. .	. .	2.8	3.5
Germany	. .	23.3	20.6	20.9	. .	19.4	21.6	26.3	. .	44.4	47.1	41.6	. .	3.4	5.4	5.9
Netherlands[e]	3.0	. .	3.5	4.2	15.1	. .	37.9	47.8	67.4	. .	41.5	31.5	8.2	. .	6.9	3.5
Belgium	37.0	37.3	37.1	26.6	10.9	18.7	22.2	27.7	43.4	37.1	31.1	19.0	5.8	5.0	5.6	4.8
France	35.9	41.9	33.4	31.3	11.9	16.1	16.7	19.7	44.2	35.8	36.5	35.1	4.1	2.0	6.6	6.6
Luxembourg	24.2	22.9	26.7	26.5	8.4	10.4	13.0	16.6	64.5	63.2	54.4	51.6	1.8	1.4	2.9	2.4
Poland	. .	. .	35.7	36.0	. .	. .	4.6	5.9	. .	. .	43.2	39.8	. .	. .	7.3	8.2

Lone-parent families (women) with a child under 6

	Proportion with woman working full-time				Proportion with woman working part-time				Proportion with woman not working			
	1984	1989	1994	1999	1984	1989	1994	1999	1984	1989	1994	1999
United States	33.8	36.0	33.8	48.9	10.3	9.5	10.3	16.8	55.9	54.6	55.9	34.4
Greece	43.5	41.7	45.2	50.9	8.0	4.9	3.8	8.4	48.6	53.4	51.0	40.7
Italy	53.5	52.8	47.1	58.7	5.3	6.4	12.2	10.8	41.1	40.8	40.6	30.5
Portugal[a]	. .	56.4	56.1	75.7	. .	4.4	8.0	5.7	. .	39.2	35.9	18.6
Spain[b]	. .	56.4	39.7	50.2	. .	4.7	8.9	11.4	. .	38.9	51.4	38.5
Ireland[c]	6.7	13.3	12.9	15.5	4.0	4.1	6.2	18.6	89.3	82.6	81.0	65.9
United Kingdom	5.9	7.2	9.1	12.5	12.6	16.4	16.8	21.7	81.4	76.4	74.0	65.8
Austria[d]	. .	. .	55.6	43.5	. .	. .	22.7	31.2	. .	. .	21.7	25.2
Germany	. .	39.1	27.4	24.0	. .	20.3	20.3	23.9	. .	40.6	52.3	52.1
Netherlands[e]	3.2	. .	4.4	6.0	9.9	. .	21.9	31.5	86.9	. .	73.6	62.5
Belgium	30.7	24.9	26.4	22.1	16.1	9.9	15.9	24.4	53.2	65.3	57.7	53.5
France	51.3	55.8	37.7	34.9	11.0	11.8	13.8	14.1	37.7	32.4	48.4	51.0
Luxembourg	63.8	51.6	49.0	52.3	11.5	2.4	6.7	19.7	24.8	46.0	44.4	27.9
Poland	. .	. .	29.4	27.8	. .	. .	9.4	5.6	. .	. .	61.2	66.7

. . Data not available.
a) 1986 instead of 1984.
b) 1987 instead of 1984.
c) 1997 instead of 1999.
d) 1995 instead of 1994.
e) 1985 instead of 1984.
Sources: Secretariat calculations on data from the European Labour Force Survey, and national data.

A number of surveys have sought to measure the preferences of families for different employment patterns. With appropriate caution, the results can be useful for assessing the way in which families would most like to arrange their work/family balance. A recent, and particularly detailed source of this type of information is provided by the *Employment Options of the Future* (EOF) survey carried out in European Union Member States[4] in 1998 (see Annex 4.B for details). Table 4.3, containing Secretariat calculations based on the survey micro-data, shows current and preferred employment patterns for couple families with a child under 6. While there are considerable differences between countries, in every case, if preferences were to be realised, there would be a move away from the single earner family, towards the dual earner type. On average, the incidence of dual-full-time-earner families and full-time-plus-part-time families would both increase by around a half. However, there are still a number of countries where

Table 4.3. **Actual and preferred employment patterns by full-time and part-time working**[a]

Couple families with child under 6
Percentages

	Man full-time/ woman full-time	Man full-time/ woman part-time	Man full-time/ woman not employed	Other	Total
Finland					
Actual	49.3	6.4	32.8	11.5	100.0
Preferred	*80.3*	*8.6*	*10.2*	*0.8*	*100.0*
Sweden					
Actual	51.1	13.3	24.9	10.7	100.0
Preferred	*66.8*	*22.2*	*6.6*	*4.4*	*100.0*
Greece					
Actual	42.2	7.9	36.1	13.8	100.0
Preferred	*65.6*	*10.6*	*9.4*	*14.4*	*100.0*
Italy					
Actual	34.9	11.8	43.3	10.0	100.0
Preferred	*50.4*	*27.7*	*10.7*	*11.2*	*100.0*
Portugal					
Actual	74.5	4.7	18.7	2.2	100.0
Preferred	*84.4*	*8.0*	*4.0*	*3.6*	*100.0*
Spain					
Actual	25.6	6.3	56.9	11.2	100.0
Preferred	*59.7*	*11.6*	*19.7*	*9.0*	*100.0*
Ireland					
Actual	30.8	18.7	37.0	13.5	100.0
Preferred	*31.1*	*42.3*	*8.1*	*18.5*	*100.0*
United Kingdom					
Actual	24.9	31.9	32.8	10.4	100.0
Preferred	*21.3*	*41.8*	*13.3*	*23.6*	*100.0*
Austria					
Actual	19.1	28.2	48.1	4.5	100.0
Preferred	*35.6*	*39.9*	*3.9*	*20.7*	*100.0*
Germany					
Actual	15.7	23.1	52.3	8.9	100.0
Preferred	*32.0*	*42.9*	*5.7*	*19.4*	*100.0*
Netherlands					
Actual	4.8	54.8	33.7	6.7	100.0
Preferred	*5.6*	*69.9*	*10.7*	*13.8*	*100.0*
Belgium					
Actual	46.0	19.4	27.3	7.3	100.0
Preferred	*54.8*	*28.8*	*13.4*	*3.0*	*100.0*
France					
Actual	38.8	14.4	38.3	8.4	100.0
Preferred	*52.4*	*21.9*	*14.1*	*11.7*	*100.0*
Luxembourg					
Actual	23.5	27.0	49.1	0.4	100.0
Preferred	*27.5*	*29.9*	*12.4*	*30.2*	*100.0*
Unweighted average					
Actual	34.4	19.1	37.9	8.5	100.0
Preferred	*47.7*	*29.0*	*10.2*	*13.2*	*100.0*

a) EU and Norway, 1998.
Sources: Secretariat calculations on the basis of microdata from the *Employment Options of the Future* survey. See Annex 4.B for details.

10% or more couples said they preferred the "male breadwinner model". It is noticeable that preferences for increased part-time working tend to be relatively low in Sweden and the Southern European countries. While Sweden pioneered the movement of women into employment, often through part-time employment, there is now a substantial interest among mothers in moving from part-time employment to full-time employment, as shown by more detailed flows data, not presented in Table 4.3. In most of the Southern European countries, part-time employment is still relatively under-developed, and may not be seen as a viable option by some

women. For Canada, Marshall (2001) finds that voluntary part-time workers represent 73% of part-time employment, and that part-time workers report considerably more satisfaction with the balance between work and home than do full-time workers.

As well as asking about preferences at the current point in time, the EOF asked about the preferred employment patterns of couples, currently with a child under 6, in five years' time. On this basis, European Foundation (2000) finds a considerable interest in increased part-time working among mothers over the medium-term. For the European Union as a whole, if preferences were realised, the proportion of mothers working would rise to around 85% but all but 2% of the increase would be due to part-time working.[5] The main interest is in part-time working of relatively long hours – in the 20-25 hours a week range [Atkinson (2000)].

The EOF also suggests that many couples with children under 6 would prefer shorter working hours (Table 4.4). Respondents in such families were asked to state the hours that they would currently like to work themselves, and the hours that they would like their partners to work, if they had a free choice, but taking into account the need to earn a living. At the same time, they were asked to give an appreciation of the financial state of their household, by selecting one of three categories: "well-off", "just managing" and "having difficulties".[6] The number responding that they were having difficulties was only 6%, on average, for the countries shown. Hours of work for "well-off" couples tend to be longer than those of couples saying that they are "just managing". However, both would like to reduce their hours and their preferred hours tend to be similar: well-off couples would prefer to reduce their hours more than those who are just-managing.[7] In addition, couples in countries where average hours are longer tend to prefer larger reductions in hours.[8]

B. Relative earnings of mothers

Expected earnings are an important determinant of the decision to return to work. Women's average earnings are lower than men's in all OECD countries, sometimes by a large amount, as shown in Chart 4.2, though the difference has been tending to decline slightly in most countries.[9] The largest gap is for Japan and Korea, the smallest for France, Belgium and Denmark (on the basis of the 1995 figures). The gap between the earnings of fathers and mothers of young children tends to be wider that the overall male/female gap, for a number of reasons. First, mothers are more likely to work in part-time jobs, where wages tend to be lower. Second, fathers of young children tend to work longer hours than other men, and earn higher wages. Third, some employers may discriminate against mothers on the grounds that they expect them to have lower commitment to their jobs, as discussed further below. Indeed, in some Anglo-Saxon countries, the wages of mothers with children are found to be lower than those of other women working in similar jobs [Harkness and Waldfogel (1999); Joshi *et al.* (1999); Waldfogel (1993, 1998*a*, 1998*b*)]. However, Datta Gupta and Smith (2000) find this does not apply in Denmark (they suggest the reason is that generous maternity/parental benefits are taken by virtually all Danish mothers, resulting in potential discrimination against mothers being transferred to women in general).

C. Child-care and unpaid work time of women and men

A number of writers have linked the differences between mothers' and fathers' employment rates and earnings to the balance of the time spent in household and caring activities. Traditionally, the fact that mothers tend to spend more time than fathers in child-care and unpaid household work was explained in terms of their assumed comparative advantages in the two spheres [Becker (1965); Gronau (1973)]. Recent models of the allocation of resources within households draw on bargaining theories, some assuming that partners co-operate, others that they compete [see Persson and Jonung (1997); Merz and Ehling (1999)]. In these models, individual (potential) earnings can be a determinant of the intra-household allocation of time. The differences between the earnings of men and women, stemming partly from discrimination against women, may thus be seen as perpetuating unequal gender divisions of household and caring activities [Joshi (1998); Bauer (1998); Beblo (1999)]. Lower labour market wages by women lead to lower incentives for women to engage in paid employment, which in turn lead to relatively high levels of unpaid work, and lower wages [Hersh and Stratton (1994)]. In addition, Lommerud and Vagstad (2000) argue that employers' expectations that mothers will invest relatively heavily in their child-care role result in mothers, and potential mothers, having to meet tougher promotion standards than fathers, again tending to confirm the traditional pattern of specialisation.

Table 4.5 presents evidence about the distribution of paid and unpaid work by men and women in couple households with children under 5,[10] drawn from time-budget surveys harmonised by a team of researchers co-ordinated by Essex University, United Kingdom [see Fisher (2000*a* and 2000*b*) for a description]. The figures for women are disaggregated according to the employment status of the woman (housewife; or in paid employment, part-time or full-time). Those for men relate to all men in couple households. Child-care is defined strictly, comprising: feeding children; dressing them; changing them; bathing them; and giving them medication; while unpaid work is defined

Table 4.4. **Average hours worked and preferred hours, according to perceived financial situation of household,[a] EU and Norway, 1998**

Total hours in couple families aged 20-50 years[b] with a child under 6

Perceived financial situation	Hours worked at present time	Hours worked (preferences)	Change in hours needed to meet preferences	*Percentage of families in this situation*[c]
Denmark				
Well off	73	62	–11	*80*
Just manage	60	51	–9	*18*
Finland				
Well off	72	56	–16	*64*
Just manage	60	41	–19	*34*
Norway				
Well off	68	60	–9	*70*
Just manage	58	51	–7	*28*
Sweden				
Well off	70	58	–12	*69*
Just manage	59	45	–14	*27*
Greece				
Well off	65	50	–16	*30*
Just manage	64	47	–17	*37*
Italy				
Well off	62	50	–12	*32*
Just manage	55	45	–10	*58*
Portugal				
Well off	78	57	–21	*21*
Just manage	68	61	–7	*62*
Spain				
Well off	61	48	–13	*20*
Just manage	46	38	–8	*68*
Ireland				
Well off	66	53	–13	*28*
Just manage	55	37	–18	*67*
United Kingdom				
Well off	66	50	–16	*29*
Just manage	60	45	–15	*63*
Austria				
Well off	67	58	–9	*64*
Just manage	59	48	–11	*33*
Germany				
Well off	62	49	–13	*52*
Just manage	55	45	–10	*42*
Netherlands				
Well off	58	47	–11	*82*
Just manage	47	37	–10	*16*
Belgium				
Well off	67	55	–12	*64*
Just manage	58	52	–7	*34*
France				
Well off	61	49	–12	*32*
Just manage	60	49	–11	*55*
Luxembourg				
Well off	56	48	–8	*73*
Just manage	58	49	–9	*26*
Unweighted average				
Well off	66	53	–13	*51*
Just manage	58	46	–11	*42*

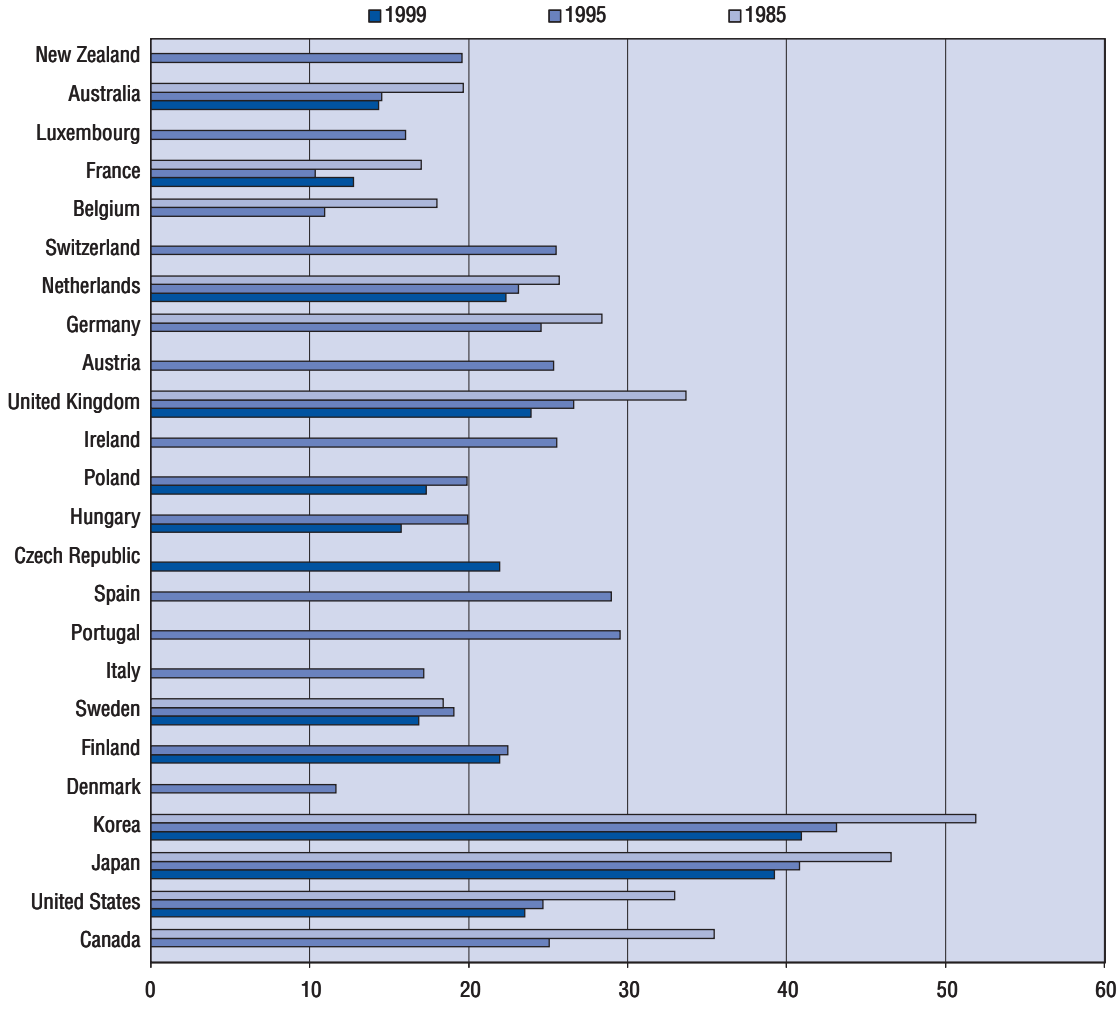
a) The information about preferred hours is derived from questions about a "free choice" of hours by the respondent and his/her partner, "taking into account the need to earn your living". The financial perceptions are responses to the question, "Taking into account the income that the members of your household receive from different sources, would you say that your household is financially well off, that you just manage or that you have difficulties?"

b) More precisely, the respondent to the survey was aged between 20 and 50.

c) The proportion of respondents indicating "difficulties" is not shown. It was under 10% in all countries except France, Greece, Portugal and Spain.

Source: Secretariat calculations on the basis of microdata from the *Employment Options of the Future* survey. See Annex 4.B for details.

Chart 4.2. **Gender wage gaps**[a]



a) Defined as the difference between median male earnings and median female earnings, as a proportion of male median earnings, except for Portugal and Hungary where the mean is used. Earnings are defined on an hourly basis, except for some countries where the comparison is restricted to full-time workers.
Source: OECD earnings database.

relatively broadly (Annex 4.B provides further details).[11] Paid work includes working in a family enterprise (which explains why "housewives" report some paid work) and is averaged over the year, including weekends and paid leave (this explains why the figures may appear low).

The figures in Table 4.5 suggest the following, for the countries shown:

- Full-time working mothers spend just over twice as much time on average as fathers on child-care (housewives spend over three times as much).
- Full-time working mothers spend about twice as much time on other unpaid work as fathers (housewives spend around two and a half times as much).
- On average, the total of paid and unpaid work is highest for women in full-time work, at around 10 hours per day, one hour more than the average for men as a whole. The lightest burden, in this sense, is borne by housewives. Women working part-time have an average total of around nine and a half hours.

The evidence from countries with surveys repeated on a reasonably consistent basis (Australia, Canada and the United Kingdom) suggests that the amount of time men spent in child-care and other unpaid household work increased relative to that of full-time employed women in Australia and Canada between the mid-eighties and the end of the nineties. In addition, the time men

Table 4.5. **Time spent on child care and unpaid work by women and men in couple families with a child under 5**

Average time per day

	Men (average for all men)				Women in full-time (paid) work				Ratio of women's time to men's, women in full-time (paid) work	
	Paid work	Child care	Other unpaid	Total paid and unpaid time	Paid work	Child care	Other unpaid	Total paid and unpaid time	Child care	Total paid and unpaid time
	hours	minutes	hours	hours	hours	minutes	hours	hours		
Canada 1986	7.0	**53**	1.8	9.6	. .	**88**	3.4	10.3	**1.7**	1.07
Canada 1992	6.0	**68**	2.3	9.4	6.0	**109**	3.2	11.1	**1.6**	1.17
Canada 1998	6.3	**89**	2.4	10.3	5.9	**124**	3.0	11.0	**1.4**	1.07
United States 1985	6.9	**42**	2.1	9.6	3.7	**108**	4.3	9.7	**2.6**	1.01
United States 1995[a]	6.2	**33**	2.0	8.7	4.9	**62**	3.3	9.1	**1.9**	1.05
Denmark 1987	7.2	**28**	1.9	9.5	5.4	**55**	3.1	9.4	**2.0**	0.99
Finland 1987	6.1	**45**	2.1	8.9	3.9	**125**	3.6	9.5	**2.8**	1.07
Sweden 1991	6.4	**70**	2.5	10.1	3.9	**130**	3.9	10.0	**1.9**	0.99
Italy 1989	6.6	**36**	1.2	8.4	4.2	**96**	4.8	10.6	**2.7**	1.26
United Kingdom 1983 & 1987	5.7	**44**	2.0	8.4	. .	**. .**	. .	. .	**. .**	. .
United Kingdom 1995	6.3	**87**	1.7	9.4	3.5	**120**	5.4	10.9	**1.4**	1.16
United Kingdom 1999	4.9	**90**	1.6	8.0	. .	**. .**	. .	. .	**. .**	. .
Austria 1992[b]	6.9	**28**	1.7	9.1	4.7	**62**	4.8	10.5	**2.2**	1.16
Germany 1992	6.1	**59**	2.5	9.5	4.1	**124**	4.2	10.3	**2.1**	1.09
Netherlands 1985	5.2	**48**	2.1	8.1	1.7	**115**	4.3	7.9	**2.4**	0.98
Australia 1987	6.7	**50**	1.8	9.3	3.5	**148**	3.8	9.8	**3.0**	1.05
Australia 1992	6.2	**62**	2.0	9.3	4.1	**206**	3.4	10.9	**3.3**	1.18
Australia 1997	6.1	**56**	2.0	9.0	6.0	**101**	2.9	10.6	**1.8**	1.18
Unweighted average most recent year for each country shown	6.3	**53**	2.0	9.1	4.4	**98**	3.7	10.1	**2.1**	1.10

	Housewives				Women in part-time (paid) work			
	Paid work	Child care	Other unpaid	Total paid and unpaid time	Paid work	Child care	Other unpaid	Total paid and unpaid time
	hours	minutes	hours	hours	hours	minutes	hours	hours
Canada 1986	0.6	**169**	5.1	8.5	. .	**. .**	. .	. .
Canada 1992	0.5	**193**	4.9	8.6	3.9	**139**	3.5	9.7
Canada 1998	0.7	**218**	4.7	9.1	3.1	**143**	3.8	9.3
United States 1985	0.6	**158**	5.0	8.2	. .	**. .**	. .	. .
United States 1995[a]	0.1	**106**	4.4	6.2	3.6	**93**	3.1	8.3
Denmark 1987	0.6	**87**	5.4	7.5	4.1	**41**	4.1	8.9
Finland 1987	0.4	**181**	4.4	7.8	2.4	**131**	4.3	8.9
Sweden 1991	0.3	**261**	5.1	9.7	3.2	**118**	4.9	10.1
Italy 1989	0.2	**120**	7.0	9.2	. .	**. .**	. .	. .
United Kingdom 1983 & 1987	0.2	**141**	5.2	7.8	. .	**. .**	. .	. .
United Kingdom 1995	0.0	**205**	4.7	8.1	3.1	**154**	4.2	9.8
United Kingdom 1999	0.4	**202**	3.7	7.4	2.7	**193**	3.8	9.6
Austria 1992[b]	0.5	**116**	6.7	9.1	3.2	**66**	5.4	9.7
Germany 1992	0.1	**175**	5.8	8.8	2.2	**142**	5.0	9.6
Netherlands 1985	0.2	**147**	4.9	7.6	2.3	**120**	4.4	8.6
Australia 1987	0.1	**219**	5.1	8.9	2.7	**154**	4.4	9.7
Australia 1992	0.1	**227**	4.7	8.5	2.2	**189**	4.3	9.7
Australia 1997	0.5	**169**	5.5	8.8	2.9	**137**	4.6	9.7
Unweighted average most recent year for each country shown	0.3	**164**	5.3	8.4	3.0	**130**	4.3	9.4

. . Data not available.
a) For 1992-94, the data for the United States relate to all parents, including single parents.
b) The data relate to all families with children.
Source: Data provided by Dr. Kimberly Fisher, Essex University (see Annex 4.B for details).

spent in child-care has tended to increase in all the countries.[12] However, these figures apply only to men in couple families, and exaggerate the increase in the amount of child-care carried out by men. An increasing proportion of children are in lone-parent families headed by women. They often see little of their fathers [Dex (1999)].

While international comparisons of time budget data need to be made with considerable caution, it appears that Canadian and Swedish men contribute the most to unpaid household work, though still performing less than their spouses (Table 4.5). At the other end of the scale unpaid household work is shared relatively unequally in Italy, where housewives perform the largest amount of household work and Italian fathers the least among the countries shown.[13]

II. Tax-benefit policies

While earnings are an important part of the incentive for mothers to work, their influence is mediated by tax/benefit policies. As pointed out by O'Donoghue and Sutherland (1999), Callan *et al.* (1999) and Dingeldey (1998), the choice of tax unit may be a key factor (Box 4.2). Other things being equal, individual, as opposed to family-based taxation provides greater incentives for partners of already-employed people to work. However, various forms of tax relief and benefits for families with children may counteract this. This section describes relevant trends in taxation over the past thirty years and draws on information recently published by the OECD to illustrate the combined effects of taxes and benefits on employment incentives for partners in couple families.

Over the past thirty years, there has been a clear trend towards compulsory, separate taxation of couples, sometimes passing through a stage where the choice is left up to couples (Table 4.6). Countries with separate taxation as early as 1970 included Canada, Japan, Greece, Australia and New Zealand. By 1990, separate taxation had moved strongly into the Nordic countries, and into a number of other regions of Europe. By 1999, the only countries with joint taxation, or where couples with average earnings were likely to opt for joint taxation, were the United States, Portugal, Poland, Ireland, Germany, Switzerland, France, Luxembourg and (for all but very small incomes) Turkey.

However, the type of taxation system is only part of the story. The effects of family-based tax reliefs and benefits can be of considerable importance for the incentives for partners to work. The second panel of Table 4.6 shows the change in net income when a couple family changes employment patterns, taking into account the combined effects of taxes and a number of benefits, including family benefits.[14] It should be noted that the figures do not include the accumulation of rights to unemployment benefits, which tend to be more valuable in countries with

Box 4.2. The impact of different taxation systems on work incentives in couple families

Taxation of dual-earner couple families may take various forms: separate, joint, or quotient, but the basic question is whether or not the income is calculated on the basis of the sum of the two earned incomes or on the basis of the two incomes separately. The two approaches may be summarised as follows [see the Annex to O'Donoghue and Sutherland (1999)], where YM is the earned income of the man, YF is the earned income of the woman and the function, T, embodies the tax schedule:

Separate taxation: Tax = T (YM) + T (YF)

Quotient taxation: Tax = Q x T [(YM + YF + other family income)/Q], where Q is the quotient.

If Q = 2, the taxation system is usually referred to as "income splitting". If it is set to 1, it is referred to as "joint" or aggregate taxation. Quotient taxation, as applied for example, in France, may take into account the incomes of family members other than the couple. However, when this is not the case, such systems are equivalent to each other, in the sense that the tax schedules can be set so that the tax rates at any given levels of earned incomes are the same.

Whatever form of joint taxation is used, there is, in principle, a reduced incentive for the partner with lower earnings (or lower potential earnings) to increase earnings, as his or her (usually her) earnings will face higher marginal tax rates under a progressive taxation system. On the other hand, as pointed out for example by the United Kingdom House of Lords (1985), quoted by O'Donoghue and Sutherland (1999), it is only by using a system of joint taxation that it is possible to achieve equality of taxation between two couples with the same total earned income, but a different distribution of that income. Owing to this dilemma, a number of countries, at different times, have offered couples the choice between different forms of taxation (though in practice the choice is often reduced by the fact that, for a couple in given circumstances, one or other form of taxation results in a lower total tax bill). In addition, the separate taxation systems of some countries contain a number of family-based measures, which may result in greater equity between couples with different earnings patterns.

Table 4.6. **Developments in personal income tax systems, 1970-1999, and relative incomes of two-earner couples with different employment patterns, 1997**

	Type of taxation system[a]			Earned income levels, relative to APW level, by employment pattern of household[b]		
	1970	1990	1999	Full-time employed/non-employed (100/0)	Full time employed/part-time employed (100/40)	Full-time employed/full-time employed (100/100)
North America						
Canada	Separate	Separate	Separate	100	145	177
Mexico	. .	. .	Separate	100	. .	. .
United States	Joint	Joint	Optional/Joint	100	143	199
Asia						
Japan	Separate	Separate	Separate	100	140	197
Korea	. .	. .	Separate			
Europe						
Denmark	Joint	Separate	Separate	100	130	172
Finland	Joint	Separate	Separate	100	142	186
Iceland	Joint	Separate	Separate	100	117	154
Norway	Optional	Optional	Optional	100	127	163
Sweden	Joint	Separate	Separate	100	131	183
Greece	Separate	Separate	Separate	100	133	183
Italy	Joint	Separate	Separate	100	137	183
Portugal	Variable	Joint	Joint	100	139	188
Spain	Joint	Optional	Separate (Joint)	100	137	188
Czech Republic	. .	. .	Separate	100	142	187
Hungary	. .	. .	Separate	100	140	180
Poland	. .	. .	Optional	100	136	189
Ireland	Joint	Joint	Optional/Joint	100	135	179
United Kingdom	Joint	Separate	Separate	100	141	192
Austria	Joint	Separate	Separate	100	135	178
Germany	Joint	Joint	Joint	100	126	163
Netherlands	Joint	Separate	Separate	100	132	179
Switzerland	Joint	Joint	Joint	100	132	176
Belgium	Joint	Joint	Separate	100	120	154
France	Joint	Joint	Joint	100	127	179
Luxembourg	Joint	Joint	Joint	100	135	172
Turkey	Separate/Joint	Separate/Joint	Separate/Joint	100	. .	. .
Oceania						
Australia	Separate	Separate	Separate	100	140	183
New Zealand	Separate	Separate	Separate	100	. .	. .

. . Data not available.

APW: Average production worker.

a) According to O'Donoghue and Sutherland (1999), while the systems in Greece, Italy, Austria and the Netherlands are best classified as separate taxation systems, they have a significant number of family-based tax measures. It should also be noted that several countries with separate taxation nevertheless give a small amount of extra tax relief in respect of a wife who is non-working, or working very little. See country chapters in OECD (2000*a*) from which the information below has been taken.

b) 100/0 refers to a situation where one member of the couple works full-time and the other couple does not work at all; 100/40 implies that one member works full time hours and the other 40% of full-time hours, and so on.

France: The system is a "quotient" system, which includes earnings from children.

Germany: Although spouses have the option of being assessed separately, according to Dingeldey (1998), there is never any financial advantage in doing so.

Norway: In most cases the individual, but in some cases (spouse has no earned income or low income) optional taxation as a couple is more favourable.

Poland: "Splitting" system used, so joint taxation will normally be more advantageous.

Spain: According to Dingeldey (1998), although Spanish couples can opt for joint taxation, this is only advantageous for couples with a very low primary income and a minimal second income.

Turkey: Independent assessment unless one of them earns more than TL2.25bn, in which case it is joint. TL2.5bn is roughly US$8 600.

United Kingdom: Married couple tax relief abolished in 2000.

United States: Married couples generally benefit if they opt for a joint return.

Sources: OECD (1993) and OECD (1999*d*).

individualised benefit systems, such as the Nordic countries, than in those with family-based systems, such as Australia. They also do not include child-care and maternity/child-care leave benefits, discussed in the next section. The base case is that of a couple family with one earner, working full-time at OECD average production worker (APW) earnings [see OECD (2000*a*) for details]. The second column of figures shows the relative net income when the first person continues to work full-time, but the second works part-time, earning 40% of the wage of an APW. The third shows the relative net income when both partners are working full-time at the APW level.

If there were no tax/benefit system, or if the system resulted in the same average effective tax rate (including the effects of benefits) on the earnings of the second member of the couple as on those of the first, the figures in the second two columns would be 140 and 200, respectively. The incentive for the household to increase total hours of work through part-time working by the second member of the couple can thus be said to be high, in this restricted sense, when the number for part-time working in the second column of Table 4.6 is around 140. The same applies to full-time working when the number in the third column is near to 200.

There are several countries where the number in the second column is close to or above 140: Canada, the United States, Japan, the United Kingdom and Australia. The figures for most European countries are lower. For full-time working, few countries are close to the 200 mark and many European countries are well below. The figures also demonstrate that the *type* of taxation system is not necessarily determinant of the level of incentives in the sense used here – the average figures for countries where there is separate taxation are similar to those where it is joint.

III. Work/family reconciliation policies

National work/family reconciliation policies are taken to include policies for child-care and for various types of child-care leave, including maternity, paternity and parental leave benefits. This section provides summary indicators for their incidence in different countries, referring to detailed information in Adema (forthcoming). They are examined mainly from the point of view of their effects on the labour market attachment of parents and on gender equity.

A. Child-care arrangements

Table 4.7 provides information on the extent of child-care arrangements for two groups of young children: those under 3 years old, and those 3 years old and over but under the age of 6 (or the age when compulsory schooling begins). It is concerned primarily with formal child-care arrangements, including:

- Group-care in child-care centres (nurseries, kindergarten, play-schools), sometimes organised within the educational system.
- Residential care, including specialist services such as care for disabled children.
- Childminders, based in their own home, looking after one or more children.
- Care provided by a carer who is not a family-member but frequently lives in with the family.

Information on the extent to which the child-care is publicly funded is to be found in Adema (forthcoming).

Countries which have a high level of public funding generally spend the bulk of it on the first two types of child-care. However, most governments provide special arrangements for children considered to be at risk of abuse or neglect, and for children in lone-parent families, low-income families and families with special work-commitments. Many governments intervene in arrangements for child-care in other ways. For example, Austria and France require home-based childminders to be registered. In France, the *Allocation de garde d'enfant à domicile* (AGED) provides support to parents who arrange child-care at home, by covering most of the employers' charges that would otherwise be paid and allowing tax deduction of part of the costs.

Of the countries for which data are available, the highest proportions of children under 3 in formal child-care (40% or more) are found in Canada, in three of the Nordic countries (Denmark, Sweden and Norway), in the Slovak Republic, in the United States and in New Zealand. Very much lower proportions are found in the Southern and Central European countries. For the older group, the coverage is much higher, reaching 90% or more in several countries. It is also more uniform across countries.

While facilities for pre-school children over three years old tend to be financed mainly out of public expenditure, there is more diversity in the financing of formal child-care for the under-threes [Adema (forthcoming)]. Child-care centres for this age group are mainly publicly financed (though not necessarily publicly operated) in all of the Nordic countries, as well as a number of other European countries. The non-European countries, as well as Ireland, the United Kingdom, the Netherlands and Switzerland, rely mainly on commercial private sector provision of formal child-care services for children under 3. Child-care may also be provided or supported by private sector enterprises (see Section IV). Part of the

Table 4.7. Summary indicators of formal child-care coverage and maternity leave

	Proportion of young children using formal child-care arrangements[a]			Maternity/child-care leave indicators for 1999-2001		
	Year	Aged under 3	Aged 3 to mandatory school age	Duration of maternity leave (weeks)	Maternity benefits (% of average wages[b])	Total duration of maternity/child-care leave (weeks)
North America						
Canada	1999	45	50	15	55	50
Mexico	. .	. .	. .	12	100	12
United States	1995	54	70	0	0	12
Asia						
Japan	1998	13	34	14	60	58
Korea[c]	2000	7	26	8.5	100	60.5
Europe						
Denmark	1998	64	91	30	100	82
Finland	1998	22	66	52	70	164
Iceland		. .	. .	. .	. .	26
Norway	1997	40	80	42	100	116[d]
Sweden	1998	48	80	64	63	85
Greece	2000	3	46	16	50	42
Italy	1998	6	95	21.5	80	64.5
Portugal	1999	12	75	24.3	100	128.3
Spain	2000	5	84	16	100	164
Czech Republic	2000	1	85	28	69	28
Hungary	. .	. .	. .	24	100	180
Poland	. .	. .	. .	18	100	122
Slovak Republic	1999	46	90	28	90	184
Ireland[e]	1998	38	56	14	70	42
United Kingdom	2000	34[f]	60[f]	18	44	44
Austria	1998	4	68	16	100	112
Germany	2000	10	78	14	100	162
Netherlands	1998	6	98	16	100	68
Switzerland	. .	. .	. .	16	. .	16
Belgium	2000	30	97	15	77	67
France	1998	29	99	16	100	162
Luxembourg				16	100	68
Turkey	. .	. .	. .	12	66	12
Oceania						
Australia	1999	15	60	0	0	52
New Zealand	1998	45	90	0	0	52

. . Data not available.

a) The data include both public and private provision, and cover the four types of formal child-care arrangements defined in the text. They do not cover primary schools, which are particularly important sources of child care for children 4 years of age and over in Ireland, and for 5 year-olds in Australia, the Netherlands, New Zealand, and the United Kingdom. Under "aged under 3", for Canada, the under 5 years are covered; for the Slovak Republic, the age range is 0-2; for the United Kingdom, 0-4.

b) Where benefits are paid on a flat-rate basis, they have been converted to a percentage by using data on the average female wage in manufacturing. See Gauthier and Bortnik (2001).

c) Korea is in the process of revising the law to extend maternity leave from 8.5 to 13 weeks.

d) Provisional data.

e) Proportion of children aged under 5 in paid child-care.

f) England only.

Sources for maternity/child-care leave data: Gauthier and Bortnik (2001), except for Mexico, Hungary, the Czech Republic, Poland and Turkey: Kamerman (2000*b*), and national sources for Korea.

Sources for formal child-care data: Data were provided by national authorities except for Canada: Jenson and Thompson (1999); Belgium, Finland, Spain, Sweden: Kamerman (2000*a*); France: Drees (2000); Germany, the Netherlands, Sweden and the United Kingdom: Rostgaard and Fridberg (1998).

reason for the lower provision of formal child-care for the under-threes is the greater costs involved in caring for very young children.

In countries relying mainly on public expenditure, a higher proportion of children under 3 tends to be covered by formal child-care arrangements. However, the difference is not necessarily very large. Calculations based on the information in Adema (forthcoming) suggest that the average proportion of children covered in countries relying mainly on public expenditure is only slightly higher than in those countries relying mainly on private expenditure (some countries with mainly private funding have a

high rate of coverage, such as Canada and the United States). The main issues in assessing the relative merits of public and private provision of child-care from the point of view of the household are therefore not merely availability, but also cost and quality. In countries relying on private provision, private costs can be high. For example, in the United States, where parental fees constitute 76% of child-care financing [Kamerman (2000*a*)], low-income families devote about 25% of their family income to child-care [United States Congress (1998)]. Standards of private care may require special attention, for example in the case of private networks of childminders based in their own homes.[15]

Finally, a number of countries, including Denmark, Finland, France and Norway, have schemes to provide subsidies to parents looking after their own children at home. The benefit rates may decline with the hours of public child-care use (as in Norway), or be conditional on parents not using public child-care facilities at all (Denmark, Finland). These schemes are closely linked, conceptually, with the paid parental leave schemes that have been developed in many countries. However, they do not necessarily carry any rights to return to a job. Their employment effects are discussed below.

B. Maternity, paternity, parental and child-care leave

While maternity leave, with employment protection, has been widespread in OECD countries for many years, paternity leave and parental leave are more recent developments. Parental leave has often been defined [as in OECD (1995)] as being leave in addition to maternity/paternity leave to allow parents to take care of an infant or young child. This is the sense in which it is used in some national programmes for "parental leave", such as that in the United Kingdom. However, in some countries, child-care leave systems are now a mixture of individual and family entitlements, and paternity and parental leave are incorporated into "child-care leave" arrangements for the family as a whole. This ambiguity should be borne in mind in interpreting the information provided below. In what follows, the term "maternity/child-care leave" is used to encompass all of the various types of leave just mentioned. It should also be noted that entitlement to maternity and childcare leave is often conditional on previous work experience on a continuous and full-time basis as an employee over a certain period (usually for a year). Exceptions include the Scandinavian countries (where most women are covered), the Netherlands (where some temporary and part-time workers are covered) and Germany (where mothers in education and unemployment are covered). In the Southern European countries, entitlement often depends on having a contract for permanent employment.

The most extensive statutory programmes are seen in the Nordic countries (for information on extra-statutory arrangements provided by firms, see Section IV). In almost all countries (the United States, Australia, and New Zealand are exceptions) part or all of the various kinds of maternity/child-care leave is remunerated, often at 100% (Table 4.7).[16] Paid maternity leave equivalent to 13 weeks of pay or more had been instituted before the end of the 1970s in Finland, Norway, Sweden, Italy, Austria, Germany and France [Gauthier and Bortnik (2001)]. By the end of the 1990s, this level was exceeded in 16 countries.[17] In addition, the total duration of maternity/child-care leave (paid or unpaid) is now a year or more in at least 20 OECD countries. Other recent changes include the extension of some forms of leave to part-time employees (for example, in Ireland). In addition, greater flexibility is being introduced into parental leave arrangements. Following the precedent set some time ago by Sweden, a number of other countries now provide for some flexibility in working hours of parents, including Austria, Denmark, Finland, and the Netherlands. As noted in OECD (1999*b*, Chapter 1), transitions from part-time to full-time work have been relatively common in Sweden, partly as a result. Germany facilitates the re-entry of mothers to work by means of employer subsidies for retraining programmes, child-care provision and wages.

Specific paternity leave entitlements are still relatively uncommon, and often of short duration. They vary from three days or less in Greece, Portugal, Spain, the Netherlands, Belgium and France to ten days in Sweden, fourteen days in Denmark, Iceland and Norway and eighteen days in Finland. They are usually paid at the full rate (although at a flat rate in the private sector in Denmark and 80% of usual earnings in Sweden). However, in addition, fathers are increasingly eligible for paid leave under maternity/child-care leave provisions, sometimes with a "father quota" available on a "use-it-or-lose-it" basis [Adema (forthcoming)].

Until recently, fathers took up little of the paternity/child-care leave available to them. For example, in 1995 only 5% of fathers in the European Union took paternity leave [European Commission (1998*a*)]. When child-care leave can be taken by either parent, fathers have tended to take comparatively little of it [Bruning and Plantenga (1999)]. However, particularly in the Nordic countries, the situation has been changing somewhat. Paternity leave take-up rates have reached 58% in Denmark (100% in the public sector where the scheme is fully paid), 64% in Sweden and 80% in Norway [European Commission (1998*b*); Ellingsaeter (1998)]. In addition, in some of the

Nordic countries, substantial proportions of fathers are now taking up at least part of the child-care leave that is now reserved for them. Recent take-up rates of child-care leave by fathers include 10% for Denmark, almost 80% for Norway [OECD (1999*c*)] and 36% for Sweden [Sundstrom and Duvander (2000)].[18] However, the amount of leave taken is generally unknown – as is the proportion of time the fathers on leave spend looking after their children. Parental leave arrangements with specific "father quotas" also exist in Austria[19] and Denmark. In the Netherlands, fathers of young children are entitled to reduced hours and, according to a 1994 survey, 13% of fathers switched temporarily to a 4-day week when their children were small [European Commission (1998*a*)]. According to various studies employers' attitudes are often quoted by fathers as an important reason for their low take-up rates [European Commission (1998*a*); Sundstrom and Duvander (2000)]: employers may regard fathers taking parental leave as relatively uncommitted to their jobs [Albrecht *et al.* (1999)]. However, mothers' attitudes may also be important. A number of authors have concluded that the father's decision whether or not to become heavily engaged in child-care depends, first, on whether or not the mother wishes it [Bjoonsberg (1998); Giovannini (1998); Sundstrom and Duvander (2000)]. In Sweden, more educated and younger men with well-educated wives and one or two children are most likely to take childcare leave [Sundstrom and Duvander (2000)]. In the Netherlands, fathers taking up part-time parental leave are generally well-educated and often work in the public sector.

C. The choice between child-care, child-care leave and parental care for children

Greater access to formal child-care facilities, whether provided directly or subsidised by public authorities, can be expected to raise participation rates of mothers. Indeed, some studies find significant positive effects. Gustafsson and Stafford (1992) find that subsidising child-care has a positive impact on female labour supply in Sweden. Powell (1998) concludes that the cost of child-care has a negative impact on the probability of Canadian mothers' working full-time. Kimmel (1998), for the United States, finds that the cost of child-care has a considerable negative impact on the employment behaviour of mothers. However, others find inconclusive results. These include Michalopoulos *et al. (*1992), for the United States, who find that the primary benefit of more generous subsidies is to allow users of high quality care to purchase slightly higher quality market care; and Dobbelsteen *et al.* (2000), for the Netherlands, who find that the cost of child-care has no effect on the labour force participation of the mother and surmise that subsidies for child-care may mainly serve to change the type of child-care used from informal to formal.

Maternity leave policies with employment protection can also be expected to raise mother's employment rates. Indeed, the main reason given by employers who offer extended periods of maternity leave is precisely to increase retention rates of mothers (see Section IV). Concern has been expressed that long periods of maternity leave (or child-care leave, which is generally taken by the mother) may lead to detachment from the labour market, and lower employment rates and earnings for mothers in the longer term [OECD (1995); Blau and Ehrenberg (1997); Moss and Deven (1999)]. However, few studies have attempted to determine at what point maternity and child-care leave policies might have this effect. In the Nordic countries long parental leave entitlements, paid at almost a full rate, do not seem to have had a negative impact on women's labour market opportunities compared with other OECD countries, where leaves are shorter in duration and sometimes unpaid. Ruhm (1998), comparing data from 16 OECD countries, concludes that short spells of maternity leave are associated with higher female employment rates but finds no consistent results regarding longer periods of leave.[20] The special features of the programmes, and the way they are funded, by the state or by private employers, may matter more than their duration. The take-up of the schemes is likely to vary, and may be quite low among highly-skilled women (as suggested by the evidence on employer-provided career break schemes noted in Section IV).

Finally, schemes to pay parents to look after their own children at home, without any guarantee of employment or re-employment, may encourage labour market detachment if they continue over a long period of time. For example, Ilmakunnas (1997), for Finland, reports a high rate of take-up of the "home-care allowance" available to parents who do not use public child-care services, and finds that most of these parents choose to look after their children themselves, leading to a substantial reduction in female employment rates. Afsa (1999) and Fagnani (1998) report similar results for France.[21]

IV. Firms' contribution to the reconciliation between work and family life

Firms play a crucial role in the work/family reconciliation. Whatever government policies are put in place, the detailed aspects of the reconciliation are worked out at the level of the workplace. National policies will be much

less effective if firms implement them unwillingly – perhaps denying some or all of their employees their full legal rights. Here, relatively low-skilled, or easily-replaced employees might be most vulnerable [Kiser (1996)]. On the other hand, in some countries, either for business reasons, or because of their values, many firms not only comply fully with national legislation, but complement it through "family-friendly" arrangements. The main questions addressed in this section are:

- What types of firm are most likely to offer voluntary family-friendly arrangements and what types of employees are most likely to be offered them and to make use of them?
- How does the pattern of family-friendly arrangements in firms link with public provision to support the work/family reconciliation?

A. Defining family-friendly arrangements by firms

Family-friendly arrangements in firms are taken to be practices, facilitating the reconciliation of work and family life, which firms introduce to complement statutory requirements, *e.g.* by allowing extra leave for family reasons. Only employees can decide whether or not any particular arrangement is actually family-friendly. Employers may tend to make a rather generous estimate of the range of family-friendly arrangements they have put in place, in order to be seen in a better light. In addition, firms with family-friendly arrangements may be simultaneously "family-unfriendly", in the sense of imposing working arrangements which make it difficult to reconcile work and family life.

Family-friendly arrangements can be divided into four main types: leave from work for family reasons; changes to work arrangements for family reasons; practical help with child-care and eldercare; and the provision of training and information [see Evans (2001, Table 1) for a detailed list]. Leave from work for family reasons includes provisions for extra-statutory maternity, paternity and parental leave, career breaks, leave to care for elderly relatives, and emergency leave to deal with a sick child or problems with child-care. Changes in work arrangements for family reasons include reductions in working hours (for example from full-time to part-time working), term-time only working contracts, work at home for family reasons, and appropriate flexi-time arrangements.

All these types of arrangements can be of considerable assistance in easing the work/family reconciliation, especially where national legislation is comparatively restricted and public child-care is not well developed. Extra-statutory family leave is often vital when children are ill and not able to benefit from the usual child-care arrangements, or when child-care arrangements break down. Flexibility in working hours is of vital importance to deal with the emergencies of everyday family life. Finally, modern communications technology, including the mobile telephone and the Internet, allows easier and faster communications between off-site employees and their enterprises. This may allow more work to be shifted back to the home, potentially aiding the work/family reconciliation, though there are dangers that it may also lead to work invading family life [Check (1996); Wallis (1996)].

B. Family-friendly arrangements in firms in Australia, Japan, the United Kingdom and the United States

The most extensive information on family-friendly arrangements in firms is currently available for Australia, Japan, the United Kingdom and the United States.[22] By comparison with most European countries, these four countries have traditionally had relatively low levels of public child-care provision and of statutory maternity, paternity and parental leave. A good deal of responsibility for the work/family reconciliation has thus fallen to firms, and there has been substantial interest in the way they have responded. Analysis of the national surveys, described in Annex 4.B, shows a number of common features.

Employer surveys show that family-friendly arrangements are most common in the public sector. This is to be expected: the public sector both employs a relatively high proportion of women and is less subject to market pressures. Family-friendly arrangements are also more likely to be reported by large firms, especially in the case of Japan [Sato (2000); Tachibanaki (2001)]. However, when attention is focussed on changes in working arrangements, the differences may be quite small, especially since smaller firms may be more willing to allow informal arrangements [WFU/DEWRSB (1999) for Australia; Dex and Scheibl (2000) for the United Kingdom]. Family-friendly arrangements tend to be more common in firms with higher proportions of professional and technical workers. For Australia, Whitehouse and Zetlin (1999) also find that family-friendly arrangements are more common where there is a written Equal Employment Opportunities statement, and when there is a structured hierarchical management system. For Japan, Tachibanaki (2001) finds positive correlations between measures of equal opportunity policies and measures of family-friendly arrangements. In addition, firms which report moves to inculcate a more family-friendly culture are likely to have a relatively high proportion of female managers. For the United States, Osterman (1995) finds a link between family-friendly arrangements and a "high

commitment" style of management, in which senior managers adopt a strategy of team working and job-rotation, and delegate relatively high levels of responsibility to lower-level staff [OECD (1999*b*, Chapter 4)].

Regarding the type of family-friendly arrangements on offer and the benefits they bring, employers in these four countries are more likely to mention changes in working hours, such as part-time working and flexi-time, than extra family leave benefits or help with child-care. It is very rare for employers to provide benefits from each of the four categories mentioned above. The most commonly cited reasons for introducing these arrangements (according to UK surveys) are better retention rates of valued staff with family responsibilities, and improvements in staff morale [Forth *et al.* (1997); Cully *et al.* (1999)]. DTI (2000) reports econometric evidence that mothers entitled to extra-statutory leave or pay are more likely to return to work after child-birth, even after controlling for a range of other factors. The same is true of mothers entitled to part-time working. The same study reports a range of case study evidence for the United Kingdom indicating that family-friendly working practices can result in a net reduction in absences from work and increase employee commitment. For the United States, Dex and Scheibl (1999) review a number of econometric studies showing positive effects on productivity, turnover, quit rates, and work performance measures. However, family-friendly arrangements also have costs, notably covering for absences. While subjective evidence from employers with family-friendly arrangements suggests the net benefits are positive, there seems to be little objective evidence to support the contention that introducing family-friendly arrangements tends to improve the financial situation of firms. One reason for this may be that they are often associated with other working practices (such as "high-commitment" practices) which have stronger, beneficial effects [Osterman (1995)].

The employee-based data paint a similar picture. Flexible working hours, followed by various types of short-duration family leave schemes (such as sick-child leave) tend to be mentioned most often – work-place *crèches* and career breaks much more rarely. Higher-skilled employees are more likely to report that they have access to a range of family-friendly working arrangements, as are employees in larger firms and in the public sector. Detailed analysis of Australian and Canadian data shows that such flexible hours arrangements are appreciated by employees. Job satisfaction is increased, and stress reduced, when employees with family responsibilities are able to work no more hours than they desire to work and have some control over their starting and stopping times [Whitehouse and Zetlin (1999); Gottlieb *et al.* (1998)]. However, employee data from the United Kingdom show that some forms of family-friendly arrangements are seldom used even when they are available. In particular, career breaks are a fairly common entitlement for "fast-track" women employees, but are hardly ever taken up [Forth *et al. (*1997)]. Hakim (2001) argues that this group of employees is unlikely to be attracted by arrangements which might slow their career progression.

There is little evidence of significant growth over time in family-friendly arrangements for any of these four countries. This may be partly because of the lack of consistent data. However, what evidence is available tends to be mixed. For the United States, a comparison of the 1992 and 1997 rounds of the *National Study of the Changing Workforce* shows little overall change in child-care benefits [Bond *et al.* (1998)]. Waldfogel (forthcoming) reports a similar finding on the basis of successive US *Employee Benefits Surveys.* Nevertheless, Golden (2000) reports a substantial increase in "flexi-time" over the same period. For Australia, affirmative action reports cited by WFU/DEWRSB (1999) suggest some increase in the provision of paid maternity leave and in the provision of permanent part-time work for employees with family responsibilities. In Australia and the United States, however, these changes have not stopped employees from becoming less content, overall, with the reconciliation between their work and family lives [WFU/DEWRSB (1999); Bond *et al. (*1998)]. For the United States, at least, it is plausible that one reason is the substantially longer working hours and increased work pressure reported by employees in general [Bond *et al. (*1998)].

Comparisons of the incidence of flexi-time and voluntary part-time working are shown in Table 4.8, which includes figures for the European Union, discussed below. Out of the four countries, flexi-time working appears to be relatively common in the United States and Australia. While precise comparisons are difficult, it appears that voluntary part-time working plays a stronger role in Australia, Japan and the United Kingdom than in the United States, where part-time working is itself less common (Table E, Statistical Annex). Finally, few firms appear to have work-place crèche arrangements in any of these countries.

C. Family-friendly arrangements in firms in the European Union

For the European Union, two surveys carried out by the European Foundation for the Improvement of Living and Working Conditions (EFILWC), the *Second European Survey on Working Conditions* (SESWC) and the *Employment Options of the Future* survey (EOF), provide information on extra-statutory family leave, provision for child-care, flexi-time working and voluntary part-time working. In addition, the *European Labour Force Survey*

Table 4.8. **Indicators of family-friendly and relevant flexible working arrangements in enterprises, 1995-1996**

	Percentage of women employees with child under 15 in household reporting:				Percentage of employees reporting that they work flexi-time	Percentage of women in employment working part-time on a voluntary basis[a]
	Extra-statutory arrangements for:			Employer provision for child day-care		
	Sick child leave	Maternity leave	Parental leave			
North America						
Canada	. .	. .	. .	. .	23	17
United States (1997)	50[b]	50[b]	. .	13-24	45	10
Asia						
Japan	8-15	10	. .	1-10	19	37
Europe						
Denmark	38	40	38	7	25	18
Finland	37	36	34	8	22	6
Sweden	6	7	7	1	32	20
Greece	65	81	69	18	23	2
Italy	72	81	69	5	19	11
Portugal	48	49	43	22	19	5
Spain	63	69	55	8	20	8
Ireland	24	68	22	7	19	17
United Kingdom	41	61	28	10	32	30
Austria	74	85	87	19	22	21
Germany[c]	65	92	87	16	33	27
Netherlands	40	75	53	25	36	45
Belgium	62	65	43	14	26	21
France	47	58	51	12	26	15
Luxembourg	35	82	41	11	18	25
Oceania						
Australia	>58	>34	. .	. .	50	26

. . Data not available.

a) For Europe, voluntary part-time includes only those women who did not say they worked part-time because of education, sickness/disability or because they could not find a full-time job, but did say they did not want to work full-time. The definition for the other countries is somewhat broader.

b) Rough estimate based on partial information.

c) Western *Länder* of Germany only for the first 5 columns.

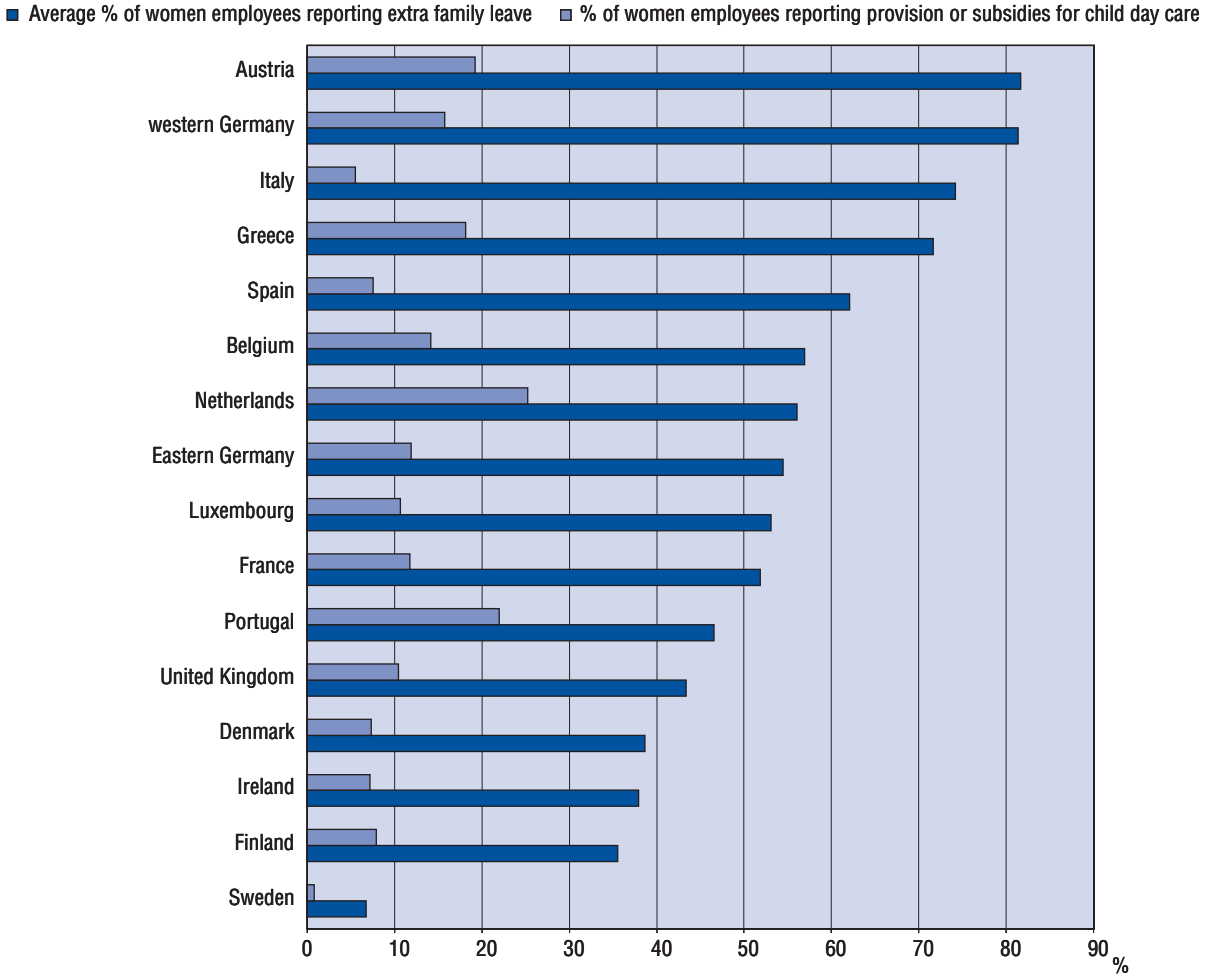
Sources: The data for Europe in the first five columns are Secretariat calculations on the basis of the *Second European Survey on Working Conditions*; those in the last column are Secretariat calculations on the basis of the *Employment Options of the Future survey.* For other countries, data on family-friendly working arrangements have been taken from the sources noted in the text; data on flexi-time working are taken from Lipsett and Reesor (1997) for Canada, Bond *et al.* (1998) for the United States, Tachibanaki (2001) for Japan and WFU/DEWRSB (1999) for Australia; data on voluntary part-time working are based on a number of sources, as detailed in Evans (2001, para. 55).

provides information about working at home – another way in which working arrangements may be changed for family reasons. Details of the questions used and background information about the surveys are to be found in Annex 4.B.

The first four columns of data in Table 4.8 show the proportion of women employees with a child under 15 in the family who reported that extra-statutory family leave, or child-care arrangements were available in the companies where they worked.[23] Owing to the strong associations between the three different leave measures, it seems legitimate to summarise the information along just two dimensions, as shown in Chart 4.3. Overall, the highest figures are seen for Austria and western Germany, followed by three of the Southern European countries. The Nordic countries, Ireland and the United Kingdom are at the bottom. The Netherlands and Portugal stand out for having particularly high levels of firm-provided day-care relative to the amount of extra-statutory leave that their firms provide. The high figures for the Netherlands reflect its system of partnership between parents, firms and the government, in which firms are encouraged to buy places in privately-run child-care centres, which they then provide to employees at reduced rates [Dobbelsteen *et al.* (2000)].

Table 4.8 also shows information for flexi-time working and voluntary part-time working.[24] Flexi-time shows much less national variation than for extra-statutory leave, and the highest figures are seen outside Europe, in the United States and Australia. The highest figures for voluntary part-time working, as a proportion of total female employment, are seen in Japan, the Netherlands and the United Kingdom, in each case at

Chart 4.3. **Extra-statutory employer-provided family-friendly practices, European Union, 1995/96**[a]



a) Figures in the lower bars are the average, for the country concerned, of the proportions reporting extra-statutory sick child leave, maternity leave and parental leave. The terms, "western" and "eastern" Germany, refer to the western and eastern *Länder*.
Source: Secretariat calculations using the Second European Survey on Working Conditions, referring to women employees with a child under 15 in the household.

30% or more. The Nordic countries and the Southern European countries have comparatively low figures.

The final form of family-friendly working arrangement mentioned above is working at home for family reasons. Despite the considerable discussion of its potential, there is as yet little evidence that working at home is common, or growing quickly. In 1992, according to the *European Labour Force Survey*, only 4.9% of employed men and women in the European Union said they carried out their employment in their homes on a regular basis. In 1997, the figure had fallen to just over 4.4%.

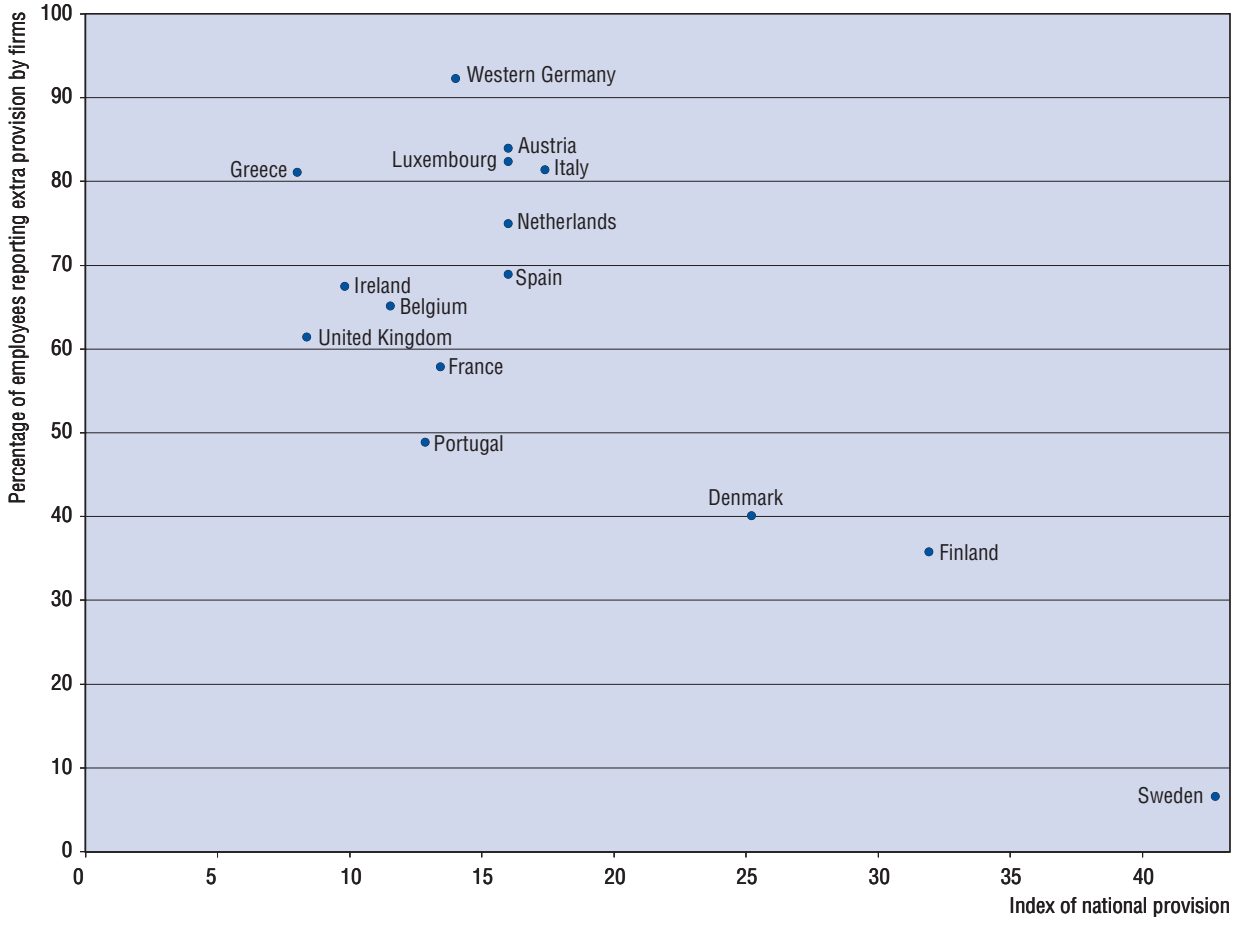
D. Firms' voluntary provision of maternity leave and national legislation

This sub-section explores the relationship between extra-statutory maternity leave and the arrangements provided for under national legislation.[25] Chart 4.4 shows the pattern of voluntary provision of extra maternity leave by firms, derived from the SESWC, against an index of national maternity leave for the same year. There is no simple relationship. The lowest values for firm provision are seen when national provision is highest. The highest figures for firm-based maternity leave, and the highest

spread of values, are seen when national provision is towards its median level. The Nordic countries are all to the right of the chart, with high national provision and low firm-based provision. The Central European countries tend to be at the top of the chart, with high values for firm-based provision, and above-average values for national provision. Ireland and the United Kingdom are to the left, with fairly low values for both measures.

As neither Australia nor the vast majority of the States of the United States have statutory, paid maternity leave, they would both be at the extreme left of the chart, with a zero value for the index. However, for Australia, 42% of female employees in workplaces with 20 or more employees and with permanent status reported being granted paid maternity leave by their firms in 1995 [Morehead *et al.* (1997)]. For the United States, the index would again be zero because of the absence of any statutory requirement for paid maternity leave. In addition, the period of maternity leave itself is only statutory for roughly 46% of the employed population of the United States – those employees in private-sector firms with 50 or more employees who have fulfilled certain employment conditions [Waldfogel (1999)]. However, according to Bond *et al.* (1998), 94% of employees in both large and small firms report that women at their places of employment are able to take time off work, without endangering their jobs, to recuperate from childbirth. It thus seems likely that many employers of small firms go beyond their legal obligation as regards time off from work. However, even for larger firms, this leave is paid in only 2% of cases.

Chart 4.4. **Comparison of indicators of firms' provision of extra-statutory maternity leave and national provisions, EU, 1995/96**



Sources: The index of national provision is the product of the number of weeks of maternity leave and the rate of pay during those weeks, taken from Table 4.9. The proportion of employees reporting extra-statutory provision by firms refers to women employees with a child under 15 in the household and is taken from the *Employment Options of the Future* survey.

V. Summary of the international patterns

Tables 4.7 and 4.8 above contain a number of indicators of work/family reconciliation policies. Table 4.9 brings them together with the employment rate of women aged 30-34, for the 19 countries for which the indicators are reasonably complete. They are scaled to have mean zero and standard deviation unity, in order to equalise the degree of variation and put them on a common scale. As shown in the bottom line of the table, the strongest cross-country correlations of the individual indicators with the employment rate of women aged 30-34 are for the proportion of children under three in formal child-care, and the maternity pay indicator calculated as the product of the number of weeks of maternity leave and the average pay during those weeks. There is little or no correlation with the total number of weeks of maternity/child-care leave, nor with the proportion of voluntary part-time employment. The correlation with extra-statutory leave by firms is negative, as might be expected in so far as its correlation with the maternity leave index is negative (Chart 4.4).

The table also includes a composite index, which is the sum of the indicators for the coverage of the under-threes in formal child-care, maternity leave, flexi-time, voluntary part-time and one half of the extra-statutory leave by firms indicator (the factor of one half is included to acknowledge the fact that extra-statutory provision by firms is generally of considerably less importance than national provision). The exclusion of the other indicators is justified not merely by their low correlation with the employment rate but also by the fact that the coverage of the over-threes in formal child-care leaves out a good deal of provision through the educational system; and that the

Table 4.9. **Summary indicators of work/family reconciliation policies and relevant flexible work arrangements**

All indicators scaled so as to have mean zero and standard deviation unity, across the countries included[a]

	Child-care coverage for under-3s	Child-care coverage for over-3s	Maternity pay entitlement[b]	Total maternity/ child-care leave	Voluntary family leave in firms[c]	Flexi-time working	Voluntary part-time working	Composite index[d]	Employment rate for women aged 30-34
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Canada	1.1	–1.2	–0.7	–0.8	. .	–0.5	0.2	**0.2**	71.8
United States	1.6	–0.1	–1.4	–1.6	–0.8	2.0	–0.5	**1.2**	72.0
Japan	–0.6	–2.1	–0.7	–0.6	–2.1	–0.9	0.3	**–2.9**	52.6
Denmark	2.1	1.0	1.3	–0.1	–0.4	–0.3	–0.1	**2.9**	78.8
Finland	–0.1	–0.3	1.9	1.6	–0.6	–0.6	–1.2	**–0.3**	70.7
Sweden	1.3	0.4	2.3	0.0	–1.9	0.6	0.2	**3.3**	76.7
Greece	–1.1	–1.4	–0.7	–0.9	1.1	–0.5	–1.6	**–3.4**	57.1
Italy	–1.0	1.2	0.2	–0.5	1.2	–0.9	–0.7	**–1.9**	52.6
Portugal	–0.7	0.1	0.8	0.9	–0.1	–0.9	–1.3	**–2.2**	75.7
Spain	–1.0	0.6	0.0	1.6	0.6	–0.8	–1.0	**–2.5**	49.3
Ireland	0.7	–0.9	–0.5	–0.9	–0.5	–0.9	–0.2	**–1.1**	69.1
United Kingdom	0.5	–0.7	–0.7	–0.9	–0.2	0.5	1.1	**1.3**	69.4
Austria	–1.1	–0.2	0.0	0.5	1.5	–0.6	0.3	**–0.6**	72.6
Germany	–0.8	0.3	–0.1	1.6	1.5	0.7	0.8	**1.3**	68.6
Netherlands	–1.0	1.3	0.0	–0.4	0.3	1.0	2.5	**2.7**	71.5
Belgium	0.3	1.3	–0.4	–0.4	0.4	–0.1	0.2	**0.2**	70.8
France	0.3	1.4	0.0	1.6	0.2	–0.2	–0.3	**–0.1**	65.6
Australia	–0.5	–0.7	–1.4	–0.7	–0.1	2.6	1.3	**1.9**	64.2
Correlation with the employment rate for women aged 30-34	0.59	0.20	0.36	-0.04	-0.18	0.26	0.25	**0.68**	

. . Data not available.
a) This is designed to put the indicators onto a common scale. A value of zero implies that the country concerned is at the average value for the countries in the table.
b) Calculated as the product of the duration of maternity leave and the earnings replacement rate.
c) Average of data for the three kinds of leave shown in Table 4.8.
d) Calculated as the sum of the indicators in columns (1), (3), (6) and (7), plus half of that in column (5).
Source: Tables 4.7 and 4.8.

take-up rate of the total period of maternity/child-care leave is unknown.[26] The composite index has a fairly high correlation, of just under 0.7, with the employment rate. This suggests the importance of work/family reconciliation measures of this type and also the importance of taking account of a range of such policies – this correlation is higher than that with any of the individual indicators. The North American countries and the Nordic countries generally tend to have relatively high values of the composite index. The lowest values are found in Japan, the Southern European countries and Ireland. Countries with similar values of the composite index may, of course, have quite different strategies for reconciling work and family life. For example, while the Netherlands has a similar value to Denmark, the Netherlands has much higher scores for flexible hours working (including voluntary part-time working) but lower scores for child-care coverage and maternity leave.

Conclusions

This chapter has concentrated on examining the work/family balance from the point of view of its relationship to the number of parents, particularly mothers, in paid employment, while noting its likely relationship with fertility. The approach has been to compare the employment rates of women and mothers with indicators of policy measures designed to provide incentives for parents to work and to ease the work/family reconciliation. This narrow perspective has meant that a number of vital areas have had to be left to one side. These include questions of maintaining family income resources, dealt with under the OECD programme on "Family-Friendly Social Policies", and child development, which comes under the programme on "Early Childhood Education and Care" (see *www.oecd.org/els/social/ffsp* and *www.oecd.org/els/education/ecec* respectively).

The international perspective leads to a number of findings of policy relevance. The first is that, in countries with relatively well-developed systems of work/family reconciliation policies, women tend to have higher employment rates in their thirties (when their employment is most likely to be affected by child-rearing and child-care). Both formal child-care coverage of young children and paid maternity leave policies appear important from this perspective. The direction of causality is not, of course, clear. It may be that in countries where women are more present in employment, they are better able to press for higher benefits. However, it seems unlikely that the causality runs entirely in this direction. From a historical perspective, many countries with high levels of female employment – notably the Nordic countries – were among the first to introduce work/family reconciliation policies as part of a deliberate policy to facilitate higher levels of female employment [Gauthier (1996)]. This may add weight to calls for the extension of such arrangements in countries where they are currently relatively underdeveloped and where the employment rates of women are low.

A second finding relates to the historical and current relationship between employment rates and fertility rates. Viewed over time, employment and child-rearing appear to be substitutes. In almost all OECD countries successive cohorts of women entering child-bearing and working ages have had higher employment rates, but lower fertility rates. In addition, for recent cohorts, larger increases in employment have been associated with larger decreases in fertility. However, the current experience of a number of OECD countries, particularly the United States and the Nordic countries, shows that high levels of female employment rates need not be incompatible with relatively high fertility rates – paradoxically, there is currently a positive correlation between female employment rates and fertility rates across OECD countries.

A third finding relates to the crucial contribution to the work/family reconciliation made by firms. A number of studies have shown the importance of appropriate kinds of flexibility for the work/family balance, in terms of emergency leave for family reasons, flexible working hours and voluntary part-time working. The evidence presented above shows that firms in countries with the highest levels of national provision tend to rely almost entirely on that provision, adding relatively little to it. On the other hand, in other countries, where national provision has traditionally been relatively low, there is little sign that firms have filled the gap. Research suggests that, in some situations, firms can reap benefits by paying more attention to the work/family (or work/life) balance of their employees, particularly in the areas of reduction of stress, improvement of morale, better retention of women employees and stronger employee commitment to the organisation. Surveys also suggest that many firms are unaware of these potential benefits. Governments should thus be able to play a role by sponsoring research to show where benefits are most likely to be obtained, as well as by offering technical advice on how to introduce family-friendly arrangements successfully.

The analysis has also pointed up a number of issues common to a large number of countries. From the point of view of the main policy issue addressed in this chapter, one crucial finding is the polarisation of mothers' employment. Mothers with medium and high levels of education are closing the gap between their employment rates and those of fathers at the rate of one percentage

point a year, on average. However, in many countries, the employment rates of less-well-educated mothers are lagging behind. One reason for this may be the lower benefits that they can expect from the labour market. However, in addition, while they will be treated on an equal basis by public systems for child-care and family leave, they are less likely to be accorded family-friendly benefits (such as career-breaks, extra family leave and flexible working arrangements) by firms, and may be less well-placed to combine work and family life. There is a danger that many lower-educated mothers may become detached from the labour market and be unable to make a successful entry, or re-entry, later in life. They may, thus, be unable to provide for themselves adequately in the case of family breakdown and may also suffer social isolation. Policy action may be needed to stimulate continued attachment to the labour market, possibly on a part-time basis, and to ensure appropriate training opportunities.

Part-time working is the preferred form of employment among many mothers of young children in a large number of OECD countries, as well as being favoured by a much smaller, though apparently growing, number of fathers. Part-time working generally offers lower earnings and career prospects than full-time working, and in most countries transitions from part-time working to full-time working are rare. However, Sweden is an exception to this last statement, through its programme for allowing mothers to move to part-time working temporarily when their children are small. A number of other countries have also introduced schemes for allowing temporary transitions from full-time to part-time working over recent years (including Germany and the Netherlands). These policies need to be carefully evaluated to see if this extra flexibility leads eventually to an increase in the proportion of women working full-time.

The chapter has also added to findings that show that the gender balance in household duties and caring for children remains unequal in all OECD countries. Women continue to play a much greater role than men, and this is undoubtedly one of the reasons for continuing inequalities in employment and earnings patterns. While it is true that there has been some movement towards symmetry within couple families, this is offset, to a greater or lesser extent, by the fact that the bulk of the growing number of lone-parent families are headed by women. Efforts to introduce paternity leave schemes, and parental leave schemes in which part of the leave is available only to fathers have met with some success, calling for careful monitoring to see what kinds of policies might be most effective. Further progress may require addressing the attitudes of firms, which are often cited by fathers as limiting their involvement with their families.

Overall, the results presented above suggest that efforts to improve the work/family reconciliation may well produce positive benefits in terms of women's employment rates. The key is to allow for greater flexibility in employment patterns in such a way as to encourage longer and deeper involvement by women in paid employment. This may also be one way to work towards greater gender equity in the labour market. Given that women continue to invest more of their time in child-care and household activities, at ages which are traditionally of key importance for building up a career, it is vital to work for greater flexibility over the life course, loosening the link between age and career progression, and valuing a wider range of employment patterns for both women and men.

NOTES

1. In this chapter, a relatively narrow definition of family has been chosen in order to facilitate analyses of the work/family balance from the labour market viewpoint, and provide a better basis of comparison between countries. Families in multi-family households and families with a member over 60 have been excluded. A child is defined as being under 20, and an adult as aged 20 or over (the age limit of 18 is used for the United States). A couple is defined as two adults, with or without children, living together in the same household, whether or not linked by marriage. (The United States is an exception. Only married couples are included, so that two non-married people living together would be considered to be part of a multi-family household and excluded.) A lone parent family is defined as an adult living together with a child.
2. It should be noted that the standard employment definition, used in Table 4.1, counts many people on maternity/child-care leave as employed. Excluding them would reduce the employment rates considerably for some countries. For example, for Finland, if the data excluded the mothers on maternity leave during the reference week, the 1998 employment rates would fall to 69.0% for all parents in couple families, 47.7% for all mothers in couple families, 58.7% for the lone parents and 48.2% for all mothers with a child under 6. For Sweden, the 2000 figure for the employment rate of mothers aged 25-54 with a child under 7 would fall to 65.7%.
3. One reason for the lower employment rates of less-well-educated mothers is no doubt their lower potential earnings in paid employment. Marshall (1999) finds that those who do not return are more likely to have been working part-time before child-birth and less likely to have been in a unionised or professional job, and tend to have shorter tenure. A quick return is linked to self-employment and the absence of maternity leave.
4. The survey also included Norway.
5. Eighteen per cent of the couples said they would prefer both partners to work part-time. For a further discussion of preferences for part-time working, see OECD (1999*b*) and Evans *et al.* (2000).
6. The precise question used was: "Taking into account all of the income that the members of your household receive from different sources, would you say that your household is financially well off, that you just manage or that you have difficulties?"
7. Households in Spain saying they are "just managing" are the only exception.
8. The cross-country correlation between the number of hours worked by the "well-off" and the preferred reduction in hours is around 0.8.
9. It must be noted that these comparisons do not take account of the differences in the types of job done by men and women.
10. The choice of age 5 as the age cut-off was dictated by the data source.
11. The ratio of the time spent by men and women on child-care has been found to remain roughly the same whether child-care activities are strictly or broadly defined [Klevmarken and Stafford (1997), for Finland and Sweden; Barrère-Maurisson *et al.* (2000), for France; Silver (2000), for Canada].
12. The figures for men refer to men in all types of couple families. Some evidence relating specifically to men with wives in full-time paid employment suggests that the balance is less equal than shown here [Beblo (1999); Hersch and Stratton (1994); Fisher (2000*a* and 2000*b*); Silver (2000)].
13. However, according to a 1991 Eurobarometer survey covering a wider range of countries, Portuguese men contribute the least to household work in the European Union, around 70% saying it represented none of their time. Spanish women reported spending 7 times as much time as men caring for children and doing (unpaid) household work [European Commission (1998*a*)].
14. In principle, the figures also include the effects of housing benefits, employment-conditional benefits, and social assistance benefits, though these are rarely relevant at the levels of household income considered. It should be noted that they refer to national arrangements and that regional or provincial systems may be different.
15. For example, the Quality Improvement and Accreditation System in Australia requires private commercial and community-based service centres to evaluate and, if need be, to improve their service delivery, against 52 principles of good quality care. A quality assurance system for Family Day Care (a network of individuals providing child-care in their own homes for other people's children) is now being developed and preliminary work for the development of a system for outside school hours care is underway.
16. In some countries the entitlement to pay during maternity/child-care leave depends upon work history and social insurance contributions, and so not all mothers are covered.
17. This is derived as the product of the first two columns of data on maternity/child-care leave in Table 4.7.
18. In Sweden, the introduction of the "daddy month" in 1995 was associated both with an increase in the overall take-up of leave by fathers and with a decrease in the average length of the leave taken, from 34 days in 1995 to 27 days in 1999.
19. If only the mother takes parental leave in Austria, cash benefits are paid for 18 months; if the father also takes some leave, payments are made for 24 months.
20. Ruhm (1998) also finds some evidence that long periods of absence from work may result in lower earnings.

21. More precisely, Afsa (1999) reports that, when the *Allocation parentale d'éducation* (a benefit to parents of children under three with previous work experience who opt for staying at home) became available to parents with only two children (before 1995 it was available only to those with three), there was a significant drop in employment rates as a result.

22. Survey data for Canada are soon to be published, and information from small-scale surveys for Ireland are to be found in Coughlan (2000).

23. As explained in Annex 4.B, the sample was restricted to this group of employees on the grounds that women without responsibility for a child, and men, are less likely to be aware of family-friendly arrangements. The results thus only apply to firms with employees of this type.

24. The figures for flexi-time working are shown for all employees to allow comparison with available figures for Australia and the United States. It should be noted that the question used in the SESWC did not investigate the extent to which the hours flexibility had been introduced to suit the employee – the figures thus include a certain proportion of cases where the flexibility in hours was designed to suit the employer.

25. Maternity leave is chosen for this comparison because it is widespread and well-established. Schemes for child sick leave and paternity leave are less widespread and are relatively new policy developments in many countries. Employer schemes for child day-care are designed to complement not only public schemes but also other, private-based schemes.

26. Including the total leave indicator would give higher results for countries like Austria and Germany which have relatively well-developed programmes of parental leave.

Annex 4.A

Supplementary table

Table 4.A.1. **Changes in family types**

	Couples with or without children							Single people and lone-parents				
	Couples without children	Couples with one child aged under 6	Couples with one child aged 6 or over	Couples with 2 children, youngest aged under 6	Couples with 2 children aged 6 or over	Couples with 3 or more children, youngest aged under 6	Couples with 3 or more children aged 6 or over	Single	Lone-parents with one child aged under 6	Lone-parents with one child aged 6 or over	Lone-parents with two or more children youngest aged under 6	Lone-parents with two or more children aged 6 or over
	Share of each type of household, 1999[a]											
Belgium	34.0	6.0	10.5	6.8	9.6	4.0	4.0	19.6	0.8	2.1	0.9	1.6
Canada	18.7	7.3	8.5	6.9	12.4	4.1	6.1	23.4	3.0	2.9	3.3	3.6
Finland[b]	21.2	4.8	8.4	5.9	8.1	4.9	3.1	37.6	0.7	3.0	0.6	1.6
France	30.2	6.4	10.6	7.1	9.1	4.4	3.8	22.1	0.8	2.9	0.8	1.7
Germany	33.1	4.9	11.1	5.3	8.4	2.4	2.3	27.1	0.8	2.6	0.7	1.3
Greece	38.2	5.9	14.3	7.1	14.4	2.5	2.8	12.2	0.2	1.4	0.3	0.9
Ireland[c]	27.0	5.5	9.9	7.6	10.7	9.2	9.7	14.2	1.0	1.8	1.5	2.0
Italy	35.9	8.1	16.3	7.8	11.5	2.4	2.1	12.8	0.4	1.4	0.4	0.9
Luxembourg	30.8	7.3	11.9	9.5	9.2	5.3	3.5	18.0	0.4	1.9	0.9	1.3
Netherlands	34.7	5.2	6.9	7.0	9.3	3.4	3.6	25.4	0.5	2.0	0.6	1.4
Portugal	31.3	10.4	20.8	8.7	12.6	3.2	2.8	5.8	0.4	2.0	0.8	1.1
Spain	33.5	7.5	19.5	8.7	16.0	2.7	3.4	6.0	0.2	1.2	0.3	1.0
Switzerland	22.9	6.5	9.4	8.0	11.3	3.6	4.3	28.5	0.4	2.6	0.4	2.0
United Kingdom	31.9	5.7	8.2	6.9	9.0	3.9	3.3	20.0	1.7	3.3	2.9	3.3
United States	22.9	5.4	8.8	6.9	9.2	4.9	4.3	24.9	1.6	4.4	2.7	4.0
	Percentage changes, 1994-1999											
Belgium	–1.8	0.5	–8.5	–4.4	3.4	–0.7	26.8	20.0	6.7	2.4	17.3	16.1
Canada	15.4	2.3	8.4	–0.1	3.7	–1.7	5.8	14.5	14.3	–1.0	53.1	10.9
Finland[b]	–5.7	–7.4	–11.6	–7.4	–3.0	22.9	36.4	11.5	–37.7	2.9	–48.3	6.4
France	2.4	–5.0	–0.3	1.5	–1.0	–9.0	–2.0	19.3	21.3	22.9	10.2	25.2
Germany	–4.2	–10.2	2.2	–8.3	–2.2	–6.7	12.7	7.4	–3.9	22.1	6.7	38.3
Greece	9.6	–2.1	6.8	–9.0	–13.8	–16.9	–23.7	8.2	21.0	–4.4	–0.5	–7.2
Ireland[c]	14.9	5.5	9.6	2.2	11.8	–9.4	–9.3	16.3	30.7	36.6	33.4	12.7
Italy	9.3	0.4	–8.4	0.9	–8.2	–13.1	–9.7	16.0	8.5	7.6	–10.2	23.3
Luxembourg	–0.3	–4.4	–4.3	6.1	–4.8	22.0	33.4	25.8	–29.9	19.2	55.2	50.5
Portugal	4.5	35.8	–7.4	32.1	–18.9	–0.1	–34.9	1.6	34.3	7.3	63.8	–16.5
Spain	23.8	–3.8	7.8	–2.4	–6.3	–30.8	–45.3	30.2	20.7	19.9	20.5	3.5
Sweden	. .	. .	. .	. .	. .	. .	. .	. .	–15.2	13.7	–10.5	40.4
Switzerland	–0.1	–2.0	10.1	7.3	14.0	–7.1	24.4	0.0	42.0	21.6	20.0	–7.2
Netherlands	4.7	2.1	–5.5	4.1	5.6	–11.8	13.2	7.3	17.8	31.2	–7.8	29.7
United Kingdom	2.6	0.0	–0.3	–0.1	1.0	–9.3	6.8	15.2	10.0	27.1	20.4	38.3
United States	7.0	–3.1	5.1	–6.6	5.6	–3.9	14.0	18.5	5.7	6.5	–10.1	15.5

Table 4.A.1. **Changes in family types** *(cont.)*

	Couples with or without children							Single people and lone-parents				
	Couples without children	Couples with one child aged under 6	Couples with one child aged 6 or over	Couples with 2 children, youngest aged under 6	Couples with 2 children aged 6 or over	Couples with 3 or more children, youngest aged under 6	Couples with 3 or more children aged 6 or over	Single	Lone-parents with one child aged under 6	Lone-parents with one child aged 6 or over	Lone-parents with 2 or more children, youngest aged under 6	Lone-parents with 2 two or more children aged 6 or over
	Percentage changes, 1984-1999											
Belgium	30.2	–13.3	–26.6	–0.2	–12.5	–1.0	–12.1	178.9	178.5	65.8	97.2	66.5
Canada	42.9	16.1	25.0	4.0	19.4	–0.1	–9.8	52.8	59.9	41.7	184.0	27.3
France	23.2	–1.6	–6.5	–3.5	–5.4	–10.2	–22.4	56.5	59.1	35.2	21.1	40.2
Greece	37.6	–9.7	7.3	–34.7	–13.9	–47.0	–36.1	53.5	1.0	–4.3	–56.2	–6.5
Ireland[c]	52.9	4.6	54.2	–1.1	43.7	–41.0	–6.9	63.2	360.7	152.8	155.7	123.0
Italy	37.5	–0.1	–10.3	–8.2	–27.3	–41.2	–63.4	41.7	62.4	4.9	–17.3	6.5
Luxembourg	18.1	17.7	–1.7	46.2	–1.0	86.1	7.4	88.5	16.6	47.0	192.4	90.4
Portugal[d]	30.6	34.8	9.4	–12.1	–13.9	–52.2	–59.2	32.8	89.8	34.7	–4.5	–25.1
Spain[d]	44.9	. .	–12.5	. .	–36.3	. .	–80.9	68.1	. .	47.0	. .	–11.5
Netherlands[e]	50.6	19.4	–21.0	16.3	–20.8	–2.6	–7.1	64.5	15.4	36.2	–7.6	–3.2
United Kingdom	26.6	15.3	–12.1	–3.3	–14.4	–14.6	–19.5	129.3	203.5	82.0	178.2	108.6
United States	19.6	–6.8	4.2	–1.4	9.7	–1.0	6.4	46.9	23.6	30.2	30.3	28.5

. . Data not available.
a) Not including other types of household: row totals are 100%.
b) 1995 instead of 1994 and 1998 instead of 1999.
c) 1997 instead of 1999.
d) 1986 instead of 1984.
e) 1985 instead of 1984.
Sources: Secretariat calculations on the basis of information from the European Labour Force Survey, supplied by EUROSTAT, and from national labour force surveys for Canada, Finland, Sweden and the United States.

Annex 4.B

Data sources

Data on preferences for different working arrangements

The source of the data on preferences was the *Employment Options of the Future* (EOF) survey, sponsored by the European Foundation for the Improvement of Living and Working Conditions in Dublin (for the 15 EU member states) and by the Norwegian Royal Ministry of Labour and Government Administration (for Norway). Carried out in the Summer of 1998 by Infratest Burke Sozialforschung and a consortium of field research institutes, it covered 30 000 people aged between 16 and 64 who were either working or said they intended to take up work during the following five years. It was primarily designed to find out who wants to work and who does not, and to investigate preferences for different working arrangements both at the time of the survey and five years later. Details of the survey can be found in Atkinson (2000).

Data from time budget surveys

Time budget surveys seek to measure the time allocated by individuals to different activities such as paid market work, unpaid household work, caring activities, education and leisure time. Most time budget surveys ask individuals to compile a diary of their daily activity twice a week: on a weekday and on a weekend day. The diary may contain a set of pre-coded activities and a time sheet or it may ask respondents general questions about what they did and from when to when [Merz and Ehling (1999); Klevmarken and Stafford (1997)].

The data used here are drawn from a number of time budget surveys harmonised and made more comparable by a team of researchers at Essex University and elsewhere [see Fisher (2000*a* and 2000*b*) for a description]. They cover 12 OECD countries. The data relate to the time use of individuals in households of a given type. The full set of data available includes couple households and lone-parent households, distinguished by the presence and age of children (below and above five years). For female partners, a further distinction is made between full-time workers, part-time workers and non-workers. The following activities are considered: paid market work; child-care strictly defined, which includes feeding the children, dressing them, changing them, bathing them and giving medication; and other unpaid household work. Paid work includes all paid work and related activities, including time spent on the main job, on any second job, working at home, and time spent travelling to and from work. Other unpaid work includes: cooking/food preparation; cleaning dishes; laundry/ironing; house cleaning; odd jobs; gardening; care of pets or domestic animals; shopping; paying household bills; and domestic travel (*i.e.* travel for family reason, which includes taking the children to school and back).

Cross-country comparisons can only be made with considerable caution. Generally, cross-country differences in the time spent by parents caring for their children may reflect not only differences in policies across countries, such as the availability of public and private care services, but also differences in fertility rates (the data take no account of the number of children in the household), as well as differences in the time budget questionnaires. Some surveys code multiple activities that may take place at the same time, such as cooking and taking care of children. However, most surveys ask respondents to enter what they consider to be the "main activity". This often leads to underrecording of child-related activities, such as playing with children or watching them play.

Data on family-friendly arrangements in firms

General considerations

Data on family-friendly arrangements provided by firms can come from employers or employees. Data from employers tend to be more suitable for linking the type of family-friendly benefits provided with the characteristics of firms. They can also include valuable insights into the reasons why employers introduce (or abandon) family-friendly arrangements, and on the costs and benefits they perceive flowing from them. However, there are some difficulties. Employer-based data are likely to refer to formal policies (particularly in large firms) and leave out informal arrangements, which may be of considerable importance [Dex and Scheibl (2000)]. The policies that are mentioned may be unfamiliar to some employees, because of insufficient notification. In addition, they may be available to only part of the workforce, and may be subject to the agreement of the supervisors. The basic information will tend to refer to provision – though some firms may also have information on use.

A further reason for caution is that some working arrangements, introduced by firms to suit their production needs, may be labelled as family-friendly simply in order to show the employers in a better light [Simkin and Hillage (1992)]. Of course, this is not to deny that there are situations where both firms and families can gain from flexible work arrangements, such as some types of voluntary part-time work. However, *a priori*, there is no reason to suppose that flexibility introduced to meet a firm's needs will coincide with the flexibility that best suits family needs.

Surveys of employees generally have the advantage of providing detailed information about the characteristics both of employees who know of their entitlement to family-friendly arrangements, and of those who use them. They can also illustrate the attitudes of employees and their perceived needs. However, there is the difficulty that, unless the survey instructions are particularly clear, employees may not know whether they should provide information about just the policies that concern them personally, or about ones which are used by, or available to, other employees in the company. For example, a man asked if

extra-statutory maternity leave is available will respond that it is not, if he is thinking about his personal case, but may respond that it is, if he is thinking about the employees in the company in general.

Survey data for Australia, Japan, the United Kingdom and the United States

For Australia and the United Kingdom, information can be drawn from national workplace surveys. For Australia, this is the 1995 Australian Workplace Industrial Relations Survey (AWIRS95), reported in Morehead *et al.* (1997), and for the United Kingdom, the 1998 Workplace Employment Relations Survey (WERS98), reported in Cully *et al.* (1998 and 1999). For the United Kingdom, there is also a special suite of officially-sponsored surveys on family-friendly arrangements, reported in Forth *et al.* (1997). The surveys just mentioned cover both employer and employees. Japan's information comes from a special employer survey [Sato (2000)]. Finally, for the United States, a number of employer surveys, including the Survey of American Establishments [Osterman (1995)], and the two rounds of the employee-based National Study of the Changing Workforce (NSCW), conducted in 1992 and 1997 [Bond *et al.* (1998)], contain information on family-friendly arrangements.

The Second European Survey on Working Conditions

This survey, described in European Foundation (1997), was conducted in the fifteen countries of the European Union between 27 November 1995 and 19 January 1996, in close collaboration with Eurostat and National Statistical Institutes. The survey was designed to monitor working conditions as perceived by respondents.

The multi-stage random sampling design was designed to be representative of the employed population. All people aged 15 and over were included in the sampled population, with the exception of retired people, unemployed people and housewives. The target number of interviews was 1 000 cases per country, with the exceptions of 500 for Luxembourg, 1 000 for the former western Germany and 1 000 for the former eastern Germany. The figures achieved were close to these targets, giving a total of just under 16 000 interviews for Europe as a whole. The samples were found to over-represent "services" and "public administration", while under-representing "agriculture", and some industry sub-sectors.

Questions on family-friendly arrangements

The precise questions used to investigate the incidence of family-friendly policies by enterprises were as follows:

Q30. Over and above any statutory requirements, does your company/employer additionally provide for? (yes, no, not applicable, don't know)

- *Sick child leave that is, amount of time you can stay at home to take care of a sick child*
- *Maternity leave that is, the amount of time a woman can stay at home before and (after) the birth of a child*
- *Parental leave that is, the amount of time a mother or a father can stay at home to take care of a very young child*
- *Child day care that is, your company/employer provides or subsidises day care for your child.*

The caveats mentioned in the Introduction relating to employee-based data on family-friendly policies apply to these data. In particular, there is the ambiguity as to whether the data refer to working arrangements to which the employees concerned are personally entitled, or to ones which exist in their establishments. However, as well as the category, "don't know", the survey designers included a category, "non-applicable" in order to assess the possible effect of this ambiguity. Analysis of the data suggested that, for simple international comparisons, it was best to restrict the sample to women employees with a child under 15 in the household [Evans (2001)].

As the United Kingdom was included in this European survey, it was possible to make some consistency checks between the levels of family-friendly arrangements indicated here and the levels indicated by the United Kingdom surveys of employees. The results are broadly consistent. The European results for child day care and sick child leave are roughly in line with the figures for personal entitlement for time off work for family reasons and the various measures of entitlement to help with child-care obtained from the UK surveys. The European figure for parental leave reported by women employees is, fortuitously, exactly the same as that obtained from WERS98. It is not possible to make comparisons of extra-statutory maternity leave.

Data on relevant flexible working arrangements

Non-EU sources of data are noted in the tables. For the European Union, the sources were the Second European Survey on Working Conditions (SESWC) for data on flexi-time working, and the Employment Options of the Future (EOF) survey for data on voluntary part-time working. Both surveys are described above.

The SESWC question designed to obtain information on flexi-time is:

Q20. For each of the following statements please answer Yes or No: …

You have fixed starting and finishing times every day.

Flexi-time working was taken to occur when a negative response was given to this question. This seems likely to be an over-estimate, as the figure might include people on variable amounts of overtime, or subject to on-call working. However, the figure obtained in this way for the United Kingdom was found to be the same as that for flexi-time working given by the WERS98 employee questionnaire.

The EOF survey questions used to measure voluntary part-time working were as follows. Part-time workers were first identified by a question asking employees to describe their status as part- or full-time. Those assessing themselves as part-time were then asked to give a reason why they worked part-time. They were first invited to respond positively to one of the following, possible reasons, which were presented in turn:

- *You are a student/at school*
- *You are ill or disabled*
- *You have been unable to find a full-time job*

The next possible reason presented was:

- *You do not want to work full-time.*

Respondents were also allowed not to give a reason for working part-time. The figures for "voluntary" part-time working reported here relate only to those respondents saying they did not want to work full-time.

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Chapter 5

THE EMPLOYMENT OF FOREIGNERS: OUTLOOK AND ISSUES IN OECD COUNTRIES

Summary

In the majority of OECD countries, the numbers of foreigners or immigrants and their proportions of the total population have risen over the past ten years, both for endogenous and exogenous reasons. The size and compositions of the immigrant communities continue to vary considerably according to the host country however. While admissions of new permanent foreign workers are currently very few in number, especially in the European OECD countries, the temporary employment of foreigners appears to becoming more widespread and the majority of OECD Member countries have implemented measures to facilitate the admission of skilled and highly skilled foreign workers.

The participation rates of foreigners are generally lower than those of nationals and foreign labour is often concentrated in the certain sectors. Its use is, however, becoming more widespread, most notably in the tertiary sector. The greater vulnerability of foreign workers to unemployment and their lower degree of employability show that they face, in particular in Europe, difficulties in integrating into the labour market. These difficulties are attributable in part to the need for a period of adaptation, notably for newly arrived refugees, qualifications and experience which do not always match the needs of the labour market, weak grasp of the host country's language as well as to the fact they are often victim to employment discrimination.

The upturn in economic growth observed over the course of the last decade in the majority of OECD Member countries has contributed to widening the debate on immigration, the essential focus of which remains the control of flows, to the contributions that immigration might play in reducing sectoral labour shortages and moderating the effects of population ageing. In this chapter, the emphasis is placed on the impact of the employment of foreigners on the equilibrium and dynamics of the labour market. The limits of a migration policy whose chief aim is to respond to the short-term needs of the labour market are underlined first of all. The analysis then turns to the way in which the employment of foreigners responds to cyclical fluctuations. Though foreign workers are in some Member countries more vulnerable in recessions, they can not be considered responsible for labour market disequilibria. The employment of foreigners could make an active contribution during economic upturns even if, given the relatively small numbers involved, their employment cannot by itself constitute an alternative to the need for labour market adjustments.

The contribution of immigration to long-term growth is examined in the final section. The emphasis is placed on the supply of skilled labour and the measures recently implemented by many OECD Member countries to facilitate the entry of foreign specialists, notably in information and communications technologies. Increased reliance on foreign workers is nevertheless subject to certain limits and notably the fact that a massive intake of highly qualified immigrants could have a negative impact on the development of emerging economies through the "brain drain" effect.

Introduction

Increased immigration is frequently opposed on the basis of fears that significant inflows of foreign workers increase unemployment, depress wages and lead to declines in the employment of low-skilled nationals.

The effect of immigration on the equilibrium and dynamics of the labour market is in fact appreciably more complex; it cannot be understood without reference to both the characteristics of the migrants and the economic conditions prevailing in the host country. The labour market role of foreign workers varies according to the stage

of the economic cycle. Moreover, the nature of the links between immigration and the labour market depends on the timescale of the analysis. Over the long-term, immigration can contribute to moderating the effects of demographic ageing and to augmenting human capital. In the short-term, immigration can contribute towards resolving cyclical fluctuations and imbalances in the labour market. Within the limited framework of this chapter, the emphasis is placed on this short-term contribution.

The following points will be discussed in turn in this chapter: the introductory section briefly examines the contribution of immigration to population growth in OECD countries and outlines the main characteristics of the immigrant or foreign labour force; Section II discusses the contribution of immigration to the relieving of short-term imbalances in the labour market, and then highlights the role that the employment of foreigners plays in labour market adjustment during periods of upturn and downturn; Section III briefly considers, against the background of recent developments in OECD countries, the role that immigration might play, on the one hand, in moderating the effects of population ageing and, on the other, in relieving shortages of skilled and highly skilled labour during periods of economic growth.

Main findings

The principal conclusions which can be drawn from this chapter are the following:

- In the majority of OECD countries, the numbers of foreigners or immigrants and their proportions of the total and active populations have risen over the past ten years. This proportion varies widely however between countries.
- While admissions of new permanent foreign workers are currently very few in number, especially in the European OECD countries, the temporary employment of foreigners appears to becoming more widespread. The temporary employment of foreign workers introduces flexibility into the labour market. It can also have the effect of dissuading employers, in particular in seasonal activities, from resorting to the use of undocumented workers.
- Foreign labour is concentrated in certain sectors. Its use is, however, becoming more widespread, most notably in services to businesses and households. In the new immigration countries, foreigners have a higher tendency than nationals to occupy blue collar posts. Such a gap also persists in much older immigration countries. Foreign workers, in some Member countries, are in general more vulnerable to unemployment than nationals.
- The employment of foreigners plays a buffer role in the labour market's adjustment to cyclical fluctuations. Difficulties are nevertheless encountered when attempts are made to implement migration policies whose principal objective is to respond to the short-term needs of the labour market. Immigration can not be held responsible for the disequilibria observed in the labour market.
- The contribution of immigration to long-term growth is not confined to its quantitative impact on increases in the labour force; it is also reflected in its qualitative impact in terms of human capital accumulation. In the present context of growth in the OECD Member countries, labour shortages are particularly marked in information and communications technologies. Some Member countries are also encountering difficulties in hiring low qualified workers. Most OECD Member countries have amended their legislation in order to facilitate the admission of skilled and highly skilled foreign workers.

I. Immigration, population and employment in OECD countries

Net migration is a significant factor in the annual increase of the total population of OECD countries. This contribution to population growth is boosted, moreover, in some Member countries, by the higher fertility rate of foreigners as compared to nationals.

A. Immigration and population growth

In the majority of OECD countries, the numbers of foreigners or immigrants and their proportions of the total population have risen over the past ten years (see Box 5.1 and Table 5.1). The proportion of foreigners in the total population varies widely across the European OECD countries. In 1998 it was quite high in Luxembourg and Switzerland (although slightly lower than the previous year), was close to 9 per cent in Austria, Germany and Belgium (as well as in Greece, if we take into account the very high number of immigrants in an irregular situation) and was 6 per cent in France. In new countries of immigration such as Finland, Italy, Portugal and Spain, the proportion of foreigners remains low (between 1.6 and 2.1 per cent). This is in spite of marked increases in inflows over the past ten years. The same is true of Japan and Korea, as well as Mexico and Turkey. Since the end of the 1980s, the foreign population has increased significantly in Germany, chiefly as the result of the increase in

Box 5.1. Migration statistics

Recording of flows

For the European OECD countries as well as for Korea and Japan, the most detailed statistics on foreign populations refer to the nationality of residents. On this basis, people born in the country can be included in the total of foreigners whilst foreign-born immigrants who acquire the nationality of their host country are not. In Australia, Canada and the United States the criterion is the country of birth. A distinction is made between foreign-born and native-born people. This approach provides figures for immigrants residing in the country, regardless of their nationality. Trends in numbers of immigrants or foreigners vary from country to country depending on migration policy, inflows and outflows, the demographic dynamics of the foreign populations as well as naturalisations (which result in a corresponding reduction in the total of foreigners).

Statistics on the foreign labour force

Due to differences in the definitions used and the way in which data are collected in individual OECD countries, the foreign or immigrant labour forces in different countries are not always comparable. For example, some European OECD countries do not have detailed statistics on the numbers of self-employed foreigners. With the exception of Australia, the non-European OECD countries produce annual statistics on the numbers of foreign-born workers only in census years. Not all European countries include cross-border workers in their labour force. In some countries, such as Austria, Luxembourg and Switzerland, they represent an important share of the labour force. In addition, it is not always possible to obtain data on the number of foreigners employed in seasonal work (in particular in agriculture and tourism), or the number of temporary workers and/or trainees. Even though the European Union countries conduct employment surveys (in principle, annually) following a shared methodology, the harmonised results of which are published by Eurostat, not all of the aforementioned problems have been resolved. Furthermore, these surveys do not cover collective households, such as workers' hostels where many immigrants live. International comparisons should therefore be treated with caution, and in the case of Spain due to the concentration of the majority of immigrants in a few regions, the labour force survey underestimates the number of foreign workers. Finally, undocumented immigration and the illegal employment of foreigners are only partially reflected in official statistics because not all undocumented immigrants eventually gain official acceptance (for a detailed analysis of the economic aspects of undocumented immigration and the combatting of the illegal employment of foreigners, see OECD 2000*a)*.

In most of OECD countries there are no data on outflows of immigrants or foreigners from the labour market (stopping work, retiring, returning to the country of origin, naturalisation, etc.) which would provide a more accurate picture of labour market movements. There is also some confusion in the statistics dealing with work permits: in the official data of some countries it is hard to distinguish between new issues and changes or renewals. The annual increase in the labour force due to immigration is similarly difficult to assess, because the distinction between newly arriving immigrant workers and the initial entry on to the labour market of immigrants who had arrived at an earlier date (for example as accompanying family) or who were born in the host country is not always drawn. The people in the latter positions can be included in the inflows of new foreign workers, this is not always the case (for example in France).

immigration flows of ethnic Germans (*Aussiedler*) and foreigners from Central and Eastern Europe.

Broadly speaking, the size of a particular foreign or immigrant community varies in any given host country according to migration traditions, the networks created by the communities already established there, employment opportunities and the proximity of the origin country. In some European Union countries, such as Luxembourg, Ireland, Belgium and Portugal, the proportion of EU citizens in the total foreign population is very high. In the United States Mexicans predominate among the foreign-born population. The changes that have occurred over the past ten years, in particular the removal of restrictions on outward movements from the countries of Central and Eastern Europe and the high economic growth in Asia have extended the geographical frame of reference for international migration. In particular, they have led to new flows, involving an increasingly diverse range of origin countries. They have also altered the breakdown by nationality of foreign populations in host countries, and the spread of immigrants from the same country of origin across host countries.

In the European Union, the proportion of foreigners from non-member countries has risen and some national groups have emerged or gained in prominence in comparison with other groups of longer standing. In Germany, for instance this is the case of nationals of Eastern and Central Europe and the former USSR, in France of Moroccans and Senegalese, and in the Netherlands of nationals of the former Yugoslavia. In the Nordic countries, the proportion of nationals from neighbouring countries has fallen in Finland, Norway and Sweden, while

Table 5.1. **Foreign or foreign-born population and labour force in selected OECD countries**

Thousands and percentages

Foreign population and labour force[a]

	Foreign population				Foreign labour force[b]			
	Thousands		% of total population		Thousands		% of total labour force	
	1988[c]	1998[d]	1988	1998	1988[e]	1998[f]	1988	1998
Austria	344	737	*4.5*	*9.1*	161	327	*5.4*	*9.9*
Belgium	869	892	*8.8*	*8.7*	291	375	*7.2*	*8.8*
Czech Republic	. .	38	. .	*0.4*	. .	23	. .	*0.5*
Denmark	142	256	*2.8*	*4.8*	65	94	*2.2*	*3.2*
Finland	19	85	*0.4*	*1.6*	. .	35	. .	. .
France	3 597	3 263	*6.3*	*5.6*	1 557	1 587	*6.4*	*6.1*
Germany	4 489	7 320	*7.3*	*8.9*	1 911	2 522	*7.0*	*9.1*
Greece	. .	228	. .	*2.6*	. .	167	. .	*3.8*
Iceland	. .	3	. .	*1.5*	. .	2	. .	*1.4*
Ireland	82	111	*2.4*	*3.0*	35	48	*2.7*	*3.2*
Italy	645	1 250	*1.1*	*2.1*	285	332	*1.3*	*1.7*
Japan	941	1 512	*0.8*	*1.2*	. .	670	. .	*1.0*
Korea	45	148	*0.1*	*0.3*	. .	77	. .	*0.4*
Luxembourg	106	153	*27.4*	*35.6*	69	135	*39.9*	*57.7*
Netherlands	624	662	*4.2*	*4.2*	176	208	*3.0*	*2.9*
Norway	136	165	*3.2*	*3.7*	49	67	*2.3*	*3.0*
Portugal	95	178	*1.0*	*1.8*	46	89	*1.0*	*1.8*
Slovak Republic	. .	27	. .	*0.5*	. .	6	. .	*0.3*
Spain	360	720	*0.9*	*1.8*	58	191	*0.4*	*1.2*
Sweden	421	500	*5.0*	*5.6*	220	219	*4.9*	*5.1*
Switzerland	1 007	1 348	*15.2*	*19.0*	608	691	*16.7*	*17.3*
United Kingdom	1 821	2 207	*3.2*	*3.8*	871	1 039	*3.4*	*3.9*

Foreign-born population and labour force

	Foreign-born population				Foreign-born labour force			
	Thousands		% of total population		Thousands		% of total labour force	
	1991[g]	1998[h]	1991	1998	1991[g]	1998[h]	1991	1998
Australia	3 965	4 394	*22.9*	*23.4*	2 182	2 294	*25.7*	*24.8*
Canada	4 343	4 971	*16.1*	*17.4*	2 681	2 839	*18.5*	*19.2*
Hungary	. .	153	. .	*1.9*	. .	70	. .	*1.7*
United States	19 767	26 300	*7.9*	*9.8*	11 565	16 100	*9.4*	*11.7*

. . Data not available.

a) Data are from population registers except for France (Census), Ireland and the United Kingdom (Labour Force Survey), Japan and Switzerland (register of foreigners) and Italy, Portugal and Spain (residence permits). Labour Force data are from the respective labour force surveys or from residence or work permits. Total population for the Czech Republic, Greece, Iceland and Hungary is based upon individuals aged 15 and over.

b) Data include the unemployed except for Italy, Luxembourg, the Netherlands, Norway and the United Kingdom.

c) 1990 for France.

d) 1999 for France.

e) 1991 for Italy; 1989 for Belgium; and 1992 for Japan.

f) Data for Luxembourg include cross-border workers; data for Norway exclude the self-employed and for Switzerland seasonal and cross-border workers are not included.

g) 1990 for the United States.

h) 1996 for Canada; 1999 for Hungary.

Source: OECD (2001), *Trends in International Migration*; EU labour force survey, figures provided by Eurostat.

new foreign communities have grown in numbers: Asians (Pakistanis, Vietnamese, Iranians, Sri Lankans) and Turks in Norway and Sweden, and nationals of the former Yugoslavia in Norway, Sweden and Finland. These shifts reflect both changes in the origin of the flows as well as in their nature (for example, an increase in the number of asylum seekers).

Over recent years, the European OECD countries have experienced increasing inflows of Asian nationals, in particular the Chinese. Although in some places the trend is still too recent to be clearly identified in the breakdown of the foreign population by nationality, the scales of the flows are such that national groups from this continent can be expected to rapidly attain significant

proportions. The process can already be seen at work in the new immigration countries. For instance, Chinese nationals are among the leading immigrant communities in Italy and Spain.

B. Immigrants and the labour market

Broadly speaking, the population of foreign workers does not constitute an homogeneous group. Changes in the foreign labour force and its main characteristics (nationality, skill level, participation rates, sectoral distribution and unemployment rates) are not due solely to the profile of the new immigration flows but also to any economic and institutional changes that have taken place over the period under review. For instance, any liberalisation of the requirements for naturalisation and any modification to the regulations governing immigrants' access to the labour market are likely to affect substantially the size of the foreign labour force. Similarly, the existence of areas of free circulation such as between New Zealand and Australia, or among Nordic Countries, or between Ireland and the United kingdom, and more recently among EU countries, explains the importance of the flows of the citizens originating from these zones.

General trends linked to the employment of foreigners

Though the proportion of foreigners or immigrants in the labour force can diverge from that of the total population for which they account, depending, *inter alia*, on the time of arrival of the successive migration waves, the size of the family component in migration flows and selection criteria linked to age or qualifications, over the past decade the proportions have essentially followed the same trend (see Table 5.1). It is greater in Australia, Austria, Canada, Germany, Luxembourg and the United States, whereas it is smaller in Denmark, France, the Netherlands and Norway.

While admissions of new permanent foreign workers are currently very few in number, especially in the European OECD countries, the temporary employment of foreigners appears to be becoming more widespread; some countries are indeed taking policy measures to assist it (see Section II). The temporary employment of foreign workers introduces flexibility into the labour market and contributes thereby to relieving sectoral labour shortages in the host countries. This is particularly the case in new technology sectors, where many countries face shortages of skilled and highly skilled workers. Increased temporary labour immigration can also have the effect of dissuading employers, particularly in seasonal activities, from resorting to the use of undocumented workers.

Table 5.2 presents the inflows of temporary foreign workers, by principal categories, for a number of OECD Member countries. There is a fairly marked upward trend in these flows into Australia, Japan, the United Kingdom and the United States. Measures to assist the admission of temporary workers, including skilled and highly skilled people, have only recently been introduced in France, Germany and other European OECD countries, in particular Italy and Spain. These measures were implemented in response to the upswing in economic activity and the emergence of labour shortages in certain sectors.

In 1998, the participation rates of foreigners varied considerably according to their sex (see Table 5.3). The participation rate for immigrant or foreign women was systematically lower than that of their male counterparts, and was in general lower than that of female nationals. Due to the relative importance of refugees, the discrepancy between participation rates for female nationals and foreign women is greatest in Sweden, Denmark and the Netherlands. In Italy and in Spain, which are new countries of immigration, and Luxembourg, where labour immigration predominates heavily, the reverse is true, with the participation rate for foreign women being higher than for their national counterparts.

The participation rates of foreign males are in general lower than those of male nationals. Where such a gap exists it is narrower than that between foreign and national females.

Sectoral distribution and employment status of foreigners

Table 5.4 presents an overview of the sectoral distribution of foreign workers in 1998-1999. In particular, foreigners are markedly over-represented, in the sense that they account for a far higher proportion in the sector than they do in the country's total labour force, in sectors such as mining and manufacturing in Austria, Germany, Italy, Switzerland, Australia and Canada. They are also over-represented in the construction sector. That is the case, for example, in Austria, France, Greece, Luxembourg and Portugal. Foreign labour is concentrated in the service sector (for example in Switzerland). Though its use in this sector is widespread, it is most notably used in commerce, catering, education, health care, services to households and "other services". It is typically in public administration that the lowest proportion of foreigners are employed. This is because the jobs in this sector are in general only open to nationals. In the specific case of the illegal employment of foreign workers, the information obtained in the course of regularisation programmes indicates that they are on average younger than the remainder

Table 5.2. Entries of temporary workers in selected OECD countries by principal categories, 1992, 1996-1998

Thousands

	1992	1996	1997	1998
Australia				
Skilled temporary resident programme[a]	14.6	31.7	31.7	37.3
Working Holiday Makers[b]	25.9	40.3	50.0	55.6
Total	**40.5**	**72.0**	**81.7**	**92.9**
	(40.3)	*(20.0)*	*(19.7)*	*(26.0)*
Canada[c]				
Total	**. .**	**60.0**	**62.3**	**65.1**
	(252.8)	*(226.1)*	*(216.0)*	*(174.1)*
France				
Employees on secondment	0.9	0.8	1.0	1.2
Researchers	0.9	1.2	1.1	1.0
Other holders of an *APT*[d]	2.8	2.8	2.6	2.2
Seasonal workers	13.6	8.8	8.2	7.5
Total	**18.1**	**13.6**	**12.9**	**11.8**
	(42.3)	*(11.5)*	*(11.0)*	*(10.3)*
Germany				
Workers employed under a contract for services	115.1	45.8	38.5	33.0
Seasonal workers	212.4	220.9	226.0	201.6
Trainees	5.1	4.3	3.2	3.1
Total	**332.6**	**272.5**	**271.2**	**237.6**
	(408.9)	*(262.5)*	*(285.4)*	*(275.5)*
Japan				
Highly skilled workers	85.5	98.3	107.3	119.0
Trainees	. .	25.8	26.9	27.1
Total	. .	**124.1**	**134.2**	**146.1**

	1992	1996	1997	1998
Korea				
Highly skilled workers	3.4	13.4	14.7	11.1
Trainees	4.9	68.0	90.4	64.2
Total	**8.3**	**81.4**	**105.0**	**75.4**
Switzerland				
Seasonal workers	126.1	62.7	46.7	39.6
Trainees	1.6	0.7	0.7	0.7
Total	**127.8**	**63.4**	**47.4**	**40.3**
	(39.7)	*(24.5)*	*(25.4)*	*(26.8)*
United Kingdom				
Highly skilled workers (long-term permits)[e]	12.7	19.1	22.0	25.0
Short-term permit holders	14.0	17.0	20.4	23.5
Working Holiday Makers	24.0	33.0	33.3	40.8
Trainees	3.4	4.0	4.7	. .
Total	**54.1**	**73.1**	**80.4**	**89.3**
United States[f]				
Highly skilled workers				
Specialists (visa H-1B)	110.2	144.5	. .	240.9
Specialists (NAFTA, visa TN)[g]	12.5	27.0	. .	59.1
Workers of distinguished abilities (visa O)	0.5	7.2	. .	12.2
Seasonal workers (visa H-2A)	16.4	9.6	. .	27.3
Industrial trainees (visa H-3)	3.4	3.0	. .	3.2
Total	**143.0**	**191.2**	. .	**342.7**
	(116.2)	*(117.5)*	*(90.6)*	*(77.5)*

. . Data not available.

Note: The figures in brackets indicate the number of entries of permanent workers.

a) Temporary resident visas granted under the "economic stream". The data cover the fiscal year (from July to June of the indicated year) and include accompanying persons. From 1996 on, the data are on and offshore.

b) Temporary resident visas granted under the Working Holiday Maker Scheme. Visas granted onshore are not included.

c) Total of persons issued employment authorisations to work in Canada temporarily excluding persons issued employment authorisations on humanitarian grounds. Persons are shown in the year in which they received their first temporary permit.

d) Beneficiaries of provisional work permits (APT).

e) Long-term permits (one year and over) are mostly accorded to specialists and senior managers.

f) The data cover the fiscal year (October to September of the indicated year). A person is counted as many times as he/she enters the country over the course of the same year. The data may well therefore be over-estimates.

g) The figures include family members.

Sources: Australia: Department of Immigration and Ethnic Affairs (DIEA); Canada: Citizenship and Immigration Canada; France: Office des migrations internationales, *Annuaire des migrations 98;* Germany: Bundesanstalt für Arbeit; Japan: Ministry of Justice; Korea: Ministry of Justice; Switzerland: Office fédéral des étrangers; United Kingdom: Department of Employment; United States Department of Justice, *1998 Statistical Yearbook of Immigration and Naturalization Service.*

Table 5.3. **Participation rate and unemployment rate of nationals and foreigners by sex in selected OECD countries, 1998**[a, b]

Thousands and percentages

	Participation rate				Unemployment rate			
	Men		Women		Men		Women	
	Nationals	Foreigners	Nationals	Foreigners	Nationals	Foreigners	Nationals	Foreigners
Austria	79.8	84.3	62.4	63.4	4.8	10.3	5.3	8.9
Belgium	72.9	69.0	55.1	40.7	6.5	18.9	10.9	24.1
Czech Republic	81.1	77.9	64.4	57.1	4.6	9.2	7.5	14.7
Denmark	84.1	69.4	76.0	51.6	3.8	7.3	6.1	16.0
Finland	76.0	81.0	70.2	57.8	12.7	36.0	13.3	43.7
France	75.0	76.1	62.5	49.0	9.6	22.0	13.5	26.8
Germany	79.4	77.3	63.4	48.7	8.5	17.3	10.1	15.9
Greece	79.1	91.4	49.1	61.2	6.9	9.7	16.5	18.8
Iceland	95.4	90.4	84.7	77.8	2.4	7.6	3.8	3.1
Ireland	77.4	73.3	52.1	50.9	8.0	12.4	7.3	10.4
Italy	73.6	89.1	44.4	54.0	9.6	5.1	16.7	17.6
Luxembourg	74.6	78.3	43.9	53.5	1.5	2.6	2.8	6.0
Netherlands	83.2	66.5	63.5	40.8	3.1	11.6	5.6	14.1
Norway	87.0	85.5	78.1	64.8	3.4	5.9	4.0	6.0
Portugal	83.5	77.4	65.5	56.1	3.8	1.4	5.6	17.4
Spain	75.9	84.0	47.7	52.2	14.0	10.9	26.6	24.0
Sweden	79.1	70.5	73.4	52.9	9.3	23.2	7.5	19.4
Switzerland	93.1	90.5	73.2	75.5	2.1	6.8	3.0	8.7
United Kingdom	83.0	78.1	67.4	56.1	6.8	10.7	5.2	9.4
Australia	74.8	70.8	57.1	48.7	8.3	8.6	6.9	8.2
Canada	73.8	68.4	60.2	52.9	10.3	9.9	9.5	11.6
Hungary	67.8	72.2	52.3	53.6	7.5	7.6	6.2	6.4
United States	74.2	79.7	60.8	52.7	4.3	4.9	4.5	6.0

a) For Australia, Canada, Hungary and the United States, the data refer to the foreign-born population.
b) For Canada the data refer to 1996; Hungary refers to 1999.
Sources: EU Labour force survey, data supplied by Eurostat; Labour force survey, Australian Bureau of Statistics; 1996 Census, Statistics Canada; BLS, United States.

of the labour force and are widely distributed across the economy (see Box 5.2).

Furthermore, as Table 5.5 shows, foreigners have a greater tendency to occupy blue collar as opposed to white collar jobs. Though the difference is most marked in the new immigration countries (the Czech Republic, Greece, Italy, Japan, Portugal and Spain) a gap nevertheless also persists in much older immigration countries such as Austria, France and Germany.

The disparity indicator used in Table 5.6 enables one to take an overview of the extent to which the sectoral distribution of foreigners' employment has converged with that of nationals' over the past fifteen years. The lower this indicator (for its method of calculation, see the note to Table 5.6), the closer is the sectoral distribution of foreigner workers to that of nationals; this is notably the case in Australia, Belgium, Germany, the Netherlands, Norway and Spain.

The diminution in the disparities in the distributions of foreign workers compared to those of nationals implies that foreigners' labour market integration has been increasing. In the European OECD countries, for example, with the arrival of second-generation young people on the labour market, usually with a higher level of education and training than their parents, young foreign workers are increasingly working in jobs with a "national profile" as opposed to those typically held by first-generation immigrants.

Table 5.7 presents a comparison of the proportions of national and foreign workers in self-employment in 1999, or the most recent year for which data are available. In several OECD countries the proportion of foreign workers who are self-employed is much the same as for nationals. This is the case, for instance, in Australia, Canada, France, Germany and the United States. Self-employed foreigners are proportionally more numerous than self-employed nationals in the Czech Republic,

Table 5.4. **Foreign employment by economic activity in OECD countries**[a]

% of total foreign employment, 1998-1999 average

	Agriculture and fishing	Mining and manufacturing	Construction	Wholesale, retail and accommodation	Health, education and social services	Households	Public administration and ETO	Other services	Total
Austria	1.2	**27.9***	**12.3**	**25.0***	13.5	**0.9**	1.7	**17.6***	100
Belgium	1.7	**23.4***	**8.9**	**22.6***	16.3	**0.7**	8.8	17.7*	100
Czech Republic	2.8	31.2*	**12.3**	**21.6***	**17.4***	0.0	3.8	10.9	100
Denmark	**5.0**	16.2	3.3	**21.7***	**30.3***	0.0	3.5	**20.0***	100
Finland	4.2	15.8	5.3	**24.6***	**31.1***	0.0	0.4	18.7*	100
France	2.9	**20.5***	**16.7**	**18.3***	12.3	7.2	2.6	**19.3***	100
Germany	1.6	**35.3***	8.7	**23.0***	15.0*	**0.6**	2.0	13.8	100
Greece	3.5	**19.3***	**26.6***	19.0	5.9	**19.9***	0.8	5.0	100
Iceland	6.2	**33.0***	1.1	14.8*	**28.6***	0.0	**5.4**	10.9	100
Ireland	2.8	**20.5**	5.9	**21.9***	**22.5***	**1.9**	1.3	**23.2***	100
Italy	**6.0**	**29.0***	**9.4**	17.7*	11.1	**10.4**	3.0	13.4*	100
Japan	0.3	62.2*	2.0	8.2*	. .	. .	. .	**27.3***	100
Luxembourg	1.1	10.9	**15.4***	**20.5***	11.5	**3.7**	11.7	**25.2***	100
Netherlands	2.7	**24.1**	4.4	**20.7***	17.8	0.3	5.0	**25.1***	100
Norway	1.6	**16.9***	4.7	**20.8***	**33.3***	**0.5**	1.9	**20.3***	100
Portugal	3.3	17.4	**18.6***	**24.3***	**17.9***	**6.1**	1.8	**10.6***	100
Spain	**9.0**	11.6	8.8	**26.1***	14.2*	**16.4***	1.3	12.5	100
Sweden	2.3	**21.3***	2.1	**22.0***	**32.4***	0.0	1.9	18.1	100
Switzerland	1.0	**23.5***	**8.8**	**22.4***	21.9*	**1.6**	3.6	17.1	100
United Kingdom	1.6	19.3	7.1	**19.8***	**24.1***	**0.5**	6.0	**21.6***	100
Australia	2.1	**18.8**	7.9	22.4*	16.1	3.2	3.1	**26.4***	100
Canada	2.4	**19.6**	5.0	24.1*	24.6*	. .	3.8	**20.4***	100
Hungary	3.1	23.2*	6.2	**25.7***	**22.5***	0.0	3.4	**16.0**	100
United States	**3.6**	**18.6**	6.1	**22.9***	2.2	**2.0**	20.8	23.7*	100

. . Data not available.

Note: The numbers in bold signify the sectors where foreigners are over-represented. The asterix (*) identifies the top three sectors of foreign employment.

a) For Australia, Canada, Hungary and the United States, the data refer to the foreign-born population.

Sources: EU labour force survey, data supplied by Eurostat; labour force survey, Australian Bureau of Statistics; Statistics Bureau, Japan; 1996 Census, Statistics Canada; and Current Population Survey, US Bureau of the Census.

Norway, Sweden and the United Kingdom; in Austria, Greece, Iceland, Italy, Portugal and Switzerland the reverse is true. It is hard to account for the trends observed without a more detailed analysis of the structure of self-employment in each individual OECD country.[1] A few explanations can nevertheless be put forward: in some cases immigrants, in particular refugees, faced with difficulties in entering the labour market turn towards self-employment, mainly in neighbourhood services (Denmark, Norway and Sweden, for example); access to self-employment for foreigners is sometimes hampered by the legislation in force, largely designed with dependent employment in mind (as is the case, for example, in Switzerland, Austria and Luxembourg); in countries with a tradition of immigration (the United Kingdom, Sweden and Belgium, for example) the longstanding pattern of migration may explain why more foreigners are self-employed – they have in fact a greater ability to obtain the funds necessary to set up independent activities; finally, in the case of the Czech Republic, the extremely liberal legislation (until recently) on immigrants taking up self-employment accounts for the significant difference between the proportions of foreigners and nationals with that labour market status.

In virtually all the European OECD countries (Italy and Spain being the exceptions), the proportion of immigrant or foreign workers of the total unemployed is greater than their proportion of the labour force. Chart 5.1, which relates to the most recent year for which data are available, shows that the highest proportions are in the Netherlands and Finland. In both of these countries, foreigners are proportionately two and a half times as numerous in the unemployment count as they are in the labour force. The situation is almost as critical in Belgium, Denmark, Portugal and Sweden.

Unemployment rates for foreign women are generally higher than for foreign men, except in Australia, Austria, Germany, Hungary, Sweden and the United Kingdom (see Table 5.3). Conversely, the disparity between unemployment rates for nationals and foreigners is more marked for men than for women. In the settlement countries (Australia, Canada and the United

Box 5.2. **Where do undocumented immigrants work?**

While it is difficult to compile a precise list of all the different occupations practised by undocumented immigrants, information from regularisation programmes shows a far wider range of sectors than might be expected. A study of six OECD countries [see OECD (2000*b*)] has identified the main sectors involved. These are agriculture, construction and civil engineering, small-scale industry, tourism, hotels and catering, and services to households and to business, including computer services.

Accompanying the declining share of agriculture and industry in gross domestic product in most of the industrialised countries, illegal immigrants have become very much involved in the services sector where their presence has coincided with a rise in total employment. In countries such as France and Italy, skilled undocumented foreigners find work in science and language teaching, as well as in hospital services, though usually at much lower rates of pay than nationals. Seasonal tourism, retail trading and catering, where long hours have to be worked, are other sources of employment. The growth in services to businesses (such as equipment maintenance and servicing, caretaking) and services to households (such as child minding and other domestic services) has also been favourable to undocumented workers.

The growth in outsourcing in most OECD countries is another recent trend which has favoured the recruitment of undocumented immigrants. It has enabled firms in several sectors to evade their social security contributions as well as the constraints imposed by labour legislation. The textile/clothing and building/civil engineering industries often use outsourcing, as do services. This practice has led to what might be termed "false" dependent employment, whereby employees of an outsourcing firm are effectively self-employed freelancers.

Illegal employment reflects to a certain degree the difficulty encountered in hiring certain categories of workers. It also reflects the problems of dealing with the underground economy.

States) the disparity in unemployment rates for foreign-born and native-born people are much narrower than those in the European countries for foreigners and nationals.

The scope for family members to take up employment in the host country (subject to certain conditions) supplements the number of labour market entrants. Many of them have difficulty in securing their first job in the host country. The recent increases in other categories of inflow have also contributed to swelling the figures for foreign unemployment, especially as in a number of OECD countries labour market conditions are relatively unfavourable for low-skilled workers. For example, foreigners admitted as refugees or asylum seekers face (when allowed to take up employment) considerable difficulties in some host countries in finding work (due in particular to language problems) in the early years of their stay. This may account for the high rates of unemployment amongst foreigners observed in Denmark, Norway and Sweden, countries where the annual flows of refugees or asylum seekers are relatively high compared with other admission categories. A period of adjustment is in some cases needed before immigrants succeed in integrating into the labour market of the host country. This can be due to the need to become more familiar with the language and how to deal with government services, learn modes of access to the labour market (job search methods) or adjust to the prevailing work conditions. All these factors are decisive in obtaining and keeping a job.

II. Foreign employment and short-term labour market equilibrium

Migration movements are the combined outcome of two mechanisms that may be presented as pull and push factors.[2] The latter stem from the behaviour of migrants who wish to leave their countries of origin on account of adverse economic, social and/or political conditions there. On the demand side, the requirements of labour markets in host countries predominate, even though immigration flows include categories admitted on humanitarian grounds (annual refugee quotas, asylum seekers) or social grounds (settlement migration, family reunion). As a general rule, the host countries attach great importance in their migration policies to smoothing imbalances between labour supply and demand and to meeting longer term needs. For their part, migrants make a selection from the various destinations open to them chiefly on the basis of the conditions prevailing in individual countries, in particular the scope for obtaining employment. Other criteria, in particular pre-existing social networks as well as cultural and linguistic ties, influence both the decision to emigrate and the choice of destination.

The question that arises, accordingly, is the extent to which migration movements coincide with fluctuations in the demand for labour in host countries. Can migration policy be successfully designed in such a way as to meet labour market needs? What are the chief limitations on an approach of this kind?

Table 5.5. Employment distribution by type of occupation

Percentage of the employed, 1998-99 average[a, b]

	Foreign employment		Total employment	
	Blue collar	White collar	Blue collar	White collar
Austria	67.1	21.8	40.8	45.8
Belgium	41.6	47.1	32.0	57.3
Czech Republic	50.8	33.7	44.8	42.8
Denmark	40.8	46.8	33.6	50.6
Finland	40.2	41.2	35.7	52.1
France	62.7	25.8	37.1	50.2
Germany	55.9	29.9	36.1	52.3
Greece	78.3	9.8	47.1	40.2
Hungary	28.5	56.2	45.6	40.2
Iceland	50.9	31.2	37.6	43.1
Ireland	27.6	58.6	39.1	46.7
Italy	62.0	25.5	41.7	42.5
Luxembourg	43.4	45.0	34.6	55.7
Netherlands	40.0	50.5	27.0	60.3
Norway	30.5	51.1	30.0	50.7
Portugal	51.3	30.9	56.5	29.9
Spain	47.8	35.7	47.6	38.5
Sweden	38.4	41.2	30.6	51.3
Switzerland	38.6	45.9	30.9	55.8
United Kingdom	23.0	58.3	29.1	56.0
Australia	34.2	57.9	31.6	58.5
Canada	22.7	67.7	21.6	69.1
Japan	70.9	22.8	33.4	36.5
United States	33.9	46.5	26.8	59.3

Note: In terms of the ISCO-88 system, blue-collar workers are defined as craft and related trades workers, plant and machine operators and assemblers and elementary occupations (Major Group 7/8/9); and white-collar workers include legislators, senior officials and managers, professionals, technicians and associate professionals and clerks (Major Groups 1/2/3/4). The total labour force also includes service workers and shop and market sales workers and skilled agriculture and fishery workers (Major Groups 5/6). With respect to Australia, Canada, Japan and the United States a different classification system of occupations was available. Some differences exist between these classifications systems and ISCO-88.

a) Data for Australia, Canada, Hungary and the United States refer to foreign-born individuals.

b) Data for Canada refer to 1996, Hungary to 1999 and Australia and Japan to 2000.

Sources: EU labour force survey, data provided by Eurostat; Labour force survey, Australian Bureau of Statistics; Statistics Bureau, Japan; 1996 Census, Statistics Canada; *Current Population Survey*, US Bureau of the Census.

Following World War II, in particular from the mid-1950s onwards, a number of European countries established programmes to admit large numbers of foreign workers in order to cope with their increased need for labour. These immigration flows were organised under guest worker programmes; the foreigners admitted under these arrangements generally had temporary status. Belgium, France, Germany, the Netherlands, Switzerland and the United Kingdom were particularly involved at that period. The resident foreign population in Western Europe doubled between 1950 and 1970, from 5 to 10 million; by 1982 it had reached 15 million.[3]

In the wake of the first oil crisis, the majority of European countries suspended the immigration of new foreign workers. Against expectations, earlier waves of immigrants did not return to their countries of origin. This was due in particular to the even worse economic situations prevailing in them and the fear that they would be unable to return later to the host country. The foreign population continued to rise as a result of natural increase and family reunion flows.[4] During this period, the main settlement countries (*i.e.* Australia, Canada and the United States) continued to conduct active and open migration policies with regard to workers and their families.

Chart 5.2 illustrates the historical trends from 1960 onwards for selected OECD countries. Each section of this figure presents the net migration rates, the rate of growth in total employment and a conjunctural indicator defined as the deviation of per capita GDP from its estimated trend level for the whole of the period 1965-95. It highlights the links between these series and thereby indicates the extent to which migration flows have matched the economic cycle and fluctuations in labour demand.

Table 5.6. **Disparity of the foreign employment distribution by economic activity**[a]

	1983[b]	1994-95[c]	1998-99[d]
Austria	. .	21.6	20.4
Belgium	21.7	21.1	14.4
Czech Republic	. .	. .	10.0
Denmark	16.3	13.9	10.4
Finland	. .	21.1	16.7
France	24.2	19.9	18.4
Germany	22.9	25.0	19.3
Greece	. .	28.3	37.4
Iceland	. .	22.6	21.5
Ireland	22.4	17.3	15.0
Italy	. .	11.3	9.9
Luxembourg	. .	76.6	75.5
Netherlands	. .	16.7	13.8
Norway	. .	16.8	12.3
Portugal	. .	20.9	23.0
Spain	. .	25.4	18.5
Sweden	15.4	10.3	10.0
Switzerland	. .	. .	18.1
United Kingdom	11.3	11.7	12.6
Australia	12.8	9.8	9.5
Canada	11.9	8.7	. .
Hungary	. .	. .	16.6
United States	8.9	6.5	6.2

. . Data not available.

Note: The disparity indicator is defined as the sum over all sectors of $(|p_i-q_i|)/2$, where p_i and q_i represent the share of sector *i* in foreign employment and national employment respectively. This indicator gives the percentage of foreign workers in "foreign" sectors who would have to be reallocated to the "national" sectors to make the distribution of employment by sector the same for foreigners as for nationals. A sector is considered "foreign" if the share of foreign employment in the sector is greater than that of foreign employment in total employment.

a) For Australia, Canada, Hungary and the United States, the data refer to the foreign-born population.

b) For Canada data refer to 1991, for Sweden 1982 and for the United States the data refer to 1980.

c) For Austria, Finland, Iceland and Sweden data refer to 1995. For Canada and Australia the data refer to 1996.

d) For Hungary data refer to 1999 and for Australia the data refer to 2000.

Sources: See Table 5.3, except for the United States: Current Population Survey, US Bureau of the Census.

The first finding is the apparent parallelism of the macroeconomic and migration series over the first part of the period for the European countries considered. Until the end of the 1970s, migration flows moved in parallel with the conjunctural indicators in Germany, the Netherlands, Sweden and the United Kingdom, and to a lesser extent in Australia. This was in fairly marked contrast with Canada and the United States, where the variables do not appear to have been directly linked. From the early 1980s, on the other hand, disparate trends are found for all countries. Even though the reasons may differ from one country to another, this points to the difficulty in controlling migration flows, to programme them, and to keep them in parallel over the long term with changing requirements in the labour market.[5]

It should be noted that a significant proportion of migration movements are not undertaken directly for economic reasons. Over the course of the 1990s, family reunion accounted on average for over 50 per cent of all inflows to Canada, France, Sweden and the United States. The admission of refugees and asylum seekers is another form of movement which is normally independent of economic trends in the host country. This is the predominant component of migration particularly in the Nordic countries.

A further argument, the return of immigrants, may also be advanced to account for the imperfect way that net migration adjusts to economic trends in the host country. Migrants consider their decision of whether or not to return to their country of origin in the same way as the initial decision of whether or not to leave. Migrants considering leaving their host country will compare their current circumstances with the position they could expect to face if they returned home or moved on elsewhere. They also need to bear in mind any fixed costs (settlement, reinsertion, loss of social capital, etc.) and their expectations of trends in economic and social conditions over the medium term. Even when the economic environment in the host country deteriorates severely, a decision not to return home may still be rational. That the possibility of readmission to the host country should reinsertion at home fail is frequently limited (when not inexistent) reinforces the inclination to stay. There is little information on

Table 5.7. **Employment status by nationality, 1999**[a, b]

Thousands and percentage of total

	Nationals		Foreigners	
	Total employment in thousands	Self-employed as % of total employment	Total employment in thousands	Self-employed as % of total employment
Austria	3 342	14.5	336	5.2
Belgium	3 682	17.3	306	17.2
Czech Republic	4 692	14.4	24	22.2
Denmark	2 644	9.3	63	8.6
Finland	2 310	13.8	23	12.4
France	21 529	12.3	1 225	10.3
Germany	33 175	10.9	2 914	9.8
Greece	3 789	43.0	150	8.7
Iceland	148	18.3	3	7.7
Ireland	1 534	19.0	53	19.7
Italy	20 407	28.4	210	18.5
Luxembourg	104	10.8	73	6.7
Netherlands	7 365	11.5	239	10.0
Norway	2 187	7.7	65	9.1
Portugal	4 732	27.0	56	20.6
Spain	13 582	21.7	174	22.6
Sweden	3 905	11.4	149	12.5
Switzerland	3 084	20.3	756	8.9
United Kingdom	26 286	12.0	1 020	14.1
Australia	8 491	14.0	. .	. .
Canada	10 726	9.1	2 541	10.4
United States	115 079	8.8	17 100	7.3

. . Data not available.
a) For Australia, Canada and the United States, the data refer to the foreign-born population.
b) For Canada data refer to 1996.
Sources: See Table 5.3.

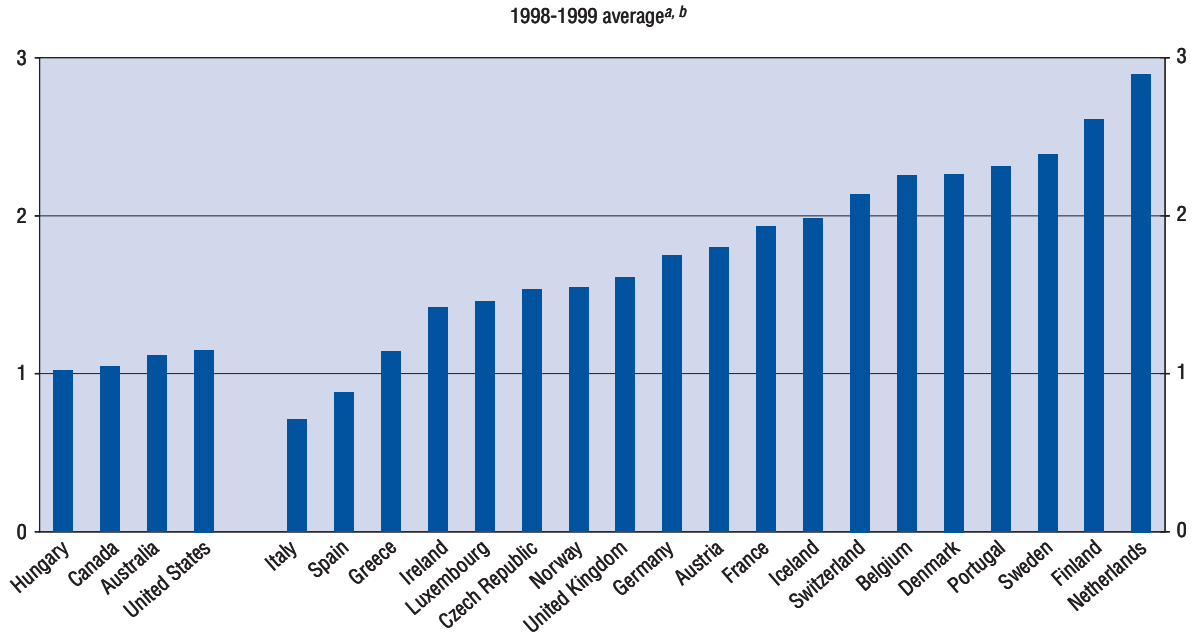
return migration flows, but in the United States, for example, it is estimated that around 25 per cent of immigrants go back to their countries of origin. In any case, it is far easier to control admissions than monitor departures, and so it is hard to completely control the scale and composition of net migration.

Quite aside from the difficulties in controlling immigration flows (see above, with regard to undocumented entries, and OECD, 2000*b*), other questions arise when considering the introduction of a selective policy of labour immigration. These questions relate in particular to the needs: *i)* to identify short and medium-term requirements by types of skill; *ii)* to define criteria for identifying the "right candidates"; *iii)* to assess the candidates' capabilities; and *iv)* to offer an environment that is sufficiently attractive to draw in the target group. That entails a trade-off between the sophistication and the speed of selection procedures, an essential element in the effectiveness of migration policies that seek to meet labour market requirements. Last, the reception of new immigrants may also raise difficulties in terms of the supply of accommodation and welfare services. These constraints necessarily increase labour demand in those sectors, and hence correspondingly reduce the net contribution to the labour market from the new inflow of foreign labour.

These general observations highlight the difficulties that may occur in applying a migration policy whose chief aim is to respond to the short-term needs of the labour market. Admission of temporary workers is nonetheless still widespread in OECD countries, even in Australia, Canada and the United States which give priority to the permanent settlement of migrants (see Table 5.2).

Given the particular characteristics of foreign or immigrant labour, in terms of skills, demographic profile and sectoral distribution, it seems likely that the employment of foreigners does play a special role in the equilibrium and dynamics of the labour market. How does the employment of foreigners respond to cyclical fluctuations? Are the adjustments that the foreign workforce has to make different from those facing nationals? In what

Chart 5.1. **Share of foreigners in total unemployment relative to their share in the labour force**



a) For Australia, Canada, Hungary and the United States, the data refer to the foreign-born population.
b) For Canada, the data refer to 1996. For the United States, the data refer to 1998 and, for Australia, Hungary and the Czech Republic, the data refer to 1999.
Sources: See Table 5.3.

ways does the use of foreign labour assist labour market adjustment?

Over the past twenty years, most OECD countries have experienced two periods of recession. The first occurred in the early 1980s, in response to the second oil shock. Between 1979 and 1983 the average rate of unemployment across the OECD area as a whole rose from 5.2 per cent to over 8.5 per cent. The second recession, in the early 1990s, though appreciably less severe had a considerable impact on the labour market as the demand for labour reacted more swiftly to the downturn.

How is the employment of foreigners affected when economic activity declines? Does foreign labour play a special buffer role on the labour market during a recession, and what are the possible mechanisms at work?

A. Foreign workers in periods of recession

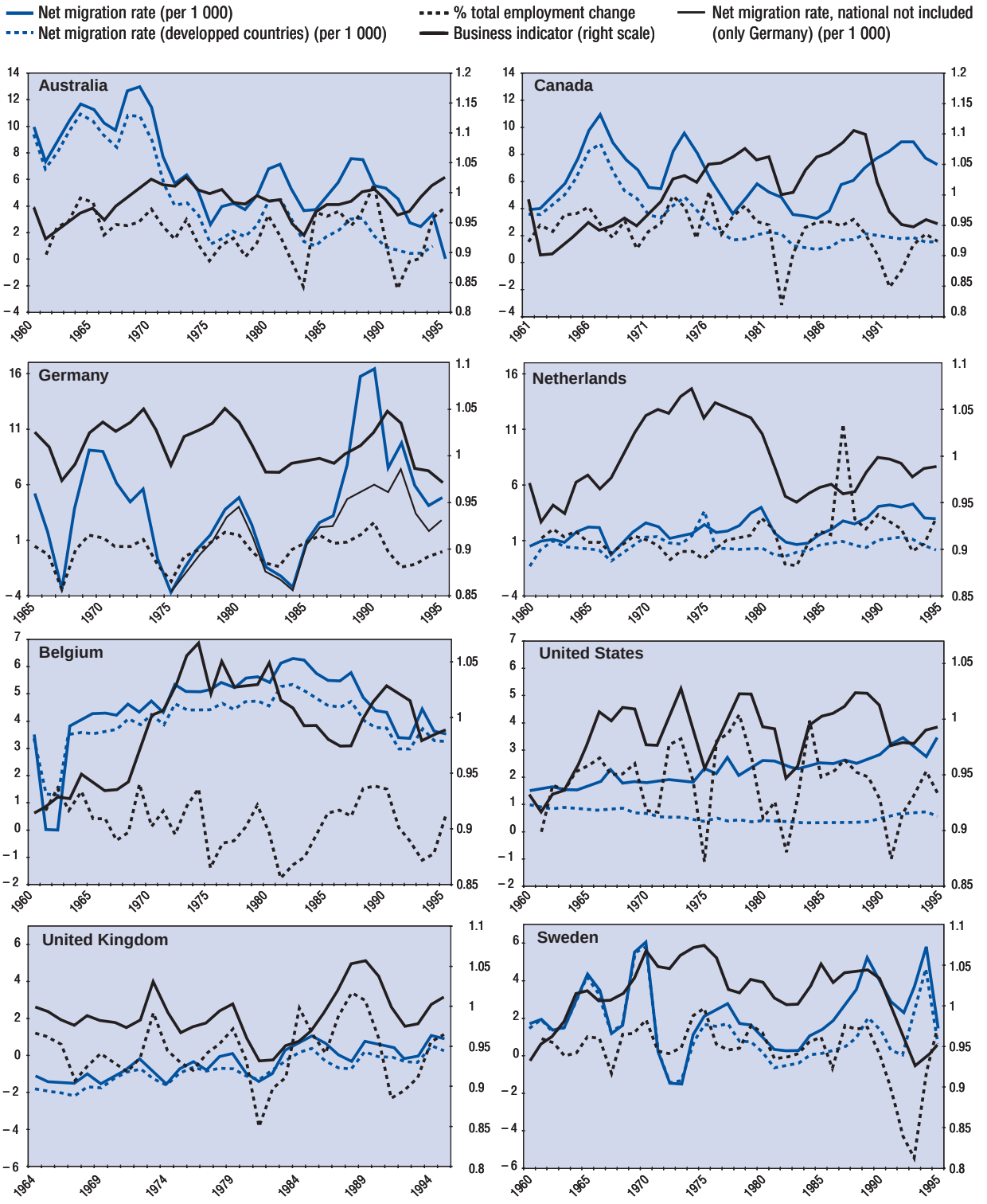
The earlier analysis showed the ways in which the employment of immigrants or foreigners differs from that of nationals in OECD Member countries. The features highlighted stem both from the history of successive waves of migration (main countries of origin, skills and work experience of migrants, demographic profile, knowledge of the host country's language) and differences in institutional structures (regulations governing access to the labour market and setting up businesses, etc.) which determine the employability of the foreign labour force.

In particular, and although the distribution of foreign labour by sectors of activity is increasingly converging with that of the remainder of the labour force (see Tables 5.4 and 5.6), it is still slightly over-represented in those sectors which are the most sensitive to cyclical downturns (notably construction and retailing).[6]

For all of the countries under consideration, the foreign labour force is on average relatively less skilled than that of nationals (see Table 5.8) and foreign workers are more concentrated than nationals in the lowest socio-professional categories (see Table 5.5). These characteristics are as a general rule also linked with greater volatility of employment in response to cyclical fluctuations.

These general points all help to explain why, during a recession, foreigners are, in some OECD Member countries, proportionally more affected than nationals by unemployment. Table 5.9 illustrates this phenomenon. It shows for the three main European countries of immigration and Australia,[7] during the most recent period of recession, the trend in the relative share of foreigners in

Chart 5.2. **Net migration rate and the business cycle in selected OECD countries, 1960-1995**



Sources: Labour Force Statistics (OECD), calculations by the OECD Secretariat; Population Division (United Nations).

Table 5.8. **Foreign and national adult populations classified by level of education in selected OECD countries**[a]

1995-1998 average, percentages

	Lower secondary		Upper secondary		Third level	
	Foreigners	Nationals	Foreigners	Nationals	Foreigners	Nationals
United States[b]	35.0	15.7	24.1	35.0	40.9	49.3
Germany	48.5	13.2	37.0	62.2	14.4	24.6
France	63.3	33.4	22.9	45.4	13.8	21.1
Italy	47.1	56.3	38.3	34.3	14.6	9.3
United Kingdom	65.1	43.9	14.7	32.5	20.2	23.7
Canada[c]	22.2	23.1	54.9	60.3	22.9	16.6
Sweden	30.8	20.4	41.5	50.3	27.7	29.3

a) The educational attainment classification is defined as follows: lower secondary refers to pre-primary education or none, primary or lower secondary; upper secondary refers to upper secondary education or post-secondary non tertiary education; third level refers to tertiary education.
b) Foreign-born and native populations aged 25 and over. Lower secondary refers to less than high school diploma, upper secondary refers to high school diploma and third level refers to some college or more.
c) Foreign-born and native populations aged 25 to 44. Lower secondary refers to below grade 9, upper secondary refers to grades 9 to 13 and third level refers to some post-secondary education plus university degrees.
Sources: EU labour force survey, data provided by Eurostat; Statistics Canada; US Bureau of the Census.

unemployment in comparison to the proportion of the labour force for which they account.

There are many reasons why foreigners in some OECD countries are more vulnerable to unemployment than nationals. Among other things, it reflects the lesser employability of this category of labour, and is accentuated in certain countries during periods of recession, as well as in countries faced with a growing number of asylum seekers. Data obtained from the European employment survey enable one to estimate the determinants of the probability of being in work or available for work (age, gender, level of education, place of birth and nationality). These estimates (see Annex 5.B) indicate that, *ceteris paribus*, foreigners have a greater probability of being non-active or looking for work whatever their country of residence, with the exception of Greece, Ireland, Italy and Spain (countries in which labour immigration predominates) and Luxembourg (where immigration flows originate overwhelmingly from other European Union countries).[8] Foreigners born in a European Union country are less directly affected.

Foreigners are also over-represented among the long-term unemployed (see Chart 5.3). In France, for example, nearly 57 per cent of jobless foreigners have been out of work for more than a year, as compared with less than 43 per cent for French nationals. A similar situation is obtained in Australia and Canada, but not in the recent immigration countries in Southern Europe (Greece, Italy, Portugal, Spain) where migration for employment purposes predominates.

Access to self-employment is sometimes seen as a way out of insecurity and a means of social promotion. In some countries migrants have been very active in the entrepreneurial sector and have greatly contributed to the development of economic activity and to reducing labour market disequilibria during recessions. Several factors may explain why, *ceteris paribus*, migrants have a greater propensity to create their own businesses. These include self-selection [See Stark (1991); Borjas (1987); or Chiswick (2000)], community arrangements and barriers to salaried employment (see above). Measures could certainly be introduced in a number of countries to promote the development of such activities by the foreign labour force, in particular by simplifying administrative procedures and facilitating access to credit.

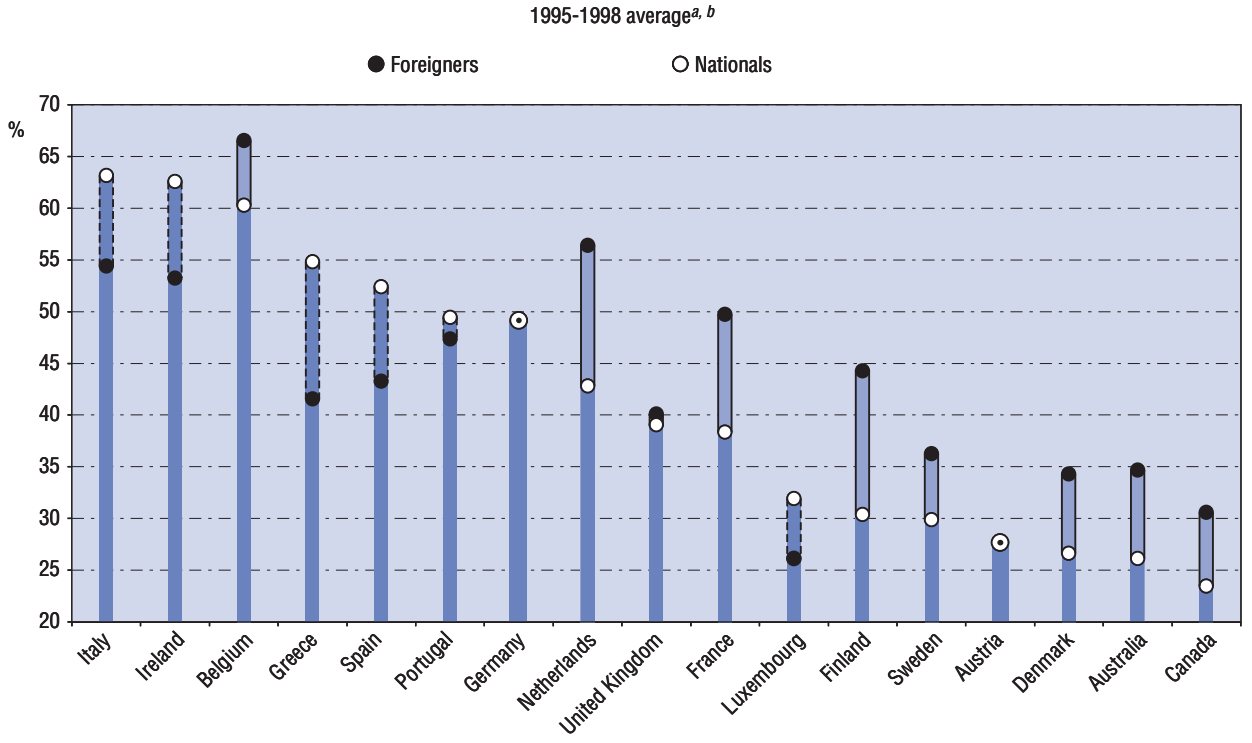
During periods of marked labour market imbalances, as have occurred over the past two decades in some European countries, some people have at times sought to establish a causal link between immigration and unemployment.

Table 5.9. **Share of foreigners in total unemployment relative to their share in the labour force during a recessionary period**[a]

	Period[b]	Annual growth of the ratio during the period (%)
Australia	1990-1992	3.7
France	1991-1994	1.9
Germany	1991-1994	3.9
United Kingdom	1989-1992	5.0

a) For Australia the data refer to the foreign-born population.
b) The period of recession is determined by estimates of the business cycle produced by the OECD (Economic Cycle Research Institute in the case of Australia).
Sources: See Table 5.3.

Chart 5.3. **Percentage of long-term unemployment by nationality**



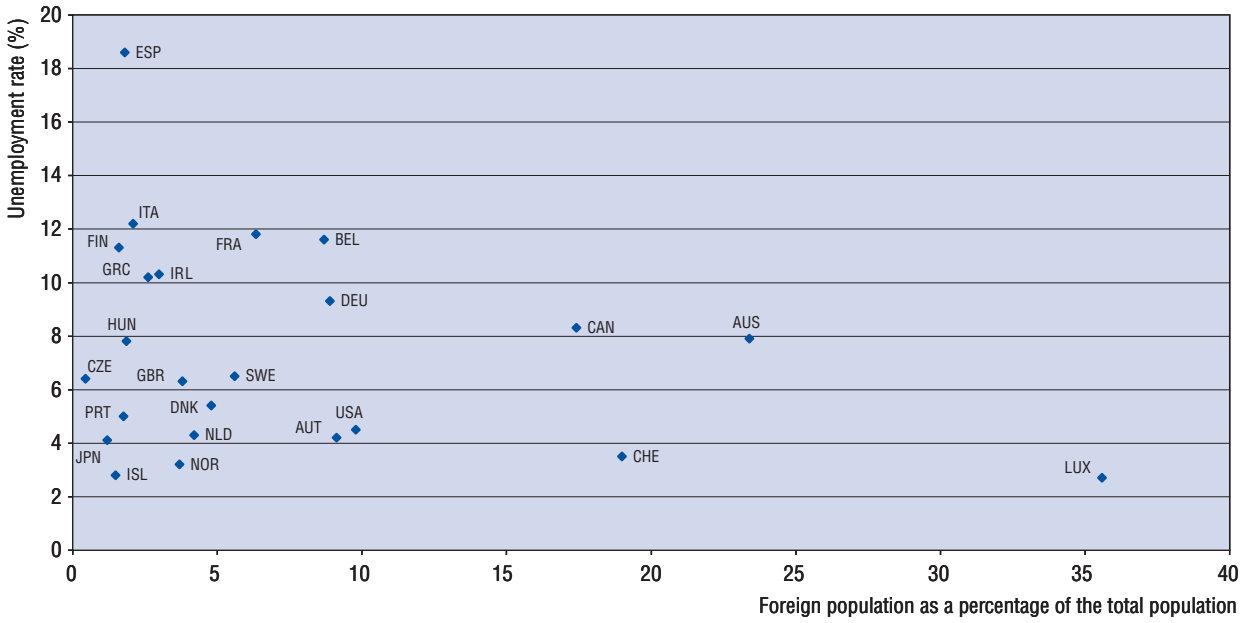
a) Data for Australia and Canada refer to the foreign-born population.
b) Total population includes those individuals aged 15 and over with the exception of Australia (15-64).
Sources: EU labour force survey, figures provided by Eurostat; Labour force survey, Australian Bureau of Statistics; 1996 Census, Statistics Canada.

Chart 5.4 shows OECD countries classified in terms of their unemployment rates and the relative sizes of their foreign populations, though this is no proof in itself. In countries such as Finland and Spain, where unemployment rates are relatively high, foreigners account for very low proportions of the total population. Annex 5.C, presented in the form of a synoptic table, sets out the main findings from a dozen empirical studies in various OECD countries, covering different periods and using a range of econometric methods to seek to uncover any link. None of this research has come to any really significant conclusions. There are several reasons for this. Firstly, new immigrants are also consumers and the satisfaction of their needs entails expanded employment. They accordingly raise the demand for goods and services (notably accommodation and food), whether or not they subsequently raise the labour supply. Secondly, except in very special circumstances such as the repatriations from Algeria to France in 1962, from Angola to Portugal in the early 1970s and the arrivals of Cubans in Miami in 1980, the inflows are extremely small compared to the labour force already in the country. Finally, most of the research which has made empirical estimates, generally concludes that immigrant or foreign labour is complementary to, rather than a substitute for, that of nationals.[9]

Most of the econometric studies undertaken in the United States, Australia and in Europe have concluded that immigration does not lead to a decrease in the incomes of nationals. These conclusions are all the more robust for having been based on a wide variety of data sources and methodological approaches. Studies show that the impact of foreigners on the labour market is always positive for all categories of labour with the exception in the case of the United States of earlier migrant waves and in Europe of some low-skilled groups.[10] Given that the labour market characteristics of settled and recently arrived immigrants are similar, they are in direct competition. Nevertheless, though the impact can be negative it is very small.

In conclusion, while immigration can certainly not be held responsible for labour market disequilibria, foreign workers in some OECD Member countries do seem relatively more vulnerable to cyclical downturns. It

Chart 5.4. **Foreign population and the unemployment rate in some OECD countries, 1998**[a]



a) For Australia, Canada, Hungary and the United States, the data refer to the foreign-born population.
Sources: See Table 5.4.

should nevertheless be noted that the relative size of the stocks of foreign and national labour, as well as statutory safeguards against discrimination, restrict the influence of this mechanism.

B. The employment of foreigners during economic upturns

Since the mid-1990s there has been a sustained development of activity in most of the OECD countries, together with a decline in unemployment rates, notably in the European Union countries. In 1999 and 2000 respectively there were falls of three-tenths and five-tenths of a point in the average rate of unemployment across the area. This trend, which may continue over coming years, possibly at a more moderate pace (see OECD, 2000*c*) will necessarily have effects on the employment of foreigners and immigrants. Against this background, a number of OECD countries are considering the possibility of making greater use of immigration as a means of coping with labour shortages and holding down inflationary pressures.

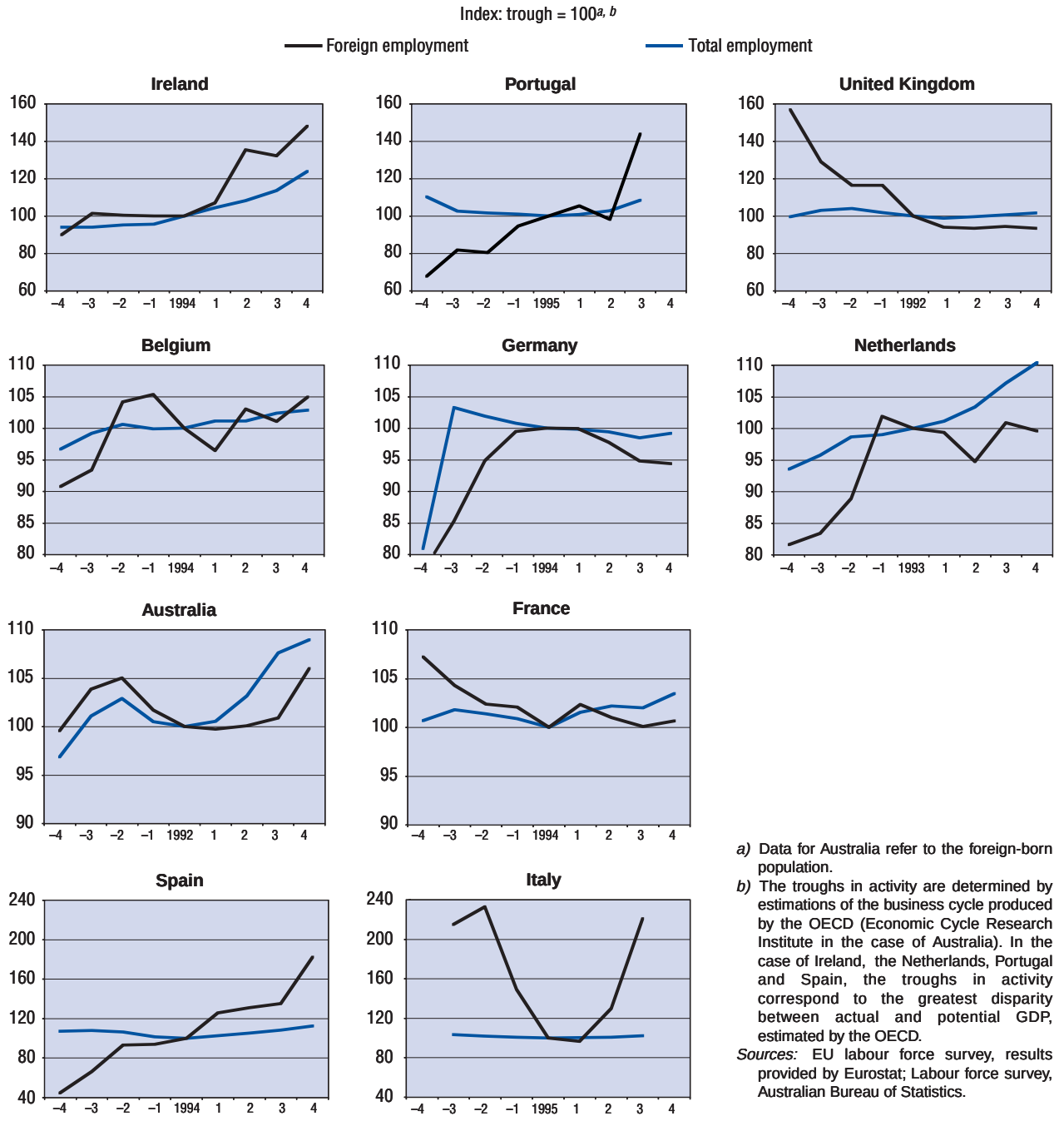
To what extent does the employment of foreigners play a role in total employment creation during economic recoveries? How does it affect the sectoral and geographical mobility of the labour force? Should there be systematic recourse to immigration to cope with labour shortages? What are the limitations and the alternatives to such an approach?

When the change in the total number of foreigners employed is compared to that in total employment from the year in which the most recent economic recovery started in selected OECD countries,[11] the trend in the employment of foreigners displays more marked fluctuations than total employment (see Chart 5.5). In particular, the recovery in Italy, Spain, Portugal and Ireland has been accompanied by stronger growth in the employment of foreigners. The latter two countries have been faced over the last decade with reversals in migration flows, and during the second half of this period have experienced particularly sustained growth in labour demand.

In Belgium, France, Germany, the Netherlands and the United Kingdom, the economic recovery appears to have been less favourable to foreigners. In the case of France, with the exception of 1995, the number of foreigners employed declined continuously over the period studied. In Australia, the trend in the employment of foreigners has followed the economic cycle.

Sectoral analysis of the changes in total and foreign employment between 1994-95 and 1998-99 for a number of European countries and some other OECD Members completes this panorama (see Chart 5.6). We can distinguish an

Chart 5.5. **Changes in foreign and total employment during economic recoveries**



a) Data for Australia refer to the foreign-born population.

b) The troughs in activity are determined by estimations of the business cycle produced by the OECD (Economic Cycle Research Institute in the case of Australia). In the case of Ireland, the Netherlands, Portugal and Spain, the troughs in activity correspond to the greatest disparity between actual and potential GDP, estimated by the OECD.

Sources: EU labour force survey, results provided by Eurostat; Labour force survey, Australian Bureau of Statistics.

initial group of countries, including the new countries of immigration in Southern Europe (Italy, Greece, Portugal, Spain) and Ireland, where the employment of foreigners rose in all sectors. The United Kingdom could be placed in this group, though the employment of foreigners has grown more markedly in services as is the case in Switzerland. A second group of countries includes those with a longer-standing tradition of immigration such as Austria, Belgium, France, Germany and the Netherlands. Here foreign labour has been reassigned to sectors where it had previously been relatively under-represented. This is the case in particular with the agricultural sector in

Belgium and the Netherlands and with households services and "other services" in Austria, France and Germany. The process goes hand in hand with a greater concentration of nationals in sectors concerned with sales, new technological developments and social services.

Foreign labour accordingly seems to have a twofold impact on the equilibrium and dynamics of the labour market in periods of expansion. It provides a response to greater demand for labour, in particular at periods when it is rising very strongly. Further, it assists the reassignment of nationals employment to more dynamic and attractive sectors. The latter effect ties in with the theory of labour market segmentation [see Piore (1979)], under which activities at the bottom of the social scale exert little attraction and display chronic labour shortages, which foreign workers are ready to fill.

In countries where the geographical and sectoral mobility of the native population is limited, foreign workers may also introduce greater flexibility to the labour market and hence assist its development. This is in particular the case in European Union countries, where intra-regional mobility remains low despite the fact that workers are free to move and settle (see Table 5.10).[12] Foreign workers are often more mobile than their national counterparts, because they are on average younger and tend to have fewer family attachments in the host country. The self-selecting aspect of the migration process may also help explain why, *ceteris paribus*, the foreign population is generally relatively more geographically mobile [see Stark (1991); Borjas (1987); or Chiswick (2000)].

Admitting further flows of immigrants to attenuate labour market shortages is regularly mentioned during economic upturns. In current circumstances, the issue of relaxing the conditions for recruiting foreign workers is being increasingly broached, notably in the United States and Canada but in Europe as well, where in some cases unemployment rates remain high. It is also being debated in Asia, more especially for skilled labour (see below).

What circumstances would warrant complementing attempts to relieve tensions in the labour market by the increased use of immigration?

Before seeking to respond to this question, the distinction should be drawn between absolute and relative shortages [see Böhning (1996)]. We can speak of an absolute labour shortage when the skills required are not immediately available, either because they are already in use or because they do not exist. Some current labour shortages in OECD countries, in particular for specialised posts in new technology, may fall in this category. We can speak of relative labour shortages when incentives such as increased wages or improved work conditions can be expected to draw out a potentially available labour supply.

The extent of labour market tensions is primarily a function of the pace of economic growth and the potential reserves of labour. When growth is slow, as was the case during the 1980s except for Korea and to a lesser degree for Japan and Australia, labour market equilibrium is more easily attained and the expectations of economic agents progressively adjust. In periods of rapid growth, by contrast, equilibrium can be difficult to attain. For example, some workers upgrade their expectations and requirements and tend to move away from the least attractive and least rewarded activities. In this context, employers usually turn to contract and/or temporary labour, and to immigration, to maintain growth in their business and offset the pace of adjustment in the labour market.[13] Initially, they seek to shield themselves from any downturn in the economy. That such a strategy is implemented would appear to be confirmed by the increase in the immigration of temporary foreign workers (see above).

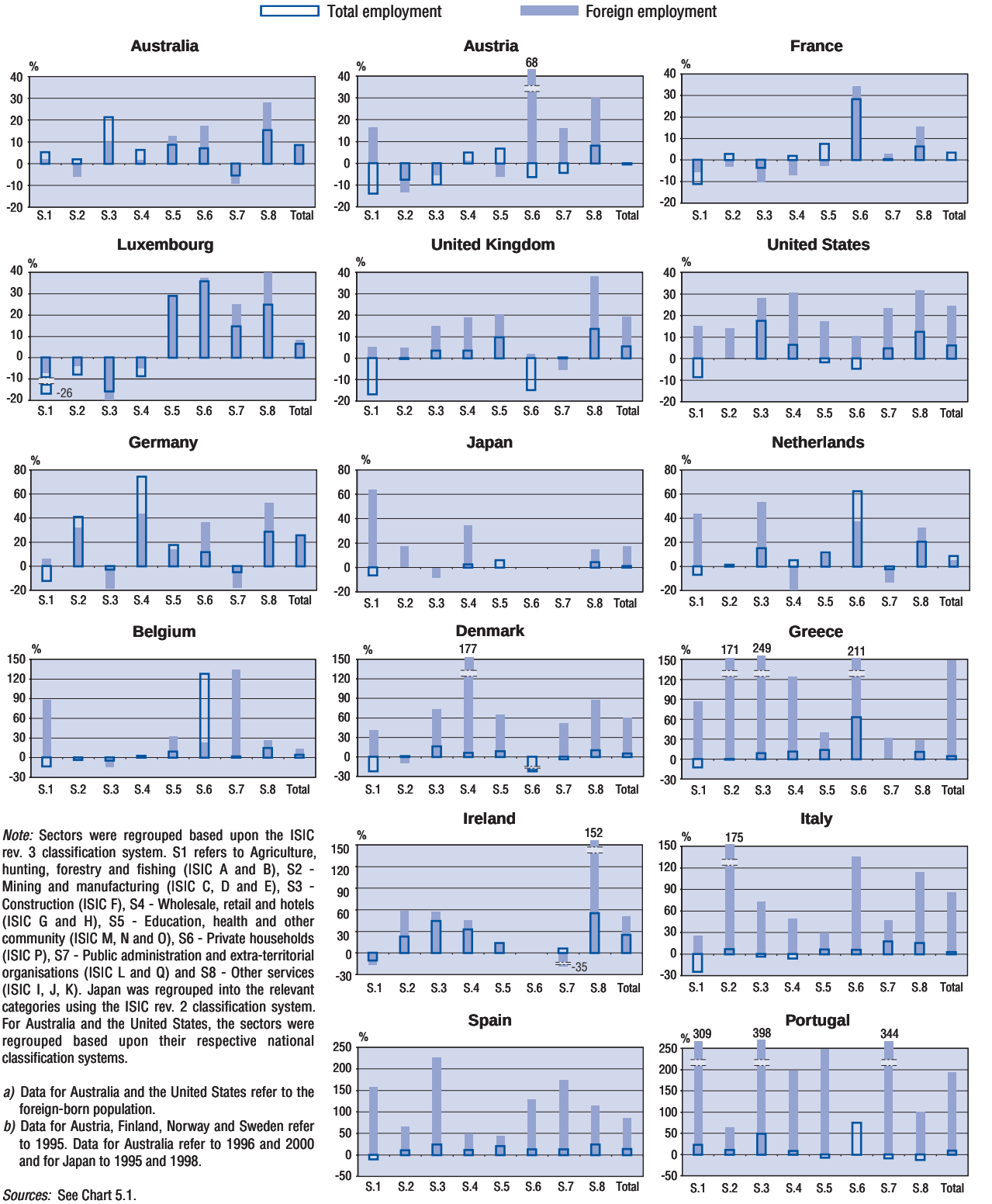
In situations of absolute labour shortages, the principal short-term remedy would indeed appear to be increased admissions of foreign workers; other solutions can be envisaged in the case of relative shortages. Mobilising resident labour, either unemployed or non-active, productivity gains and to some extent relocating labour-intensive activities, notably those which are intensive in their use of unskilled-labour, can be expected to relieve relative labour shortages. The difficulties encountered in implementing a policy designed to programme migration flows over the long term as a function of labour market requirements justify the consideration of all other possible means of adjustment.

In conclusion, it seems clear that the employment of foreigners cannot by itself resolve all the cyclical disequilibria observed in the labour market.

III. Foreign employment and long-term labour market equilibrium

Projected population trends in OECD Member countries through to 2050 give rise to questions of two very different kinds. We first have the possibility of a fall in the total population of these countries; then there is marked population ageing, in other words an increase in the dependency ratio, defined as the ratio of over-65s to those of working age (15-64 years of age). United Nations projections, assuming zero net immigration, estimate that the populations of Europe and Japan will have fallen by 12 and 17 per cent respectively by 2050. In the United States the proportion of elderly people is expected to go

Chart 5.6. **Growth of foreign and total employment by economic activity between 1994-1995 and 1998-1999**[a, b]



Note: Sectors were regrouped based upon the ISIC rev. 3 classification system. S1 refers to Agriculture, hunting, forestry and fishing (ISIC A and B), S2 - Mining and manufacturing (ISIC C, D and E), S3 - Construction (ISIC F), S4 - Wholesale, retail and hotels (ISIC G and H), S5 - Education, health and other community (ISIC M, N and O), S6 - Private households (ISIC P), S7 - Public administration and extra-territorial organisations (ISIC L and Q) and S8 - Other services (ISIC I, J, K). Japan was regrouped into the relevant categories using the ISIC rev. 2 classification system. For Australia and the United States, the sectors were regrouped based upon their respective national classification systems.

a) Data for Australia and the United States refer to the foreign-born population.

b) Data for Austria, Finland, Norway and Sweden refer to 1995. Data for Australia refer to 1996 and 2000 and for Japan to 1995 and 1998.

Sources: See Chart 5.1.

Table 5.10. **Intra-European mobility of EU citizens, 1997**

Immigration flows by nationality in per cent of total inflows of EU citizens

Nationality	Receiving country												
	Luxembourg	Portugal	Belgium	Spain	United Kingdom	Denmark	Netherlands	Germany	Sweden	Austria	Greece	Finland	France
Austria	0.4	0.7	0.9	1.6	1.2	1.8	1.7	7.0	1.1	–	3.2	1.4	1.3
Belgium	16.7	4.6	–	6.5	0.8	1.7	9.6	1.3	0.9	1.2	3.0	1.1	6.4
Denmark	2.0	1.2	1.6	1.7	2.0	–	1.9	1.7	14.3	1.5	4.0	4.9	1.4
Finland	1.5	1.0	1.5	2.5	4.6	5.0	2.1	2.1	39.7	2.1	3.0	–	0.9
France	23.4	12.2	25.5	13.6	33.9	9.6	9.4	9.5	5.0	5.6	11.6	6.4	–
Germany	9.5	23.0	11.3	29.1	12.7	20.4	25.6	–	13.3	51.1	26.4	10.4	9.9
Greece	1.1	0.1	2.2	0.2	14.7	1.1	3.5	11.0	2.8	4.2	–	1.9	1.2
Ireland	1.1	1.3	1.2	0.8	2.3	1.9	3.2	2.6	1.6	1.0	1.0	0.9	2.1
Italy	6.9	6.1	10.0	10.1	4.3	6.7	6.6	26.2	2.8	11.0	8.7	4.2	13.8
Luxembourg	–	0.1	0.8	0.1	–	–	0.1	0.4	0.1	0.1	0.1	0.0	0.2
Netherlands	3.6	10.8	22.8	5.5	7.7	8.0	–	4.7	3.8	4.4	7.0	3.8	3.4
Portugal	25.9	–	5.9	6.9	3.5	1.0	3.4	17.7	0.7	4.5	0.4	0.3	36.4
Spain	1.8	17.1	4.2	–	5.3	6.2	5.6	4.9	2.2	2.3	0.9	3.6	8.1
Sweden	1.9	2.2	2.3	2.3	7.1	18.9	2.8	2.4	–	3.5	5.8	48.3	2.2
United Kingdom	4.2	19.7	9.8	19.1	–	17.6	24.4	8.5	11.7	7.5	24.9	12.8	12.7
Total	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**
In percent of total inflows of foreigners	*78.3*	*59.0*	*56.0*	*39.1*	*32.3*	*27.6*	*25.0*	*24.5*	*21.4*	*20.2*	*17.5*	*17.0*	*9.7*
Share of EU citizens in total population in percent	*30.0*	*0.3*	*4.7*	*0.3*	*1.4*	*0.8*	*1.4*	*2.3*	*2.1*	*1.1*	*0.2*	*0.2*	*2.0*

– Not applicable.
Source: Eurostat, New Cronos database.

on rising.[14] This is the outcome of a decline in fertility, generally to below the generational replacement rate (*i.e.* fewer than 2.1 children per woman) and of welcome increases in life expectancy.

A. Immigration and demographic ageing

Recourse to immigration to relieve demographic imbalances has the advantage of an immediate and relatively significant impact on the labour force, given that the incomers are typically younger and more mobile. In addition, in some OECD Member countries and for certain nationalities, the fertility rate of immigrant women is often high, which contributes (though to a limited degree) to population growth. At the same time, there are political and practical constraints on the shaping and application of migration policy designed to alter the demographic structure. This is because a number of factors limit control over inflows (agreements on free movement, persistence of illegal immigration, admission on family reunion or humanitarian grounds) and outflows. Finally, the expected consequences of immigration also depends on the nature of the flows (legal or illegal, temporary or permanent).

While immigration may for a time help to prevent population decline, it cannot be expected to have more than a marginal impact on the projected disequilibria in the age structure [Tapinos (2000)]. An increase in the foreign population will not, on its own, resolve the problem of population ageing. One could go as far as to say that the scale of the simulations carried out by the UN provides proof, *a contrario*, due to the magnitude of the flows involved, that no "migration solution" is possible (see United Nations, 2000). But we may consider how to shape migration policy so that it contributes, *inter alia*, to the aim of facilitating labour market adjustment and moderating the effects of population ageing.

For the time being, the introduction of special programmes for admitting temporary workers in order to increase the labour supply directly seems to be preferred to permanent immigration policies in the European OECD countries. Some countries, less directly affected by population ageing, already take an overall and co-ordinated approach to immigration (notably Australia, Canada and New Zealand), including selective age-related criteria for some categories of immigrants. Others do not explicitly apply age criteria, but their immigration rules and practices have implications for the age distribution of entrants. One example is the system of family preferences in the United States. Another example, in Europe in particular, is the use of regularisation programmes, which very largely concern people of working age only. Finally, if

other countries were to decide to adopt a policy of permanent immigration, they would have to introduce new programmes and amend the content and objectives of their migration policy accordingly.

The contribution of immigration to long-term growth is not confined to its quantitative impact on increases in the labour force; it is also reflected in its qualitative impact in terms of human capital accumulation. A proportion of immigrants possess relatively high qualifications and levels of professional experience which they can exploit to varying degrees in the host country [Friedberg (2000)].

B. Immigration and human capital

In the present context of growth in OECD Member countries the demand for skilled and highly skilled labour has been increasing. Labour shortages are particularly marked in information and communications technologies; it has been estimated that this shortage amounts to some 850 000 technical staff in the United States and nearly 2 million in Europe [OECD (2000*a*)].

Most OECD Member countries have in fact already amended their legislation in order to facilitate the admission of foreign specialists, in particular in high technology fields (see Annex 5.D). These measures are composed of five principal elements:

- *Relaxing any quantitative constraints that apply.* The United States raised the annual quota of H1B visas reserved for professionals and skilled workers by nearly 70 per cent in 2000. Over the coming three fiscal years, 195 000 people can be granted temporary admission to the country under this programme. In addition, the 7 per cent ceiling on the proportion of visas going to nationals of any given country has been lifted (see Table 5.11).
- *Setting up special programmes for shortage occupations.* The German government has instituted a "green card" programme under which 20 000 computer and information technology specialists may be allowed to enter Germany to work for up to five years. The authorities had initially stated that they chiefly hoped to receive Indian nationals, but by the end of the first three months of the process over half the 5 000 applications had come from nationals of central and eastern European countries and Russia.
- *Facilitating recruitment conditions or procedures and relaxing criteria for issuing employment visas for highly skilled workers.* Since 1998, France has been applying a simplified system for computer specialists, under which reference to the employment situation is no longer required. The United Kingdom now applies simplified fast-track procedures for issuing work permits for certain occupations and has extended the list of shortage occupations. Australia has decided to amend its points systems for permanent immigrants, giving more weight to a number of skills including those in new technology fields. New Zealand is considering introducing a system of visa applications via the Internet, with the aim of attracting computer professionals very quickly. In Japan visa renewals have been facilitated and conditions for family reunion relaxed for certain categories of highly qualified workers. In Korea, skilled workers can now stay in the country permanently.
- *Increasing non-wage incentives for skilled foreign workers.* Many companies are granting additional paid leave to new skilled and highly skilled recruits. They are also making available to them free access to welfare and recreational facilities, and in some cases even accommodation.
- *Allowing foreign students to change status at the end of their course and thereby enter the labour market.* In the United States, the majority of new recipients of H1B visas are students already residing in the country. In Germany and Switzerland, students are no longer compelled to leave at the end of their course and may apply for an employment visa. In Australia students who apply for permanent residence within six months of graduation are exempt from the normal requirements relating to work experience.

Table 5.11. **H 1B visas: limits and visas issued (excluding dependants)**

	1992	1994	1996	1998	1999	2000	2001-03	2004
Limit	65 000	65 000	65 000	65 000	115 000	195 000	195 000	65 000
Number issued	48 645	60 279	55 141	Reached in September	Reached in June	Reached in March		

Source: Immigration and Naturalization Service, US Department of Justice.

Increased reliance on foreign workers is nevertheless subject to certain limits. Their salaries, at identical skill levels must be the same as those of nationals. Labour market tests are lifted only rarely. There also exist, in France and Germany for example, minimum salaries beneath which the worker's entry is not automatic. The issue of reforming education and professional training systems is also the subject of debate in many OECD countries concerned by labour shortages in new technology sectors. Measures in the course of preparation aim to increase over the medium-term the supply of resident workers qualified in these fields. An important issue of discussion is whether, or to what extent, the massive intake of highly qualified immigrants could have a negative impact on the development of emerging economies through the "brain drain" effect.

In this context of global shortages of skilled and highly skilled labour, a number of countries are concerned about emigration by their own specialists. Canada, France and Sweden in particular have expressed concerns in this regard. Governments sometimes attempt to persuade their residents to remain in the country through tax incentives, for example by reducing the rates applicable to higher incomes. The scope of these measures is limited, however, especially given that some countries have very attractive tax regimes and offer non-wage benefits to foreign workers (see above).[15]

It is sometimes asked whether international migration has in fact become globalised in the image of the growing liberalisation of trade and capital movements. From a detailed review of overall trends in the international mobility of persons over the last thirty years, and from migration policy analysis, the answer is largely "No" [Tapinos and Delaunay (2000)]. But research findings do point the other way for the skilled and highly skilled segments. For example, Cobb-Clark and Connolly (1996) showed that demand for immigration visas in skilled categories was directly influenced in Australia by the scale of skilled immigration into Canada and the United States. Apart from the demand effects associated with the development of new technology, various other factors account for the special mobility of skilled labour: lower transport and communications costs; wider knowledge of foreign languages; the use of English as a world language, accelerated by the internationalisation of business; and, finally, enhanced access to information, via the Internet, in particular with regard to employment openings and the institutional conditions of mobility.

In this context, the integration of labour markets within the OECD Member countries accordingly appears, at this level at least, to be proceeding via competition among host countries rather than through special forms of co-operation. This observation also applies to the European Union countries, which are endeavouring to frame a common immigration policy.

NOTES

1. For more detailed analysis, reference may be made to Le (2000) or Campbell, Fincher and Webber (1991) for Australia; Mata and Pendakur (1999) or Beaujot, Maxim and Hao (1994) for Canada; and Borjas (1986), Evans (1989) or Yuengert (1995) for the United States. Less research has been conducted on European countries. See, *inter alia*, Rees and Shah (1986) for the United Kingdom and Rath and Kloosterman (2000) for an overview.
2. For a comprehensive presentation of the determinants of migration, reference may be made, *inter alia*, to Massey *et al.* (1993) or Ghatak, Levine and Wheatley Price (1996).
3. See Stalker (1994) for a detailed analysis and a historical survey of labour migration flows.
4. See Zimmermann (1994) for a detailed discussion of European migration policy, in particular in Germany and France. For a comparative analysis of family immigration policies, see a special chapter in *Trends in International Migration*, OECD (2000).
5. The estimates of Granger causality between the net migration rate and the rate of growth in total employment, presented in Annex 5.A, are unstable and only weakly significant. While for some countries the dynamics of total employment are observed to precede or anticipate the dynamics of immigration at the start of the period in question, the link is systematically nullified from the early 1980s onwards. This points to the instability of the relationship between the two series.
6. See *OECD Employment Outlook*, Chapter 1, OECD (1993).
7. Unfortunately, relevant series are not available for other non-European countries, in particular the United States and Canada.
8. The detailed findings are set out in Annex 5.B. The positive effect on the probability of being in work or available for work which is identified for foreigners in some countries stems partly from the predominance of migration for employment purposes. Given that a number of variables were excluded from the estimation exercise (knowledge of language, occupational experience) the findings cannot be interpreted directly in terms of employment discrimination. There is a wealth of literature on the subject, inspired by the pioneering work of Becker (1971). For European countries, for example, reference may be made to Zegers de Beij (2000) or Viprey (2000) for a recent comparative analysis.
9. See the special chapter in *Trends in International Migration*, OECD (1994), Borjas (1999) for a review of the main recent research and their results.
10. See Note 9. See also Borjas (1991), Briggs and Tienda (1984).
11. The recovery year is determined from OECD estimates where available (France, Germany, the United Kingdom and the United States). For Australia and Italy, ECRI estimates are used. For Ireland, the Netherlands and Spain, the year of recovery is taken as being that in which capacity utilisation is greatest.
12. Decressin and Fatas (1995) estimate that changes in intra-European immigration flows in response to labour demand shocks are about half of those in the United States. On this point, see also Krueger (2000) and Tapinos (1994).
13. A number of studies have evaluated the conditions of labour market adjustment in OECD countries. There is comparatively greater rigidity in Europe (see, *inter alia*, Pissarides and McMaster, 1990). The current growth in Europe is accordingly being accompanied by greater job insecurity, with nearly half the employment created across the EU countries being on fixed-term contracts or filled *via* temporary employment agencies (about 15 per cent of the total).
14. For fuller details on the ageing process in OECD Member countries, see OECD (1998).
15. H1B visa holders in the United States, for instance, are exempt from income tax in their first three years of residence.

Annex 5.A

Immigration and variation of the labour demand

Table 5.A.1. Estimation of the Granger causality between net immigration and the variation of the labour demand in some OECD countries

	Period[a]	Causality tested	F-Statistic	Probability to reject the no causality hypothesis[b]
Australia	1961-1995	X2 → X1	0.060	0.941
		X1 → X2	0.574	0.569
	1964-1979	X2 → X1	1.196	0.336
		X1 → X2	4.378	0.038**
	1979-1995	X2 → X1	2.949	0.094
		X1 → X2	1.170	0.346
Belgium[c]	1961-1995	X2 → X1	0.885	0.424
		X1 → X2	0.641	0.534
Canada	1961-1995	X2 → X1	1.500	0.240
		X1 → X2	0.416	0.664
	1961-1974	X2 → X1	6.472	0.026**
		X1 → X2	2.737	0.132
	1974-1995	X2 → X1	0.981	0.395
		X1 → X2	0.279	0.760
Germany[d]	1964-1995	X2 → X1	1.186	0.324
		X1 → X2	2.014	0.158
	1964-1977	X2 → X1	5.877	0.039**
		X1 → X2	3.360	0.105
	1977-1995	X2 → X1	2.578	0.121
		X1 → X2	1.051	0.382
Netherlands	1961-1995	X2 → X1	0.517	0.602
		X1 → X2	0.742	0.485
	1964-1976	X2 → X1	1.339	0.309
		X1 → X2	11.433	0.003**
	1976-1995	X2 → X1	0.374	0.694
		X1 → X2	1.040	0.377
United Kingdom	1964-1995	X2 → X1	0.639	0.536
		X1 → X2	1.466	0.250
	1964-1979	X2 → X1	1.949	0.198
		X1 → X2	3.88	0.061*
	1979-1995	X2 → X1	1.262	0.318
		X1 → X2	0.518	0.608
United States	1961-1995	X2 → X1	0.060	0.941
		X1 → X2	0.574	0.569
	1964-1978	X2 → X1	0.214	0.811
		X1 → X2	3.279	0.076*
	1978-1995	X2 → X1	0.357	0.706
		X1 → X2	0.139	0.872
Sweden[e]	1961-1995	X2 → X1	3.673	0.038**
		X1 → X2	2.167	0.133

Legend: X1: Net migration rate;
X2: Growth rate of total employment.

a) The period considered is either the total period or the period on which the causality is the most significant.

b) * significant at a 10% level and
** significant at a 5% level.

c) Similar result on all sub-periods.

d) Net migration excluding nationals.

e) Granger causality is observed only on the entire period.

Source: *Labour Force Statistics* (OECD), calculations by the Secretariat (OECD).

Annex 5.B

Probability to be inactive and probability to be employed in some European countries

Table 5.B.1. Estimation of the probability to be inactive in some European countries[a] (PROBIT)

	Austria		Belgium		Switzerland		Czech Republic		Germany		Denmark	
Constant	0.610	*0.056*	1.504	*0.057*	0.126	*0.059*	1.411	*0.055*	0.149	*0.023*	–0.063	*0.068*
Gender	–0.647	*0.043*	–0.715	*0.039*	–0.731	*0.048*	–0.630	*0.039*	–0.637	*0.014*	–0.398	*0.053*
Age	–0.700	*0.028*	–1.013	*0.027*	–0.450	*0.031*	–1.001	*0.027*	–0.518	*0.010*	–0.469	*0.036*
Age^2	0.089	*0.003*	0.118	*0.003*	0.053	*0.003*	0.113	*0.003*	0.068	*0.001*	0.060	*0.004*
Education	–0.361	*0.037*	–0.462	*0.026*	–0.233	*0.038*	–0.595	*0.039*	–0.234	*0.011*	–0.312	*0.041*
Place of birth within EU	0.199*	*0.147*	–0.227	*0.092*							0.032*	*0.201*
Foreigner	0.055*	*0.072*	0.483	*0.069*	0.127	*0.055*	0.086*	*0.275*	0.333	*0.022*	0.732	*0.137*
N *(weighted)*	14 252	*(5 344)*	8 768	*(6 711)*	9 034	*(4 753)*	14 995	*(7 029)*	66 116	*(49 965)*	6 092	*(3 511)*
Log Likelihood	–2 372.5		–2 842.7		–1972.9		–2 788.9		–22 081		–1 452.7	

	Spain		Finland		France		Greece		Ireland		Italy	
Constant	1.054	*0.025*	0.201	*0.066*	1.315	*0.023*	1.233	*0.049*	1.384	*0.145*	1.244	*0.244*
Gender	–0.924	*0.018*	–0.207	*0.052*	–0.575	*0.016*	–0.938	*0.036*	–0.871	*0.065*	–0.936	*0.015*
Age	–0.678	*0.012*	–0.637	*0.035*	–1.068	*0.011*	–0.743	*0.023*	–0.556	*0.038*	–0.787	*0.011*
Age^2	0.077	*0.001*	0.077	*0.004*	0.120	*0.001*	0.083	*0.003*	0.066	*0.004*	0.090	*0.001*
Education	–0.245	*0.012*	–0.235	*0.037*	–0.256	*0.011*	–0.308	*0.027*	–0.631	*0.117*	–0.410	*0.013*
Place of birth within EU	0.033*	*0.095*	–0.162*	*0.275*	–0.288	*0.049*	0.193*	*0.197*	–0.062*	*0.172*	0.144*	*0.243*
Foreigner	–0.111*	*0.092*	0.629	*0.212*	0.383	*0.033*	–0.214	*0.102*	0.304*	*0.232*	0.033*	*0.224*
N *(weighted)*	26 728	*(25 572)*	11 878	*(3 409)*	36 908	*(37 506)*	13 496	*(6 922)*	15 292	*(1 921)*	25 429	*(37 603)*
Log Likelihood	–13 306		–1 497.1		–15 768		–3 470.2		–1 079.1		–18 909	

	Luxembourg		Netherlands		Norway		Portugal		Sweden		United Kingdom	
Constant	1.569	*0.297*	0.139	*0.039*	0.144	*0.082*	0.766	*0.046*	0.697	*0.059*	0.250	*0.025*
Gender	–0.894	*0.187*	–0.697	*0.031*	–0.324	*0.058*	–0.630	*0.039*	–0.207	*0.042*	–0.468	*0.017*
Age	–0.920	*0.129*	–0.457	*0.019*	–0.460	*0.039*	–0.805	*0.025*	–0.732	*0.029*	–0.332	*0.011*
Age^2	0.106	*0.014*	0.065	*0.002*	0.052	*0.004*	0.089	*0.003*	0.073	*0.003*	0.040	*0.001*
Education	–0.263	*0.130*	–0.408	*0.022*	–0.283	*0.045*	–0.182	*0.035*	–0.248	*0.030*	–0.487	*0.013*
Place of birth within EU	–0.220*	*0.285*	–0.407	*0.110*	–0.024*	*0.232*	–0.002*	*0.063*	0.056*	*0.091*	–0.278	*0.071*
Foreigner	–0.042*	*0.269*	0.886	*0.071*	0.192*	*0.192*	0.037*	*0.167*	0.542	*0.091*	0.538	*0.052*
N *(weighted)*	5 883	*(277)*	16 826	*(10 552)*	9 486	*(2 786)*	10 896	*(6 076)*	9 314	*(5 493)*	29 895	*(32 855)*
Log Likelihood	–128.6		–4 644.7		–1 193.3		–2 831.9		–2 356.7		–14 878	

a) Standard errors are in italic. Non significant variables at 5% level are identified with an asterisk.
Sources: Labour Force Surveys, data provided by Eurostat, calculations by the Secretariat (OECD).

Table 5.B.2. Estimation of the probability to be employed in some European countries (PROBIT)

	Austria		Belgium		Switzerland		Czech Republic		Germany		Denmark	
Constant	1.430	*0.114*	0.274	*0.104*	1.517	*0.112*	0.155	*0.095*	1.235	*0.034*	1.145	*0.107*
Gender	–0.008	*0.071*	0.264	*0.058*	0.100	*0.084*	0.177	*0.052*	0.041	*0.019*	0.129	*0.080*
Age	0.026	*0.055*	0.304	*0.050*	0.142	*0.058*	0.242	*0.042*	0.002	*0.015*	0.132	*0.058*
Age^2	–0.002	*0.007*	–0.024	*0.006*	–0.012	*0.007*	–0.018	*0.005*	–0.005	*0.002*	–0.011	*0.007*
Education	0.273	*0.065*	0.359	*0.038*	0.157	*0.066*	0.581	*0.059*	0.264	*0.015*	0.165	*0.063*
Place of birth within EU	0.075*	*0.273*	0.369	*0.139*							–0.009*	*0.336*
Foreigner	–0.285	*0.105*	–0.719	*0.098*	–0.487	*0.088*	–0.062	*0.350*	–0.313	*0.029*	–0.425	*0.226*
N *(weighted)*	13 106	*(3 825)*	7 850	*(4 332)*	8 626	*(3 847)*	14 682	*(5 081)*	62 169	*(37 777)*	5 646	*(2 834)*
Log Likelihood	–714.0		–1 161.6		–505.9		–1 378.4		–10 976		–555.3	

	Spain		Finland		France		Greece		Ireland		Italy	
Constant	0.024	*0.038*	0.173	*0.090*	0.147	*0.038*	–0.076	*0.083*	1.105	*0.275*	–0.254	*0.447*
Gender	0.490	*0.025*	0.107	*0.067*	0.220	*0.021*	0.490	*0.053*	–0.053	*0.116*	0.367	*0.023*
Age	0.254	*0.019*	0.314	*0.048*	0.270	*0.018*	0.370	*0.040*	0.051	*0.075*	0.419	*0.019*
Age^2	–0.017	*0.002*	–0.026	*0.006*	–0.019	*0.002*	–0.024	*0.005*	–0.002	*0.009*	–0.028	*0.002*
Education	0.134	*0.015*	0.316	*0.049*	0.293	*0.015*	0.092	*0.038*	0.222	*0.208*	0.172	*0.018*
Place of birth within EU	–0.070*	*0.119*	0.093*	*0.324*	0.462	*0.066*	–0.232*	*0.259*	–0.188*	*0.269*	0.099*	*0.445*
Foreigner	0.091*	*0.116*	–0.652	*0.261*	–0.576	*0.042*	0.094*	*0.132*	–0.062*	*0.398*	0.435*	*0.420*
N *(weighted)*	25 685	*(16 223)*	11 327	*(2 623)*	34 432	*(25 787)*	12 471	*(4 657)*	14 475	*(1 158)*	24 760	*(22 765)*
Log Likelihood	–6 597.9		–864.2		–8 877.2		–1 420.6		–300.0		–7 293.6	

	Luxembourg		Netherlands		Norway		Portugal		Sweden		United Kingdom	
Constant	1.318	*0.791*	1.147	*0.069*	0.968	*0.142*	1.171	*0.092*	0.764	*0.098*	0.820	*0.038*
Gender	0.259	*0.440*	0.274	*0.056*	–0.018	*0.112*	0.112	*0.065*	–0.102	*0.058*	–0.167	*0.026*
Age	0.172	*0.382*	0.175	*0.038*	0.374	*0.078*	0.202	*0.047*	0.205	*0.045*	0.203	*0.017*
Age^2	–0.010	*0.047*	–0.016	*0.005*	–0.027	*0.010*	–0.017	*0.005*	–0.016	*0.005*	–0.015	*0.002*
Education	0.262	*0.331*	0.259	*0.041*	0.099	*0.092*	0.053	*0.052*	0.252	*0.043*	0.369	*0.021*
Place of birth within EU	0.272	*0.618*	0.463*	*0.223*	–0.039*	*0.425*	–0.004*	*0.106*	0.180*	*0.140*	0.089*	*0.108*
Foreigner	–0.439*	*0.611*	–0.693	*0.128*	–0.330*	*0.321*	–0.529	*0.211*	–0.631	*0.125*	–0.355	*0.083*
N *(weighted)*	4 821	*(172)*	15 336	*(7 819)*	8 954	*(2 269)*	10 161	*(4 434)*	8 499	*(4 316)*	28 450	*(26 022)*
Log Likelihood	17.6		–1 143.4		–279.9		–853.2		–1 109.8		–5 593.8	

a) Standard errors are in italic. Non significant variables at 5% level are identified with an asterisk.
Sources: Labour Force Surveys, data provided by Eurostat, calculations by the Secretariat (OECD).

Annex 5.C

Immigration and unemployment

Table 5.C.1. Review of the main studies concerning immigration and unemployment

Reference	Country	Data	Model	Main findings
Muller and Espenshade **1985** "The fourth wave: California's newest immigrants"	United States	◆ 1970 and 1980 censuses in 247 urban areas and sub-sample of 51 regions where Mexican immigration is greatest ➢ Proportion of persons of Mexican origin in the total population	Estimating the unemployment rate for Blacks as a function of the proportion of Hispanics, trends in the total population, the percentage of Blacks with secondary education and the white unemployment rate	No effect from immigration of Mexican origin on the unemployment rate for the Black population in spite of the fact that labour supply by both communities is similar
Withers and Pope 1985 *"Immigration and unemployment"*	Australia	◆ Quarterly longitudinal data for the period 1948-1982 ➢ Net immigration and migration (entry/exit) by permanent or long-stay residents	1. Granger causality test on unemployment and immigration series 2. Other estimations of the unemployment rate allowing for structural factors (Models 1 and 2: job vacancies and unemployment benefit) or cyclical factors (Model 3: real wages, capacity utilisation, demand index, etc.)	– No significant immigration effect on unemployment was identified in any of the cases. A significant and slightly negative effect from immigration is however found in Model 3 (elasticity close to – 0.2) – The authors do find a systematic adverse effect from unemployment on the net immigration flow and on immigrant inflows
Card **1990** *"The impact of the Mariel boatlift on the Miami labor market"*	United States	Examines the impact of the arrival of some 125 000 Cubans, largely unskilled, in May 1980 in Florida. The Mariel Flow increased the population of Miami by 7%. Data from the Current Population Survey.		Apparently Cubans alone *(i.e.* neither unskilled other Hispanics, Blacks or Whites) were significantly affected by this flow. But the growth of Miami's population was lower, indicating a fall from other sources of immigration
Altonji and Card **1991** *"The effects of immigration on the labor market outcomes of less-skilled natives"*	United States	◆ 1970 and 1980 censuses in 120 cities ➢ 19-64-year-olds not in education Proportion of immigrants in the total population	Estimation of the participation rate, employment rate and weekly wages of unskilled native workers. The migration variable was used to check any endogenous effects	– Very slightly significant positive effect of the migration variable on employment, but negative on wages (elasticity 1.2)
Hunt **1992** *"The impact of the 1962 repatriates from Algeria on the French labor market"*	France	Review of the impact of the repatriation of 900 000 settlers (*pieds noirs*) from Algeria in 1962. The total labour force was raised by some 1.6%. Instrumental variables are used to check incomers' choice of location.		The author estimates that an additional percentage point in the proportion of returnees in the labour force reduced regional wages by 0.8 of a point and increased the native unemployment rate by 0.2 of a point.
Pope and Withers **1993** *"Do migrants rob jobs? Lessons of Australian history, 1861-1991"*	Australia	◆ Annual longitudinal data for the period 1861-1981 ➢ Net immigration rate	Estimation of a disequilibrium model including 4 endogenous variables (unemployment rate for natives, real wages of natives, net migration rate and capacity utilisation). The main explanatory variables include an indicator for foreigners' human capital, the level of unemployment benefit, union membership, real national expenditure, expected rate of growth in money supply and dummies for various historical periods.	A negative effect of immigration on unemployment, particularly marked in the most recent period (post-second world war) though observed in earlier periods as well. But the lagged effect of immigration on unemployment is positive, partly (but only partly) offsetting the initial effect as immigrants enter the labour market and adjust their consumption.
Simon, Moore and Sullivan **1993** *"The effect of immigration on aggregate native unemployment: an across-city estimation"*	United States	◆ Aggregate data for main American cities for the period 1960-1977 ➢ Annual rate of immigration per city	Estimation of the impact of immigration with various time-lags on the levels or changes in unemployment	Regression analysis using immigration lagged by one year show no significant effect on the unemployment rate. A very slightly positive effect is obtained when changes in unemployment rates are considered over two years.

Table 5.C.1. **Review of the main studies concerning immigration and unemployment** *(cont.)*

Reference	Country	Data	Model	Main findings
Marr and Siklos **1994** *"The link between immigration and unemployment in Canada"*	Canada	◆ Quarterly longitudinal data covering the period 1961-1990 ➢ Number of immigrants, all categories combined	Estimation of a non-parametric model examining the unemployment rate as a function of the number of immigrants, the money supply, GDP and an energy cost indicator. Two periods are considered: 1961-1978 and 1978-1985	Over the period 1961-78 no immigration effect on unemployment is found. Over the more recent period, however, the authors show that past immigration significantly affects the current unemployment rate. These findings may in part reflect the change in migration policy between the two periods.
Muhleisen and Zimmermann **1994** *"A panel analysis of job changes and unemployment"*	Germany	◆ Individual data from the German Socio-Economic Panel between 1982 and 1989, including only private-sector male employees aged 17-52 in 1982. ➢ Proportion of foreigners in local industry	Estimation of a multi-period Probit model to determine the probability of an individual being unemployed or changing jobs as a function of his/her individual characteristics and various local factors including a variable for the proportion of foreigners.	The authors rule out the hypothesis that the proportion of foreigners in local employment may have an impact on worker mobility or exposure to unemployment. They also show that foreigners are not significantly distinct from natives when all their individual characteristics are taken into account.
Carrington and de Lima **1996** *"The impact of 1970s repatriates from Africa on the Portuguese labor market"*	Portugal	Impact of the return of Angolan nationals to Portugal (*retornados*) in the mid-1970s. Over three years some 600 000 people arrived in Portugal, largely in Lisbon, Porto and Setubal, increasing the total population by some 10%.		Given that the inflow coincided with a cyclical downturn in Portugal, the authors check against economic trends in Spain and find that additional 5% immigration between 1963 and 1981 had no instantaneous effect but a lagged effect equivalent to an additional 1.5 percentage points unemployment.
Diaz-Emparanza and Espinosa **2000** *"Análisis de la relación entre la inmigración internacional y el desempleo"*	Spain	◆ Longitudinal monthly data covering the period 1981-1999 ➢ Work permit series adjusted for the 1991 regularisation programme	Estimation of a VAR model and short-term causality test	The two series of data are I(1) with different lags and are not co-integrated. There is accordingly no long-term relation between immigration and unemployment. But in the short term the authors identify an effect for immigration, though it is negligible.
Gross **2000** *"Three million foreigners, three million unemployed? Immigration and the French labor market"*	France	◆ Quarterly longitudinal data between 1974-1995 adjusted for the 1981 regularisation programme ➢ Rates of worker immigration and family immigration	1. Long-term relation estimated using a VAR model with four variables: unemployment rate, real wages, female participation rate and migration 2. Short-term relation estimated by an error-correction model where the migration variable is assumed to be exogenous	Immigration has a strong adverse effect on unemployment over the long term (even allowing for family immigration) and a positive but very slight effect in the short term

Annex 5.D

Skilled foreign workers

Table 5.D.1. Eligibility criteria for recruitment and residence of skilled foreign workers in some OECD countries

Main categories of workers by country	General admission conditions and specific admissions	Availability of domestic workers as grounds for refusal	Quotas	Authorised length of stay and possibility for renewal	Possibility for family reunification
Australia					
1. Permanent immigration programmes					
1.1. Skilled-Independent 1.2. Skilled-Australian Sponsored	• Generally post-secondary qualifications but in a small number of cases substantial work experience may be acceptable. Threshold requirements on skill, work experience, age and English language ability. • Points test. Applicants are awarded points according to age, skill, English language ability and work experience. Additional points are awarded for applicants whose skills are in short supply in Australia, *e.g.* information technology, accountancy and nursing as well as for spouse skills, Australian qualifications, Australian work experience, capital and language skills other than English, and where applicable, for family links. • Sponsorship (only for the category "Skilled Australian Sponsored") by a relative who is an Australian citizen or permanent resident[a].	No	No. Planning levels adjusted subject to demand and economic and labour market needs.	Permanent	Spouses including *de facto* partners and dependent children receive a visa at the same time as the skilled applicant as part of the family unit. Parents of the skilled applicant may be separately sponsored for permanent entry within capped numbers.
2. Temporary immigration programmes *(Economic Stream)*[b]					
Business entry visas and other temporary visas for skilled workers	Nominated by the employer	Yes for non-key activities (except for skills that are in shortage). This is not required for key activities.	No	Business entry visa: up to 4 years. Other temporary visas for skilled workers: up to 2 years. No restrictions on renewal.	Members of the family unit may be granted visas to join temporary residence visa holders in Australia. The application can be separate or combined with the main applicant.
Canada					
1. Permanent immigration programmes					
1.1. Skilled workers	Objective of post-secondary educational level as minimum. Selection test that awards points on the basis of criteria as level of education, linguistic knowledge, skills and experience. Family members of a person who has already settled in Canada receive supplementary points.	No	No but planning ranges are given annually for each immigration category.	Permanent	Immediate family members may accompany the principal applicant or they may be sponsored at a later date.
1.2. Business immigrants (investors, entrepreneurs, self-employed)	Investors must make a minimum investment in a Canadian business; entrepreneurs and self-employed must be able to create jobs in Canada.	No		Permanent	Immediate family members can accompany the principal applicant or they may be sponsored at later date.
2. Temporary immigration programmes					
2.1 Highly skilled temporary workers	Established by employer to Canadian standards.	Yes, even if there are many exceptions	No	Three years maximum (renewable)	Yes. Applications may be made for employment authorization (no validation required).

Table 5.D.1. **Eligibility criteria for recruitment and residence of skilled foreign workers in some OECD countries** *(cont.)*

Main categories of workers by country	General admission conditions and specific admissions	Availability of domestic workers as grounds for refusal	Quotas	Authorised length of stay and possibility for renewal	Possibility for family reunification
2.2. Special pilot project for professionals in the field of software development	Post-secondary educational level	No	No	Three years maximum (renewable)	Yes, but not the right to work.
2.3. Temporary workers within NAFTA programme or the Canada-Chile Free Trade Agreement	Post-secondary educational level (list of occupations)	No	No	One year (renewable)	Yes, but not the right to work.
France					
IT specialists (simplified procedure) and other highly skilled temporary workers	5 tertiary educational level years (or equivalent skill) and must earn minimum of 180 000 FF annually.	Yes except for jobs in IT and for those who earn more than 23 000 FF a month.	No	9 months (renewable). Total of 5 years.	Yes, application may be made for a one-year visa and a further application for family reunification.
Germany					
Special programme for IT workers ("Green card" programme)	University or polytechnic level of education or an annual salary higher than 100 000 DM.	Yes	20 000 (evaluation of the programme after 10 000).	5 years maximum.	Yes
Japan					
Engineers and specialists	College degree or at least 10 years work experience (3 years in some specific cases) Salary must be equivalent to that of a Japanese national worker in the same conditions.	No	No	1 year or 3 years (renewable).	Yes but family members are not allowed to work without authorisation.
Korea					
Professionals and technicians[c]	At least 5 years work experience in IT or master's degree level with at least 2 years work experience in the related field.	No	No	Duration of stay is now permanent	Yes
New Zealand					
1. Permanent residents					
1.1. General Skills Category[d]	Points test. Points are awarded for age, qualifications, work experience, an offer of employment and some settlement factors (a family sponsor, settlement funds, spousal qualifications and New Zealand work experience). A minimum standard of English language ability must be demonstrated.	No	A "target" on the number of residence approvals is set annually by the government.	Permanent	Spouses/partners and dependent children may be included within the principal applicant's residence application and receive full residence rights along with the principal applicant. Once resident in New Zealand, migrants may sponsor their parents, siblings and adult children for residence provided they meet the policy eligibility criteria under the Family Category within residence policy.
1.2. Business immigration (entrepreneurs, investors, employees of businesses relocating)	A minimum standard of English language ability must be demonstrated by all applicants. Each category has separate eligibility criteria.	Idem	Idem	Idem	Idem

Table 5.D.1. **Eligibility criteria for recruitment and residence of skilled foreign workers in some OECD countries** *(cont.)*

Main categories of workers by country	General admission conditions and specific admissions	Availability of domestic workers as grounds for refusal	Quotas	Authorised length of stay and possibility for renewal	Possibility for family reunification
2. Temporary workers					
2.1. Work permit holders	Applicants must have an offer of employment in New Zealand.	Yes. A *Labour Market Shortages List*, which contains a list of occupations *prima facie* in shortage, is being piloted. The list is compiled regionally and updated every quarter. If an occupation is deemed to be in shortage, no labour market check is required.[e]	No	Issued for the period for which employment is offered but cannot exceed 3 years (renewable).	Work permit holders may be accompanied by their spouse/ partner and dependent children. Spouses and partners of long term work permit holders may also apply for a work permit.
2.2. Long term business visa holders	Applicants must submit a business proposal, which is assessed by an organisation with business expertise for its viability.	No	No	3 years, renewable once.	Idem
Norway					
Work permit delivered to workers with special skills	Usually at least 2 years of tertiary educational level. Special skills obtained through work practice may be considered. Applicants must hold a job offer by the employer or a standardised contract of service.[f]	Yes, the skill must be absolutely necessary to the activity.	No	1 year (renewable). After 3 years, a permanent permit may be issued.	Yes
Switzerland					
Skilled workers (outside EEA[g])	Skills do not refer to a minimum educational level but to skills that are needed and evaluated locally as well as the post to be occupied by the worker. The wage and conditions of employment must be identical to those that would be accorded to a Swiss occupying the same post.	Yes	Yes, locally	Depends on the sector of activity	Depends on the type of the residence permit
United Kingdom					
Simplified procedure for some highly skilled workers *(shortage occupation list)*, including some IT or communication specialists. Pilot project that allows people of outstanding ability to apply for entry and thereafter to search for employment	UK degree level qualification or higher national diploma plus one year of experience or at least 3 years of work experience in the field for which the permit has been delivered	Yes, not applicable in case of renewal[h]	No	The maximum period has been extended to 5 years. After 4 years, the worker has the right of settlement (indefinite leave to remain) if he/she is still in employment.	Yes

Table 5.D.1. Eligibility criteria for recruitment and residence of skilled foreign workers in some OECD countries *(cont.)*

Main categories of workers by country	General admission conditions and specific admissions	Availability of domestic workers as grounds for refusal	Quotas	Authorised length of stay and possibility for renewal	Possibility for family reunification
United States					
1. Permanent immigration					
Employment-based immigration (Green card system for professionals with advanced degrees in sciences, art or business, priority workers and other skilled workers)		Yes	Generally limited to 140 000 annual entries (including family members)	Permanent	Yes
2. Temporary immigration					
2.1. H1B programme	• Bachelor degree or 4 years of study at the college level. 3 years of relevant experience can count as 1 year of college. • Having an employment offer at the same conditions as nationals.	No	Yes, 195 000 for the next 3 years. Jobs in non-profit-making organisations and universities are not included in this quota.	6 years. Residence allowed whilst immigrant application being considered.	Yes, but family members are not allowed to work without authorisation.
2.2. Temporary skilled immigrants accepted within NAFTA programme	Bachelor degree or 4 years of study at the college level. 3 years of relevant experience can count as 1 year of college.	No	No, except a quota for Mexican professionals (5 500) until January 1st 2004.	1 year renewable indefinitely.	Yes

a) Applicants who meet the minimum skill, age and English language requirements, but who may not meet the points test can be eligible in the Skilled-Regional Sponsored category if they are sponsored by relatives living in a designated area (Sydney, Newcastle, Wollongong, Perth, Brisbane, the Sunshine Coast and the Gold Coast are not designated areas).
b) Other more limited programmes (Labour Agreements, Regional Headquarters Agreements) allow employers to negociate with the government the temporary entry (generally for 3 years) of skilled workers.
c) Immigration and emigration laws have recently been revised to facilitate the entry of personnel from these categories. More deregulation should promote the entry of IT specialists.
d) IT specialists who do not have the necessary qualifications for entry to New Zealand under the General Skills Category may benefit from some specific arrangements. They may be exempt from those requirements where they have relevant work experience, an offer of employment in New Zealand and their application is supported by the Information Technology Association of New Zealand (ITANZ). Similar measures are expected to be implemented in July 2001 for other skilled workers in sectors experiencing shortages.
e) IT specialists are not subject to the usual labour market test.
f) The application for a work permit must be lodged from the home country. The Public Employment Service provides assistance to employers who want to recruit staff members from European countries (excluding Nordic countries), especially for doctors, dentists, nurses and engineers. Nordic nationals do not need a permit to work in Norway. Other EU nationals only need an EU residence permit that may be issued while being in Norway.
g) No minimum skill level is imposed for EEA workers. The free movement of persons between Switzerland and the European Union should enter into force in 2002.
h) Fast track procedure (50% of applications are clearer within a week and 90% in 4 weeks).

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Statistical Annex

Sources and definitions

An important source for the statistics in these tables is Part III of OECD, *Labour Force Statistics*, 1980-2000 (forthcoming), and the OECD *Labour Market Statistics* CD-ROM (forthcoming). Users can refer to notes and sources published in OECD, *Labour Force Statistics*, 1979-1999.

Sources and definitions are otherwise specified at the bottom of each table.

The data on employment, unemployment and the labour force are not always the same as the series used for policy analysis and forecasting by the OECD Economics Department, reproduced in Tables 1.2 and 1.3.

Conventional signs

.. Data not available

. Decimal point

| Break in series

- Nil or less than half of the last digit used

Note on statistical treatment of Germany

In this statistical annex, data up to end-1990 are for western Germany only; unless otherwise indicated, they are for the whole of Germany from 1991 onwards.

Table A. **Standardized unemployment rates in 25 OECD countries**

As a percentage of total labour force

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
Australia	6.9	9.6	10.8	10.9	9.7	8.5	8.5	8.5	8.0	7.2	6.6
Austria	..	..	..	4.0	3.8	3.9	4.3	4.4	4.5	4.0	3.7
Belgium	6.7	6.6	7.2	8.8	10.0	9.9	9.7	9.4	9.5	8.8	7.0
Canada	8.1	10.3	11.2	11.4	10.4	9.4	9.6	9.1	8.3	7.6	6.8
Czech Republic	..	..	..	4.4	4.4	4.1	3.9	4.8	6.5	8.8	8.9
Denmark	7.7	8.4	9.2	10.2	8.2	7.2	6.8	5.6	5.2	5.2	4.7
Finland	3.2	6.6	11.6	16.4	16.7	15.2	14.5	12.6	11.4	10.2	9.8
France	9.0	9.5	10.4	11.7	12.3	11.7	12.4	12.3	11.8	11.2	9.5
Germany[a]	4.8	4.2	4.5	7.9	8.4	8.2	8.9	9.9	9.3	8.6	8.1
Greece	..	..	7.9	8.6	8.9	9.2	9.6	9.8	10.9	11.6	11.1
Hungary	..	..	9.9	12.1	11.0	10.4	10.1	8.9	8.0	7.1	6.5
Ireland	13.4	14.8	15.4	15.6	14.4	12.3	11.7	9.9	7.5	5.6	4.2
Italy	9.0	8.6	8.9	10.2	11.2	11.6	11.7	11.7	11.8	11.3	10.5
Japan	2.1	2.1	2.2	2.5	2.9	3.1	3.4	3.4	4.1	4.7	4.7
Korea	..	..	..	..	..	..	..	..	..	..	4.3
Luxembourg	1.7	1.7	2.1	2.6	3.2	2.9	3.0	2.7	2.7	2.3	2.2
Netherlands	6.2	5.8	5.6	6.6	7.1	6.9	6.3	5.2	4.1	3.3	2.8
New Zealand	7.8	10.3	10.3	9.5	8.2	6.3	6.1	6.6	7.5	6.8	6.0
Norway	5.3	5.6	6.0	6.1	5.5	5.0	4.9	4.1	3.3	3.2	3.5
Poland	..	..	..	14.0	14.4	13.3	12.3	11.2	10.6	..	16.1
Portugal	4.8	4.2	4.3	5.7	7.0	7.3	7.3	6.8	5.2	4.5	4.2
Spain	16.3	16.4	18.4	22.7	24.1	22.9	22.2	20.8	18.8	15.9	14.1
Sweden	1.7	3.1	5.6	9.1	9.4	8.8	9.6	9.9	8.3	7.2	5.9
Switzerland	..	2.0	3.1	4.0	3.8	3.5	3.9	4.2	3.5	3.0	..
United Kingdom	7.1	8.9	10.0	10.5	9.6	8.7	8.2	7.0	6.3	6.1	5.5
United States	5.6	6.8	7.5	6.9	6.1	5.6	5.4	4.9	4.5	4.2	4.0
European Union[b]	..	8.2	9.2	10.7	11.1	10.7	10.8	10.6	9.9	9.2	8.3
OECD Europe[b]	..	..	..	10.7	11.0	10.5	10.5	10.3	9.7	9.3	8.8
Total OECD[b]	..	..	..	8.0	7.9	7.5	7.4	7.2	7.1	6.8	6.4

a) Up to and including 1992, western Germany; subsequent data concern the whole of Germany.

b) For above countries only.

Note: In so far as possible, the data have been adjusted to ensure comparability over time and to conform to the guidelines of the International Labour Office. All series are benchmarked to labour-force-survey-based estimates. In countries with annual surveys, monthly estimates are obtained by interpolation/extrapolation and by incorporating trends in administrative data, where available. The annual figures are then calculated by averaging the monthly estimates (for both unemployed and the labour force). For countries with monthly or quarterly surveys, the annual estimates are obtained by averaging the monthly or quarterly estimates, respectively. For several countries, the adjustment procedure used is similar to that of the Bureau of Labor Statistics, U.S. Department of Labor. For EU countries, the procedures are similar to those used in deriving the Comparable Unemployment Rates (CURs) of the Statistical Office of the European Communities. Minor differences may appear mainly because of various methods of calculating and applying adjustment factors, and because EU estimates are based on the civilian labour force.

Source: OECD, *Quarterly Labour Force Statistics*, No. 1, 2001.

Table B. **Employment/population ratios, activity rates and unemployment rates by sex for persons aged 15-64 years[a]**

Both sexes

Percentages

	Employment/population ratio						Labour force participation rate						Unemployment rate					
	1990	1996	1997	1998	1999	2000	1990	1996	1997	1998	1999	2000	1990	1996	1997	1998	1999	2000
Australia	67.9	67.3	66.3	67.2	67.7	69.1	73.0	73.6	72.4	73.0	72.9	73.8	7.0	8.5	8.5	7.9	7.0	6.3
Austria	..	67.3	67.2	67.4	68.2	67.9	..	71.1	70.9	71.3	71.6	71.3	..	5.3	5.2	5.5	4.7	4.7
Belgium	54.4	56.3	57.0	57.3	58.9	60.9	58.7	62.2	62.6	63.2	64.6	65.2	7.3	9.5	9.0	9.4	8.7	6.6
Canada	70.3	67.3	68.0	68.9	70.1	71.1	76.6	74.6	74.9	75.2	75.9	76.3	8.2	9.7	9.2	8.4	7.6	6.9
Czech Republic	..	69.3	68.7	67.5	65.9	65.2	..	72.1	72.1	72.2	72.2	71.6	..	3.9	4.8	6.5	8.7	8.8
Denmark	75.4	74.0	75.4	75.3	76.5	76.4	82.4	79.5	79.8	79.3	80.6	80.0	8.5	6.9	5.4	5.1	5.2	4.5
Finland	74.1	61.9	62.8	64.0	66.0	67.0	76.6	72.5	72.1	72.4	73.6	74.3	3.2	14.7	12.8	11.6	10.3	9.9
France	59.9	59.2	58.8	59.4	59.8	61.1	66.0	67.4	67.1	67.4	67.8	68.0	9.2	12.2	12.4	11.9	11.8	10.1
Germany	64.1	64.4	64.0	64.4	64.9	66.3	68.4	70.7	71.0	71.0	71.2	72.2	6.2	8.9	9.9	9.3	8.7	8.1
Greece	54.8	54.9	54.8	55.6	55.4	55.9	59.1	61.0	60.8	62.5	62.9	63.0	7.2	9.9	9.8	11.0	12.0	11.3
Hungary	..	52.7	52.7	53.8	55.7	56.4	..	58.5	57.8	58.4	59.9	60.2	..	9.9	8.7	7.8	7.0	6.4
Iceland[b,c]	79.9	80.4	80.0	82.2	84.2	84.6	82.1	83.6	83.1	84.5	85.9	86.6	2.7	3.7	3.8	2.7	1.9	2.3
Ireland	52.3	54.4	56.1	59.8	62.4	64.5	60.2	63.4	62.7	65.0	66.3	67.4	13.2	14.2	10.5	7.9	5.8	4.4
Italy	53.9	50.6	50.5	51.8	52.5	53.4	59.8	57.7	57.7	59.0	59.6	59.9	9.9	12.3	12.5	12.3	11.8	11.0
Japan	68.6	69.5	70.0	69.5	68.9	68.9	70.1	72.0	72.6	72.6	72.4	72.5	2.2	3.5	3.5	4.2	4.9	5.0
Korea	61.2	63.8	63.7	59.5	59.7	61.6	62.8	65.1	65.4	64.0	63.9	64.3	2.5	2.1	2.7	7.0	6.5	4.2
Luxembourg	59.1	59.1	59.9	60.2	61.6	62.7	60.1	61.1	61.5	61.9	63.1	64.2	1.6	3.3	2.5	2.8	2.4	2.4
Mexico[c]	58.0	59.1	61.1	61.4	61.2	60.9	59.9	61.9	63.3	63.2	62.5	62.3	3.1	4.5	3.5	3.0	2.1	2.2
Netherlands	61.1	65.4	67.5	69.4	70.9	72.9	66.2	69.9	71.5	72.6	73.6	74.9	7.7	6.5	5.6	4.4	3.6	2.7
New Zealand	67.3	71.1	70.5	69.5	70.0	70.7	73.0	75.8	75.6	75.2	75.2	75.2	7.8	6.2	6.7	7.6	6.9	6.1
Norway[b]	73.1	75.3	77.0	78.3	78.0	77.8	77.1	79.2	80.2	80.9	80.6	80.7	5.3	4.9	4.0	3.2	3.2	3.5
Poland	..	58.4	58.8	58.9	57.5	55.0	..	66.9	66.4	66.1	65.9	65.8	..	12.7	11.5	10.9	12.8	16.4
Portugal	65.5	62.3	63.4	66.8	67.4	68.1	68.8	67.5	68.2	70.3	70.9	71.0	4.8	7.7	6.9	4.9	4.9	4.1
Slovak Republic	..	65.4	64.1	63.2	60.6	59.0	..	73.4	73.3	73.3	73.3	73.5	..	10.9	11.5	12.3	16.2	18.7
Spain[b]	51.1	48.2	49.5	51.2	53.8	56.1	60.9	62.0	62.5	63.1	63.9	65.3	16.1	22.1	20.7	18.8	15.9	14.1
Sweden[b]	83.1	71.6	70.7	71.5	72.9	74.2	84.6	79.5	78.7	78.1	78.5	78.9	1.8	10.0	10.4	8.4	7.1	5.9
Switzerland[c]	79.6	78.3	78.1	79.3	79.7	79.6	81.1	81.3	81.5	82.3	82.2	81.8	1.8	3.8	4.2	3.7	3.1	2.7
Turkey	54.5	52.4	51.2	51.1	51.0	48.2	59.4	56.2	54.9	54.9	55.4	51.8	8.2	6.7	6.9	7.0	7.9	6.8
United Kingdom[b]	72.4	69.9	70.8	71.2	71.7	72.4	77.8	76.1	76.2	75.9	76.3	76.6	6.8	8.2	7.1	6.2	6.1	5.6
United States[b]	72.2	72.9	73.5	73.8	73.9	74.1	76.5	77.1	77.4	77.4	77.2	77.2	5.7	5.5	5.0	4.5	4.3	4.0
European Union[d]	61.6	60.3	60.5	61.5	62.4	63.6	67.4	67.7	67.9	68.3	68.8	69.5	8.3	11.0	10.8	10.0	9.4	8.4
OECD Europe[d]	61.2	59.7	59.8	60.5	61.0	61.3	66.8	66.6	66.5	66.9	67.3	67.2	8.1	10.3	10.1	9.5	9.4	8.9
Total OECD[d]	65.2	64.5	65.0	65.2	65.4	65.7	69.5	69.7	69.9	70.0	70.1	70.1	6.0	7.4	7.1	6.9	6.7	6.3

| Indicates break in series.

a) Ratios refer to persons aged 15 to 64 years who are in employment or in the labour force divided by the working age population, or in unemployment divided by the labour force.

b) Refers to persons ages 16 to 64.

c) The year 1990 refers to 1991.

d) For above countries only.

Source: OECD, *Labour Force Statistics, 1980-2000,* Part III, forthcoming.

For Austria, Belgium, Denmark, Greece, Italy, Luxembourg, the Netherlands and Portugal data are from the European Labour Force Survey.

Table B. **Employment/population ratios, activity rates and unemployment rates by sex for persons aged 15-64 years**[a] *(cont.)*

Men

Percentages

	Employment/population ratio						Labour force participation rate						Unemployment rate					
	1990	1996	1997	1998	1999	2000	1990	1996	1997	1998	1999	2000	1990	1996	1997	1998	1999	2000
Australia	78.5	75.9	74.7	75.2	76.1	76.6	84.4	83.3	81.8	82.1	82.1	82.0	6.9	9.0	8.7	8.4	7.3	6.6
Austria	..	76.1	75.9	75.9	76.7	76.2	..	80.4	80.0	80.2	80.5	80.1	..	5.4	5.1	5.4	4.7	4.8
Belgium	68.1	66.8	67.1	67.0	67.5	69.8	71.3	72.2	72.2	72.5	73.0	73.8	4.6	7.4	7.1	7.6	7.5	5.3
Canada	77.8	73.1	73.8	74.3	75.5	76.3	84.9	81.3	81.4	81.4	82.0	82.1	8.3	10.1	9.4	8.7	7.9	7.0
Czech Republic	..	78.1	77.4	76.3	74.3	73.6	..	80.7	80.5	80.3	80.2	79.4	..	3.3	3.9	5.0	7.3	7.4
Denmark	80.1	80.5	81.3	80.2	81.2	80.7	87.1	85.3	85.2	83.5	85.0	84.0	8.0	5.6	4.6	3.9	4.5	4.0
Finland	76.7	64.3	65.2	66.8	68.4	69.4	79.6	75.1	74.6	75.1	75.9	76.5	3.6	14.4	12.5	11.1	9.8	9.2
France	69.7	66.7	66.2	66.5	66.8	68.1	75.0	74.5	74.3	74.1	74.4	74.4	7.0	10.5	10.9	10.3	10.3	8.5
Germany	75.7	72.9	72.2	72.5	73.1	74.8	80.1	79.5	79.6	79.6	79.7	81.1	5.3	8.4	9.3	8.8	8.3	7.7
Greece	73.4	72.6	71.9	71.6	70.9	71.3	76.8	77.4	76.9	77.1	76.9	77.1	4.4	6.2	6.4	7.2	7.7	7.5
Hungary	..	60.2	60.3	60.6	62.6	63.3	..	67.4	66.6	66.3	67.8	68.0	..	10.7	9.5	8.5	7.5	7.0
Iceland[b,c]	85.2	84.3	84.2	86.0	88.2	88.2	87.3	87.3	87.1	87.9	89.4	89.8	2.4	3.4	3.3	2.3	1.4	1.8
Ireland	67.8	66.6	67.6	71.4	73.5	75.6	77.7	75.8	75.6	77.8	78.2	79.1	12.8	12.1	10.6	8.2	6.1	4.5
Italy	72.0	65.3	65.0	66.7	67.1	67.6	77.0	72.3	72.2	73.7	73.7	73.8	6.5	9.7	9.8	9.6	9.0	8.4
Japan	81.3	82.1	82.4	81.7	81.0	81.0	83.0	85.0	85.4	85.3	85.3	85.2	2.1	3.5	3.5	4.3	5.0	5.1
Korea	73.9	76.7	76.0	71.7	71.5	73.3	76.2	78.6	78.2	77.8	77.1	76.9	3.0	2.4	2.8	7.9	7.3	4.8
Luxembourg	76.4	74.4	74.3	74.6	74.4	75.0	77.4	76.3	75.7	76.0	75.7	76.4	1.3	2.5	1.9	1.9	1.7	1.8
Mexico[c]	84.1	82.7	84.7	84.8	84.8	84.0	86.4	86.4	87.2	87.1	86.4	85.8	2.6	4.3	2.8	2.6	1.8	2.1
Netherlands	75.2	75.7	77.9	79.6	80.3	82.1	79.7	80.0	81.4	82.4	82.6	83.9	5.7	5.3	4.4	3.4	2.7	2.2
New Zealand	76.1	79.0	78.4	77.1	77.3	78.0	83.0	84.2	84.1	83.5	83.2	83.2	8.3	6.2	6.7	7.7	7.1	6.2
Norway[b]	78.6	80.0	81.7	82.8	82.1	81.5	83.4	84.1	85.0	85.6	85.0	84.8	5.8	4.8	3.9	3.2	3.4	3.6
Poland	..	65.2	66.1	65.8	63.6	61.2	..	73.5	73.2	72.8	72.3	71.7	..	11.3	9.8	9.5	12.0	14.6
Portugal	78.6	71.0	71.9	75.7	75.7	76.2	81.4	76.1	76.7	78.9	79.1	78.8	3.4	6.7	6.2	4.0	4.4	3.2
Slovak Republic	..	69.2	67.7	66.7	63.5	61.5	..	77.1	77.2	77.5	77.2	77.0	..	10.2	11.0	11.9	16.1	18.7
Spain[b]	71.0	63.6	64.9	67.0	69.6	71.4	80.4	77.1	77.2	77.7	78.3	79.1	11.8	17.4	15.9	13.7	11.1	9.7
Sweden[b]	85.2	73.2	72.4	73.5	74.8	76.1	86.7	81.7	81.0	80.7	80.9	81.2	1.8	10.7	10.8	8.8	7.5	6.3
Switzerland[c]	90.0	86.8	85.9	87.2	87.2	87.3	91.1	89.8	89.9	90.1	89.6	89.4	1.2	3.4	4.4	3.2	2.7	2.3
Turkey	76.9	74.9	74.7	74.1	72.8	71.2	83.6	80.5	79.9	79.6	79.1	76.4	8.0	6.9	6.5	7.0	8.0	6.8
United Kingdom[b]	82.1	76.3	77.4	78.1	78.4	79.1	88.3	84.6	84.4	83.9	84.1	84.3	7.1	9.8	8.2	6.9	6.8	6.1
United States[b]	80.7	79.7	80.1	80.5	80.5	80.6	85.6	84.3	84.2	84.2	84.0	83.9	5.7	5.4	4.9	4.5	4.1	3.9
European Union[d]	74.6	70.2	70.4	71.3	72.0	73.2	80.2	77.9	77.8	78.1	78.4	78.9	6.7	9.8	9.6	8.7	8.2	7.3
OECD Europe[d]	75.2	70.7	70.8	71.4	71.6	72.0	80.9	77.9	77.8	78.0	78.1	78.0	6.7	9.3	9.0	8.4	8.3	7.7
Total OECD[d]	78.2	75.6	75.9	76.0	76.1	76.3	82.8	81.2	81.2	81.2	81.2	81.1	5.4	6.9	6.5	6.4	6.3	5.8

Indicates break in series.

a) Ratios refer to persons aged 15 to 64 years who are in employment or in the labour force divided by the working age population, or in unemployment divided by the labour force.

b) Refers to persons ages 16 to 64.

c) The year 1990 refers to 1991.

d) For above countries only.

Source: OECD, *Labour Force Statistics, 1980-2000,* Part III, forthcoming.

For Austria, Belgium, Denmark, Greece, Italy, Luxembourg, the Netherlands and Portugal data are from the European Labour Force Survey.

Table B. **Employment/population ratios, activity rates and unemployment rates by sex for persons aged 15-64 years**[a] *(cont.)*

Women

Percentages

	Employment/population ratio						Labour force participation rate						Unemployment rate					
	1990	1996	1997	1998	1999	2000	1990	1996	1997	1998	1999	2000	1990	1996	1997	1998	1999	2000
Australia	57.1	58.7	57.8	59.2	59.3	61.6	61.5	63.8	63.0	63.9	63.6	65.5	7.2	8.0	8.1	7.3	6.7	5.9
Austria	..	58.6	58.5	59.0	59.7	59.7	..	61.8	61.8	62.5	62.7	62.5	..	5.3	5.3	5.6	4.8	4.6
Belgium	40.8	45.6	46.7	47.5	50.2	51.9	46.1	52.0	52.9	53.8	56.0	56.6	11.5	12.4	11.6	11.7	10.3	8.3
Canada	62.7	61.5	62.2	63.6	64.7	65.8	68.3	67.9	68.3	69.1	69.8	70.5	8.1	9.3	8.9	8.0	7.3	6.7
Czech Republic	..	60.6	59.9	58.7	57.4	56.9	..	63.6	63.7	64.0	64.1	63.7	..	4.7	6.0	8.2	10.5	10.6
Denmark	70.6	67.4	69.4	70.3	71.6	72.1	77.6	73.6	74.2	75.1	76.1	75.9	9.0	8.4	6.5	6.4	5.9	5.0
Finland	71.5	59.4	60.4	61.2	63.5	64.5	73.5	69.9	69.5	69.7	71.2	72.0	2.7	15.0	13.1	12.1	10.8	10.6
France	50.3	51.7	51.5	52.3	52.9	54.3	57.2	60.3	60.1	60.8	61.3	61.7	12.1	14.3	14.2	13.9	13.7	12.0
Germany	52.2	55.5	55.4	56.0	56.5	57.7	56.4	61.5	62.0	62.3	62.3	63.2	7.4	9.7	10.7	10.0	9.3	8.7
Greece	37.5	38.5	39.1	40.3	40.7	41.3	42.6	45.8	46.0	48.5	49.7	49.7	12.0	15.8	15.1	16.8	18.2	16.9
Hungary	..	45.5	45.5	47.3	49.0	49.7	..	49.9	49.3	50.8	52.3	52.7	..	8.8	7.7	6.9	6.3	5.6
Iceland[b,c]	74.5	76.5	75.6	78.3	80.2	81.0	76.8	79.8	79.1	80.9	82.3	83.3	3.0	4.1	4.4	3.3	2.5	2.8
Ireland	36.6	43.0	44.6	48.2	51.3	53.3	42.6	48.8	49.7	52.1	54.3	55.7	14.0	11.9	10.4	7.5	5.5	4.2
Italy	36.4	36.1	36.2	37.1	38.1	39.3	43.2	43.3	43.6	44.5	45.6	46.2	15.8	16.6	16.8	16.7	16.4	14.9
Japan	55.8	56.8	57.6	57.2	56.7	56.7	57.1	58.9	59.7	59.8	59.5	59.6	2.3	3.6	3.6	4.2	4.7	4.7
Korea	49.0	51.1	51.6	47.4	48.1	50.1	49.9	51.9	52.8	50.4	50.8	51.8	1.9	1.6	2.4	5.8	5.3	3.4
Luxembourg	41.4	43.6	45.4	45.6	48.5	50.0	42.5	45.7	47.1	47.6	50.2	51.7	2.5	4.7	3.7	4.2	3.3	3.2
Mexico[c]	34.2	37.4	39.7	40.0	39.6	40.1	35.7	39.3	41.7	41.5	40.7	41.2	4.3	4.9	4.7	3.6	2.7	2.5
Netherlands	46.7	54.8	56.9	58.9	61.3	63.4	52.4	59.6	61.3	62.5	64.4	65.7	10.9	8.1	7.2	5.8	4.9	3.5
New Zealand	58.5	63.4	62.7	62.1	63.0	63.5	63.2	67.5	67.2	67.1	67.4	67.5	7.3	6.1	6.7	7.4	6.6	5.9
Norway[b]	67.2	70.4	72.2	73.6	73.8	74.0	70.7	74.1	75.3	76.1	76.1	76.5	4.9	4.9	4.1	3.3	3.0	3.2
Poland	..	51.8	51.8	52.2	51.6	48.9	..	60.5	59.9	59.7	59.8	59.9	..	14.3	13.5	12.6	13.8	18.4
Portugal	53.3	54.2	55.5	58.3	59.6	60.4	57.1	59.5	60.3	62.1	63.0	63.6	6.7	8.8	7.9	6.1	5.4	5.1
Slovak Republic	..	54.6	54.0	53.5	52.1	51.5	..	62.5	62.0	61.7	62.3	63.2	..	12.7	12.9	13.2	16.4	18.6
Spain[b]	31.6	33.0	34.3	35.7	38.3	41.1	41.8	47.0	48.0	48.7	49.9	51.8	24.4	29.8	28.4	26.7	23.2	20.6
Sweden[b]	81.0	69.9	68.9	69.4	70.9	72.3	82.5	77.1	76.3	75.5	76.0	76.4	1.8	9.6	9.9	8.0	6.7	5.4
Switzerland[c]	68.7	69.3	69.8	71.0	71.8	71.6	70.6	72.3	72.7	74.2	74.5	73.9	2.6	4.2	4.0	4.3	3.6	3.2
Turkey	32.9	29.8	27.5	27.9	29.1	25.1	36.0	31.7	29.9	30.1	31.6	27.0	8.7	6.1	8.0	7.1	7.9	6.8
United Kingdom[b]	62.8	63.3	64.0	64.2	64.9	65.5	67.2	67.5	68.0	67.8	68.4	68.9	6.5	6.3	5.8	5.3	5.1	4.8
United States[b]	64.0	66.3	67.1	67.4	67.6	67.9	67.8	70.1	70.7	70.7	70.7	70.8	5.6	5.5	5.1	4.7	4.4	4.2
European Union[d]	48.2	50.0	50.5	51.4	52.5	53.9	54.2	57.1	57.6	58.2	59.0	59.8	10.9	12.4	12.3	11.7	11.0	9.9
OECD Europe[d]	48.4	50.7	51.2	52.0	52.9	53.9	54.3	57.7	58.0	58.7	59.5	60.2	10.7	12.0	11.8	11.3	11.0	10.5
Total OECD[d]	53.3	54.9	55.6	55.9	56.5	57.1	57.3	59.7	60.3	60.5	60.9	61.3	8.1	9.0	8.7	8.5	8.2	7.8

| Indicates break in series.

a) Ratios refer to persons aged 15 to 64 years who are in employment or in the labour force divided by the working age population, or in unemployment divided by the labour force.

b) Refers to persons ages 16 to 64.

c) The year 1990 refers to 1991.

d) For above countries only.

Source: OECD, *Labour Force Statistics, 1980-2000,* Part III, forthcoming.

For Austria, Belgium, Denmark, Greece, Italy, Luxembourg, the Netherlands and Portugal data are from the European Labour Force Survey.

Table C. **Unemployment, labour force participation rates and employment/population ratios by age and sex**

Both sexes

Percentages

		1990			1997			1998			1999			2000		
		15 to 24	25 to 54	55 to 64	15 to 24	25 to 54	55 to 64	15 to 24	25 to 54	55 to 64	15 to 24	25 to 54	55 to 64	15 to 24	25 to 54	55 to 64
Australia	Unemployment rates	13.2	5.1	5.4	15.9	6.6	7.2	14.5	6.3	6.1	13.5	5.4	5.8	12.3	5.0	4.0
	Labour force participation rates	70.4	79.9	44.1	66.8	79.6	45.1	67.6	80.0	46.6	68.4	79.6	46.9	69.0	80.5	49.0
	Employment/population ratios	61.1	75.8	41.8	56.2	74.4	41.9	57.8	75.0	43.7	59.2	75.3	44.2	60.5	76.5	47.1
Austria	Unemployment rates	..	..	..	7.6	4.8	5.2	7.5	5.0	6.4	5.9	4.5	4.8	6.3	4.3	6.7
	Labour force participation rates	..	..	..	58.4	83.9	30.0	58.5	84.7	29.9	58.4	85.1	30.7	56.1	85.3	31.4
	Employment/population ratios	..	..	..	54.0	79.9	28.5	54.2	80.4	28.0	54.9	81.3	29.2	52.5	81.6	29.2
Belgium	Unemployment rates	14.5	6.5	3.5	21.3	7.9	4.7	20.4	8.4	5.3	22.6	7.4	5.7	15.2	5.8	3.2
	Labour force participation rates	35.5	76.7	22.2	32.0	81.0	23.1	32.6	81.2	23.8	32.9	82.5	26.2	35.7	82.8	25.9
	Employment/population ratios	30.4	71.7	21.4	25.2	74.6	22.0	26.0	74.4	22.5	25.5	76.4	24.7	30.3	77.9	25.0
Canada	Unemployment rates	12.4	7.3	6.0	16.2	7.8	7.6	15.1	7.1	6.9	14.0	6.4	5.9	12.6	5.7	5.4
	Labour force participation rates	69.7	84.2	49.3	61.5	83.9	48.2	61.9	84.3	48.6	63.5	84.6	49.9	64.4	84.8	51.2
	Employment/population ratios	61.1	78.0	46.3	51.5	77.3	44.5	52.5	78.3	45.3	54.6	79.2	46.9	56.3	79.9	48.4
Czech Republic	Unemployment rates	..	..	..	8.6	4.1	3.6	12.4	5.5	3.8	17.0	7.5	4.8	17.0	7.7	5.2
	Labour force participation rates	..	..	..	48.3	88.7	39.7	49.1	88.5	38.6	48.3	88.6	39.4	46.1	88.4	38.2
	Employment/population ratios	..	..	..	44.2	85.0	38.3	43.0	83.7	37.1	40.1	81.9	37.5	38.3	81.6	36.3
Denmark	Unemployment rates	11.5	7.9	6.1	8.1	4.8	5.1	7.2	4.6	5.1	10.0	4.3	4.2	6.7	4.1	4.0
	Labour force participation rates	73.5	91.2	57.1	74.2	87.0	54.1	71.6	87.5	53.1	73.3	88.2	56.6	71.9	87.9	56.9
	Employment/population ratios	65.0	84.0	53.6	68.2	82.8	51.4	66.4	83.4	50.4	66.0	84.4	54.2	67.1	84.3	54.6
Finland	Unemployment rates	9.1	2.1	2.7	25.3	10.7	15.0	23.8	9.5	14.0	21.5	8.4	10.2	21.6	8.0	9.4
	Labour force participation rates	57.4	89.7	43.6	44.6	86.8	42.0	45.8	87.1	42.0	49.4	87.7	43.9	50.6	87.9	46.6
	Employment/population ratios	52.0	87.8	42.6	33.3	77.5	35.7	34.9	78.9	36.2	38.8	80.3	39.2	39.8	80.9	42.3
France	Unemployment rates	19.1	8.0	6.7	28.1	11.1	8.5	25.4	10.8	8.7	26.6	10.7	8.7	20.7	9.2	7.9
	Labour force participation rates	36.4	84.1	38.1	28.0	86.0	36.7	28.0	86.2	36.1	28.4	86.2	37.4	29.5	86.2	37.2
	Employment/population ratios	29.5	77.4	35.6	20.1	76.4	33.6	20.9	76.8	33.0	20.8	77.0	34.2	23.3	78.3	34.2
Germany	Unemployment rates	5.6	5.7	11.6	10.2	8.9	15.3	9.1	8.4	14.8	8.5	7.9	13.9	7.7	7.3	13.5
	Labour force participation rates	59.8	78.0	41.6	51.1	84.3	45.2	51.1	84.7	44.8	51.2	84.9	44.7	52.5	86.5	44.7
	Employment/population ratios	56.4	73.6	36.8	45.9	76.8	38.3	46.4	77.6	38.2	46.8	78.2	38.5	48.4	80.2	38.6
Greece	Unemployment rates	23.3	5.1	1.6	31.0	7.7	3.2	29.7	9.0	3.2	31.7	9.8	4.4	29.5	9.6	3.8
	Labour force participation rates	39.4	72.2	41.5	35.5	75.5	42.1	40.0	76.8	40.4	39.3	77.6	40.2	38.1	77.6	40.6
	Employment/population ratios	30.3	68.5	40.8	24.5	69.7	40.7	28.1	69.9	39.1	26.8	70.0	38.4	26.9	70.2	39.0
Hungary	Unemployment rates	..	..	..	15.9	7.5	5.7	13.5	6.8	4.8	12.4	6.2	2.7	12.1	5.6	3.0
	Labour force participation rates	..	..	..	37.3	75.9	18.3	40.8	75.4	17.4	40.7	77.1	19.9	39.0	77.4	22.9
	Employment/population ratios	..	..	..	31.3	70.2	17.3	35.3	70.3	16.6	35.7	72.3	19.4	34.3	73.0	22.2
Iceland[a, b]	Unemployment rates	4.9	2.2	2.1	7.7	3.0	3.1	6.0	2.1	1.6	4.4	1.4	1.4	4.7	1.7	1.7
	Labour force participation rates	59.5	90.1	87.2	60.3	91.0	86.4	65.5	90.8	88.1	68.1	92.1	87.1	71.6	92.2	85.7
	Employment/population ratios	56.6	88.1	85.4	55.7	88.2	83.7	61.6	88.9	86.7	65.1	90.9	85.9	68.3	90.6	84.2

Table C. **Unemployment, labour force participation rates and employment/population ratios by age and sex** *(cont.)*

Both sexes

Percentages

		1990			1997			1998			1999			2000		
		15 to 24	25 to 54	55 to 64	15 to 24	25 to 54	55 to 64	15 to 24	25 to 54	55 to 64	15 to 24	25 to 54	55 to 64	15 to 24	25 to 54	55 to 64
Ireland	Unemployment rates	17.7	12.5	8.4	16.2	9.6	6.2	11.7	7.3	5.1	8.5	5.3	4.2	6.4	4.0	2.5
	Labour force participation rates	50.3	68.5	42.1	45.4	74.2	42.6	48.6	76.0	43.9	50.7	77.2	45.7	51.6	78.5	46.3
	Employment/population ratios	41.4	60.0	38.6	38.1	67.1	40.0	43.0	70.5	41.6	46.3	73.1	43.7	48.2	75.3	45.2
Italy	Unemployment rates	28.9	6.6	1.8	33.6	9.6	4.4	33.8	9.8	4.7	32.9	9.5	4.9	31.5	8.8	4.7
	Labour force participation rates	46.8	72.8	32.5	38.0	72.4	28.6	38.4	73.4	29.0	38.1	73.9	28.9	38.1	74.2	28.6
	Employment/population ratios	33.3	68.0	32.0	25.2	65.5	27.3	25.4	66.2	27.7	25.5	66.9	27.5	26.1	67.7	27.3
Japan	Unemployment rates	4.3	1.6	2.7	6.6	2.8	3.9	7.7	3.4	5.0	9.3	4.0	5.4	9.2	4.1	5.6
	Labour force participation rates	44.1	80.9	64.7	48.6	82.2	66.9	48.3	82.1	67.1	47.2	81.9	67.1	47.0	81.9	66.5
	Employment/population ratios	42.2	79.6	62.9	45.3	79.9	64.2	44.6	79.2	63.8	42.9	78.7	63.4	42.7	78.6	62.7
Korea	Unemployment rates	7.0	1.9	0.8	7.7	2.1	1.1	16.0	6.3	4.0	14.2	5.8	4.5	10.2	3.7	2.6
	Labour force participation rates	35.0	74.6	62.4	34.4	76.6	64.4	31.3	75.0	61.5	31.3	74.7	60.9	31.8	75.2	59.2
	Employment/population ratios	32.5	73.2	61.9	31.7	75.0	63.7	26.3	70.3	59.0	26.8	70.4	58.1	28.5	72.4	57.6
Luxembourg	Unemployment rates	3.7	1.4	0.8	7.3	2.1	0.9	6.4	2.5	0.6	6.8	2.0	1.0	6.4	2.0	1.4
	Labour force participation rates	44.7	72.8	28.4	37.4	76.0	24.0	35.3	76.7	25.1	34.0	78.3	26.5	34.0	79.8	27.6
	Employment/population ratios	43.1	71.8	28.2	34.7	74.4	23.7	33.1	74.7	25.0	31.7	76.7	26.3	31.8	78.2	27.2
Mexico[b]	Unemployment rates	5.4	2.2	1.0	6.3	2.5	1.1	5.3	2.2	1.0	3.4	1.8	0.8	4.4	1.5	1.2
	Labour force participation rates	52.2	65.9	54.6	53.5	70.1	56.1	54.0	69.8	54.4	52.5	69.1	55.7	51.8	69.3	53.5
	Employment/population ratios	49.3	64.4	54.1	50.1	68.4	55.4	51.1	68.3	53.9	50.8	67.8	55.2	49.6	68.3	52.8
Netherlands	Unemployment rates	11.1	7.2	3.8	9.7	4.8	3.9	8.8	3.7	2.3	7.4	3.0	2.7	5.3	2.3	1.9
	Labour force participation rates	59.6	76.0	30.9	63.1	81.8	32.7	66.1	82.3	33.8	67.7	83.0	36.3	72.2	83.6	38.6
	Employment/population ratios	53.0	70.6	29.7	56.9	77.8	31.4	60.3	79.3	33.0	62.7	80.6	35.3	68.4	81.7	37.9
New Zealand	Unemployment rates	14.1	6.0	4.6	13.1	5.3	4.0	14.6	6.1	4.6	13.7	5.4	5.0	13.2	4.5	4.7
	Labour force participation rates	67.9	81.2	43.8	66.9	82.1	56.8	65.2	81.8	58.4	63.3	82.1	59.9	63.0	82.3	60.0
	Employment/population ratios	58.3	76.3	41.8	58.1	77.8	54.5	55.7	76.8	55.7	54.6	77.6	57.0	54.7	78.6	57.2
Norway[a]	Unemployment rates	11.8	4.2	2.1	10.6	3.0	1.9	9.1	2.4	1.8	9.6	2.4	1.1	10.2	2.6	1.3
	Labour force participation rates	60.5	85.9	63.1	61.6	87.7	67.3	63.8	87.9	68.4	63.9	87.6	68.0	64.7	87.6	68.0
	Employment/population ratios	53.4	82.3	61.8	55.1	85.0	66.0	57.9	85.8	67.2	57.8	85.5	67.3	57.7	85.2	67.1
Poland	Unemployment rates	..	..	..	24.7	10.0	5.3	23.2	9.5	5.9	30.0	10.8	7.7	35.2	13.9	9.4
	Labour force participation rates	..	..	..	38.3	82.9	35.5	37.3	82.9	34.3	34.7	82.6	35.2	37.8	82.4	31.3
	Employment/population ratios	..	..	..	28.8	74.7	33.6	28.6	75.0	32.3	24.3	73.7	32.5	24.6	71.0	28.4
Portugal	Unemployment rates	10.4	3.7	1.7	14.1	5.7	5.2	9.4	4.2	3.5	9.1	4.1	3.6	8.4	3.4	3.3
	Labour force participation rates	58.4	79.8	47.6	44.2	83.4	49.4	47.5	84.0	52.3	47.6	84.3	53.2	45.8	84.7	53.5
	Employment/population ratios	52.4	76.9	46.8	37.9	78.6	46.8	43.0	80.4	50.5	43.3	80.8	51.3	41.9	81.9	51.7
Slovak Republic	Unemployment rates	..	..	..	21.7	9.9	10.6	23.6	10.2	11.6	32.1	13.1	15.6	35.2	15.5	18.3
	Labour force participation rates	..	..	..	48.1	88.0	68.8	48.3	87.4	69.4	48.1	87.6	69.1	47.2	88.4	68.9
	Employment/population ratios	..	..	..	35.7	79.3	60.6	34.0	78.4	60.0	30.2	76.1	57.2	28.4	74.7	55.4

Table C. **Unemployment, labour force participation rates and employment/population ratios by age and sex** *(cont.)*

Both sexes

Percentages

		1990			1997			1998			1999			2000		
		15 to 24	25 to 54	55 to 64	15 to 24	25 to 54	55 to 64	15 to 24	25 to 54	55 to 64	15 to 24	25 to 54	55 to 64	15 to 24	25 to 54	55 to 64
Spain[a]	Unemployment rates	30.1	13.1	8.1	37.1	18.1	11.3	34.1	16.5	10.3	28.5	13.9	9.9	25.5	12.4	9.6
	Labour force participation rates	54.9	70.3	40.0	46.6	75.3	37.8	46.4	75.6	38.8	47.4	76.2	38.7	48.2	77.4	40.7
	Employment/population ratios	38.3	61.1	36.8	29.3	61.6	33.5	30.6	63.1	34.8	33.9	65.6	34.9	35.9	67.8	36.8
Sweden[a]	Unemployment rates	4.5	1.3	1.5	21.0	9.0	8.2	16.8	7.6	6.5	14.2	6.2	6.7	11.9	4.9	6.1
	Labour force participation rates	69.1	92.8	70.5	50.2	88.6	68.2	50.0	88.0	67.5	51.1	88.0	68.6	52.3	88.1	69.4
	Employment/population ratios	66.0	91.6	69.4	39.6	80.7	62.7	41.6	81.3	63.0	43.8	82.6	64.0	46.1	83.8	65.1
Switzerland[b]	Unemployment rates	3.2	1.6	1.2	6.0	4.1	2.9	5.8	3.3	3.3	5.7	2.6	2.6	4.8	2.3	2.8
	Labour force participation rates	71.6	85.9	72.0	67.0	86.9	72.8	67.2	87.9	73.9	68.6	87.5	73.6	68.3	87.4	72.0
	Employment/population ratios	69.3	84.5	71.1	62.9	83.4	70.7	63.3	84.9	71.5	64.7	85.2	71.7	65.0	85.4	70.0
Turkey	Unemployment rates	16.0	5.4	3.1	14.3	4.6	1.6	14.2	4.9	1.8	15.2	5.8	1.8	13.2	5.0	2.3
	Labour force participation rates	54.7	65.1	44.1	46.2	61.7	40.5	45.1	62.1	41.1	46.4	62.1	41.3	41.8	59.2	36.1
	Employment/population ratios	45.9	61.6	42.7	39.6	58.9	39.9	38.7	59.0	40.3	39.3	58.5	40.6	36.3	56.2	35.3
United Kingdom[a]	Unemployment rates	10.1	5.8	7.2	13.5	5.9	6.3	12.3	5.0	5.3	12.3	4.9	5.1	11.8	4.4	4.4
	Labour force participation rates	78.0	83.9	53.0	70.5	83.3	51.7	69.5	83.3	51.0	69.2	83.8	52.1	69.7	84.1	52.8
	Employment/population ratios	70.1	79.0	49.2	61.0	78.4	48.5	61.0	79.1	48.3	60.7	79.7	49.4	61.5	80.4	50.5
United States[a]	Unemployment rates	11.2	4.6	3.3	11.3	3.9	2.9	10.4	3.5	2.6	9.9	3.2	2.7	9.3	3.1	2.5
	Labour force participation rates	67.3	83.5	55.9	65.4	84.1	58.9	65.9	84.1	59.3	65.5	84.1	59.3	65.9	84.1	59.2
	Employment/population ratios	59.8	79.7	54.0	58.0	80.9	57.2	59.0	81.1	57.7	59.0	81.4	57.7	59.8	81.5	57.7
European Union[c]	Unemployment rates	15.8	6.8	6.4	20.5	9.3	9.4	18.7	8.7	8.9	17.6	8.2	8.5	15.6	7.3	8.0
	Labour force participation rates	54.7	78.7	41.0	46.7	81.3	40.8	47.2	81.7	40.7	47.5	82.1	41.4	48.3	82.7	41.8
	Employment/population ratios	46.1	73.4	38.4	37.1	73.8	37.0	38.3	74.6	37.1	39.1	75.4	37.8	40.8	76.6	38.5
OECD Europe[c]	Unemployment rates	15.5	6.6	5.9	19.0	8.6	8.4	17.7	8.2	8.1	17.7	8.0	8.1	16.5	7.6	8.1
	Labour force participation rates	55.0	77.4	41.9	46.1	79.6	41.7	46.3	79.9	41.6	46.5	80.1	42.2	46.4	80.2	42.0
	Employment/population ratios	46.5	72.3	39.5	37.3	72.7	38.1	38.1	73.3	38.2	38.3	73.7	38.8	38.7	74.1	38.6
Total OECD[c]	Unemployment rates	11.6	4.8	4.1	13.4	6.0	5.4	12.8	5.9	5.5	12.5	5.7	5.6	11.8	5.3	5.5
	Labour force participation rates	55.8	78.9	50.4	51.7	80.4	50.8	51.9	80.4	50.8	51.8	80.4	51.3	51.9	80.5	51.0
	Employment/population ratios	49.3	75.1	48.3	44.7	75.6	48.0	45.2	75.6	48.0	45.3	75.8	48.4	45.7	76.2	48.2

| Indicates break in series.

a) Age group 15 to 24 refers to 16 to 24.

b) The year 1990 refers to 1991.

c) For above countries only.

Source: OECD, *Labour Force Statistics, 1980-2000*, Part III, forthcoming.

For Austria, Belgium, Denmark, Greece, Italy, Luxembourg, the Netherlands and Portugal data are from the European Labour Force Survey.

Table C. **Unemployment, labour force participation rates and employment/population ratios by age and sex**

Men

Percentages

		1990			1997			1998			1999			2000		
		15 to 24	25 to 54	55 to 64	15 to 24	25 to 54	55 to 64	15 to 24	25 to 54	55 to 64	15 to 24	25 to 54	55 to 64	15 to 24	25 to 54	55 to 64
Australia	Unemployment rates	13.9	4.9	6.3	17.1	6.6	8.7	15.7	6.7	7.0	14.7	5.5	6.3	13.1	5.2	4.9
	Labour force participation rates	73.0	93.1	63.2	68.7	90.6	59.5	69.9	90.4	60.5	70.8	90.0	61.7	69.8	90.3	61.5
	Employment/population ratios	62.8	88.5	59.2	56.9	84.6	54.3	59.0	84.3	56.3	60.3	85.0	57.8	60.6	85.6	58.5
Austria	Unemployment rates	..	..	..	7.8	4.5	6.0	7.4	4.9	6.6	5.5	4.5	5.3	6.9	4.2	7.1
	Labour force participation rates	..	..	..	61.4	93.3	43.0	61.7	93.8	42.5	62.6	93.8	43.9	60.7	93.6	44.5
	Employment/population ratios	..	..	..	56.6	89.1	40.5	57.1	89.2	39.6	59.2	89.6	41.6	56.5	89.7	41.4
Belgium	Unemployment rates	10.1	4.0	3.1	17.6	6.2	4.8	18.3	6.6	5.3	22.7	6.1	4.5	12.9	4.6	3.4
	Labour force participation rates	37.0	92.2	35.4	34.7	92.1	33.9	35.7	91.7	33.9	35.5	91.8	36.8	38.7	92.1	36.3
	Employment/population ratios	33.3	88.5	34.3	28.5	86.4	32.2	29.2	85.7	32.1	27.5	86.2	35.1	33.7	87.9	35.1
Canada	Unemployment rates	13.6	7.2	6.2	17.1	8.0	7.6	16.6	7.2	7.0	15.3	6.5	6.3	13.9	5.7	5.4
	Labour force participation rates	72.2	93.1	64.3	63.5	90.9	59.6	63.5	91.0	58.8	65.3	91.1	60.7	65.9	91.1	61.0
	Employment/population ratios	62.3	86.4	60.3	52.7	83.6	55.1	52.9	84.4	54.7	55.4	85.1	56.9	56.7	85.9	57.7
Czech Republic	Unemployment rates	..	..	..	7.5	3.2	3.1	10.7	3.9	3.6	15.9	5.9	4.6	16.7	6.0	5.0
	Labour force participation rates	..	..	..	56.1	95.2	56.3	55.7	95.1	55.1	54.2	95.1	56.2	51.3	94.9	54.5
	Employment/population ratios	..	..	..	51.9	92.2	54.6	49.8	91.4	53.2	45.6	89.5	53.6	42.8	89.3	51.7
Denmark	Unemployment rates	11.4	7.5	5.2	6.6	4.1	4.4	6.7	3.2	4.2	9.5	3.7	3.2	6.5	3.5	3.9
	Labour force participation rates	76.5	94.5	69.2	77.7	92.5	63.8	71.5	91.9	61.1	76.7	92.7	61.9	75.2	91.5	64.5
	Employment/population ratios	67.8	87.4	65.6	72.5	88.7	61.0	66.7	88.9	58.5	69.5	89.3	59.9	70.3	88.3	61.9
Finland	Unemployment rates	10.4	2.5	1.8	25.5	10.4	15.0	23.2	9.0	14.0	21.0	7.9	10.9	21.2	7.2	9.3
	Labour force participation rates	58.1	92.9	47.1	45.6	89.5	44.5	46.5	90.2	44.5	49.7	90.5	45.4	50.4	90.8	48.1
	Employment/population ratios	52.1	90.6	46.3	33.9	80.2	37.8	35.7	82.1	38.3	39.3	83.4	40.1	39.8	84.1	43.7
France	Unemployment rates	15.3	5.9	6.0	24.6	9.7	8.6	21.9	9.3	8.3	24.2	9.0	8.7	18.4	7.6	7.6
	Labour force participation rates	39.6	95.4	45.8	31.4	94.8	42.0	30.9	94.5	41.3	32.1	94.1	42.6	32.7	94.1	41.6
	Employment/population ratios	33.6	89.8	43.0	23.7	85.6	38.4	24.2	85.8	37.9	24.3	85.7	38.9	26.7	87.0	38.4
Germany	Unemployment rates	5.3	4.7	9.9	10.7	8.2	14.1	9.7	7.8	13.7	9.1	7.3	12.8	8.1	6.7	12.6
	Labour force participation rates	62.0	91.2	57.7	55.3	93.4	55.7	55.7	93.6	55.2	55.7	93.9	55.1	57.1	95.8	55.2
	Employment/population ratios	58.7	86.9	52.0	49.4	85.8	47.9	50.3	86.3	47.6	50.7	87.0	48.0	52.5	89.4	48.2
Greece	Unemployment rates	15.1	3.2	1.8	22.2	4.9	3.3	21.4	5.7	2.9	23.0	6.2	4.1	22.1	6.1	3.5
	Labour force participation rates	44.1	94.3	59.5	38.7	94.6	61.0	43.5	94.4	57.5	41.3	94.5	57.1	41.0	94.3	57.3
	Employment/population ratios	37.4	91.3	58.4	30.1	89.9	59.0	34.2	89.0	55.8	31.8	88.7	54.8	31.9	88.6	55.3
Hungary	Unemployment rates	..	..	..	16.9	8.2	6.3	14.8	7.3	4.7	13.2	6.7	3.4	13.0	6.2	3.7
	Labour force participation rates	..	..	..	43.6	85.0	27.8	46.5	82.8	26.9	46.2	84.4	30.8	44.4	84.5	34.5
	Employment/population ratios	..	..	..	36.2	78.0	26.1	39.6	76.8	25.6	40.0	78.7	29.7	38.7	79.2	33.2
Iceland[a, b]	Unemployment rates	5.8	1.8	1.0	8.3	2.3	2.8	6.4	1.3	1.8	4.4	0.7	0.9	5.7	1.1	0.5
	Labour force participation rates	60.1	97.0	93.5	59.2	96.7	91.7	63.8	96.1	93.3	66.2	97.1	94.1	70.1	96.1	94.7
	Employment/population ratios	56.6	95.2	92.6	54.3	94.5	89.1	59.7	94.8	91.6	63.3	96.4	93.2	66.1	95.1	94.2

Table C. **Unemployment, labour force participation rates and employment/population ratios by age and sex** *(cont.)*

Men

Percentages

		1990			1997			1998			1999			2000		
		15 to 24	25 to 54	55 to 64	15 to 24	25 to 54	55 to 64	15 to 24	25 to 54	55 to 64	15 to 24	25 to 54	55 to 64	15 to 24	25 to 54	55 to 64
Ireland	Unemployment rates	19.0	12.0	8.5	16.9	9.8	6.5	12.1	7.7	5.3	8.7	5.7	4.2	6.1	4.3	2.6
	Labour force participation rates	53.2	91.8	65.0	48.8	90.4	61.7	52.5	91.5	63.1	54.3	91.6	64.3	56.1	92.0	64.7
	Employment/population ratios	43.1	80.9	59.5	40.6	81.5	57.7	46.2	84.4	59.7	49.6	86.4	61.6	52.7	88.1	63.0
Italy	Unemployment rates	23.4	3.9	1.7	28.7	7.5	4.6	30.2	7.3	4.7	28.6	6.9	4.6	28.4	6.4	4.6
	Labour force participation rates	50.7	94.0	51.7	42.2	89.8	43.5	43.7	90.5	43.5	42.4	90.5	42.8	42.2	90.4	42.2
	Employment/population ratios	38.8	90.2	50.9	30.1	83.0	41.5	30.5	83.9	41.5	30.3	84.3	40.8	30.2	84.6	40.3
Japan	Unemployment rates	4.5	1.4	3.4	6.9	2.5	5.0	8.2	3.1	6.3	10.3	3.7	6.7	10.4	3.9	6.8
	Labour force participation rates	43.4	97.5	83.3	49.4	97.6	85.1	48.8	97.3	85.2	47.7	97.1	85.2	47.4	97.1	84.1
	Employment/population ratios	41.4	96.2	80.4	46.0	95.1	80.9	44.8	94.3	79.8	42.8	93.6	79.5	42.5	93.5	78.4
Korea	Unemployment rates	9.5	2.5	1.2	9.5	2.4	1.5	20.8	7.1	5.4	17.9	6.6	6.2	12.9	4.3	3.7
	Labour force participation rates	28.4	94.6	77.2	28.2	94.0	79.9	26.3	93.6	75.5	26.5	92.3	73.6	26.7	92.0	70.8
	Employment/population ratios	25.7	92.2	76.3	25.5	91.8	78.7	20.8	86.9	71.4	21.7	86.2	69.0	23.3	88.0	68.2
Luxembourg	Unemployment rates	2.7	1.1	1.1	5.6	1.5	0.8	5.8	1.7	0.0	6.2	1.4	0.7	5.7	1.4	2.0
	Labour force participation rates	45.7	95.1	43.2	39.4	93.4	35.8	37.2	94.4	35.1	36.0	94.2	35.6	37.4	94.2	38.6
	Employment/population ratios	44.5	94.0	42.7	37.2	92.0	35.5	35.1	92.8	35.1	33.7	92.9	35.4	35.3	92.8	37.9
Mexico[b]	Unemployment rates	5.2	1.5	1.0	5.4	2.0	.9	4.7	1.9	1.1	2.7	1.6	1.1	4.2	1.4	1.4
	Labour force participation rates	71.2	96.8	85.9	71.7	96.9	83.7	71.8	96.7	83.3	69.8	96.4	82.5	68.4	96.3	80.9
	Employment/population ratios	67.5	95.4	85.1	67.8	95.0	82.9	68.4	94.8	82.4	67.9	94.8	81.7	65.6	95.0	79.8
Netherlands	Unemployment rates	10.3	5.0	2.8	9.2	3.6	3.2	8.3	2.6	1.8	6.6	2.1	2.1	4.7	1.7	1.7
	Labour force participation rates	60.0	93.4	45.8	64.3	93.5	44.4	67.3	93.5	47.0	67.4	93.4	49.8	73.4	93.8	50.8
	Employment/population ratios	53.8	88.8	44.5	58.4	90.1	43.0	61.7	91.0	46.2	62.9	91.5	48.8	69.9	92.2	49.9
New Zealand	Unemployment rates	14.9	6.6	4.9	13.2	5.3	4.7	15.6	6.0	4.9	14.6	5.5	5.5	14.1	4.4	5.4
	Labour force participation rates	71.4	93.4	56.8	69.6	92.0	69.3	67.9	91.4	70.6	66.9	91.1	71.7	65.9	91.3	72.2
	Employment/population ratios	60.7	87.2	54.0	60.4	87.2	66.0	57.3	85.9	67.1	57.2	86.0	67.7	56.6	87.3	68.3
Norway[a]	Unemployment rates	12.4	4.7	3.0	10.2	3.0	2.1	8.9	2.3	2.0	9.6	2.6	1.3	9.5	2.9	1.8
	Labour force participation rates	63.9	92.3	72.8	64.8	92.2	74.9	66.4	92.4	76.0	66.7	91.8	74.5	67.5	91.4	74.4
	Employment/population ratios	56.0	88.0	70.7	58.2	89.5	73.3	60.5	90.2	74.5	60.2	89.4	73.6	60.2	88.7	73.1
Poland	Unemployment rates	..	..	..	22.0	8.2	5.6	21.5	8.0	6.2	28.3	10.0	8.7	33.3	12.1	9.1
	Labour force participation rates	..	..	..	42.3	89.4	45.3	41.0	89.3	44.5	37.9	88.7	45.8	40.9	88.3	40.4
	Employment/population ratios	..	..	..	33.0	82.1	42.7	32.2	82.2	41.7	27.2	79.8	41.8	27.3	77.6	36.7
Portugal	Unemployment rates	7.9	2.4	1.9	11.0	5.0	6.4	8.2	3.1	3.8	7.5	3.7	4.4	5.5	2.7	3.8
	Labour force participation rates	63.8	94.0	65.9	48.5	92.7	62.2	51.1	93.1	66.8	51.8	93.2	65.3	50.5	92.7	65.0
	Employment/population ratios	58.7	91.7	64.6	43.1	88.0	58.2	46.9	90.2	64.2	47.9	89.7	62.4	47.7	90.2	62.5
Slovak Republic	Unemployment rates	..	..	..	21.1	8.9	7.1	23.8	9.4	7.1	32.1	12.7	10.4	36.4	15.2	13.5
	Labour force participation rates	..	..	..	53.6	94.1	39.4	54.5	93.7	42.0	53.3	93.7	41.1	51.6	93.9	41.0
	Employment/population ratios	..	..	..	38.5	85.7	36.6	35.8	84.7	39.0	31.4	81.6	36.9	28.5	79.6	35.5

Table C. **Unemployment, labour force participation rates and employment/population ratios by age and sex** *(cont.)*

Men

Percentages

		1990			1997			1998			1999			2000		
		15 to 24	25 to 54	55 to 64	15 to 24	25 to 54	55 to 64	15 to 24	25 to 54	55 to 64	15 to 24	25 to 54	55 to 64	15 to 24	25 to 54	55 to 64
Spain[a]	Unemployment rates	23.2	9.3	8.4	30.3	13.6	10.8	27.1	11.5	9.6	21.7	9.2	9.4	19.5	7.9	8.8
	Labour force participation rates	61.7	94.3	62.4	51.6	92.6	56.6	51.7	92.7	57.7	52.7	92.7	57.8	53.2	92.8	60.3
	Employment/population ratios	47.4	85.5	57.2	36.0	80.1	50.5	37.7	82.0	52.1	41.3	84.2	52.4	42.8	85.4	55.0
Sweden[a]	Unemployment rates	4.5	1.3	1.3	21.6	9.2	9.5	17.5	7.8	7.8	14.8	6.5	7.3	12.3	5.2	6.9
	Labour force participation rates	69.3	94.7	75.4	51.4	91.0	71.5	51.4	90.5	71.3	52.6	90.3	72.3	53.3	90.6	72.8
	Employment/population ratios	66.1	93.5	74.4	40.3	82.6	64.7	42.4	83.4	65.8	44.8	84.4	67.1	46.7	85.8	67.8
Switzerland[b]	Unemployment rates	3.0	0.8	1.4	8.0	4.0	3.1	4.7	2.8	4.0	5.6	2.2	2.5	5.6	1.6	3.0
	Labour force participation rates	72.9	97.8	86.4	69.0	97.0	81.9	70.8	97.1	81.6	67.9	97.2	80.9	70.5	96.7	79.3
	Employment/population ratios	70.7	97.0	85.2	63.5	93.2	79.3	67.5	94.3	78.4	64.1	95.1	78.9	66.5	95.2	77.0
Turkey	Unemployment rates	16.6	5.2	4.0	13.9	4.5	2.0	14.9	5.0	2.3	15.8	5.9	2.6	13.6	5.0	3.0
	Labour force participation rates	71.8	94.2	61.3	61.3	92.7	57.0	59.7	92.7	58.0	60.3	91.7	55.9	56.9	89.4	53.0
	Employment/population ratios	59.9	89.3	58.8	52.8	88.5	55.9	50.8	88.1	56.7	50.8	86.3	54.4	49.1	84.9	51.4
United Kingdom[a]	Unemployment rates	11.1	5.6	8.4	15.6	6.7	7.8	14.0	5.4	6.8	14.1	5.4	6.4	13.2	4.8	5.5
	Labour force participation rates	83.5	94.8	68.1	74.6	91.6	63.6	73.2	91.4	62.6	73.2	91.6	63.5	73.7	91.9	63.3
	Employment/population ratios	74.2	89.5	62.4	63.0	85.4	58.6	63.0	86.4	58.3	62.9	86.7	59.4	63.9	87.5	59.8
United States[a]	Unemployment rates	11.6	4.6	3.8	11.8	3.7	3.1	11.1	3.3	2.8	10.3	3.0	2.7	9.7	2.9	2.4
	Labour force participation rates	71.8	93.4	67.8	68.2	91.8	67.6	68.4	91.8	68.1	68.0	91.7	67.9	68.6	91.6	67.3
	Employment/population ratios	63.5	89.1	65.2	60.1	88.4	65.5	60.8	88.8	66.2	61.0	89.0	66.1	62.0	89.0	65.6
European Union[c]	Unemployment rates	13.6	5.3	6.2	18.8	8.1	9.3	17.3	7.4	8.6	16.3	6.8	8.3	14.3	6.1	7.8
	Labour force participation rates	58.6	93.7	56.6	50.6	92.5	52.7	51.2	92.6	52.4	51.5	92.7	52.8	52.3	93.1	53.0
	Employment/population ratios	50.6	88.8	53.1	41.1	85.0	47.8	42.3	85.8	47.9	43.1	86.3	48.5	44.8	87.5	48.9
OECD Europe[c]	Unemployment rates	14.0	5.2	5.8	17.5	7.5	8.1	16.7	7.0	7.7	16.8	6.9	7.5	15.6	6.4	7.3
	Labour force participation rates	60.9	93.8	57.7	52.1	92.3	52.6	52.2	92.3	52.4	52.2	92.2	52.8	52.3	92.3	52.5
	Employment/population ratios	52.4	89.0	54.4	42.9	85.4	48.3	43.4	85.9	48.4	43.4	85.9	48.8	44.1	86.4	48.7
Total OECD[c]	Unemployment rates	11.1	4.2	4.4	13.0	5.3	5.6	12.6	5.2	5.7	12.3	5.1	5.7	11.7	4.7	5.5
	Labour force participation rates	61.3	94.4	66.4	57.1	93.1	63.6	57.3	93.1	63.5	57.1	92.9	63.8	57.1	92.9	63.0
	Employment/population ratios	54.5	90.5	63.5	49.7	88.2	60.0	50.1	88.2	59.9	50.0	88.1	60.1	50.4	88.5	59.6

Indicates break in series.

a) Age group 15 to 24 refers to 16 to 24.

b) The year 1990 refers to 1991.

c) For above countries only.

Source: OECD, *Labour Force Statistics, 1980-2000* , Part III, forthcoming.

For Austria, Belgium, Denmark, Greece, Italy, Luxembourg, the Netherlands and Portugal data are from the European Labour Force Survey.

Table C. **Unemployment, labour force participation rates and employment/population ratios by age and sex**

Women

Percentages

		1990			1997			1998			1999			2000		
		15 to 24	25 to 54	55 to 64	15 to 24	25 to 54	55 to 64	15 to 24	25 to 54	55 to 64	15 to 24	25 to 54	55 to 64	15 to 24	25 to 54	55 to 64
Australia	Unemployment rates	12.4	5.5	3.0	14.5	6.5	4.2	13.2	5.7	4.4	12.0	5.3	4.7	11.5	4.6	2.4
	Labour force participation rates	67.7	66.6	24.9	64.7	68.7	30.6	65.1	69.6	32.4	65.9	69.2	31.7	68.1	70.7	36.3
	Employment/population ratios	59.3	63.0	24.2	55.4	64.2	29.3	56.5	65.6	31.0	58.0	65.6	30.3	60.4	67.4	35.4
Austria	Unemployment rates	..	..	..	7.3	5.0	3.3	7.6	5.2	5.7	6.4	4.6	3.4	5.6	4.4	5.9
	Labour force participation rates	..	..	..	55.4	74.4	17.9	55.5	75.5	18.1	54.2	76.3	18.3	51.5	76.8	18.9
	Employment/population ratios	..	..	..	51.4	70.7	17.3	51.3	71.6	17.1	50.7	72.8	17.6	48.6	73.5	17.8
Belgium	Unemployment rates	19.2	10.3	4.9	25.7	10.2	4.3	23.0	10.7	5.4	22.4	9.0	8.1	18.2	7.4	2.8
	Labour force participation rates	34.1	60.8	9.9	29.3	69.7	13.0	29.4	70.5	14.2	30.1	72.9	16.1	32.6	73.2	15.8
	Employment/population ratios	27.5	54.5	9.4	21.8	62.6	12.4	22.6	62.9	13.4	23.4	66.4	14.8	26.7	67.8	15.4
Canada	Unemployment rates	11.0	7.6	5.7	15.2	7.6	7.6	13.6	6.9	6.7	12.6	6.3	5.3	11.3	5.8	5.5
	Labour force participation rates	67.3	75.4	34.9	59.3	76.9	37.1	60.2	77.6	38.7	61.7	78.2	39.4	62.9	78.6	41.6
	Employment/population ratios	59.9	69.7	33.0	50.3	71.0	34.3	52.1	72.2	36.1	53.9	73.2	37.3	55.8	74.0	39.3
Czech Republic	Unemployment rates	..	..	..	10.3	5.3	4.5	14.8	7.3	4.4	18.5	9.5	5.1	17.4	9.9	5.4
	Labour force participation rates	..	..	..	40.2	82.1	24.9	42.1	81.9	23.9	42.1	82.0	24.4	40.6	81.8	23.7
	Employment/population ratios	..	..	..	36.1	77.7	23.8	35.8	76.0	22.9	34.3	74.2	23.2	33.6	73.7	22.4
Denmark	Unemployment rates	11.6	8.4	7.5	9.9	5.7	6.0	7.6	6.1	6.4	10.5	4.9	5.6	7.0	4.7	4.2
	Labour force participation rates	70.4	87.7	45.8	70.4	81.7	43.9	71.6	82.9	44.3	70.1	83.5	50.6	68.8	84.3	48.2
	Employment/population ratios	62.2	80.3	42.4	63.4	77.0	41.2	66.1	77.8	41.5	62.8	79.4	47.8	64.0	80.4	46.2
Finland	Unemployment rates	8.3	1.6	2.8	25.0	11.1	15.0	24.5	10.1	13.9	22.2	9.0	9.4	22.0	8.8	9.4
	Labour force participation rates	56.9	86.5	40.8	43.6	84.0	39.6	45.1	84.0	39.7	49.1	84.8	42.4	50.8	85.0	45.2
	Employment/population ratios	52.2	85.1	39.7	32.7	74.6	33.7	34.1	75.6	34.2	38.2	77.1	38.4	39.9	77.6	40.9
France	Unemployment rates	23.9	10.7	7.6	32.8	12.9	8.5	30.0	12.7	9.3	29.7	12.6	8.7	23.7	11.1	8.3
	Labour force participation rates	33.1	72.9	31.1	24.5	77.3	31.6	25.0	77.9	31.2	24.6	78.4	32.5	26.2	78.4	32.9
	Employment/population ratios	25.2	65.1	28.8	16.5	67.3	28.9	17.5	68.0	28.3	17.3	68.5	29.6	20.0	69.6	30.2
Germany	Unemployment rates	6.0	7.1	15.2	9.6	9.8	17.2	8.3	9.2	16.5	7.7	8.7	15.5	7.2	8.0	15.0
	Labour force participation rates	57.4	64.1	26.4	46.6	74.9	34.8	46.2	75.6	34.4	46.3	75.7	34.3	47.6	76.9	34.1
	Employment/population ratios	54.0	59.6	22.4	42.2	67.5	28.8	42.4	68.6	28.7	42.8	69.2	28.9	44.2	70.8	29.0
Greece	Unemployment rates	32.6	8.6	1.2	40.6	11.9	3.1	39.3	13.9	3.7	41.0	15.2	5.0	37.7	14.7	4.4
	Labour force participation rates	35.3	51.5	24.3	32.6	57.5	25.1	36.6	59.9	24.5	37.4	61.5	24.4	35.4	61.7	25.5
	Employment/population ratios	23.8	47.1	24.0	19.4	50.7	24.4	22.2	51.6	23.6	22.1	52.1	23.1	22.0	52.6	24.4
Hungary	Unemployment rates	..	..	..	14.5	6.7	4.4	11.6	6.1	5.1	11.3	5.6	1.3	10.9	5.0	1.6
	Labour force participation rates	..	..	..	30.6	67.2	10.8	34.9	68.2	10.0	35.0	70.0	11.4	33.3	70.4	13.5
	Employment/population ratios	..	..	..	26.2	62.7	10.3	30.9	64.0	9.5	31.1	66.1	11.3	29.7	66.9	13.3
Iceland[a, b]	Unemployment rates	3.9	2.6	3.4	7.1	3.9	3.5	5.6	2.9	1.4	4.4	2.1	1.9	3.6	2.4	3.2
	Labour force participation rates	58.8	83.0	81.1	61.5	85.1	81.2	67.3	85.4	83.0	70.1	87.0	80.3	73.2	88.2	76.8
	Employment/population ratios	56.5	80.8	78.3	57.2	81.8	78.4	63.5	82.9	81.9	67.0	85.1	78.8	70.6	86.0	74.4

Table C. **Unemployment, labour force participation rates and employment/population ratios by age and sex** *(cont.)*

Women

Percentages

		1990			1997			1998			1999			2000		
		15 to 24	25 to 54	55 to 64	15 to 24	25 to 54	55 to 64	15 to 24	25 to 54	55 to 64	15 to 24	25 to 54	55 to 64	15 to 24	25 to 54	55 to 64
Ireland	Unemployment rates	16.1	13.5	8.3	15.3	9.3	5.2	11.2	6.6	4.6	8.3	4.8	4.3	6.9	3.6	2.4
	Labour force participation rates	47.3	45.5	19.9	41.9	58.4	23.3	44.6	60.8	24.6	46.9	63.0	26.9	46.9	65.0	27.8
	Employment/population ratios	39.6	39.3	18.2	35.5	53.0	22.1	39.6	56.8	23.5	42.9	60.0	25.7	43.7	62.7	27.1
Italy	Unemployment rates	35.4	11.3	2.0	39.9	13.1	3.8	38.4	13.9	4.7	38.3	13.6	5.6	35.3	12.5	4.9
	Labour force participation rates	43.0	52.1	15.0	33.8	55.1	15.0	33.1	56.2	15.5	33.8	57.3	15.9	34.0	57.9	15.9
	Employment/population ratios	27.8	46.2	14.7	20.3	47.9	14.4	20.4	48.4	14.8	20.8	49.5	15.0	22.0	50.7	15.2
Japan	Unemployment rates	4.1	2.1	1.4	6.3	3.2	2.2	7.3	3.8	2.9	8.2	4.4	3.3	7.9	4.4	3.6
	Labour force participation rates	44.8	64.2	47.2	47.7	66.7	49.5	47.8	66.6	49.9	46.7	66.4	49.8	46.6	66.5	49.7
	Employment/population ratios	43.0	62.9	46.5	44.7	64.6	48.4	44.3	64.0	48.5	42.9	63.6	48.2	43.0	63.6	47.8
Korea	Unemployment rates	5.5	0.9	0.3	6.6	1.7	0.5	12.9	4.9	1.9	11.9	4.4	2.1	8.5	2.7	1.4
	Labour force participation rates	40.7	54.2	49.6	39.7	58.5	50.5	35.7	56.0	48.2	35.4	56.6	48.9	36.1	57.8	48.2
	Employment/population ratios	38.5	53.7	49.4	37.1	57.5	50.2	31.1	53.2	47.2	31.2	54.1	47.8	33.1	56.3	47.5
Luxembourg	Unemployment rates	4.7	2.2	0.0	9.2	2.9	1.2	7.1	3.9	1.9	7.4	2.9	1.5	7.3	2.9	0.0
	Labour force participation rates	44.0	49.7	13.8	35.3	58.0	12.6	33.4	58.4	15.6	31.9	62.0	17.7	30.6	64.9	16.8
	Employment/population ratios	42.0	48.6	13.8	32.1	56.3	12.5	31.0	56.2	15.3	29.5	60.2	17.5	28.3	63.0	16.8
Mexico[b]	Unemployment rates	5.8	3.8	1.0	7.8	3.5	1.8	6.4	2.7	0.5	4.5	2.1	0.2	4.7	1.7	0.7
	Labour force participation rates	34.5	38.2	24.4	36.5	46.3	30.2	37.1	45.8	28.3	36.1	44.8	29.5	36.1	45.6	28.6
	Employment/population ratios	32.5	36.8	24.2	33.6	44.7	29.6	34.7	44.6	28.1	34.5	43.9	29.4	34.4	44.8	28.4
Netherlands	Unemployment rates	11.9	10.9	6.3	10.3	6.5	5.5	9.3	5.1	3.5	8.2	4.1	3.9	5.9	3.0	2.1
	Labour force participation rates	59.2	57.9	16.9	61.8	69.6	21.0	64.9	70.7	20.5	68.0	72.4	22.8	70.9	73.0	26.4
	Employment/population ratios	52.2	51.6	15.8	55.4	65.1	19.8	58.9	67.1	19.8	62.5	69.4	21.9	66.7	70.9	25.8
New Zealand	Unemployment rates	13.2	5.4	4.0	12.9	5.4	2.9	13.5	6.2	4.1	12.8	5.3	4.1	12.1	4.6	3.5
	Labour force participation rates	64.3	69.3	30.7	64.1	72.6	44.4	62.4	72.5	46.3	59.6	73.5	48.4	59.9	73.8	48.0
	Employment/population ratios	55.8	65.6	29.5	55.7	68.7	43.1	54.0	68.1	44.4	52.0	69.6	46.3	52.7	70.3	46.3
Norway[a]	Unemployment rates	11.0	3.9	1.9	11.1	3.1	1.7	9.4	2.4	1.6	9.5	2.2	0.8	10.9	2.3	0.7
	Labour force participation rates	56.9	79.2	53.9	58.3	82.9	60.0	61.1	83.2	61.0	61.0	83.2	61.5	61.8	83.5	61.6
	Employment/population ratios	50.7	76.1	52.8	51.8	80.3	59.0	55.3	81.2	60.0	55.2	81.4	61.1	55.0	81.6	61.2
Poland	Unemployment rates	..	..	..	28.0	12.0	4.9	25.2	11.2	5.5	32.0	11.8	6.1	37.3	16.0	9.7
	Labour force participation rates	..	..	..	34.3	76.5	27.1	33.7	76.5	25.7	31.5	76.7	26.1	34.8	76.5	23.7
	Employment/population ratios	..	..	..	24.7	67.3	25.7	25.2	67.9	24.3	21.4	67.6	24.5	21.8	64.3	21.4
Portugal	Unemployment rates	13.3	5.4	1.4	18.0	6.5	3.4	10.7	5.5	2.9	11.1	4.7	2.4	12.0	4.1	2.6
	Labour force participation rates	53.0	67.0	31.5	39.8	74.8	38.3	43.9	75.2	39.7	43.3	75.8	42.8	41.0	77.1	43.4
	Employment/population ratios	46.0	63.4	31.1	32.6	69.9	37.0	39.2	71.1	38.6	38.5	72.2	41.7	36.1	73.9	42.3
Slovak Republic	Unemployment rates	..	..	..	22.6	11.0	5.8	23.4	11.2	8.8	32.1	13.4	6.7	33.8	15.8	8.7
	Labour force participation rates	..	..	..	42.3	81.9	9.6	41.9	81.1	10.3	42.8	81.5	11.1	42.6	82.9	10.7
	Employment/population ratios	..	..	..	32.7	72.8	9.0	32.1	72.1	9.5	29.0	70.6	10.3	28.2	69.8	9.8

Table C. **Unemployment, labour force participation rates and employment/population ratios by age and sex** *(cont.)*

Women

Percentages

		1990			1997			1998			1999			2000		
		15 to 24	25 to 54	55 to 64	15 to 24	25 to 54	55 to 64	15 to 24	25 to 54	55 to 64	15 to 24	25 to 54	55 to 64	15 to 24	25 to 54	55 to 64
Spain[a]	Unemployment rates	39.7	20.6	7.2	46.1	25.4	12.7	43.4	24.1	12.1	37.3	21.0	11.2	33.1	18.7	11.5
	Labour force participation rates	47.5	46.9	19.5	41.2	58.1	20.6	40.9	58.9	21.4	41.8	60.2	21.5	42.9	62.4	22.7
	Employment/population ratios	28.7	37.2	18.1	22.2	43.4	18.0	23.2	44.8	18.8	26.2	47.6	19.1	28.7	50.7	20.1
Sweden[a]	Unemployment rates	4.4	1.2	1.6	20.3	8.7	6.7	16.1	7.3	5.2	13.6	5.9	5.9	11.4	4.6	5.3
	Labour force participation rates	68.9	90.8	65.8	48.9	86.2	65.0	48.5	85.4	63.6	49.5	85.7	64.8	51.2	85.6	65.9
	Employment/population ratios	65.9	89.7	64.8	38.9	78.6	60.7	40.7	79.1	60.3	42.8	80.6	61.0	45.4	81.7	62.5
Switzerland[b]	Unemployment rates	3.4	2.6	0.7	3.8	4.2	2.6	7.0	4.0	2.1	5.7	3.2	2.8	3.9	3.1	2.5
	Labour force participation rates	70.3	73.7	53.3	64.8	76.8	60.8	63.5	78.6	63.7	69.3	77.6	64.0	66.0	78.0	62.4
	Employment/population ratios	67.9	71.8	53.0	62.3	73.5	59.2	59.1	75.5	62.4	65.4	75.1	62.2	63.4	75.6	60.8
Turkey	Unemployment rates	15.0	5.9	1.0	15.1	5.0	0.6	13.0	4.8	0.7	14.2	5.5	0.2	12.3	4.7	0.5
	Labour force participation rates	39.4	36.0	26.6	31.7	29.8	24.6	31.1	30.4	24.9	32.9	31.5	27.4	27.2	27.9	20.0
	Employment/population ratios	33.5	33.9	26.4	26.9	28.3	24.4	27.1	28.9	24.7	28.3	29.8	27.4	23.9	26.6	19.9
United Kingdom[a]	Unemployment rates	9.0	5.9	5.0	11.0	4.9	3.9	10.5	4.5	3.1	10.2	4.3	3.2	10.1	4.0	2.8
	Labour force participation rates	72.4	72.9	38.7	66.1	75.0	40.3	65.4	75.1	39.8	65.0	75.9	41.1	65.6	76.1	42.6
	Employment/population ratios	65.9	68.6	36.7	58.8	71.3	38.7	58.5	71.7	38.5	58.4	72.6	39.8	58.9	73.1	41.4
United States[a]	Unemployment rates	10.7	4.6	2.8	10.7	4.1	2.7	9.8	3.8	2.4	9.5	3.4	2.6	8.9	3.3	2.5
	Labour force participation rates	62.9	74.0	45.2	62.6	76.7	50.9	63.3	76.5	51.2	62.9	76.8	51.5	63.2	76.8	51.8
	Employment/population ratios	56.1	70.6	44.0	55.9	73.5	49.5	57.2	73.6	50.0	57.0	74.1	50.1	57.6	74.3	50.5
European Union[c]	Unemployment rates	18.4	9.1	6.9	22.5	10.8	9.7	20.4	10.5	9.4	19.2	9.9	8.9	17.1	8.9	8.3
	Labour force participation rates	50.8	63.7	26.5	42.6	70.0	29.5	43.1	70.7	29.5	43.4	71.5	30.3	44.3	72.2	31.0
	Employment/population ratios	41.5	57.9	24.7	33.0	62.4	26.7	34.3	63.3	26.7	35.1	64.4	27.6	36.7	65.7	28.4
OECD Europe[c]	Unemployment rates	17.5	8.7	6.1	21.0	10.2	8.4	19.1	9.9	8.2	18.9	9.6	7.7	17.8	9.2	7.6
	Labour force participation rates	49.1	60.8	27.1	40.1	66.8	28.9	40.3	67.3	28.8	40.8	67.9	29.7	40.4	68.0	29.6
	Employment/population ratios	40.6	55.5	25.5	31.7	59.9	26.4	32.6	60.6	26.4	33.1	61.4	27.4	33.2	61.7	27.3
Total OECD[c]	Unemployment rates	12.1	5.8	3.6	14.0	6.8	4.8	13.1	6.7	4.7	12.8	6.4	4.7	12.0	6.1	4.6
	Labour force participation rates	50.3	63.6	35.5	46.2	67.8	37.9	46.5	67.8	37.9	46.5	68.1	38.7	46.6	68.2	38.7
	Employment/population ratios	44.2	59.9	34.2	39.7	63.2	36.0	40.4	63.2	36.1	40.6	63.7	36.8	41.0	64.1	36.9

Indicates break in series.

a) Age group 15 to 24 refers to 16 to 24.

b) The year 1990 refers to 1991.

c) For above countries only.

Source: OECD, *Labour Force Statistics, 1980-2000* , Part III, forthcoming.

For Austria, Belgium, Denmark, Greece, Italy, Luxembourg, the Netherlands and Portugal data are from the European Labour Force Survey.

Table D. **Unemployment, labour force participation rates and employment/population ratios by educational attainment for persons aged 25-64, 1999**

Percentages

		Both sexes			Men			Women		
		Less than upper secondary education	Upper secondary education	Tertiary education	Less than upper secondary education	Upper secondary education	Tertiary education	Less than upper secondary education	Upper secondary education	Tertiary education
Australia	Unemployment rates	8.4	5.1	3.4	9.2	5.2	3.6	7.6	4.9	3.1
	Labour force participation rates	64.5	80.3	84.8	79.4	88.6	92.0	54.0	66.2	78.2
	Employment/population ratios	59.1	76.2	82.0	72.1	84.0	88.7	49.9	62.9	75.7
Austria[a]	Unemployment rates	6.9	3.6	2.0	8.0	3.4	1.8	6.0	4.0	2.2
	Labour force participation rates	56.6	78.1	88.1	71.2	86.0	92.4	48.0	68.4	83.0
	Employment/population ratios	52.6	75.3	86.4	65.5	83.1	90.7	45.1	65.6	81.2
Belgium	Unemployment rates	12.0	6.6	3.1	10.0	4.6	2.4	15.6	8.3	3.9
	Labour force participation rates	55.8	79.8	88.1	71.2	88.0	92.0	42.1	70.5	84.3
	Employment/population ratios	49.1	74.5	85.4	63.3	84.4	89.8	34.5	64.5	81.0
Canada	Unemployment rates	10.6	6.6	4.2	10.7	6.7	4.1	10.3	6.5	4.4
	Labour force participation rates	61.0	80.7	86.1	73.7	88.0	90.9	47.7	72.9	81.8
	Employment/population ratios	54.6	75.4	82.4	65.8	82.1	87.1	42.8	68.1	78.2
Czech Republic	Unemployment rates	18.8	6.5	2.6	20.0	5.0	2.1	18.0	8.4	3.4
	Labour force participation rates	57.8	81.7	89.8	72.3	88.7	95.1	51.1	74.1	82.3
	Employment/population ratios	46.9	76.4	87.4	57.9	84.3	93.1	41.8	67.9	79.5
Denmark	Unemployment rates	7.0	4.1	3.0	6.8	3.3	2.6	7.2	5.1	3.5
	Labour force participation rates	66.3	84.2	90.6	74.5	87.7	92.9	60.0	79.9	88.4
	Employment/population ratios	61.7	80.7	87.9	69.5	84.8	90.5	55.6	75.8	85.3
Finland	Unemployment rates	13.1	9.5	4.7	12.0	9.3	3.3	14.4	9.8	5.9
	Labour force participation rates	67.4	82.2	88.9	70.5	85.9	90.9	64.0	78.1	87.3
	Employment/population ratios	58.6	74.3	84.7	62.0	77.8	87.9	54.8	70.4	82.1
France	Unemployment rates	15.3	9.2	6.2	14.1	7.2	5.3	16.7	12.0	7.1
	Labour force participation rates	66.6	82.8	87.2	77.2	88.5	91.2	57.7	76.1	83.5
	Employment/population ratios	56.4	75.1	81.8	66.3	82.2	86.4	48.1	67.0	77.5
Germany	Unemployment rates	15.8	8.8	4.9	17.7	8.4	4.4	14.1	9.4	5.8
	Labour force participation rates	58.0	76.6	87.4	75.6	83.6	90.2	47.0	70.0	82.5
	Employment/population ratios	48.9	69.9	83.1	62.3	76.7	86.2	40.6	63.0	77.7
Greece	Unemployment rates	8.5	10.9	7.5	5.5	6.6	5.3	13.7	17.3	10.3
	Labour force participation rates	60.0	72.8	87.3	81.6	89.4	90.8	41.1	56.9	83.2
	Employment/population ratios	54.8	64.9	80.7	77.1	83.5	86.0	35.4	47.0	74.6
Hungary	Unemployment rates	11.1	5.8	1.4	12.6	6.0	1.5	9.5	5.2	1.1
	Labour force participation rates	40.2	76.5	83.2	48.4	83.3	88.3	34.5	68.4	78.5
	Employment/population ratios	35.8	72.1	82.1	42.3	78.4	87.1	31.2	64.9	77.6

Table D. **Unemployment, labour force participation rates and employment/population ratios by educational attainment for persons aged 25-64, 1999** *(cont.)*

Percentages

		Both sexes			Men			Women		
		Less than upper secondary education	Upper secondary education	Tertiary education	Less than upper secondary education	Upper secondary education	Tertiary education	Less than upper secondary education	Upper secondary education	Tertiary education
Iceland	Unemployment rates	2.3	1.0	0.6	1.6	0.5	0.2	2.8	1.9	1.1
	Labour force participation rates	88.5	91.5	95.7	95.6	96.2	98.9	83.8	84.3	92.5
	Employment/population ratios	86.5	90.6	95.1	94.1	95.8	98.8	81.4	82.7	91.5
Ireland[a]	Unemployment rates	11.6	4.5	3.0	11.7	4.2	2.7	11.4	4.8	3.4
	Labour force participation rates	60.4	75.1	87.9	80.7	91.9	94.1	37.6	62.7	80.6
	Employment/population ratios	53.4	71.7	85.2	71.3	88.0	91.6	33.3	59.7	77.9
Italy	Unemployment rates	10.6	8.0	6.9	7.8	5.7	4.9	16.6	11.1	9.3
	Labour force participation rates	53.3	76.1	86.7	75.2	85.7	91.8	32.6	66.1	81.3
	Employment/population ratios	47.7	70.0	80.7	69.3	80.8	87.3	27.2	58.8	73.7
Japan	Unemployment rates	5.6	4.4	3.3	6.4	4.5	2.7	4.3	4.2	4.4
	Labour force participation rates	72.2	77.6	82.4	88.2	95.7	97.5	56.3	61.6	64.4
	Employment/population ratios	68.2	74.2	79.7	82.6	91.4	94.9	53.9	59.0	61.6
Korea	Unemployment rates	5.4	6.3	4.7	7.6	7.0	5.1	3.5	5.0	3.5
	Labour force participation rates	70.5	71.0	78.4	85.8	89.9	91.9	61.0	49.7	54.7
	Employment/population ratios	66.7	66.5	74.8	79.3	83.6	87.2	58.9	47.2	52.8
Luxembourg	Unemployment rates	3.7	1.1	1.0	2.8	0.8	0.6	5.0	1.7	1.8
	Labour force participation rates	56.6	73.9	85.9	77.2	86.5	91.0	40.9	59.8	78.4
	Employment/population ratios	54.5	73.0	85.0	75.0	85.8	90.5	38.9	58.8	77.0
Mexico	Unemployment rates	1.4	1.9	3.0	1.3	0.9	3.0	1.6	2.5	3.1
	Labour force participation rates	64.7	63.3	85.1	94.3	96.4	94.7	37.8	53.2	71.4
	Employment/population ratios	63.8	62.1	82.6	93.1	95.6	91.9	37.2	51.9	69.2
Netherlands	Unemployment rates	4.9	2.4	1.7	3.6	1.4	1.4	6.7	3.6	2.1
	Labour force participation rates	59.7	80.2	88.7	78.3	87.9	92.1	44.9	71.8	84.3
	Employment/population ratios	56.8	78.3	87.2	75.4	86.6	90.8	41.8	69.2	82.5
New Zealand	Unemployment rates	8.9	4.5	4.0	9.2	4.5	4.4	8.3	4.8	3.7
	Labour force participation rates	65.4	83.5	84.1	78.9	91.4	91.1	53.9	74.5	78.8
	Employment/population ratios	59.6	79.8	80.8	71.6	87.3	87.1	49.4	70.9	75.8
Norway[a]	Unemployment rates	2.9	2.4	1.5	3.4	2.2	1.6	2.4	2.5	1.4
	Labour force participation rates	69.8	85.9	91.6	80.9	90.5	93.6	59.4	81.0	89.7
	Employment/population ratios	67.7	83.9	90.2	78.2	88.5	92.0	58.0	79.0	88.4
Poland[a]	Unemployment rates	13.9	9.1	2.5	12.7	7.2	2.2	15.1	11.5	2.8
	Labour force participation rates	57.0	78.2	89.4	68.5	84.8	92.1	47.8	71.3	87.1
	Employment/population ratios	49.1	71.1	87.2	59.8	78.7	90.1	40.6	63.1	84.7

Table D. **Unemployment, labour force participation rates and employment/population ratios by educational attainment for persons aged 25-64, 1999** *(cont.)*

Percentages

		Both sexes			Men			Women		
		Less than upper secondary education	Upper secondary education	Tertiary education	Less than upper secondary education	Upper secondary education	Tertiary education	Less than upper secondary education	Upper secondary education	Tertiary education
Portugal	Unemployment rates	4.2	5.1	2.5	3.9	4.1	3.0	4.6	6.2	2.1
	Labour force participation rates	79.3	86.4	93.0	89.0	90.5	95.9	69.0	82.4	90.9
	Employment/population ratios	75.9	82.0	90.7	85.5	86.8	93.0	65.8	77.3	89.0
Spain	Unemployment rates	14.7	12.9	11.1	10.5	7.8	6.9	22.8	19.8	16.0
	Labour force participation rates	59.8	79.9	87.2	82.2	91.2	91.4	39.5	68.4	82.7
	Employment/population ratios	51.0	69.6	77.6	73.5	84.1	85.1	30.5	54.9	69.4
Sweden	Unemployment rates	9.0	6.5	3.9	8.5	6.7	4.7	9.7	6.3	3.1
	Labour force participation rates	73.1	85.1	89.0	79.6	88.0	90.0	66.5	83.7	88.1
	Employment/population ratios	66.5	79.6	85.6	71.9	81.6	85.7	60.0	77.5	85.4
Switzerland	Unemployment rates	5.0	2.3	1.7	4.1	2.3	1.3	5.7	2.4	2.9
	Labour force participation rates	73.1	83.1	92.5	90.9	93.7	96.4	63.0	74.2	83.1
	Employment/population ratios	69.4	81.1	90.9	87.1	91.5	95.1	59.4	72.4	80.7
Turkey	Unemployment rates	5.3	8.1	5.0	5.6	6.8	4.5	4.5	14.2	6.0
	Labour force participation rates	59.7	69.3	83.3	87.0	90.4	88.8	28.0	33.6	72.8
	Employment/population ratios	56.5	63.7	79.1	82.2	84.3	84.8	26.7	28.9	68.5
United Kingdom	Unemployment rates	10.0	4.7	2.7	12.7	5.3	3.0	7.3	4.1	2.4
	Labour force participation rates	58.4	82.9	90.1	66.9	88.2	92.4	51.8	76.0	87.4
	Employment/population ratios	52.6	78.9	87.7	58.4	84.5	89.7	48.0	73.4	85.3
United States	Unemployment rates	7.7	3.7	2.1	7.0	3.9	2.1	8.8	3.6	2.1
	Labour force participation rates	62.7	79.2	86.4	74.3	86.7	91.4	50.5	72.3	81.4
	Employment/population ratios	57.8	76.2	84.6	69.1	83.4	89.5	46.0	69.7	79.7
European Union [b]	Unemployment rates	11.5	7.2	5.1	9.8	6.3	4.2	13.8	8.3	6.3
	Labour force participation rates	61.0	79.7	88.2	77.8	86.9	91.4	46.3	72.0	84.3
	Employment/population ratios	54.0	73.9	83.6	70.2	81.4	87.5	39.9	66.1	79.0
OECD Europe [b]	Unemployment rates	7.0	5.1	3.1	6.5	4.1	2.5	7.6	6.5	3.8
	Labour force participation rates	69.5	83.2	91.0	83.8	90.2	94.2	57.8	74.8	87.5
	Employment/population ratios	64.6	79.0	88.2	78.4	86.5	91.8	53.4	69.9	84.2
Total OECD [b]	Unemployment rates	6.3	4.7	2.9	5.8	4.2	2.6	6.8	5.4	3.3
	Labour force participation rates	68.3	80.9	87.6	84.5	89.9	93.6	54.5	71.2	81.1
	Employment/population ratios	64.0	77.0	85.1	79.6	86.1	91.2	50.8	67.3	78.4

a) Data are for the year 1998.

b) For above countries only.

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

Table E. **Incidence and composition of part-time employment**[a], **1990-2000**

Percentages

Part-time employment as a proportion of employment

	Men					Women				
	1990	1997	1998	1999	2000	1990	1997	1998	1999	2000
Australia[b, c]	11.3	14.6	14.4	14.3	14.8	38.5	41.0	40.7	41.4	40.7
Austria	..	2.6	2.7	2.8	2.6	..	21.3	22.8	24.4	24.4
Belgium	4.6	4.8	4.9	7.3	7.1	29.8	32.3	32.2	36.6	34.5
Canada	9.1	10.5	10.6	10.3	10.3	26.8	29.4	28.8	28.0	27.3
Czech Republic	..	1.9	1.7	1.7	1.6	..	5.5	5.4	5.6	5.6
Denmark	10.2	11.1	9.8	8.9	8.9	29.6	24.2	25.4	22.7	23.5
Finland[b]	4.7	6.5	6.7	6.6	7.1	10.6	12.5	13	13.5	13.9
France	4.4	5.9	5.8	5.8	5.3	21.7	25.2	25	24.7	24.3
Germany	2.3	4.1	4.6	4.8	4.8	29.8	31.4	32.4	33.1	33.9
Greece	4.0	4.8	5.3	4.5	3.0	11.5	14.1	15.4	13.5	9.4
Hungary	..	1.8	1.9	2.1	1.7	..	5.0	5	5.1	4.8
Iceland[d]	7.5	10.1	9.8	9.1	8.8	39.7	36.8	38.6	35.2	33.7
Ireland	4.2	7.0	8.2	7.9	7.7	20.5	27.2	31.2	31.9	32.2
Italy	3.9	5.1	4.9	5.3	5.7	18.2	22.2	22.4	23.2	23.4
Japan[b, e]	9.5	12.9	12.9	13.4	11.8	33.4	38.3	39	39.7	39.4
Korea[b]	3.1	3.3	5.1	5.9	5.2	6.5	7.8	9.2	10.5	9.9
Luxembourg	1.6	2.0	2.6	1.6	2.1	19.1	26.2	29.6	28.3	28.9
Mexico	..	8.7	8.2	7.2	7.1	..	30.2	28.3	26.9	25.6
Netherlands	13.4	11.1	12.4	11.9	13.4	52.5	54.8	54.8	55.4	57.2
New Zealand	7.9	10.5	10.6	11.3	11.2	34.6	37.0	37.6	37.2	36.5
Norway	6.9	7.7	7.9	8.2	8.7	39.8	36.5	35.9	35.0	33.6
Poland[b]	..	8.2	8.0	9.3	8.8	..	16.6	16.6	18.9	17.9
Portugal	3.1	5.1	5.1	5.0	4.8	11.8	16.5	15.8	14.6	14.7
Slovak Republic	..	0.9	1.0	0.9	1.0	..	3.3	3.3	3.0	3.0
Spain	1.4	3.1	2.9	2.9	2.7	11.5	16.8	16.6	16.8	16.5
Sweden	5.3	6.5	5.6	7.3	7.3	24.5	22.6	22	22.3	21.4
Switzerland[c,d]	6.8	7.1	7.2	7.7	8.4	42.6	45.7	45.8	46.5	44.7
Turkey	4.9	3.4	3.1	4.1	5.3	18.8	11.7	11.6	13.9	19.4
United Kingdom	5.3	8.2	8.2	8.5	8.4	39.5	40.9	41.2	40.6	40.8
United States[f]	8.3	8.3	8.2	8.1	7.9	20.0	19.5	19.1	19.0	18.2
European Union[g]	4.2	5.7	5.8	6.0	6.0	27.0	29.4	29.8	29.9	30.0
OECD Europe[g]	4.4	5.4	5.4	5.8	5.9	26.8	26.1	26.4	26.8	27.5
Total OECD[g]	6.6	7.7	7.7	7.8	7.6	25.0	25.8	25.8	25.9	25.7

	Part-time employment as a proportion of total employment					Women's share in part-time employment				
	1990	1997	1998	1999	2000	1990	1997	1998	1999	2000
Australia[b, c]	22.6	26.0	25.9	26.1	26.2	70.8	68.0	68.6	68.9	68.3
Austria	..	10.8	11.5	12.3	12.2	..	86.3	86.9	87.2	88.1
Belgium	14.2	16.2	16.3	19.9	19.0	79.9	82.6	82.4	79.0	79.0
Canada	17.0	19.1	18.9	18.5	18.1	70.1	70.0	69.7	69.7	69.3
Czech Republic	..	3.4	3.3	3.4	3.3	..	69.1	70	70.9	72.5
Denmark	19.2	17.1	17	15.3	15.7	71.5	64.3	68.7	68.4	69.8
Finland[b]	7.5	9.4	9.6	9.9	10.4	67.2	63.4	63.8	64.9	63.8
France	12.2	14.9	14.8	14.7	14.2	79.8	78.8	79.3	79.0	80.1
Germany	13.4	15.8	16.6	17.1	17.6	89.7	85.1	84.1	84.1	84.5
Greece	6.7	8.2	9	7.8	5.4	61.1	63.0	63.1	64.4	65.5
Hungary	..	3.3	3.4	3.5	3.2	..	71.3	69.2	68.7	71.4
Iceland[d]	22.2	22.4	23.2	21.2	20.4	81.6	75.8	77.4	77.1	77.0
Ireland	9.8	15.2	18	18.3	18.4	71.8	72.7	73.6	75.7	76.4
Italy	8.8	11.3	11.2	11.8	12.2	70.8	71.0	71.9	71.5	70.5
Japan[b, e]	19.2	23.3	23.6	24.1	23.1	70.5	67.0	67.5	67.0	69.7
Korea[b]	4.5	5.1	6.8	7.8	7.1	58.7	62.4	54.8	55.2	57.2
Luxembourg	7.6	11.1	12.8	12.1	13.0	86.5	89.0	87.3	91.8	90.4
Mexico	..	15.9	15	13.8	13.5	..	63.8	63.5	65.4	65.1
Netherlands	28.2	29.1	30	30.4	32.1	70.4	77.6	75.8	77.4	76.2
New Zealand	19.6	22.4	22.8	23.0	22.6	77.1	74.1	74.3	73.3	72.9
Norway	21.8	21.0	20.8	20.7	20.3	82.7	80.1	79.6	78.8	77.0
Poland[b]	..	11.9	11.8	13.6	12.8	..	61.1	62.2	62.4	61.7
Portugal	6.8	10.2	9.9	9.3	9.2	74.0	72.6	71.3	70.8	71.7
Slovak Republic	..	2.0	2.0	1.8	1.9	..	73.7	71.9	73.2	71.2
Spain	4.6	7.9	7.7	7.9	7.8	79.5	74.8	75.9	77.0	78.6
Sweden	14.5	14.2	13.5	14.5	14.0	81.1	76.3	78.1	73.7	72.9
Switzerland[c,d]	22.1	24.0	24.2	24.8	24.4	82.4	83.4	83.4	82.6	80.6
Turkey	9.2	5.7	5.6	7.1	9.0	62.5	58.2	60.7	60.7	56.1
United Kingdom	20.1	22.9	23	22.9	23.0	85.1	80.4	80.4	79.6	79.9
United States[f]	13.8	13.6	13.4	13.3	12.8	68.2	68.4	68	68.4	68.0
European Union[g]	13.3	15.7	15.9	16.2	16.3	80.9	79.1	79.0	78.8	79.0
OECD Europe[g]	13.2	13.9	14.1	14.6	14.9	79.6	77.1	77.2	76.8	76.6
Total OECD[g]	14.3	15.3	15.4	15.5	15.3	73.4	71.1	71.1	71.1	71.6

| Indicates break in series

a) Part-time employment refers to persons who usually work less than 30 hours per week in their main job. Data include only persons declaring usual hours.

b) Data are based on actual hours worked.

c) Part-time employment based on hours worked at all jobs.

d) 1990 refers to 1991.

e) Less than 35 hours per week.

f) Estimates are for wage and salary workers only.

g) For above countries only.

Notes, sources and definitions:

For Austria, Belgium, Denmark, France, Germany, Greece, Ireland, Italy, Luxembourg, the Netherlands, Portugal, Spain and the United Kingdom, data are from the European Labour Force Survey. See OECD the <<Definition of Part-time Work for the Purpose of International Comparisons>>, Labour Market and Social Policy Occasional Paper N° 22. Available on Internet (http://www.oecd.org/els/employment/docs.htm).

Table F. **Average annual hours actually worked per person in employment** [a]

	1979	1983	1990	1996	1997	1998	1999	2000
Total employment								
Australia	1904	1852	1869	1867	1866	1860	1864	1860
Canada	1832	1780	1788	1784	1787	1779	1785	1801
Czech Republic	..	..	..	2066	2067	2075	2088	2092
Finland[b]	..	1809	1763	1789	1780	1761	1765	1721
Finland[c]	1837	1787	1728	1737	1730	1726	1730	1691
France	1806	1712	1657	1608	1605	1567	1562	..
Germany	..	..	1598	1511	1506	1510	1503	1480
Western Germany	1696	1657	1548	1487	1485	1490	1483	1462
Iceland	..	..	..	1860	1839	1817	1873	1885
Italy	1722	1699	1674	1636	1640	1638	1634	..
Japan	2126	2095	2031	1892	1864	1842	1840	..
Korea	..	2734	2514	2467	2436	2390	2497	2474
Mexico	..	..	..	1901	1927	1878	1921	1888
New Zealand	..	..	1820	1838	1823	1825	1842	1817
Norway	1514	1485	1432	1407	1401	1400	1395	1376
Spain	2022	1912	1824	1810	1812	1833	1815	1812
Sweden	1516	1518	1546 |	1623	1628	1629	1635	1624
Switzerland	..	..	..	1586	1580	1580	1588	..
United Kingdom	1815	1713	1767	1738	1737	1731	1719	1708
United States	1845	1808	1819	1839	1849	1864	1871	1877
Dependent employment								
Canada	1801	1762	1771	1777	1782	1773	1780	1797
Czech Republic	..	..	..	1987	1989	1995	2014	2018
Finland[b]	..	..	1666	1690	1687	1672	1673	1638
France	1669	1570	1543	1502	1502	1501	1499	..
Germany	..	..	1537	1433	1426	1430	1422	1397
Western Germany	1633	1620	1497	1406	1400	1407	1399	1377
Iceland	..	..	..	1799	1790	1762	1810	1820
Italy	1648	1626	1599	1577	1577	1566	1563	..
Japan[d]	2114	2098	2052	1919	1900	1879	1842	1859
Japan[e]	..	..	2064	1919	1891	1871	1840	1853
Mexico	..	..	..	1958	1978	1942	1976	1935
Netherlands	1591	1530	1433	1357	1355	1340	1343	..
Spain	1936	1837	1762	1747	1748	1765	1750	1750
United Kingdom	1750	1652	1704	1699	1702	1703	1695	1684
United States	1831	1799	1807	1828	1840	1856	1862	1869

| Indicates break in series.

a) The concept used is the total number of hours worked over the year divided by the average numbers of people in employment. The data are intended for comparisons of trends over time; they are unsuitable for comparisons of the level of average annual hours of work for a given year, because of differences in their sources. Part-time workers are covered as well as full-time.

b) Data estimated from the Labour Force Survey.

c) Data estimated from national accounts.

d) Data refer to establishments with 30 or more regular employees.

e) Data refer to establishments with 5 or more regular employees.

Sources and definitions:

Australia : Data supplied by the Australian Bureau of Statistics from the Labour Force Survey. Annual hours are adjusted to take account of public holidays occuring during the reporting period. The method of estimation is consistent with the national accounts.

Canada : Data series supplied by Statistics Canada, based mainly on the monthly Labour Force Survey supplemented by the Survey of Employment Payrolls and Hours, the annual Survey of Manufacturers and the Census of Mining.

Czech Republic : Data supplied by the Czech Statistical Office and based on the quarterly Labour Force Sample Survey. Main meal breaks (one half hour a day) are included.

Finland : Data supplied by Statistics Finland. National accounts series based on an establishment survey for manufacturing, and the Labour Force Survey for other sectors and for the self-employed. Alternative series based solely on the Labour Force Survey.

France : New data series supplied by the Institut National de la Statistique et des Études Économiques (INSEE), produced within the framework of the national accounts.

Germany and western Germany : New data series from 1991 onward that extend coverage of part-time work with few hours of work. Data supplied by the Institut für Arbeitsmarkt- und Berufsforschung, calculated within a comprehensive accounting structure, based on establishment survey estimates of weekly hours worked by full-time workers whose hours are not affected by absence, and extended to annual estimates of actual hours by adjusting for a wide range of factors, including public holidays, sickness absence, overtime working, short-time working, bad weather, strikes, part-time working and parental leave. Data prior to 1991 are spliced with old annual hours of work estimates for 1991.

Table F. **Average annual hours actually worked per person in employment** [a] *(cont.)*

Iceland : Data are provided by Statistics Iceland and are based on the Icelandic Labor Force Survey. Annual actual hours worked per person in employment are computed by multiplying daily actual hours worked by annual actual working days net of public holidays and annual vacations. The latter are for a typical work contract by sector of activity.

Italy : Data are Secretariat estimates based on the European Labour Force Survey for 1983 to 1999. From 1960 to 1982, trend in data is taken from the series provided by ISTAT and based on a special establishment survey total employment discontinued in 1985.

Japan : Data for total employment are Secretariat estimates based on data from the Monthly Labour Survey of Establishments, extended to agricultural and government sectors and to the self-employed by means of the Labour Force Survey. Data for dependent employment supplied by Statistics Bureau, Management and Coordination Agency, from the Monthly Labour Survey, referring to all industries excluding agriculture, forest, fisheries and government services.

Korea : Data supplied by the Ministry of Labour from the Report on monthly labour survey.

Mexico : Data supplied by STPS-INEGI from the bi-annual National Survey of Employment, based on the assumption of 44 working weeks per year.

Netherlands : From 1977 onwards, figures are "Annual Contractual Hours", supplied by Statistics Netherlands, compiled within the framework of the Labour Accounts. Overtime hours are excluded. For 1970 to 1976, the trend has been derived from data supplied by the Economisch Instituut voor het Midden en Kleinbedrijf, referring to persons employed in the private sector, excluding agriculture and fishing.

New Zealand : Data supplied by Statistics New Zealand and derived from the quarterly Labour Force Survey, whose continuous sample design avoids the need for adjustments for public holidays and other days lost. Total employment figures revised slightly.

Norway : Data supplied by Statistics Norway, based on national accounts and estimated from a number of different data sources, the most important being establishment surveys, the Labour Force Surveys and the public sector accounts.

Spain : New series supplied by Instituto Nacional de Estadística and derived from the quarterly Labour Force Survey. Series break at 1986/87 due to changes in the survey.

Sweden : New series from 1996 are supplied by Statistics Sweden derived from national accounts data, based on both the Labour Force Survey and establishment surveys. Data prior to 1996 are estimated by applying new to old annual hours of work estimates for 1995 to the old series.

Switzerland : Data supplied by Office fédéral de la statistique. The basis of the calculation is the Swiss Labour Force Survey which provides information on weekly hours of work during one quarter of the year. The estimates of annual hours are based also on supplementary, annual information on vacations, public holidays and overtime working and have been extended to correspond to national accounts concepts.

United Kingdom : Since 1994, data refer to the United Kingdom (including Northern Ireland). Break in series 1994/95 due to small change in the way estimates of employment are derived. For 1992 to 1995, the levels are derived directly from the continuous Labour Force Survey. For 1984 to 1991, the trend in the data is taken from the annual Labour Force Survey. From 1970 to 1983, the trend corresponds to estimates by Professor Angus Maddison.

United States: New estimates by the Secretariat based on unpublished data supplied by the Bureau of Labor Statistics (BLS). Estimates of total hours worked on the basis of the Current Employment Statistics (CES) and the Current Population Survey (CPS) are divided by the average number of employed persons from the CPS.

Table G. **Incidence of long-term unemployment**[a, b, c, d, e]

As a percentage of total unemployment

	1990		1997		1998		1999		2000	
	6 months and over	12 months and over	6 months and over	12 months and over	6 months and over	12 months and over	6 months and over	12 months and over	6 months and over	12 months and over
Australia	41.0	21.6	51.4	30.7	52.2	33.6	48.4	29.4	43.6	27.9
Austria	..	..	47.7	28.7	43.3	29.2	47.6	31.7	43.8	28.4
Belgium	81.4	68.7	77.2	60.5	76.3	61.7	73.5	60.5	71.8	56.3
Canada	20.2	7.2	26.9	16.1	24.1	13.7	21.4	11.6	19.5	11.2
Czech Republic	..	..	53.0	30.5	54.6	31.2	61.9	37.1	69.9	48.8
Denmark	53.2	29.9	45.7	27.2	41.4	26.9	38.5	20.5	38.1	20.0
Finland[f]	32.6	9.2	48.6	29.8	42.2	27.5	46.4	29.6	46.5	29.0
France	55.5	38.0	63.7	41.2	64.2	44.1	55.5	40.3	61.9	42.5
Germany	64.7	46.8	68.5	50.1	69.6	52.6	67.2	51.7	67.6	51.5
Greece	71.9	49.8	76.5	55.7	74.8	54.9	74.3	55.3	73.6	56.5
Hungary	..	..	73.5	51.3	71.0	49.8	70.4	49.5	69.7	48.9
Iceland[f]	13.6	6.7	27.0	16.3	22.9	16.1	20.2	11.7	18.6	11.8
Ireland	81.0	66.0	73.6	57.0	..	..	76.1	55.3	..	..
Italy	85.2	69.8	81.8	66.3	77.3	59.6	77.2	61.4	75.3	60.8
Japan	39.0	19.1	41.3	21.8	39.3	20.9	44.5	22.4	46.9	25.5
Korea	13.9	2.6	15.8	2.6	14.7	1.6	18.6	3.8	14.3	2.3
Luxembourg[g]	(66.7)	(42.9)	(61.1)	(34.6)	(55.2)	(31.3)	(53.8)	(32.3)	(37.0)	(22.4)
Mexico	..	..	6.9	1.8	3.3	0.9	6.8	1.7	4.9	1.1
Netherlands	63.6	49.3	80.4	49.1	83.5	47.9	80.7	43.5	46.5	32.7
New Zealand	39.5	20.9	36.4	19.4	37.9	19.4	39.0	20.8	36.2	19.2
Norway	40.8	20.4	26.1	12.0	20.5	8.2	16.2	6.8	16.3	5.0
Poland	..	..	62.2	38.0	60.4	37.4	57.1	34.8	63.0	37.9
Portugal	62.4	44.8	66.7	55.6	64.5	44.7	63.8	41.2	60.0	42.9
Slovak Republic	..	..	67.7	51.6	68.0	51.3	69.2	47.7	74.4	54.6
Spain	70.2	54.0	71.8	55.5	70.4	54.1	67.9	51.3	64.8	47.6
Sweden	22.2	12.1	50.8	33.4	49.2	33.5	45.2	30.1	41.5	26.4
Switzerland[f]	26.2	16.4	49.4	28.5	48.9	34.8	61.0	39.8	46.6	29.1
Turkey	72.6	47.0	62.6	41.5	60.7	40.1	49.8	28.4	37.9	20.3
United Kingdom	50.3	34.4	54.8	38.6	47.3	32.7	45.4	29.6	43.2	28.0
United States	10.0	5.5	15.9	8.7	14.1	8.0	12.3	6.8	11.4	6.0
European Union[h]	65.3	48.6	68.2	50.1	66.7	49.1	63.8	47.5	63.1	46.6
OECD Europe[h]	65.7	48.1	66.9	48.0	65.3	47.0	61.9	44.2	61.3	43.2
Total OECD[h]	44.6	30.9	50.9	35.0	48.5	33.3	47.1	31.8	46.7	31.4

| Indicates break in series.

a) While data from labour force surveys make international comparisons easier, compared to a mixture of survey and registration data, they are not perfect. Questionnaire wording and design, survey timing,differences across countries in the age groups covered, and other reasons mean that care is required in interpreting cross-country differences in levels.

b) The duration of unemployment database maintained by the Secretariat is composed of detailed duration categories disaggregated by age and sex. All totals are derived by adding each component. Thus, the total for men is derived by adding the number of unemployed men by each duration and age group category. Since published data are usually rounded to the nearest thousand, this method sometimes results in slight differences between the percentages shown here and those that would be obtained using the available published figures.

c) Data are averages of monthly figures for Canada, Sweden and the United States, averages of quarterly figures for the Czech Republic, Hungary, Norway, New Zealand, Poland, Slovak Republic, and Spain, and averages of semi annual figures for Turkey. The reference period for the remaining countries is as follows (among EU countries it occasionally varies from year to year): Australia, August; Austria, April; Belgium, April; Denmark, April-May; Finland, autumn prior to 1995, spring between 1995 and 1998, and averages of monthly figures since 1999; France, March; Germany, April; Greece, March-July; Iceland, April; Ireland, May; Italy, April; Japan, February; Luxembourg, April; Mexico, April; the Netherlands, March-May; Portugal, February-April; Switzerland, second quarter; and the United Kingdom, March-May.

d) Data refer to persons aged 15 and over in Australia, Austria, Belgium, Canada, the Czech Republic, Denmark, France, Germany, Greece, Ireland, Italy, Japan, Luxembourg, Mexico, Netherlands, New Zealand, Poland, Portugal, Slovak Republic, Switzerland and Turkey; and aged 16 and over in Iceland, Spain, the United Kingdom and the United States. Data for Finland refer to persons aged 15-64 (excluding unemployment pensioners). Data for Hungary refer to persons aged 15-74, data for Norway refer to persons aged 16-74 and data for Sweden refer to persons aged 16-64.

e) Persons for whom no duration of unemployment was specified are excluded.

Table G. **Incidence of long-term unemployment among men**[a, b, c, d, e] *(cont.)*

As a percentage of male unemployment

	1990		1997		1998		1999		2000	
	6 months and over	12 months and over	6 months and over	12 months and over	6 months and over	12 months and over	6 months and over	12 months and over	6 months and over	12 months and over
Australia	42.6	24.4	54.5	33.0	55.1	36.5	50.9	31.8	45.9	30.6
Austria	..	..	42.1	28.9	37.9	26.6	40.2	28.1	41.4	29.3
Belgium	79.5	66.1	76.6	59.4	75.0	59.5	73.2	60.1	70.2	55.9
Canada	20.4	7.9	28.4	17.9	25.6	15.0	23.3	12.8	20.9	12.2
Czech Republic	..	..	53.1	31.3	52.9	30.9	58.0	32.7	68.4	47.5
Denmark	48.9	27.8	44.5	26.3	40.9	23.9	38.6	20.9	36.5	20.1
Finland[f]	36.8	9.7	49.5	31.9	46.3	31.7	49.2	33.1	49.6	32.2
France	53.1	35.4	61.7	39.1	62.3	43.2	53.7	39.0	60.6	41.1
Germany	65.2	49.1	65.9	47.1	66.0	49.9	65.3	49.9	66.0	50.1
Greece	61.8	39.9	69.1	45.8	68.9	44.7	69.0	48.6	67.2	49.5
Hungary	..	..	74.2	52.6	71.5	50.2	70.9	50.6	71.3	51.0
Iceland[f]	5.1	1.3	27.2	20.1	21.4	13.6	13.9	6.6	17.4	8.7
Ireland	84.3	71.1	77.9	63.3	..	..	77.8	59.5	..	..
Italy	84.1	68.6	81.2	66.5	76.4	60.4	76.6	62.1	74.8	60.7
Japan	47.6	26.2	49.2	28.8	45.0	25.8	49.5	27.4	52.8	30.7
Korea	16.0	3.3	18.6	3.5	16.8	1.9	21.3	4.7	16.8	3.1
Luxembourg[g]	(80.0)	(60.0)	(65.7)	(32.7)	(57.3)	(38.0)	(61.6)	(38.6)	(40.0)	(26.4)
Mexico	..	..	8.6	1.2	4.2	1.2	5.8	2.7	4.3	0.5
Netherlands	65.6	55.2	76.6	49.9	81.0	51.3	75.1	47.7	45.2	31.7
New Zealand	44.0	24.5	40.4	22.1	41.1	22.6	42.5	23.0	39.5	23.1
Norway	37.9	19.0	29.2	14.6	23.1	10.3	17.1	7.3	20.0	6.7
Poland	..	..	57.8	33.5	55.2	32.5	52.4	31.4	59.3	34.1
Portugal	56.3	38.2	64.8	53.4	61.9	43.6	63.5	39.5	60.1	46.7
Slovak Republic	..	..	65.5	49.6	66.4	48.9	67.5	45.3	74.1	54.1
Spain	63.3	45.8	67.2	49.9	65.4	48.0	62.2	45.4	58.6	41.0
Sweden	22.2	12.3	53.1	36.1	52.2	36.3	48.5	33.3	44.3	29.3
Switzerland[f]	28.0	16.0	47.9	25.5	51.5	37.9	59.3	40.7	48.0	28.0
Turkey	71.2	44.9	59.5	38.3	58.3	37.7	47.4	25.2	35.0	17.5
United Kingdom	56.8	41.8	60.2	44.9	53.2	38.0	50.1	34.5	48.1	33.7
United States	12.1	7.0	16.7	9.4	15.2	8.8	13.0	7.4	12.2	6.7
European Union[h]	63.5	47.0	66.4	48.5	64.5	47.5	61.8	46.1	61.4	45.3
OECD Europe[h]	64.3	46.4	64.8	46.0	62.9	45.0	59.2	41.9	58.3	40.6
Total OECD[h]	43.7	29.7	50.1	34.1	47.1	32.0	45.9	30.5	45.4	30.1

f) Data for 1990 refer to 1991.

g) Data in brackets are based on small sample sizes and, therefore, must be treated with care.

h) For above countries only.

Table G. **Incidence of long-term unemployment among women**[a, b, c, d, e] *(cont.)*

As a percentage of female unemployment

	1990		1997		1998		1999		2000	
	6 months and over	12 months and over	6 months and over	12 months and over	6 months and over	12 months and over	6 months and over	12 months and over	6 months and over	12 months and over
Australia	38.8	17.8	47.0	27.4	48.0	29.3	44.9	25.8	40.2	24.0
Austria	..	..	54.5	28.4	50.1	32.5	56.9	36.1	47.0	27.2
Belgium	82.5	70.0	77.8	61.5	77.5	63.5	73.8	60.9	73.1	56.7
Canada	19.8	6.2	25.0	13.9	22.2	12.2	18.9	10.2	17.8	10.0
Czech Republic	..	..	53.0	29.9	55.9	31.5	65.3	40.9	71.2	49.8
Denmark	57.7	32.0	46.7	27.9	41.6	29.0	38.5	20.1	39.6	20.0
Finland[f]	26.3	8.4	47.7	27.6	37.8	23.1	43.7	26.2	43.7	26.2
France	57.3	40.0	65.6	43.3	66.0	44.9	57.3	41.6	63.1	43.6
Germany	64.2	44.5	71.4	53.6	73.7	55.6	69.4	54.0	69.5	53.1
Greece	78.2	55.9	81.4	62.2	78.6	61.5	77.7	59.5	77.8	61.0
Hungary	..	..	72.3	49.2	70.1	49.2	69.7	47.9	67.3	45.7
Iceland[f]	21.1	11.5	26.8	12.6	24.1	18.1	24.5	15.2	19.5	14.1
Ireland	75.0	56.8	66.6	46.9	..	..	72.9	47.5	..	..
Italy	86.0	70.7	82.5	66.2	78.1	58.8	77.7	60.7	75.8	60.9
Japan	26.3	8.8	29.8	11.7	30.5	13.7	36.9	14.8	37.4	17.1
Korea	8.9	0.9	11.0	1.0	10.3	0.8	13.1	1.9	9.2	0.7
Luxembourg[g]	(55.6)	(33.3)	(57.3)	(36.1)	(53.6)	(26.3)	(47.5)	(27.2)	(34.3)	(18.8)
Mexico	..	..	4.9	2.4	2.2	0.4	8.0	0.4	6.0	2.0
Netherlands	62.0	44.6	83.4	48.5	85.5	45.2	84.9	40.4	47.6	33.4
New Zealand	32.6	15.5	31.3	16.0	33.7	15.2	34.3	17.9	32.0	14.3
Norway	45.0	22.5	25.0	11.4	17.1	5.7	15.6	6.3	11.4	2.9
Poland	..	..	66.0	41.9	65.1	41.8	61.9	38.3	66.6	41.3
Portugal	66.4	49.4	68.5	57.7	66.6	45.6	64.2	42.9	60.0	40.0
Slovak Republic	..	..	70.1	53.6	69.9	54.0	71.3	50.5	74.8	55.1
Spain	76.5	61.5	75.9	60.4	74.4	59.1	72.0	55.5	69.1	52.1
Sweden	22.2	11.8	48.1	30.1	45.6	30.1	41.2	26.1	37.9	22.8
Switzerland[f]	25.0	16.7	51.6	32.8	46.4	31.9	62.7	39.0	45.3	30.2
Turkey	75.6	51.2	69.4	48.6	66.9	46.4	56.0	36.4	46.3	28.5
United Kingdom	40.8	23.7	45.3	27.8	37.7	24.0	37.6	21.5	35.6	19.0
United States	7.3	3.7	14.9	8.0	12.8	7.1	11.6	6.2	10.5	5.3
European Union[h]	66.9	50.1	70.1	51.8	68.9	50.7	65.7	48.9	64.8	47.9
OECD Europe[h]	67.2	49.8	69.2	50.2	67.9	49.1	64.8	46.8	64.4	46.0
Total OECD[h]	45.7	32.2	51.8	36.0	50.2	34.9	48.6	33.2	48.3	33.0

Sources:

Data for *Austria, Belgium, Denmark, Germany, Greece, Ireland, Italy, Luxembourg, the Netherlands, Portugal and the United Kingdom* are based on the European Labour Force Survey and were supplied by Eurostat.

Australia: Data from the Labour Force Suvrvey supplied by the Australian Bureau of Statistics (ABS).

Canada: Data from the Labour Force Survey supplied by Statistics Canada.

Czech Republic: Data from the Labour Force Sample Survey supplied by the Czech Statistical Office.

Finland: Data from the Supplementary Labour Force Survey (biennial from 1989 until 1995, and annual from 1995 to 1998) and from the Labour Force Survey since 1999 supplied by the Central Statistical Office (CSO).

France: Data from the Enquête Emploi supplied by the Institut National de la Statistique et des Etudes Economiques (INSEE).

Hungary: Data from the Labour Force Survey supplied by the Central Statistical Office (CSO).

Iceland: Data from the Labour Force Survey supplied by Statistics Iceland.

Japan: Data from the Special Survey of the Labour Force Survey supplied by the Statistics Bureau, Management and Coordination Agency (MCA).

Korea: Data from the Labour Force Survey supplied by the National Statistical Office (NSO).

Mexico: Data from the biennial Encuesta Nacional de Empleo (ENE) supplied by the Secretaría del Trabajo y Previsión Social (STPS).

New Zealand: Data from the Household Labour Force Survey supplied by the Department of Statistics.

Norway: Data from the Labour Force Survey supplied by the Central Statistical Office (CSO).

Poland: Data from the Labour Force Survey supplied by the Central Statistical Office (CSO).

Slovak Republic: Data from the Labour Force Survey supplied by the Statistical Office of the Slovak Repulic (SOS).

Spain: Data from the Labour Force Survey supplied by Instituto Nacional de Estadística (INE).

Sweden: Data from the Labour Force Survey supplied by Statistics Sweden.

Switzerland: Data from the Labour Force Survey supplied by the Swiss Federal Statistical Office (OFS).

Turkey: Data from the Household Labour Force Survey supplied by the State Institute of Statistics (SIS).

United States: Data from the Current Population Census (CPS) supplied by the Bureau of Labor Statistics (BLS).

Table H. **Public expenditure and participant inflows* in labour market programmes in OECD countries**

Programme categories	Australia [a]								Austria							
	Public expenditure as a percentage of GDP				Participant inflows as a percentage of the labour force				Public expenditure as a percentage of GDP				Participant inflows as a percentage of the labour force			
	1996-97	1997-98	1998-99	1999-00	1996-97	1997-98	1998-99	1999-00	1997	1998	1999	2000	1997	1998	1999	2000
1. Public employment services and administration	**0.23**	**0.21**	**0.20**	**0.20**					**0.14**	**0.13**	**0.13**	**0.13**				
2. Labour market training	**0.08**	**0.06**	**0.02**	**0.02**	**2.20**	**1.93**	**0.79**	**0.96**	**0.17**	**0.15**	**0.18**	**0.17**	**1.87**[b]	**1.67**[b]	**3.01**[b]	**3.00**[b]
a) Training for unemployed adults and those at risk	0.08	0.06	0.02	0.02	1.83	1.69	0.58	0.77	0.15	0.13	0.16	0.15	. .	. .	. .	. .
b) Training for employed adults	0.01	-	-	-	0.37	0.24	0.21	0.19	0.02	0.02	0.02	0.02	. .	. .	. .	. .
3. Youth measures	**0.06**	**0.06**	**0.05**	**0.07**	**1.23**	**1.95**	**0.53**	**0.93**	**0.02**	**0.04**	**0.05**	**0.04**	**0.27**	**0.17**	**0.20**	**0.11**
a) Measures for unemployed and disadvantaged youth	0.01	-	-	0.01	0.17	0.29	0.23	0.76	0.02	0.01	0.02	0.02	. .	. .	. .	. .
b) Support of apprenticeship and related forms of general youth training	0.05	0.05	0.05	0.07	1.06	1.66	0.31	0.17	-	0.03	0.03	0.02	. .	. .	. .	. .
4. Subsidised employment	**0.20**	**0.13**	**0.09**	**0.11**	**1.54**	**1.13**	**. .**	**. .**	**0.07**	**0.07**	**0.09**	**0.10**	**0.45**	**0.32**	**0.64**	**0.56**
a) Subsidies to regular employment in the private sector	0.06	0.04	0.01	0.01	1.04	0.73	. .	. .	0.03	0.03	0.05	0.06	. .	. .	. .	. .
b) Support of unemployed persons starting enterprises	0.03	0.02	0.02	0.02	0.09	0.07	. .	0.08	-	0.01	0.01	0.01	-	. .	. .	. .
c) Direct job creation (public or non-profit)	0.11	0.07	0.07	0.09	0.41	0.33	. .	0.83	0.04	0.03	0.03	0.04	. .	. .	. .	. .
5. Measures for the disabled	**0.06**	**0.05**	**0.06**	**0.05**	**0.69**	**0.32**	**. .**	**. .**	**0.05**	**0.05**	**0.06**	**0.05**	***b***	***b***	***b***	***b***
a) Vocational rehabilitation	0.02	0.02	0.02	0.02	0.30	0.29	0.28	0.18	0.02	0.02	0.02	0.02	. .	. .	. .	. .
b) Work for the disabled	0.04	0.04	0.04	0.04	0.39	-	. .	. .	0.03	0.03	0.03	0.03	. .	. .	. .	. .
6. Unemployment compensation	**1.24**	**1.23**	**1.17**	**1.05**	**. .**	**8.85**	**. .**	**. .**	**1.22**	**1.21**	**1.15**	**1.03**	**19.57**	**19.37**	**18.72**	**-**
7. Early retirement for labour market reasons	-	-	-	-	**. .**	**. .**	**. .**	**. .**	**0.07**	**0.07**	**0.06**	**0.06**	**0.75**	**0.64**	**0.59**	**0.75**
TOTAL	**1.87**	**1.74**	**1.59**	**1.51**	**. .**	**. .**	**. .**	**. .**	**1.73**	**1.71**	**1.71**	**1.56**	**22.91**	**22.17**	**23.32**	**22.54**
Active measures (1-5)	0.63	0.51	0.42	0.46	5.66	5.32	. .	. .	0.45	0.44	0.52	0.49	2.59	2.16	3.84	3.67
Passive measures (6 and 7)	1.24	1.23	1.17	1.05	. .	. .	. .	. .	1.28	1.27	1.19	1.07	20.32	20.02	19.47	18.87
For reference:																
GDP (national currency, at current prices, 10^9)	534	566	593	630					2 513	2 615	2 712	2 834				
Labour force (thousands)					9 222	9 292	9 422	9 601					3 884	3 888	3 909	3 921

a) Fiscal years starting on July 1.

b) Participant inflows for category 5 "Measures for the disabled" are included in category 2 "Labour market training".

Table H. **Public expenditure and participant inflows[*] in labour market programmes in OECD countries** *(cont.)*

Programme categories	Belgium								Canada [a]						
	Public expenditure as a percentage of GDP				Participant inflows as a percentage of the labour force				Public expenditure as a percentage of GDP				Participant inflows as a percentage of the labour force		
	1996	1997	1998	1999	1996	1997	1998	1999	1995-96	1996-97	1997-98	1998-99[b]	1995-96	1996-97	1997-98
1. Public employment services and administration	**0.20**	**0.19**	**0.19**	**0.19**					**0.21**	**0.19**	**0.18**	**0.20**			
2. Labour market training	**0.28**	**0.26**	**0.25**	**0.25**	**8.55**	**8.55**	**8.95**	**9.08**	**0.25**	**0.17**	**0.15**	**0.17**	**1.93**	**1.90**	**1.61**
a) Training for unemployed adults and those at risk	0.17	0.17	0.16	0.16	2.37	2.41	2.82	2.98	0.24	0.16	0.15	0.17	1.91	1.90	1.61
b) Training for employed adults	0.11	0.09	0.09	0.09	6.18	6.14	6.13	6.09	0.01	-	-	-	-	-	-
3. Youth measures	**0.03**	**0.01**	**-**	**-**	**0.48**	**0.24**	**-**	**-**	**0.02**	**0.02**	**0.03**	**0.03**	**0.54**	**0.54**	**. .**
a) Measures for unemployed and disadvantaged youth	-	-	-	-	-	-	-	-	0.01	0.01	0.02	0.02	0.24	0.16	. .
b) Support of apprenticeship and related forms of general youth training	0.03	0.01	-	-	0.48	0.24	-	-	0.01	0.01	0.01	0.01	0.30	0.39	. .
4. Subsidised employment	**0.83**	**0.65**	**0.86**	**0.80**	**7.32**	**5.86**	**8.68**	**9.33**	**0.06**	**0.06**	**0.08**	**0.08**	**0.31**	**0.28**	**0.34**
a) Subsidies to regular employment in the private sector	0.27	0.17	0.35	0.28	4.49	2.84	4.44	3.79	0.01	0.01	0.01	0.01	-	0.06	0.10
b) Support of unemployed persons starting enterprises	-	-	-	-	-	-	-	-	0.02	0.02	0.02	0.01	0.07	0.09	0.10
c) Direct job creation (public or non-profit)	0.56	0.48	0.48	0.50	2.82	3.01	2.91	3.08	0.03	0.02	0.04	0.05	0.20	0.12	0.14
5. Measures for the disabled	**0.12**	**0.12**	**0.12**	**0.12**	**. .**	**. .**	**. .**	**. .**	**0.02**	**0.03**	**0.03**	**0.03**	**-**	**-**	**-**
a) Vocational rehabilitation	0.02	0.02	0.02	0.02	. .	. .	. .	. .	0.02	0.03	0.03	0.02	-	-	-
b) Work for the disabled	0.10	0.10	0.10	0.10	. .	. .	. .	. .	-	-	-	-	-	-	-
6. Unemployment compensation	**2.12**	**2.05**	**1.90**	**1.81**	**. .**	**. .**	**. .**	**. .**	**1.28**	**1.15**	**1.00**	**0.98**	**. .**	**. .**	**. .**
7. Early retirement for labour market reasons	**0.64**	**0.60**	**0.56**	**0.53**	**. .**	**. .**	**. .**	**. .**	**0.01**	**0.01**	**-**	**-**	**. .**	**. .**	**. .**
TOTAL	**4.22**	**3.87**	**3.87**	**3.69**	**. .**	**. .**	**. .**	**. .**	**1.85**	**1.62**	**1.46**	**1.49**	**. .**	**. .**	**. .**
Active measures (1-5)	1.46	1.22	1.42	1.35	. .	. .	. .	. .	0.56	0.47	0.46	0.50	2.78	2.72	. .
Passive measures (6 and 7)	2.76	2.65	2.46	2.34	. .	. .	. .	. .	1.29	1.16	1.01	0.98	. .	. .	. .
For reference:															
GDP (national currency, at current prices, 10^9)	8 328	8 727	9 082	9 423					812	845	886	910			
Labour force (thousands)					4 329	4 348	4 359	4 382					14 840	15 008	15 282

a) Fiscal years starting on April 1.
b) Provisional data.

Table H. **Public expenditure and participant inflows* in labour market programmes in OECD countries** *(cont.)*

Programme categories	Czech Republic								Denmark							
	Public expenditure as a percentage of GDP				Participant inflows as a percentage of the labour force				Public expenditure as a percentage of GDP				Participant inflows as a percentage of the labour force			
	1997	1998	1999	2000	1997	1998	1999	2000	1997	1998	1999	2000	1997	1998	1999	2000
1. Public employment services and administration	**0.08**	**0.08**	**0.09**	**0.08**					**0.12**	**0.12**	**0.11**	**0.11**				
2. Labour market training	**0.01**	**0.01**	**0.01**	**0.02**	**0.22**	**0.32**	**0.44**	**0.64**	**0.93**	**0.96**	**0.97**	**0.84**	**18.47**	**20.62**	**19.72**	**15.78**
a) Training for unemployed adults and those at risk	0.01	0.01	0.01	0.02	0.22	0.32	0.44	0.64	0.64	0.71	0.77	0.66	8.82	12.46	11.64	5.71
b) Training for employed adults	-	-	-	-	-	-	-	-	0.28	0.25	0.21	0.18	9.65	8.16	8.09	10.07
3. Youth measures	**0.01**	**0.01**	**0.02**	**0.02**	**0.07**	**0.18**	**0.21**	**0.22**	**0.10**	**0.08**	**0.12**	**0.10**	**1.50**	**1.50**	**1.88**	**1.82**
a) Measures for unemployed and disadvantaged youth	0.01	0.01	0.02	0.02	0.07	0.18	0.21	0.22	0.10	0.08	0.12	0.10	1.50	1.50	1.88	1.82
b) Support of apprenticeship and related forms of general youth training	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4. Subsidised employment	**0.02**	**0.03**	**0.05**	**0.09**	**0.30**	**0.39**	**0.60**	**0.91**	**0.30**	**0.27**	**0.23**	**0.17**	**1.11**	**1.05**	**1.00**	**0.81**
a) Subsidies to regular employment in the private sector	-	0.01	0.02	0.04	0.05	0.13	0.24	0.41	0.02	0.02	0.02	0.02	0.22	0.25	0.22	0.20
b) Support of unemployed persons starting enterprises	-	-	0.01	0.01	-	-	0.06	0.11	0.06	0.04	0.01	-	0.10	-	-	-
c) Direct job creation (public or non-profit)	0.01	0.02	0.03	0.04	0.23	0.23	0.31	0.39	0.22	0.21	0.19	0.15	0.78	0.78	0.78	0.62
5. Measures for the disabled	**-**	**0.01**	**0.01**	**0.01**	**-**	**-**	**-**	**-**	**0.21**	**0.24**	**0.32**	**0.33**	**2.28**	**2.51**	**3.05**	**2.56**
a) Vocational rehabilitation	-	-	-	-	-	-	-	-	0.21	0.24	0.32	0.33	2.28	2.51	3.05	2.56
b) Work for the disabled	-	0.01	0.01	0.01	-	-	-	-	-	-	-	-	-	-	-	-
6. Unemployment compensation	**0.20**	**0.23**	**0.31**	**0.30**	**. .**	**. .**	**. .**	**. .**	**2.12**	**1.67**	**1.41**	**1.33**	**24.42**	**23.08**	**21.15**	**19.46**
7. Early retirement for labour market reasons	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**1.71**	**1.70**	**1.68**	**1.63**	**1.06**	**1.06**	**0.58**	**0.97**
TOTAL	**0.32**	**0.36**	**0.50**	**0.52**	**. .**	**. .**	**. .**	**. .**	**5.49**	**5.03**	**4.85**	**4.51**	**48.86**	**49.83**	**47.39**	**41.41**
Active measures (1-5)	0.11	0.13	0.19	0.22	0.59	0.90	1.27	1.77	1.66	1.66	1.76	1.54	23.37	25.69	25.66	20.97
Passive measures (6 and 7)	0.20	0.23	0.31	0.30	. .	. .	. .	. .	3.83	3.37	3.09	2.96	25.48	24.15	21.72	20.44
For reference:																
GDP (national currency, at current prices, 10 [9])	1 680	1 829	1 833	1 911					1 116	1 169	1 230	1 312				
Labour force (thousands)					5 185	5 201	5 218	5 186					2 856	2 848	2 865	2 875

Table H. **Public expenditure and participant inflows* in labour market programmes in OECD countries** *(cont.)*

Programme categories	Finland								France							
	Public expenditure as a percentage of GDP				Participant inflows as a percentage of the labour force				Public expenditure as a percentage of GDP				Participant inflows as a percentage of the labour force			
	1997	1998	1999	2000[a]	1997	1998	1999	2000[a]	1996	1997	1998	1999	1996	1997	1998	1999
1. Public employment services and administration	**0.14**	**0.13**	**0.14**	**0.12**					**0.16**	**0.16**	**0.16**	**0.17**				
2. Labour market training	**0.53**	**0.44**	**0.40**	**0.35**	**5.35**	**4.35**	**4.22**	**3.40**	**0.36**	**0.34**	**0.31**	**0.28**	**3.41**	**2.90**	**2.84**	**. .**
a) Training for unemployed adults and those at risk	0.52	0.42	0.36	0.30	5.35	2.40	2.33	2.55	0.32	0.31	0.28	0.25	2.78	2.39	2.26	. .
b) Training for employed adults	0.02	0.02	0.04	0.05	-	1.95	1.89	0.85	0.04	0.03	0.04	0.03	0.63	0.52	0.58	. .
3. Youth measures	**0.23**	**0.21**	**0.20**	**0.19**	**2.68**	**2.85**	**2.49**	**2.07**	**0.27**	**0.26**	**0.33**	**0.41**	**2.64**	**2.55**	**2.82**	**. .**
a) Measures for unemployed and disadvantaged youth	0.11	0.08	0.07	0.07	1.65	1.50	1.25	1.05	0.09	0.07	0.14	0.21	0.63	0.60	0.81	. .
b) Support of apprenticeship and related forms of general youth training	0.12	0.13	0.12	0.12	1.03	1.35	1.23	1.02	0.18	0.19	0.19	0.19	2.00	1.95	2.01	1.30
4. Subsidised employment	**0.52**	**0.51**	**0.37**	**0.32**	**4.48**	**3.53**	**2.74**	**2.24**	**0.48**	**0.49**	**0.42**	**0.41**	**4.25**	**4.49**	**4.00**	**. .**
a) Subsidies to regular employment in the private sector	0.09	0.18	0.16	0.15	1.33	1.29	1.06	0.91	0.24	0.30	0.23	0.21	2.43	2.82	2.44	. .
b) Support of unemployed persons starting enterprises	0.03	0.03	0.03	0.03	0.22	0.20	0.17	0.16	0.02	-	-	-	0.15	0.13	0.15	. .
c) Direct job creation (public or non-profit)	0.40	0.29	0.19	0.14	2.93	2.04	1.51	1.17	0.22	0.19	0.19	0.20	1.66	1.53	1.40	. .
5. Measures for the disabled	**0.12**	**0.11**	**0.10**	**0.09**	**0.82**	**0.89**	**0.83**	**0.85**	**0.08**	**0.08**	**0.09**	**0.09**	**0.31**	**0.31**	**0.38**	**. .**
a) Vocational rehabilitation	0.06	0.06	0.05	0.05	0.82	0.89	0.83	0.85	0.02	0.02	0.02	0.03	0.31	0.31	0.38	. .
b) Work for the disabled	0.06	0.05	0.05	0.04	-	-	-	-	0.06	0.06	0.06	0.07	. .	. .	. .	. .
6. Unemployment compensation	**2.72**	**2.13**	**1.85**	**1.75**	**. .**	**. .**	**. .**	**. .**	**1.43**	**1.49**	**1.48**	**1.47**	**6.75**	**6.61**	**6.67**	**6.62**
7. Early retirement for labour market reasons	**0.42**	**0.43**	**0.46**	**0.47**	**. .**	**. .**	**. .**	**. .**	**0.36**	**0.35**	**0.33**	**0.29**	**0.43**	**0.34**	**0.34**	**0.29**
TOTAL	**4.68**	**3.96**	**3.53**	**3.30**	**. .**	**. .**	**. .**	**. .**	**3.13**	**3.18**	**3.11**	**3.12**	**17.78**	**17.20**	**17.04**	**. .**
Active measures (1-5)	1.54	1.40	1.22	1.08	13.33	11.62	10.27	8.55	1.34	1.34	1.30	1.36	10.60	10.24	10.04	. .
Passive measures (6 and 7)	3.14	2.56	2.32	2.22	. .	. .	. .	. .	1.79	1.84	1.81	1.76	7.17	6.95	7.01	6.90
For reference:																
GDP (national currency, at current prices, 10^9)	636	690	722	785					7 951	8 207	8 536	8 819				
Labour force (thousands)					2 508	2 532	2 578	2 609					25 609	25 768	25 916	26 293

a) Provisional data.

Table H. **Public expenditure and participant inflows* in labour market programmes in OECD countries** *(cont.)*

Programme categories	Germany								Greece			Hungary			
	Public expenditure as a percentage of GDP				Participant inflows as a percentage of the labour force				Public expenditure as a percentage of GDP			Public expenditure as a percentage of GDP			
	1997	1998	1999	2000	1997	1998	1999	2000	1996	1997	1998	1997	1998	1999	2000[a]
1. Public employment services and administration	**0.21**	**0.22**	**0.23**	**0.23**					**0.14**	**0.12**	**0.06**	**0.13**	**0.12**	**0.11**	**0.11**
2. Labour market training	**0.35**	**0.34**	**0.35**	**0.34**	**1.30**	**1.52**	**1.32**	**1.47**	**0.09**	**0.06**	**0.17**	**0.08**	**0.07**	**0.07**	**0.07**
a) Training for unemployed adults and those at risk	0.35	0.34	0.35	0.34	1.30	1.52	1.32	1.47	. .	. .	0.12	0.08	0.07	0.07	0.07
b) Training for employed adults	-	-	-	-	-	-	-	-	. .	. .	0.03	-	-	-	-
3. Youth measures	**0.07**	**0.07**	**0.08**	**0.08**	**0.67**	**0.88**	**1.01**	**1.00**	**0.09**	**0.09**	**0.11**	**-**	**-**	**-**	**-**
a) Measures for unemployed and disadvantaged youth	0.06	0.06	0.07	0.07	0.39	0.60	0.61	0.65	0.03	0.02	-	-	-	-	-
b) Support of apprenticeship and related forms of general youth training	0.01	0.01	0.01	0.01	0.28	0.28	0.40	0.35	0.07	0.07	0.10	-	-	-	-
4. Subsidised employment	**0.33**	**0.38**	**0.40**	**0.31**	**1.22**	**2.01**	**1.59**	**1.22**	**0.10**	**0.06**	**-**	**0.23**	**0.20**	**0.22**	**0.22**
a) Subsidies to regular employment in the private sector	0.05	0.03	0.03	0.03	0.21	0.17	0.10	0.11	0.07	0.04	-	0.08	0.09	0.08	0.07
b) Support of unemployed persons starting enterprises	0.03	0.03	0.04	0.04	0.20	0.25	0.24	0.23	0.02	0.02	-	-	-	-	-
c) Direct job creation (public or non-profit)	0.26	0.32	0.33	0.25	0.81	1.59	1.25	0.89	-	-	-	0.15	0.11	0.13	0.15
5. Measures for the disabled	**0.27**	**0.25**	**0.25**	**0.27**	**0.28**	**0.30**	**0.32**	**0.30**	**0.03**	**0.01**	**0.01**	**-**	**-**	**-**	**-**
a) Vocational rehabilitation	0.13	0.10	0.10	0.11	0.28	0.30	0.32	0.30	. .	. .	0.01	-	-	-	-
b) Work for the disabled	0.14	0.15	0.15	0.15	-	-	-	-	. .	. .	-	-	-	-	-
6. Unemployment compensation	**2.47**	**2.27**	**2.11**	**1.88**	**. .**	**. .**	**. .**	**. .**	**0.44**	**0.49**	**0.48**	**0.46**	**0.45**	**0.47**	**0.44**
7. Early retirement for labour market reasons	**0.05**	**-**	**0.01**	**0.01**	**. .**	**. .**	**. .**	**. .**	**-**	**-**	**-**	**0.17**	**0.16**	**0.09**	**0.04**
TOTAL	**3.76**	**3.54**	**3.42**	**3.13**	**. .**	**. .**	**. .**	**. .**	**0.88**	**0.84**	**0.83**	**1.07**	**1.01**	**0.96**	**0.87**
Active measures (1-5)	1.23	1.26	1.30	1.23	3.47	4.71	4.25	3.99	0.44	0.35	0.34	0.44	0.39	0.40	0.39
Passive measures (6 and 7)	2.52	2.28	2.12	1.89	. .	. .	. .	. .	0.44	0.49	0.48	0.63	0.62	0.56	0.48
For reference:															
GDP (national currency, at current prices, 10^9)	3 667	3 784	3 877	3 976					29 935	33 104	35 873	8 541	10 087	11 436	12 968
Labour force (thousands)					39 806	40 090	40 217	40 614							

a) Provisional data.

Table H. **Public expenditure and participant inflows* in labour market programmes in OECD countries** *(cont.)*

Programme categories	**Hungary** (cont.)				**Italy**[a]				**Japan**[b,c]			
	Participant inflows as a percentage of the labour force				Public expenditure as a percentage of GDP		Participant inflows as a percentage of the labour force		Public expenditure as a percentage of GDP			
	1997	1998	1999	2000[d]	1998	1999[d]	1998	1999[d]	1996 -97	1997 -98	1998 -99	1999 -00
1. Public employment services and administration					**. .**	**. .**			**0.19**	**0.19**	**0.10**	**0.11**
2. Labour market training	**1.22**	**1.30**	**1.35**	**1.34**	**0.15**	**0.12**	**2.45**	**2.14**	**0.03**	**0.03**	**0.03**	**0.03**
a) Training for unemployed adults and those at risk	1.14	1.18	1.24	1.26	0.11	0.08	1.53	1.24	0.03	0.03	0.03	0.03
b) Training for employed adults	0.09	0.12	0.11	0.09	0.04	0.04	0.92	0.90	-	-	-	-
3. Youth measures	**-**	**-**	**-**	**-**	**0.22**	**0.25**	**1.48**	**1.10**	**-**	**-**	**-**	**-**
a) Measures for unemployed and disadvantaged youth	-	-	-	-	0.01	0.01	. .	. .	-	-	-	-
b) Support of apprenticeship and related forms of general youth training	-	-	-	-	0.21	0.23	1.47	1.10	-	-	-	-
4. Subsidised employment	**3.62**	**4.19**	**4.07**	**4.03**	**0.25**	**0.26**	**0.48**	**0.08**	**0.11**	**0.10**	**0.11**	**0.13**
a) Subsidies to regular employment in the private sector	1.34	1.41	1.03	0.98	0.18	0.18	0.46	. .	-	-	-	-
b) Support of unemployed persons starting enterprises	0.11	0.08	0.09	0.09	0.01	0.01	. .	. .	-	-	-	-
c) Direct job creation (public or non-profit)	2.17	2.71	2.96	2.95	0.06	0.07	. .	. .	-	-	-	-
5. Measures for the disabled	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**0.01**	**0.01**	**0.01**	**0.01**
a) Vocational rehabilitation	-	-	-	-	-	-	-	-	-	-	-	-
b) Work for the disabled	-	-	-	-	-	-	-	-	-	-	-	-
6. Unemployment compensation	**7.72**	**7.33**	**7.44**	**7.03**	**0.59**	**0.56**	**5.64**	**. .**	**0.40**	**0.41**	**0.50**	**0.54**
7. Early retirement for labour market reasons	**0.65**	**-**	**-**	**-**	**0.12**	**0.09**	**. .**	**. .**	**-**	**-**	**-**	**-**
TOTAL	**13.21**	**12.82**	**12.86**	**12.41**	**. .**	**. .**	**10.05**	**. .**	**0.74**	**0.74**	**0.75**	**0.82**
Active measures (1-5)	4.84	5.49	5.42	5.37	. .	. .	4.40	3.32	0.34	0.33	0.25	0.28
Passive measures (6 and 7)	8.37	7.33	7.44	7.03	0.71	0.64	5.64	. .	0.40	0.41	0.50	0.54
For reference:												
GDP (national currency, at current prices, 10^9)					2 077 371	2 144 959			515 974	519 936	514 639	514 227
Labour force (thousands)	3 996	4 011	4 096	4 112			23 363	23 533				

a) The Italian LMP database is currently being revised. Revised data are only avai1able for the years 1998 and 1999.
b) Fiscal years starting on April 1.
c) Japanese LMP data have been revised.
d) Provisional data.

Table H. **Public expenditure and participant inflows* in labour market programmes in OECD countries** *(cont.)*

Programme categories	Korea								Mexico							
	Public expenditure as a percentage of GDP				Participant inflows as a percentage of the labour force				Public expenditure as a percentage of GDP				Participant inflows as a percentage of the labour force			
	1997	1998	1999	2000	1997	1998	1999	2000	1997	1998	1999	2000	1997	1998	1999	2000
1. Public employment services and administration	**0.01**	**0.05**	**0.04**	**0.04**					**-**	**-**	**-**	**-**				
2. Labour market training	**0.02**	**0.12**	**0.11**	**0.09**	**1.65**	**4.72**	**5.42**	**6.91**	**0.04**	**0.04**	**0.04**	**0.04**	**2.91**	**2.93**	**3.41**	**3.44**
a) Training for unemployed adults and those at risk	0.01	0.07	0.08	0.06	0.71	1.62	1.78	1.31	0.03	0.03	0.03	0.03	1.52	1.32	1.44	1.54
b) Training for employed adults	0.01	0.05	0.02	0.03	0.94	3.11	3.65	5.59	0.01	0.01	0.01	0.01	1.39	1.61	1.98	1.90
3. Youth measures	**0.04**	**0.01**	**0.01**	**0.01**	**0.07**	**0.16**	**0.14**	**0.16**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
a) Measures for unemployed and disadvantaged youth	0.04	0.01	0.01	0.01	0.07	0.16	0.14	0.16	-	-	-	-	-	-	-	-
b) Support of apprenticeship and related forms of general youth training	-	-	-	-	. .	. .	. .	. .	-	-	-	-	-	-	-	-
4. Subsidised employment	**-**	**0.27**	**0.52**	**0.31**	**0.48**	**5.46**	**9.71**	**5.97**	**0.04**	**0.03**	**0.04**	**. .**	**1.15**	**1.04**	**1.75**	**. .**
a) Subsidies to regular employment in the private sector	-	0.02	0.02	0.01	0.48	3.37	2.24	1.65	-	-	-	-	-	-	-	-
b) Support of unemployed persons starting enterprises	-	0.04	0.03	-	. .	0.05	0.47	0.29	-	-	-	. .	-	-	0.12	. .
c) Direct job creation (public or non-profit)	-	0.21	0.48	0.29	. .	2.04	7.00	4.04	0.04	0.03	0.04	. .	1.15	1.04	1.63	. .
5. Measures for the disabled	**0.01**	**0.01**	**0.01**	**0.01**	**0.16**	**0.11**	**0.11**	**0.12**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
a) Vocational rehabilitation	0.01	0.01	0.01	0.01	0.09	0.11	0.11	0.12	-	-	-	-	-	-	-	-
b) Work for the disabled	0.01	-	-	-	0.07	. .	. .	. .	-	-	-	-	-	-	-	-
6. Unemployment compensation	**0.02**	**0.18**	**0.19**	**0.09**	**0.22**	**1.92**	**2.14**	**1.38**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
7. Early retirement for labour market reasons	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
TOTAL	**0.11**	**0.64**	**0.88**	**0.55**	**2.58**	**12.38**	**17.53**	**14.54**	**0.08**	**0.07**	**0.08**	**. .**	**4.06**	**3.97**	**5.17**	**. .**
Active measures (1-5)	0.09	0.46	0.69	0.46	2.36	10.46	15.39	13.16	0.08	0.07	0.08	. .	4.06	3.97	5.17	. .
Passive measures (6 and 7)	0.02	0.18	0.19	0.09	0.22	1.92	2.14	1.38	-	-	-	-	-	-	-	-
For reference:																
GDP (national currency, at current prices, 10^9)	453 276	444 367	483 778	518 302					3 174	3 845	4 621	5 472				
Labour force (thousands)					21 662	21 456	21 634	21 950					37 193	38 242	38 470	38 607

Table H. **Public expenditure and participant inflows* in labour market programmes in OECD countries** *(cont.)*

Programme categories	Netherlands[a]								New Zealand[b]							
	Public expenditure as a percentage of GDP				Participant inflows as a percentage of the labour force				Public expenditure as a percentage of GDP				Participant inflows as a percentage of the labour force			
	1997	1998	1999	2000	1997	1998	1999	2000	1996-97	1997-98	1998-99	1999-00	1996-97	1997-98	1998-99	1999-00
1. Public employment services and administration	**0.32**	**0.31**	**0.29**	**0.25**					**0.15**	**0.15**	**0.12**	**0.07**				
2. Labour market training	**0.29**	**0.30**	**0.34**	**0.30**	**2.14**	**3.00**	**3.45**	**2.77**	**0.31**	**0.32**	**0.24**	**0.18**	**5.19**	**. .**	**3.29**	**6.50**
a) Training for unemployed adults and those at risk	0.28	0.25	0.28	0.25	1.45	1.20	1.37	1.19	0.31	0.32	0.24	0.18	5.19	. .	3.29	6.50
b) Training for employed adults	0.01	0.05	0.06	0.05	0.69	1.80	2.09	1.58	-	-	-	-	-	-	-	-
3. Youth measures	**0.10**	**0.04**	**0.04**	**0.04**	**0.80**	**0.56**	**0.62**	**0.56**	**0.10**	**0.09**	**0.12**	**0.14**	**1.92**	**2.71**	**3.22**	**0.11**
a) Measures for unemployed and disadvantaged youth	0.06	-	-	-	0.24	-	-	-	0.02	0.02	0.07	0.07	0.17	0.29	0.55	0.11
b) Support of apprenticeship and related forms of general youth training	0.04	0.04	0.04	0.04	0.56	0.56	0.62	0.56	0.08	0.07	0.05	0.07	1.76	2.42	2.68	-
4. Subsidised employment	**0.25**	**0.41**	**0.40**	**0.41**	**0.96**	**0.91**	**0.87**	**0.92**	**0.14**	**0.15**	**0.09**	**0.11**	**2.18**	**. .**	**1.34**	**2.63**
a) Subsidies to regular employment in the private sector	0.06	0.08	0.07	0.06	0.72	0.47	0.38	0.37	0.09	0.09	0.04	0.06	1.21	. .	0.71	1.06
b) Support of unemployed persons starting enterprises	-	-	-	-	-	-	-	-	0.02	0.02	0.03	0.03	-	. .	0.40	0.35
c) Direct job creation (public or non-profit)	0.19	0.33	0.34	0.35	0.25	0.44	0.49	0.54	0.04	0.04	0.03	0.02	0.94	. .	0.22	1.22
5. Measures for the disabled	**0.51**	**0.53**	**0.57**	**0.57**	**0.23**	**0.39**	**0.73**	**0.82**	**0.06**	**0.03**	**0.05**	**0.05**	**. .**	**0.67**	**0.62**	**1.33**
a) Vocational rehabilitation	-	-	-	-	-	-	-	-	0.03	0.01	0.03	0.03	. .	0.40	0.43	1.00
b) Work for the disabled	0.51	0.53	0.57	0.57	0.20	0.37	0.71	0.82	0.03	0.01	0.02	0.02	-	0.27	0.19	0.33
6. Unemployment compensation	**3.03**	**2.54**	**2.29**	**2.08**	**8.60**	**7.13**	**5.58**	**4.67**	**1.20**	**1.49**	**1.59**	**1.62**	**12.09**	**13.30**	**13.69**	**10.21**
7. Early retirement for labour market reasons	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TOTAL	**4.50**	**4.12**	**3.93**	**3.65**	**12.72**	**12.00**	**11.25**	**9.73**	**1.97**	**2.22**	**2.21**	**2.17**	**. .**	**. .**	**22.17**	**20.78**
Active measures (1-5)	1.47	1.59	1.64	1.57	4.12	4.87	5.67	5.07	0.77	0.74	0.63	0.55	. .	. .	8.48	10.57
Passive measures (6 and 7)	3.03	2.54	2.29	2.08	8.60	7.13	5.58	4.67	1.20	1.49	1.59	1.62	12.09	13.30	13.69	10.21
For reference:																
GDP (national currency, at current prices, 10^9)	735	776	814	872					95	98	99	103				
Labour force (thousands)					7 673	7 797	7 945	8 081					1 858	1 873	1 876	1 890

a) Because of major changes in recent years regarding the operation of the PES in the Netherlands, LMP data have been revised.

b) Fiscal years starting on july 1.

Table H. **Public expenditure and participant inflows* in labour market programmes in OECD countries** *(cont.)*

Programme categories	Norway								Poland							
	Public expenditure as a percentage of GDP				Participant inflows as a percentage of the labour force				Public expenditure as a percentage of GDP				Participant inflows as a percentage of the labour force			
	1997	1998	1999	2000	1997	1998	1999	2000	1997	1998	1999	2000	1997	1998	1999	2000
1. Public employment services and administration	**0.15**	**0.15**	**0.15**	**0.12**					..	..	..	..				
2. Labour market training	**0.13**	**0.10**	**0.05**	**0.08**	**1.60**	**1.27**	**1.03**	**1.05**	**0.02**	**0.02**	**0.02**	**0.01**	**0.83**	**0.80**	**0.74**	**0.57**
a) Training for unemployed adults and those at risk	0.13	0.10	0.05	0.08	1.60	1.27	1.03	1.05	0.02	0.02	0.02	0.01	0.83	0.80	0.74	0.57
b) Training for employed adults	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3. Youth measures	**0.04**	**0.02**	**0.01**	**0.01**	**0.81**	**0.49**	**0.39**	**0.41**	**0.09**	**0.10**	**0.09**	**0.07**	**2.51**	**2.56**	**2.37**	**..**
a) Measures for unemployed and disadvantaged youth	0.04	0.02	0.01	0.01	0.81	0.49	0.39	0.41	0.04	0.04	0.04	0.03	0.78	0.82	0.81	..
b) Support of apprenticeship and related forms of general youth training	-	-	-	-	-	-	-	-	0.06	0.06	0.05	0.03	1.73	1.74	1.56	..
4. Subsidised employment	**0.07**	**0.04**	**0.02**	**0.01**	**0.55**	**0.38**	**0.25**	**0.26**	**0.19**	**0.16**	**0.10**	**0.06**	**1.91**	**1.51**	**1.19**	**0.90**
a) Subsidies to regular employment in the private sector	0.04	0.03	0.01	0.01	0.31	0.33	0.19	0.22	0.08	0.07	0.05	0.03	0.98	0.84	0.74	0.58
b) Support of unemployed persons starting enterprises	0.01	-	-	-	0.09	0.05	0.06	-	0.02	0.02	0.02	0.01	-	0.06	-	-
c) Direct job creation (public or non-profit)	0.02	-	-	-	0.15	-	-	-	0.09	0.06	0.03	0.02	0.88	0.60	0.40	0.29
5. Measures for the disabled	**0.57**	**0.59**	**0.59**	**0.55**	**..**	**1.84**	**1.84**	**1.83**	**0.18**	**0.18**	**0.14**	**0.01**	**0.22**	**0.23**	**0.23**	**-**
a) Vocational rehabilitation	0.35	0.38	0.40	0.39	..	1.20	1.26	1.31	-	-	0.01	0.01	-	-	-	-
b) Work for the disabled	0.21	0.20	0.19	0.16	..	0.64	0.58	0.52	0.18	0.18	0.13	..	0.18	0.20	0.20	-
6. Unemployment compensation	**0.69**	**0.49**	**0.47**	**0.39**	**..**	**3.97**	**4.70**	**4.46**	**1.10**	**0.55**	**0.64**	**0.81**	**5.63**	**3.01**	**3.58**	**4.58**
7. Early retirement for labour market reasons	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TOTAL	**1.65**	**1.39**	**1.28**	**1.16**	**..**	**7.95**	**8.20**	**8.01**	**..**	**..**	**..**	**..**	**11.09**	**8.11**	**8.11**	**..**
Active measures (1-5)	0.96	0.90	0.81	0.77	..	3.98	3.50	3.55	..	..	..	..	5.47	5.11	4.53	..
Passive measures (6 and 7)	0.69	0.49	0.47	0.39	..	3.97	4.70	4.46	1.10	0.55	0.64	0.81	5.63	3.01	3.58	4.58
For reference:																
GDP (national currency, at current prices, 10^9)	1 096	1 109	1 193	1 404					472	554	616	711				
Labour force (thousands)					2 287	2 323	2 333	2 350					17 225	17 285	17 262	17 426

Table H. **Public expenditure and participant inflows[*] in labour market programmes in OECD countries** *(cont.)*

Programme categories	Portugal								Spain [a]							
	Public expenditure as a percentage of GDP				Participant inflows as a percentage of the labour force				Public expenditure as a percentage of GDP				Participant inflows as a percentage of the labour force			
	1995	1996	1997	1998	1995	1996	1997	1998	1997	1998	1999	2000[b]	1997	1998	1999	2000[b]
1. Public employment services and administration	**0.10**	**0.10**	**0.11**	**0.11**					**0.07**	**0.07**	**0.06**	**0.05**				
2. Labour market training	**0.23**	**0.29**	**0.28**	**0.30**	**5.29**	**6.07**	**7.06**	**9.92**	**0.15**	**0.17**	**0.28**	**0.29**	**9.63**	**9.86**	**10.56**	**9.93**
a) Training for unemployed adults and those at risk	0.04	0.05	0.08	0.08	0.19	0.33	0.59	0.63	0.08	0.10	0.21	0.21	1.53	1.83	2.05	1.13
b) Training for employed adults	0.18	0.24	0.20	0.22	5.11	5.74	6.47	9.30	0.08	0.07	0.07	0.09	8.10	8.03	8.51	8.80
3. Youth measures	**0.33**	**0.31**	**. .**	**. .**	**2.00**	**2.64**	**. .**	**. .**	**0.06**	**0.07**	**0.06**	**0.06**	**2.85**	**2.55**	**2.53**	**2.10**
a) Measures for unemployed and disadvantaged youth	0.15	0.15	. .	. .	1.13	1.25	. .	. .	0.06	0.07	0.06	0.06	1.08	1.07	1.03	0.85
b) Support of apprenticeship and related forms of general youth training	0.18	0.16	0.15	0.18	0.87	1.39	1.37	1.85	-	-	-	-	1.77	1.47	1.50	1.25
4. Subsidised employment	**0.08**	**0.11**	**0.09**	**0.09**	**0.88**	**1.17**	**0.99**	**1.09**	**0.19**	**0.32**	**0.42**	**0.41**	**1.50**	**1.78**	**5.34**	**5.22**
a) Subsidies to regular employment in the private sector	0.03	0.07	0.01	0.01	0.13	0.35	-	0.06	0.11	0.21	0.30	0.30	-	-	3.35	3.44
b) Support of unemployed persons starting enterprises	0.03	0.01	0.02	0.03	0.18	0.10	0.13	0.11	0.03	0.03	0.03	0.03	0.17	0.22	0.21	0.22
c) Direct job creation (public or non-profit)	0.03	0.03	0.05	0.05	0.57	0.71	0.82	0.91	0.06	0.08	0.09	0.08	1.31	1.56	1.78	1.56
5. Measures for the disabled	**0.05**	**0.05**	**0.03**	**0.01**	**0.18**	**0.16**	**0.15**	**0.06**	**0.02**	**0.02**	**0.02**	**0.03**	**0.14**	**0.16**	**0.17**	**0.23**
a) Vocational rehabilitation	0.04	0.04	0.02	-	0.12	0.12	0.12	-	-	-	-	-	-	-	-	-
b) Work for the disabled	0.01	0.01	0.01	0.01	0.06	-	-	-	0.02	0.02	0.02	0.03	0.14	0.16	0.17	0.23
6. Unemployment compensation	**0.83**	**0.77**	**0.70**	**0.67**	**3.68**	**3.73**	**3.32**	**3.36**	**1.78[c]**	**1.55[c]**	**1.40[c]**	**1.34[c]**	**1.58**	**1.41**	**1.46**	**1.45**
7. Early retirement for labour market reasons	**0.09**	**0.12**	**0.14**	**0.16**	**0.30**	**0.40**	**0.49**	**0.56**	***c***	***c***	***c***	***c***	-	-	-	-
TOTAL	**1.70**	**1.74**	**. .**	**. .**	**12.32**	**14.17**	**. .**	**. .**	**2.27**	**2.25**	**2.41**	**2.32**	**15.71**	**15.76**	**20.06**	**18.92**
Active measures (1-5)	0.79	0.85	. .	. .	8.34	10.04	. .	. .	0.49	0.70	1.01	0.98	14.13	14.34	18.60	17.48
Passive measures (6 and 7)	0.91	0.89	0.85	0.83	3.98	4.13	3.81	3.92	1.78	1.55	1.40	1.34	1.58	1.41	1.46	1.45
For reference:																
GDP (national currency, at current prices, 10[9])	16 102	17 099	18 276	19 693					82 060	87 545	93 693	100 874				
Labour force (thousands)					4 802	4 887	4 967	4 987					16 333	16 441	16 598	16 981

a) From 1998, data include expenditure on LMPs administered by the Autonomous Communities (in 1998, only data for the following Communities are included: Aragon, Castilla y Leon, Cataluna, Madrid, Navarra and the Pais Vasco).

b) Provisional data.

c) Data for category 7 "Early retirement for labour market reasons" are included in category 6 "Unemployment compensation".

Table H. **Public expenditure and participant inflows* in labour market programmes in OECD countries** *(cont.)*

Programme categories	Sweden								Switzerland			
	Public expenditure as a percentage of GDP				Participant inflows as a percentage of the labour force				Public expenditure as a percentage of GDP			
	1997	1998	1999	2000	1997	1998	1999	2000	1997	1998	1999	2000
1. Public employment services and administration	**0.29**	**0.28**	**0.28**	**0.26**					**0.15**	**0.14**	**0.14**	**0.11**
2. Labour market training	**0.41**	**0.45**	**0.48**	**0.31**	**4.11**	**4.58**	**3.79**	**2.87**	**0.23**	**0.14**	**0.11**	**0.09**
a) Training for unemployed adults and those at risk	0.41	0.44	0.47	0.30	3.65	3.95	3.21	2.45	0.23	0.14	0.11	0.09
b) Training for employed adults	0.01	0.01	0.01	0.01	0.46	0.64	0.58	0.42	-	-	-	-
3. Youth measures	**0.02**	**0.03**	**0.03**	**0.02**	**0.71**	**0.89**	**0.73**	**0.63**	**-**	**0.01**	**0.01**	**0.01**
a) Measures for unemployed and disadvantaged youth	0.02	0.03	0.03	0.02	0.71	0.89	0.73	0.63	-	0.01	0.01	0.01
b) Support of apprenticeship and related forms of general youth training	-	-	-	-	-	-	-	-	-	-	-	-
4. Subsidised employment	**0.71**	**0.61**	**0.45**	**0.27**	**7.55**	**5.49**	**3.33**	**3.01**	**0.23**	**0.32**	**0.25**	**0.13**
a) Subsidies to regular employment in the private sector	0.19	0.14	0.18	0.15	3.11	2.21	2.78	2.70	0.01	0.10	0.08	0.05
b) Support of unemployed persons starting enterprises	0.08	0.08	0.07	0.05	0.49	0.43	0.36	0.31	-	0.01	0.01	0.01
c) Direct job creation (public or non-profit)	0.44	0.39	0.21	0.07	3.94	2.85	0.19	-	0.22	0.21	0.16	0.07
5. Measures for the disabled	**0.59**	**0.59**	**0.57**	**0.52**	**0.98**	**1.12**	**0.85**	**0.91**	**0.15**	**0.15**	**0.14**	**0.14**
a) Vocational rehabilitation	0.03	0.04	0.04	0.03	0.63	0.67	0.51	0.56	0.15	0.15	0.14	0.14
b) Work for the disabled	0.56	0.55	0.54	0.49	0.35	0.45	0.34	0.35	-	-	-	-
6. Unemployment compensation	**2.06**	**1.81**	**1.59**	**1.34**	**. .**	**. .**	**. .**	**. .**	**1.40**	**1.10**	**0.90**	**0.57**
7. Early retirement for labour market reasons	**0.04**	**0.12**	**0.09**	**-**	**. .**	**. .**	**. .**	**. .**	**-**	**-**	**-**	**-**
TOTAL	**4.13**	**3.88**	**3.50**	**2.72**	**. .**	**. .**	**. .**	**. .**	**2.15**	**1.86**	**1.55**	**1.05**
Active measures (1-5)	2.03	1.96	1.82	1.38	13.34	12.09	8.69	7.42	0.75	0.77	0.66	0.47
Passive measures (6 and 7)	2.10	1.93	1.68	1.34	. .	. .	. .	. .	1.40	1.10	0.90	0.57
For reference:												
GDP (national currency, at current prices, 10^9)	1 824	1 905	1 995	2 083					371	381	389	407
Labour force (thousands)					4 367	4 347	4 382	4 362				

Table H. **Public expenditure and participant inflows* in labour market programmes in OECD countries** *(cont.)*

Programme categories	United Kingdom [a]						United States [b]							
	Public expenditure as a percentage of GDP			Participant inflows as a percentage of the labour force			Public expenditure as a percentage of GDP				Participant inflows as a percentage of the labour force			
	1997-98	1998-99	1999-00	1997-98	1998-99	1999-00	1996-97	1997-98	1998-99	1999-00	1996-97	1997-98	1998-99	1999-00
1. Public employment services and administration	**0.16**	**0.13**	**0.13**				**0.06**	**0.06**	**0.06**	**0.04**				
2. Labour market training	**0.07**	**0.05**	**0.05**	**0.86**	**0.48**	**0.51**	**0.04**	**0.04**	**0.04**	**0.04**	**0.77**	**0.78**	**0.59**	**. .**
a) Training for unemployed adults and those at risk	0.06	0.04	0.04	0.81	0.43	0.45	0.04	0.04	0.04	0.04	0.77	0.78	0.59	. .
b) Training for employed adults	0.01	0.01	0.01	-	-	0.06	-	-	-	-	-	-	-	. .
3. Youth measures	**0.12**	**0.13**	**0.15**	**1.14**	**0.97**	**1.01**	**0.03**	**0.03**	**0.03**	**0.03**	**0.57**	**0.59**	**0.56**	**. .**
a) Measures for unemployed and disadvantaged youth	0.01	0.02	0.04	-	-	-	0.03	0.03	0.03	0.03	0.49	0.51	0.48	. .
b) Support of apprenticeship and related forms of general youth training	0.12	0.11	0.11	1.13	0.97	1.01	-	-	-	-	0.08	0.08	0.08	. .
4. Subsidised employment	**0.01**	**-**	**0.01**	**-**	**-**	**-**	**0.01**	**0.01**	**0.01**	**0.01**	**. .**	**. .**	**. .**	**. .**
a) Subsidies to regular employment in the private sector	-	-	0.01	-	-	-	-	-	-	-	-	-	-	-
b) Support of unemployed persons starting enterprises	-	-	-	-	-	-	-	-	-	-	-	-	-	-
c) Direct job creation (public or non-profit)	0.01	-	-	-	-	-	0.01	0.01	0.01	0.01	0.07	0.07	0.07	. .
5. Measures for the disabled	**0.02**	**0.02**	**0.02**	**0.18**	**0.20**	**0.18**	**0.03**	**0.04**	**0.04**	**0.03**	**. .**	**. .**	**. .**	**. .**
a) Vocational rehabilitation	-	-	0.01	0.11	0.12	0.10	0.03	0.04	0.04	0.03	. .	. .	. .	. .
b) Work for the disabled	0.02	0.02	0.02	0.08	0.08	0.08	-	-	-	-	-	-	-	. .
6. Unemployment compensation	**0.80**	**0.64**	**0.58**	11.29	10.46	10.16	**0.26**	**0.25**	**0.25**	**0.23**	**. .**	**. .**	**. .**	**. .**
7. Early retirement for labour market reasons	**-**	**-**	**-**	-	-	-	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
TOTAL	**1.18**	**0.98**	**0.94**	15.91	12.88	12.72	**0.42**	**0.42**	**0.42**	**0.38**	**. .**	**. .**	**. .**	**. .**
Active measures (1-5)	0.39	0.34	0.37	4.61	2.42	2.56	0.17	0.17	0.17	0.15	. .	. .	. .	. .
Passive measures (6 and 7)	0.80	0.64	0.58	11.29	10.46	10.16	0.26	0.25	0.25	0.23	. .	. .	. .	. .
For reference:														
GDP (national currency, at current prices, 10^9)	787	832	871				8 194	8 666	9 153	9 824				
Labour force (thousands)				27 594	28 338	28 666					137 075	138 528	140 177	141 761

a) Excluding Northern Ireland. Fiscal years starting on April 1.

b) Fiscal years starting on October 1.

* Data on the annual inflows of participants into the programmes have not been collected for category 1 "Public employment services and administration". The totals shown in the table must be interpreted with caution.

Source: OECD database on labour market programmes. The data are compiled each year by the OECD on the basis of submissions from Member countries. The programmes have been classified into standardized categories and sub-categories. For their definitions, see OECD (1992), *Employment Outlook*, Paris.

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