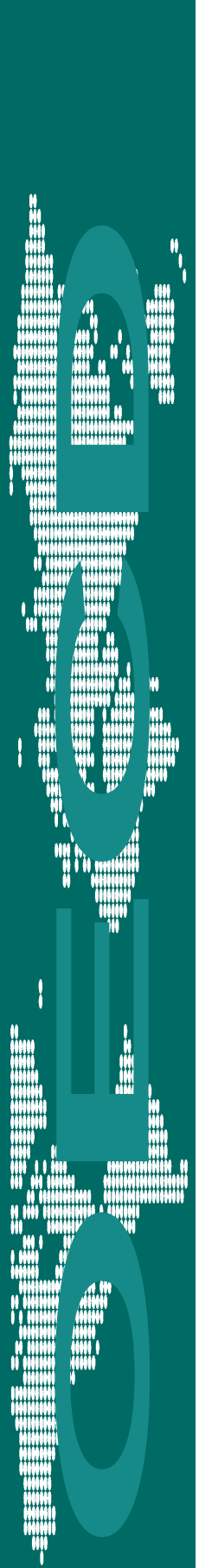

JULY 1996

Employment OUTLOOK

Short-term prospects

Making work pay

Earnings inequality and mobility

Growing into work

Employment adjustment, workers and unemployment

Employment Outlook

July 1996

ORGANISATION FOR ECONOMIC CO-OPERATION AND DEVELOPMENT

The OECD Employment Outlook

provides an annual assessment of labour market developments and prospects in Member countries. Each issue contains an overall analysis of the latest market trends and short-term forecasts, and examines key labour market developments. Reference statistics are included.

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Countering the risks of labour market exclusion

Growth has been modest, unemployment remains high, though inflation and interest rates are low.

OECD output has grown only modestly over the past two years. In the United States, growth appears relatively strong and has been associated with stable, low inflation and unemployment. In the Pacific region, Australia and New Zealand have recorded continued growth over the past few years; the upswing finally got underway in Japan in late 1995. In Europe, growth has slowed significantly from the second half of 1995 and, in some countries, unemployment rates are again rising. The OECD-area unemployment rate in the first half of 1996 is estimated to be 7.7 per cent, or over 33½ million people unemployed. The latest projections suggest little improvement in unemployment over the next two years. On the more positive side, inflation is low and contained nearly everywhere, and interest rates have also declined.

Poor labour market performance endangers the social fabric as people risk getting trapped in unemployment, in low-paid jobs or in unstable temporary work...

High and persistent unemployment is only one manifestation of the poor labour market performance in many OECD countries. OECD societies also confront some worrying inequalities which are straining the social fabric. In some countries, such as the United States and the United Kingdom, earnings have become considerably more unequal. Moreover, preliminary analysis suggests that, in such countries, the increase in earnings dispersion may not be offset in the longer-run by greater relative upward mobility among those with low earnings (Chapter 3). When inequality widens, this can lead to more marginalisation, an increase in poverty, and exacerbation of budgetary pressure on existing social safety nets. The distribution of work across households in a number of countries has also become more polarised. And, while many workers in temporary jobs do get into permanent ones, a non-trivial proportion also appears to remain in temporary work or move out of jobs altogether (Chapter 1).

...leading to exclusion unless good labour market "careers" can be fostered.

The risk now facing a number of OECD countries is that labour market exclusion can easily turn into poverty and dependency. Social protection systems can alleviate poverty, but they cannot promote participation in society unless they are closely tied to measures to tackle labour market problems. Hence, a key question is: what role can governments play to enable as many people as possible to construct good labour market "careers" in a turbulent environment, while providing an adequate safety net for those still unable to compete?

OECD analysis highlights the need to make work pay, to help young people make the transition to work and to foster lifelong learning.

The OECD *Jobs Study*, which was endorsed by Ministers in 1994, sought to provide answers to this and related questions. Work over the past two years has confirmed that the *Jobs Study* recommendations were the right ones. It has also highlighted the need for co-ordinated reforms that achieve both efficiency and equity goals over time, so that unemployment can be reduced and labour market and social exclusion can be alleviated. In this context, this editorial elaborates on three core issues of the OECD *Jobs Strategy: Pushing ahead with the strategy* (1996): *i)* how to reform tax and benefit systems so as to reduce both unemployment and poverty traps; *ii)* how to improve young people's ability to make a better transition into the world of work; and *iii)* how best to ensure the implementation of real commitments to lifelong learning in economies beset with a very large turnover in jobs.

First, tax and benefit systems must ensure that there are work incentives for all...

Making work pay. Taxes and benefits are the most direct way in which governments can affect the financial incentives to accept and to offer work (and alter the after-tax distribution of incomes). If work does not pay, people will be more reluctant to work. For the large majority of the population, there are clear financial rewards to working. However, such rewards may be lacking for a significant minority with low earnings potential. Some features of existing tax and benefit systems give rise to labour market problems, thereby contributing to higher unemployment (Chapter 2). This is not to suggest that taxes and benefits are the principal cause of high and persistent unemployment. The present malaise in OECD labour markets stems from many causes and can only be addressed by a broadly-based strategy. Nevertheless, it is undeniable that reforms to tax/benefit systems have a contribution to make in reducing unemployment in many countries.

...by reducing traps caused by high benefits or high effective tax rates, and reducing taxes on jobs – while reconciling these policies with other objectives.

Tax/benefit systems can cause labour market problems in three ways. First, they can create the so-called ''unemployment trap'' when unemployment and related welfare benefits are high relative to expected net earnings from taking a job so that the unemployed have little incentive to search actively for a job. Second, they can create the so-called ''poverty trap'' when workers earning low pay have little or no incentive to raise their earnings by increasing the amount of time and effort in work as they face very high marginal effective tax rates. Third, taxes on labour may increase its cost and reduce employment. Realistic reforms which seek to minimise the adverse effects of these traps on work incentives must take due account of the original goals of these policies. Taxes must raise revenues and benefits are intended to provide for those with inadequate incomes. Nearly all reforms which ''make work pay'' involve trade-offs between these objectives.

Cutting benefits is one solution, but it can have high social costs.

The simplest way to attack the *unemployment trap* would be to cut benefit generosity. Some countries have indeed made modest cuts (*e.g.* Austria, Canada, Denmark, Germany, Ireland, New Zealand and Sweden). However, the social costs of this solution may be unacceptably high and it may not increase work incentives greatly, at least in the regular labour market. Therefore, many countries have opted to put greater weight on alternative reforms.

Alternatives include restricting entitlements...

For example, some countries have taken action to increase the insurance principle. Canada, where seasonal unemployment is high, is considering reducing entitlements to those who repeatedly become unemployed, partly on the grounds that seasonality in production and employment has been exacerbated by the benefit system – both workers and firms have adapted their behaviour to it. In some other countries, such as Finland, the Netherlands and Spain, reforms affecting access to unemployment benefits, *e.g.* by increasing eligibility requirements, have been implemented.

...tightening controls on job-search coupled with practical assistance to help job seekers find work.

Another route to cutting the unemployment trap is to tighten administrative controls on job-search by the unemployed receiving benefits. This reform has been implemented in countries such as Australia, Belgium, Denmark, Italy, the Netherlands, Spain and the United Kingdom. It is often coupled with targeted job-search assistance and counselling provided by the public employment service. These latter services are important since a consistent message from evaluations of active labour market policies is that, properly designed and targeted, they have proven their worth in terms of being a cost-effective way of raising the probability of an unemployed job-seeker getting into work.

High marginal rates of tax and benefit withdrawal can create poverty traps...

Poverty traps create a different, but related, set of problems. If benefits for the unemployed are completely withdrawn as soon as earnings rise above zero or some very low amount, and taxes and social security contributions must be paid on these earnings, the financial disincentive to work for only a few hours would

be severe. Generally, therefore, benefits are clawed back gradually. The so-called marginal effective tax rate (METR) takes account not only of the rate at which benefits are clawed back, but also of income taxes and social security contributions. If METRs are very high, people may have little financial incentive to work more. This can be a particularly acute problem for many low-income individuals and households – hence, the term "poverty trap".

...affecting especially families dependent on means-tested benefits, most notably on lone parents...

Examples of relatively high METRs are given in Chapter 2. Many of them involve OECD countries' policies towards families. Payments that are means-tested on family income often have a METR of 100 per cent: social assistance benefits fall into this category and, in some countries, the number of recipients of such benefits has risen sharply. Moreover, most special benefits for lone parents are means-tested. The number of people and households facing high METRs varies across countries, but some patterns are clear. Women are more affected than men. The most affected group by far is lone parents.

...and exacerbated by low-paid jobs, which often serve as traps for adult workers.

The trend towards greater earnings inequality in some countries, especially the deterioration of the relative and, in some cases, absolute position of the lowest paid, can be of concern in this respect (Chapter 3). Here, it matters greatly whether low-paid jobs typically serve as stepping-stones to better ones or as long-term traps. Preliminary evidence shows that upward mobility is fairly high for young workers. It is much lower for adults who experience substantial movement from low-paid jobs to non-employment. These workers are particularly vulnerable to poverty traps and, where their earnings from work have declined, there are incentives to leave the regular labour market altogether.

Measures to improve incentives for the lowest earners may reduce incentives for the slightly better-off, but may still be worthwhile...

There are ways to reduce METRs for workers with low earnings, but they inevitably involve a trade-off: either METRs for workers and households further up the earnings distribution will increase, or income support for those on low incomes will fall. While reforms can increase work incentives for low-wage workers, the counterpart is reduced work incentives for workers higher up the earnings distribution. Some research suggests that the increase in work, induced by reforms, by the former group may be roughly equal to the decrease in work by the latter group. Irrespective of the net effect on work effort, there are very good social and long-term labour market reasons to introduce reforms that both help promote the employment of those who would otherwise be excluded from the labour market and to aid low-paid workers in general.

...for example by paying in-work benefits to low-paid workers.

One reform which has attracted growing interest is employment-conditional (so-called "in-work") benefits. These top-up the income of those in low-paid jobs. The key feature of such a benefit is that it is income tested, but payable only to those employed. Because it is phased-out as earnings rise, it is wholly targeted on low-paid workers. Such benefits are currently, in various guises, available in six OECD countries: Canada, Ireland, Italy, New Zealand, the United Kingdom and the United States.

To ensure success, in-work benefits should be focused relatively narrowly, especially on families.

The success of such schemes in raising work incentives is heavily contingent on a number of factors. On grounds of cost and of the necessary ratcheting-up of high METRs further up the earnings distribution, the benefit must be withdrawn from those earning close to the median wage, *i.e.* a relatively dense part of the earnings distribution. Thus, employment-conditional benefits are likely to be most successful in countries where the existing earnings distribution is relatively unequal and the benefits are kept fairly low relative to average earnings. Such schemes are best targeted on families with children because they have high replacement rates and, therefore, they need higher earnings to make working a more viable option than not working.

Taxes on jobs – especially employers' insurance contributions – can be a disincentive to hiring low-wage workers...

Tax and benefit systems also influence the demand for labour because non-wage labour costs can be a disincentive to hiring. In many countries, employers' social security contributions are the largest of these costs and contributions may sometimes be structured in a regressive way, meaning that a large part of the burden falls on low-wage labour. Employers' contribution rates increased in eight countries over the 1980s, often substantially, while they dropped significantly in just five countries.

...so they are being reduced in some countries, but this can create costs elsewhere.

Many countries, *e.g.* Belgium, France, Germany, Ireland, Italy and the Netherlands, have recognised the problem. In particular, attempts have been made to target rate reductions on either low-wage workers or new hires of the long-term unemployed. But these inevitably involve both ''dead-weight'' costs – some people would have been hired anyway in the absence of the cut in social security contributions – and ''displacement'' effects – some new workers are substituted for existing employees. As a result, these schemes are not self-financing and tax increases elsewhere to offset revenue losses may involve negative employment effects.

There are many trade-offs to be made in reforming tax and benefit systems, but also cases where improvements can be made at little cost elsewhere...

Public finance considerations are, however, only one of the multiple objectives which tax and benefit systems are pursuing: others include insuring against labour-market risk; supporting families without adequate resources; and preserving incentives to work. It is inevitable that all of these objectives cannot be achieved simultaneously. But some reforms to tax and benefit systems are an essential part of the OECD *Jobs Strategy*. Although cuts in benefit levels are sometimes necessary, they risk exacerbating poverty. There are, however, many *avoidable* barriers to employment where trade-offs may be less severe, such as those caused by administrative complexities, poor integration of the various parts of tax and benefit systems and badly-designed means-tests.

...furthermore, there are cases where short-term costs are worthwhile if the longer-term result is the integration of targeted vulnerable groups.

A strong case can be made for targeting tax and benefit reforms on groups that face particular difficulty integrating into the labour market, *e.g.* jobless young people trying to make the transition from educational participation to the job market, the long-term unemployed and lone parents. Such targeting is justified because the expected longer term gains from providing work experience to the target groups, thus increasing future employability, can outweigh the shorter term costs. The alternative is permanent marginalisation of part of the population from the world of work, with consequences which are apparent in too many countries.

Many young people face a range of labour market and social problems.

Youth labour market problems. The current economic and social state of many young people falls far short of what is desirable (Chapter 4). Although more youths participate longer in education, with potential long-run payoffs for them and society, as many as one-fifth leave school without the prerequisite knowledge, skills or qualifications needed for jobs in today's economy. Youth employment rates have fallen since 1979 in most countries, often substantially, particularly among young men. Many countries have also recorded an increase in the proportion of teenagers and young adults neither in work nor in education. The proportion of the young unemployed in households where no other member is employed has also tended to increase.

Making inroads to these problems requires an improvement in general job prospects...

It is not just a ''youth problem''. As long as total unemployment remains high, it is unrealistic to expect a significant improvement in youth job prospects: both the employment and unemployment rates of young people are highly responsive to the overall state of the labour market. Policies that attack the causes of high and persistent unemployment will also improve labour market outcomes for youth.

...but there are particular problems for male school-leavers...

This is a necessary, but hardly sufficient, condition. Problems appear particularly severe for young, out-of-school men: in most countries their employment rates have trended downward over the past 15 to 20 years. They are likely to have the least educational qualifications among the youth population. While the evidence is limited, the collapse of this part of the youth job market must partly reflect the shift in the composition of labour demand toward more experienced and skilled workers.

...requiring measures to foster their skill development rather than simply shunting them round job programmes...

Particularly for this group, policies need to focus on facilitating their access to jobs and on developing the requisite skills. This is not an easy task. A number of countries expanded their active labour market policies (ALMPs) for youths greatly during the 1980s, but the results, on average, are not encouraging. While some were helped, for many it simply represented recycling from joblessness to a brief spell on a programme and back again – the so-called ''carousel effect''.

...so such programmes must be combined with other measures that focus on the multiple needs of those most at risk.

One lesson from the evaluation literature is that most ALMPs do not help out-of-school youths unless they are combined with other programmes explicitly targeted at their specific labour market needs. Many youth enter programmes with multiple disadvantages stemming from where they live, their household resources and their experience in school.

Early intervention before a young person leaves school is vital...

Another lesson from the evaluation literature is that *early* intervention is vital in terms of improving prospects later. By the time a young person leaves school, it is usually very difficult and costly for ALMPs to overcome the handicaps of poor educational preparation and the demotivation that can accompany it. Preventing educational failure is a community and societal responsibility. Here, improving early childhood development and care is essential. Early intervention can help overcome some of the many disadvantages suffered by children from ''at-risk'' backgrounds and communities. This is not only a question of social equity, but also a key factor in improving the longer-term health of OECD economies.

...so efforts to avoid drop-out are important – involving community-wide partnerships as well as curriculum reform from within school systems.

Therefore, policies that contribute to *reducing* early school-leaving are critical since anything less than a sound upper-secondary education, or its equivalent vocational qualification, may be associated with low earnings capacity and is insufficient preparation for getting into the job market and for access to further learning. Tackling this problem requires the combined efforts of families, the social partners, government and the community at large. The common features of countries that do relatively well in preparing their young people for working life are ensuring diversity in content, teaching and learning methods in upper-secondary education, and in providing viable pathways back into education and training for those who leave school early.

Inadequate skills extend throughout the adult population...

Lifelong learning. The problems extend beyond schools and young people. The first International Adult Literacy Survey found that up to one-fifth of the population aged 16-65 in seven advanced economies can only perform at the most basic levels of literacy and numeracy [*Literacy, Economy and Society*, OECD and Statistics Canada (1995)]. This is far short of what is needed for employment in good jobs in today's economy. These people are at high risk of joblessness with the slew of social costs which it entails.

...who need constantly renewed skills to cope with volatile labour market conditions.

High rates of job turnover (Chapter 5), significant numbers of prime-age and older workers trapped in low-paid employment, and considerable year-on-year volatility in earnings (Chapter 3) simply reinforce the point: many workers will need to be able to enhance their skills continually, if they are to have the opportunity to move up the ladder or bounce back from setbacks, such as losing their jobs.

Education Ministers recognise that system-wide change is needed to create lifelong learning...

At their January 1996 meeting, OECD Education Ministers urged that high priority be placed on implementing strategies for system-wide change – from early childhood education to learning opportunities throughout life. This will require a more fluid relation between learning and work, where an initial period of full-time education is followed by various combinations of work, training and education in enterprises and educational institutions.

...requiring inter-ministerial co-ordination to help create investment in learning where it is needed...

Successful strategies for lifelong learning will require greatly increased co-ordination across ministries, and rethinking of the roles and responsibilities of all who provide opportunities for learning. They will probably also require increased investment in human capital and the assurance that those with insufficient resources to fund additional education/training or who are locked in jobs where learning opportunities are limited are not left behind.

...and in particular a more equitable distribution of further education and training opportunities.

Moreover, investment in further education and training is very unevenly distributed across the work force in most countries, to the great detriment of those with fewer skills and lower educational attainment. The private and social costs of such unequal access to upgrading skills and competencies are clear. A more equitable distribution of training could, therefore, enhance future productivity, thereby leading to higher growth and employment.

Governments have a role where private investment in learning falls short...

Both businesses and trade unions, and the public sector have roles to play in overcoming existing barriers to investments in learning. Market forces alone are unlikely to overcome the considerable uncertainty of the returns and costs to investments, the capital constraints facing individuals or the problem of free-riding – one firm's investment adding to the pool of abilities for others to "buy in" more cheaply than if they had undertaken the investment themselves.

...and need to look for new ways of creating learning incentives, at an acceptable public cost.

Thus, the proper incentives need to be created if new resources for lifelong learning are to be mobilised without further demands on the public purse. Taking account of countries' different circumstances and priorities, some new balance must be developed in the contributions expected of individuals, the social partners and society as a whole. Past experience with financial incentives such as training levies, subsidies or vouchers has been quite mixed. Earnings differentials can play a role as incentives for workers to invest in skills. But they are not a panacea: the structure of wages is driven by many factors other than differences in the return to human capital and those trapped in low-paid jobs often have little incentive, or the financial means, to invest in further education and training. For these reasons, Education Ministers have called on the OECD to examine carefully alternative policies and incentives to encourage lifelong learning in a cost-effective and equitable fashion.

So policies on all fronts need to be carefully co-ordinated to reduce the social damage caused when large groups are unable to participate fully in the labour market.

The future prosperity of OECD countries depends on reducing economic and social exclusion in the forms of high unemployment, non-participation in the labour market, lack of access to further learning opportunities and, in some instances, growing inequalities in earnings and incomes. It is more important than ever that policies – labour, social and educational, as well as macro-economic – be co-ordinated and coherent. Designing and re-designing a range of policies, as well as institution-building, will be required. This will take time, but it is the only way to increase the adaptability and resilience of our societies.

7 June 1996

CHAPTER 1

Recent labour market developments and prospects

A. INTRODUCTION

Output in the OECD area has grown only modestly over the past two years and, as Member countries expansions have evolved, the economic situation has become more differentiated. In the United States, growth appears relatively strong and has been associated with stable, low inflation and unemployment. In the Pacific region, Australia and New Zealand have recorded continued growth over the past few years; the upswing finally got underway in Japan in late 1995. In Europe, growth has slowed significantly from the second half of 1995 and, in some countries, unemployment rates are again rising. The OECD-area unemployment rate in the first half of 1996 is estimated to be 7.7 per cent compared with 7.6 per cent in 1995, or over 33½ million people unemployed.

A brief overview of labour market developments and prospects is provided in Section B. The special topic for this year's chapter, temporary employment, is developed in Section C. Among the issues analysed are: How important a labour market phenomenon is temporary employment? How does its incidence vary by age and gender? Is it an important route into jobs for the unemployed? And, on the basis of various longitudinal data sets, is it a persistent or fleeting labour market state? Section D presents the main conclusions.

B. SHORT-TERM OUTLOOK AND PROSPECTS

1. Recent economic trends

Output growth in the OECD area in 1995 was weaker than expected. Real GDP grew by 1.9 per cent compared with 2.7 per cent in 1994. Relative to 1994, growth slowed particularly in North America, Germany, France, the United Kingdom and Denmark (Table 1.1). Weaker-than-anticipated final domestic demand seems to be one factor behind the slowdown, particularly in Europe. On the other hand, Japan experienced a small improvement from 0.5 per cent output growth in 1994 to about 1 per cent in 1995. However, the widespread inventory correction, which has contributed to the weakness of demand, appears to be coming to an end, and recent indicators suggest that activity is strengthening in North America, while growth in Europe should pick up in the second half of 1996. For the OECD area as a whole, the short-term prospects are for continued moderate growth of 2.1 per cent in 1996, followed by slightly stronger growth in 1997, stemming mainly from a recovery in final domestic demand. However, it is not likely that OECD area unemployment will show much improvement.

The underlying conditions for growth are generally favourable; inflation is low; interest rates have fallen in most countries; and key currency relationships have been brought closer into line with fundamentals. On the other hand, qualitative indicators of business confidence have deteriorated nearly everywhere over the past year, except in Japan. Consumer confidence also seems to have fallen in many countries, particularly France, Germany and some of the smaller European countries [OECD (1996)]. This has given rise to considerable comment and speculation about the link between lower expectations and uncertainty about future prospects and the weakness of final domestic demand. However, interpreting such figures is difficult and the policy implications, if any, are not clear. Nonetheless, provided the underlying conditions are maintained, business and consumer confidence should revive, and demand should strengthen. As a result, output growth is projected to pick-up again in the second half of 1996 and in 1997.

2. Employment and unemployment

Employment in the OECD area as a whole grew by a modest 1 per cent in 1995, roughly the same as 1994. It is projected to slow down to 0.6 per cent in 1996, before recovering to about 1 per cent in 1997 (Table 1.2).

There is considerable variation across countries. Employment growth in 1995 was strongest in Australia and New Zealand, followed by Ireland and Spain. Compared with 1994, it slowed down considerably in North America, which has been in recovery for a relatively long period of time. The modest rate of job growth in the European Union – 0.6 per cent –

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

Annual percentage change

	Share in total OECD GDP	Average			Projections	
	1991	1983-1993	1994	1995	1996	1997
North America	**42.8**	**2.8**	**3.5**	**1.5**	**2.3**	**2.3**
Canada	3.3	2.7	4.6	2.2	2.1	3.4
Mexico	2.7	2.0	3.5	–6.8	3.0	4.0
United States	36.8	2.9	3.5	2.0	2.3	2.0
Japan	**14.9**	**3.6**	**0.5**	**0.9**	**2.2**	**2.4**
Central and Western Europe	**25.7**	**2.3**	**3.0**	**2.2**	**1.3**	**2.6**
Austria	0.8	2.4	3.0	1.8	0.8	1.5
Belgium	1.1	2.0	2.2	1.9	1.0	2.4
Czech Republic	0.6	..	2.6	4.8	5.6	5.8
France	6.4	2.0	2.8	2.2	1.0	2.4
Germany [b]	8.4	2.8	2.9	1.9	0.5	2.4
Ireland	0.3	3.9	6.4	7.7	6.0	5.0
Luxembourg	0.1	3.7	3.3	3.7	1.9	3.0
Netherlands	1.5	2.6	2.7	2.4	1.6	2.6
Switzerland	0.9	1.8	1.2	0.7	0.5	1.7
United Kingdom	5.6	2.2	3.8	2.4	2.2	3.0
Southern Europe	**12.1**	**2.8**	**1.0**	**3.5**	**2.3**	**2.8**
Greece	0.6	1.8	1.5	2.0	2.2	2.3
Italy	6.1	2.1	2.2	3.0	1.7	2.3
Portugal	0.6	2.9	0.8	2.5	2.3	2.7
Spain	3.1	2.8	2.1	3.0	2.3	2.7
Turkey	1.7	5.4	–5.5	7.3	4.5	5.0
Nordic countries	**2.5**	**1.7**	**4.0**	**3.3**	**2.1**	**2.5**
Denmark	0.6	1.9	4.4	2.6	1.1	2.7
Finland	0.5	1.1	4.4	4.2	2.4	3.5
Iceland	0.0	2.2	3.5	2.0	3.6	3.4
Norway	0.5	2.7	5.7	3.7	4.2	2.4
Sweden	0.9	1.2	2.6	3.0	1.3	2.0
Oceania	**2.0**	**3.0**	**5.0**	**2.9**	**3.0**	**3.3**
Australia	1.7	3.3	5.2	3.1	3.1	3.3
New Zealand	0.3	1.5	4.1	2.2	2.7	3.4
OECD Europe	**40.3**	**2.4**	**2.5**	**2.7**	**1.6**	**2.7**
EU	**36.6**	**2.3**	**2.8**	**2.5**	**1.4**	**2.5**
Total OECD	**100.0**	**2.8**	**2.7**	**1.9**	**2.1**	**2.5**

.. Data not available.

a) Aggregates are computed on the basis of 1991 GDP weights expressed in 1991 purchasing power parities.

b) 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.

Source: OECD Economic Outlook, No. 59, June 1996.

was the first gain since 1991; in particular, Finland and Sweden recorded employment increases for the first time since the major employment losses of employment of the early 1990s.

Labour force growth in the OECD area slowed to 0.7 per cent in 1995, down from about one per cent in 1994 (Table 1.2). In fact, in Austria, Germany, the United Kingdom, Denmark, Portugal and Switzerland the labour force fell. In Australia, on the other hand, the labour force grew strongly, at 2.8 per cent.

During 1995, employment growth slightly outpaced the labour force so that the unemployment rate fell slightly to 7.6 per cent for the OECD area as a whole (Table 1.3). However, the rate rose back to 7.7 per cent over the first half of 1996. There are very large differences across countries. Unemployment in Europe is well over 10 per cent compared with about 6 per cent in North America. In Japan, the unemployment rate edged up to 3.1 per cent in 1995 and is expected to be around 3.2 per cent by 1997. The latest projections embody little improvement for the OECD as a whole before the end of 1997.

Thus, labour market performance remains unsatisfactory in many OECD countries. Weak employment

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

Annual percentage change

	Employment						Labour force					
	Level 1994 (000s)	Average 1983-1993	1994	1995	Projections 1996	1997	Level 1994 (000s)	Average 1983-1993	1994	1995	Projections 1996	1997
North America [a]	**151 066**	**1.8** |	**2.2**	**1.3**	**1.2**	**1.3**	**161 145**	**1.5** |	**1.4**	**1.1**	**1.1**	**1.3**
Canada	13 292	1.6	2.1	1.6	1.4	2.1	14 832	1.5	1.1	0.7	1.2	1.7
Mexico [b]	14 709	..	1.4	–1.0	2.0	2.5	15 276	..	1.7	1.7	1.7	2.0
United States	123 065	1.8	2.3	1.6	1.1	1.1	131 036	1.5	1.4	1.0	1.0	1.1
Japan	**64 536**	**1.2**	**0.1**	**0.1**	**0.1**	**0.4**	**66 455**	**1.2**	**0.4**	**0.3**	**0.2**	**0.3**
Central and Western Europe	**106 092**	**0.6**	**0.0**	**0.5**	**–0.1**	**0.5**	**117 305**	**0.7**	**0.2**	**0.0**	**0.3**	**0.4**
Austria	3 452	0.8	0.2	–0.4	–0.6	–0.2	3 667	1.0	0.0	–0.3	–0.3	0.1
Belgium	3 686	0.5	–0.7	0.4	–0.1	0.3	4 240	0.3	0.4	0.3	0.0	0.1
Czech Republic	5 049	..	1.2	2.0	1.6	1.4	5 215	..	0.8	1.8	1.7	1.5
France	22 295	0.1	0.3	1.1	–0.3	0.2	25 409	0.5	0.9	0.3	0.2	0.4
Germany [c]	34 957	0.7	–0.7	–0.2	–0.9	0.2	38 655	0.7	0.1	–0.4	0.2	0.2
Ireland	1 225	0.4	3.5	3.0	2.3	2.1	1 429	0.6	1.9	1.3	1.8	1.8
Luxembourg	165	0.8	0.7	0.7	0.1	0.6	170	0.9	1.4	1.0	0.1	0.5
Netherlands	5 920	1.8	–0.1	1.5	1.2	1.2	6 406	1.3	1.0	1.0	1.1	1.1
Switzerland	3 775	1.5	–0.2	0.2	0.2	0.3	3 962	1.9	0.0	–0.4	0.2	0.1
United Kingdom	25 567	0.6	0.7	0.6	0.3	1.0	28 153	0.6	–0.4	–0.5	0.0	0.5
Southern Europe	**59 521**	**0.7**	**0.2**	**1.2**	**0.9**	**1.2**	**68 276**	**0.9**	**1.2**	**0.9**	**1.0**	**1.0**
Greece	3 790	0.5	1.9	0.9	0.7	1.0	4 193	0.7	1.8	1.3	0.9	1.2
Italy	20 120	0.0	–1.7	–0.6	0.2	0.2	22 680	0.2	–0.5	0.2	0.4	0.1
Portugal	4 218	0.3	–0.1	–0.6	0.1	0.2	4 531	0.1	1.3	–0.3	0.3	0.3
Spain	11 730	0.6	–0.9	2.7	0.7	1.1	15 468	1.2	1.0	1.0	0.7	0.8
Turkey	19 664	1.7	2.5	2.5	1.8	2.3	21 403	1.7	3.0	1.8	2.0	2.0
Nordic countries	**10 581**	**–0.4**	**–0.3**	**1.8**	**0.7**	**1.0**	**11 843**	**0.1**	**–0.5**	**0.8**	**0.1**	**0.5**
Denmark	2 471	0.2	–0.6	1.8	0.3	0.6	2 815	0.4	–0.7	–0.6	–0.6	0.5
Finland	2 024	–1.6	–0.8	2.2	1.1	1.7	2 480	–0.2	–0.2	0.7	0.2	0.6
Iceland	126	0.8	1.0	1.0	1.7	1.4	132	1.2	1.4	1.3	1.0	1.0
Norway	2 034	0.3	1.5	2.0	1.5	1.1	2 150	0.6	0.9	1.5	0.9	0.9
Sweden	3 926	–0.6	–0.9	1.6	0.3	0.7	4 266	–0.1	–1.2	1.3	0.2	0.3
Oceania	**9 507**	**1.6**	**3.3**	**4.2**	**1.6**	**1.8**	**10 497**	**1.8**	**1.9**	**2.8**	**1.8**	**1.7**
Australia	7 947	1.9	3.1	4.1	1.5	1.8	8 800	2.1	1.7	2.8	1.7	1.7
New Zealand	1 559	0.3	4.2	4.7	2.2	1.8	1 698	0.7	2.7	2.6	2.1	2.0
OECD Europe	**176 194**	**0.6**	**0.1**	**0.8**	**0.3**	**0.8**	**197 424**	**0.7**	**0.5**	**0.3**	**0.5**	**0.6**
EU	**145 546**	**0.4**	**–0.3**	**0.6**	**0.0**	**0.5**	**164 562**	**0.6**	**0.2**	**0.1**	**0.3**	**0.4**
Total OECD [a]	**401 303**	**1.1** |	**0.9**	**1.0**	**0.6**	**0.9**	**435 521**	**1.1** |	**0.9**	**0.7**	**0.7**	**0.8**

.. Data not available.
| Break in the series.
a) Averages for 1983-1993 exclude Mexico.
b) Data based on the National Survey of Urban Employment (see "Sources and Methods", *OECD Economic Outlook*, No. 59, June 1996).
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.
Source: OECD Economic Outlook, No. 59, June 1996.

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

	Percentage of labour force					Millions				
	Average 1983-1993	1994	1995	Projections 1996	1997	Average 1983-1993	1994	1995	Projections 1996	1997
North America [b]	**7.1** |	**6.3**	**6.0**	**5.9**	**5.9**	**9.6** |	**10.1**	**9.8**	**9.7**	**9.8**
Canada	9.9	10.4	9.5	9.3	9.0	1.4	1.5	1.4	1.4	1.4
Mexico [c]	..	3.7	6.3	6.0	5.5	..	0.6	1.0	0.9	0.9
United States	6.8	6.1	5.6	5.5	5.6	8.2	8.0	7.4	7.4	7.5
Japan	**2.5**	**2.9**	**3.1**	**3.3**	**3.2**	**1.5**	**1.9**	**2.1**	**2.2**	**2.1**
Central and Western Europe	**8.5**	**9.6**	**9.0**	**9.4**	**9.3**	**8.7**	**11.2**	**10.6**	**11.0**	**11.0**
Austria	4.7	5.9	5.9	6.2	6.5	0.2	0.2	0.2	0.2	0.2
Belgium	11.2	13.1	13.0	13.2	13.0	0.5	0.6	0.6	0.6	0.6
Czech Republic	..	3.2	3.0	3.1	3.2	..	0.2	0.2	0.2	0.2
France	9.9	12.3	11.6	12.1	12.2	2.4	3.1	3.0	3.1	3.1
Germany [d]	7.5	9.6	9.4	10.3	10.4	2.4	3.7	3.6	4.0	4.0
Ireland	15.5	14.2	12.9	12.4	12.2	0.2	0.2	0.2	0.2	0.2
Luxembourg	1.6	2.7	3.0	2.9	2.8	0.0	0.0	0.0	0.0	0.0
Netherlands	7.7	7.6	7.1	7.0	6.9	0.5	0.5	0.5	0.5	0.5
Switzerland	1.3	4.7	4.2	4.2	4.0	0.0	0.2	0.2	0.2	0.2
United Kingdom	9.2	9.2	8.2	7.9	7.5	2.5	2.6	2.3	2.2	2.1
Southern Europe	**10.8**	**12.8**	**12.6**	**12.7**	**12.6**	**6.9**	**8.8**	**8.7**	**8.9**	**8.8**
Greece	7.9	9.6	10.0	10.2	10.4	0.3	0.4	0.4	0.4	0.4
Italy	9.3	11.3	12.0	12.1	12.0	2.1	2.6	2.7	2.8	2.7
Portugal	6.4	6.9	7.2	7.4	7.5	0.3	0.3	0.3	0.3	0.3
Spain	19.3	24.2	22.9	22.9	22.7	2.7	3.7	3.6	3.6	3.6
Turkey	7.9	8.1	7.5	7.7	7.4	1.5	1.7	1.6	1.7	1.7
Nordic countries	**5.6**	**10.7**	**9.7**	**9.2**	**8.8**	**0.6**	**1.3**	**1.2**	**1.1**	**1.1**
Denmark	9.7	12.2	10.0	9.2	9.2	0.3	0.3	0.3	0.3	0.3
Finland	6.9	18.4	17.2	16.4	15.5	0.1	0.5	0.4	0.4	0.4
Iceland	1.6	4.7	5.0	4.4	4.0	0.0	0.0	0.0	0.0	0.0
Norway	4.0	5.4	4.9	4.3	4.1	0.1	0.1	0.1	0.1	0.1
Sweden	3.2	8.0	7.7	7.6	7.2	0.1	0.3	0.3	0.3	0.3
Oceania	**8.2**	**9.4**	**8.2**	**8.3**	**8.3**	**0.7**	**1.0**	**0.9**	**0.9**	**0.9**
Australia	8.6	9.7	8.5	8.7	8.6	0.6	0.9	0.8	0.8	0.8
New Zealand	6.5	8.1	6.3	6.2	6.4	0.1	0.1	0.1	0.1	0.1
OECD Europe	**9.1**	**10.8**	**10.3**	**10.5**	**10.4**	**16.2**	**21.2**	**20.5**	**21.0**	**20.9**
EU	**9.5**	**11.6**	**11.2**	**11.4**	**11.3**	**14.6**	**19.0**	**18.4**	**18.9**	**18.8**
Total OECD [b]	**7.3** |	**7.9**	**7.6**	**7.7**	**7.6**	**28.0** |	**34.2**	**33.2**	**33.8**	**33.7**

.. Data not available.
\| Break in the series.
a) According to commonly used definitions (see *OECD Economic Outlook,* No. 59, June 1996).
b) Averages for 1983 -1993 exclude Mexico.
c) Data based on the National Survey of Urban Employment (see "Sources and Methods", *OECD Economic Outlook,* No. 59, June 1996).
d) Data prior to 1991 refer to western Germany only.
Source: OECD Economic Outlook, No. 59, June 1996.

growth and persistently high levels of unemployment have gone hand-in-hand with large numbers of long-term unemployed (see Statistical Annex Table Q). In countries such as Belgium, Germany, Greece, Ireland, Italy, the Netherlands, Portugal, Spain and the United Kingdom, 40 per cent or more of the unemployed have been looking for work for at least one year. Youth unemployment rates are especially high and, in a number of countries, have increased from the early 1980s (see Chapter 4). Persistent unemployment imposes hardship on many households and individuals, and may also have contributed to the recent decline in consumer confidence mentioned above.

3. Wages, unit labour costs and inflation

Wage increases, as measured by average compensation per employee in the business sector (Table 1.4), picked up in 1995 in the OECD area, and are projected to increase slightly further in 1996,

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

Percentage changes from previous period

	Compensation per employee					Unit labour costs				
	Average 1983-1993	1994	1995	Projections 1996	1997	Average 1983-1993	1994	1995	Projections 1996	1997
North America	**7.1**	**2.9**	**4.1**	**4.4**	**4.3**	**6.1**	**2.1**	**4.7**	**3.5**	**3.1**
Canada	4.6	1.8	1.1	2.7	2.5	3.3	–0.8	0.8	2.2	1.3
Mexico	48.4	9.3	25.0	27.0	19.0	48.9	7.0	35.2	24.3	16.5
United States	4.2	2.5	2.8	2.9	3.3	3.2	2.0	2.8	2.1	2.3
Japan	**3.0**	**1.3**	**1.1**	**1.6**	**1.9**	**0.4**	**0.9**	**0.2**	**–0.8**	**–0.3**
Central and Western Europe [b]	**5.0**	**2.9**	**2.9**	**3.4**	**3.3**	**2.9**	**–0.1**	**1.1**	**1.7**	**1.0**
Austria	5.1	3.4	4.1	3.2	3.4	3.0	–0.3	1.5	1.5	1.4
Belgium	5.0	3.1	1.4	1.9	2.7	3.2	0.0	–0.2	0.6	0.5
Czech Republic	..	18.4	18.3	17.6	17.8	..	16.8	14.9	12.7	12.5
France	4.8	1.6	1.8	2.8	2.7	2.4	–1.5	0.5	1.2	0.2
Germany [c]	4.3	3.5	3.4	3.7	2.9	2.0	–0.5	1.0	2.0	0.5
Ireland	6.2	2.9	3.0	3.5	3.8	2.4	–0.3	–1.7	–0.6	0.9
Netherlands	2.4	2.5	2.6	1.8	2.7	1.0	–0.4	1.0	1.0	0.9
Switzerland	5.0	1.4	1.4	1.4	1.9	4.7	–0.2	0.8	1.1	0.4
United Kingdom	7.1	2.5	2.4	3.5	3.7	5.4	0.4	1.1	1.5	1.5
Southern Europe [b]	**8.9**	**4.4**	**4.6**	**4.7**	**4.7**	**6.5**	**0.9**	**1.8**	**2.9**	**2.6**
Greece	15.0	13.8	13.7	10.2	8.2	13.4	14.3	12.3	8.4	6.6
Italy	8.1	3.8	4.2	4.5	4.9	5.8	–0.5	0.3	2.6	2.5
Portugal	15.1	6.5	6.5	5.5	4.9	11.6	5.4	2.8	2.7	1.9
Spain	8.0	3.4	3.2	3.9	3.7	5.4	0.1	2.6	2.3	2.1
Nordic countries [b]	**6.8**	**4.5**	**3.9**	**4.0**	**4.5**	**4.4**	**–0.3**	**2.7**	**2.9**	**2.6**
Denmark	4.8	3.3	3.7	3.8	3.9	2.7	–1.8	3.1	2.4	1.2
Finland	7.8	5.3	3.8	2.9	2.9	4.0	–1.5	1.5	1.3	1.0
Norway	6.0	2.9	2.5	2.8	5.7	4.4	–0.8	1.6	2.2	4.2
Sweden	7.9	5.6	4.7	5.2	4.9	5.6	1.6	3.8	4.3	3.6
Oceania	**6.0**	**0.8**	**2.5**	**4.4**	**3.9**	**4.5**	**–0.7**	**4.0**	**2.8**	**2.3**
Australia	5.8	0.6	2.6	4.7	4.1	4.2	–1.2	3.8	2.9	2.4
New Zealand	7.1	1.7	2.0	3.1	3.1	5.7	2.1	5.2	2.7	1.5
OECD Europe [b]	**6.2**	**3.4**	**3.4**	**3.8**	**3.8**	**4.0**	**0.1**	**1.4**	**2.1**	**1.5**
EU [b]	**6.3**	**3.3**	**3.3**	**3.7**	**3.6**	**4.0**	**–0.1**	**1.2**	**2.0**	**1.3**
Total OECD [b]	**6.1**	**2.8**	**3.4**	**3.8**	**3.7**	**4.4**	**1.1**	**2.7**	**2.3**	**1.9**

.. Data not available.
a) Aggregates are computed on the basis of 1991 GDP weights expressed in 1991 purchasing power parities.
b) Countries shown.
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.
Source: OECD Economic Outlook, No. 59, June 1996.

before falling in 1997. However, at 3.4 per cent they are still below the average annual rate of growth for the period 1983-1993. The growth of the average compensation per employee is projected to increase from 2.5 per cent in 1995 to 2.9 per cent in 1996 in the G-7 countries and to 3.1 per cent in 1997. It is also expected to increase in Europe, from 3.5 to 3.8 per cent, in both 1996 and 1997.

The growth of unit labour costs rose from 0.8 per cent in 1994 to 1.6 per cent in 1995 in the G-7 countries, and increased from 1.1 per cent to 2.7 per cent, in the OECD area as a whole. However, the rate of increase is expected to slacken in both 1996 and 1997, owing to a projected slowdown in nominal compensation growth. Labour productivity is expected to grow about 1.5 per cent in 1996 and about 1.6 per cent in 1997 in the OECD area as a whole, up from just under 1 per cent in 1995.

C. TEMPORARY JOBS

1. Introduction

The phenomenon of temporary employment arrangements has led to considerable analysis over

the last decade. Indeed, a lively debate exists about its role in fostering labour market flexibility and its association with the issues of job insecurity and instability. In addition, some commentators have argued that non-standard forms of employment may exacerbate insider bargaining power in wage formation and segmentation in labour markets by creating a pool of marginal labour [Bentolila and Dolado (1994)]. It is especially germane to take-up the issue again because the availability of a long time series for a number of OECD countries enables analysis of temporary employment over a complete economic cycle. This section updates and expands upon the analysis of temporary employment presented in the 1993 *Employment Outlook*.

Any analysis of temporary work arrangements must bear in mind that the definitions and regulations governing it differ across countries and have often changed over time [OECD (1993); Marullo (1995)]. That is, there are many employment arrangements that might be considered temporary and their relative importance can differ across institutional, legal and policy settings. The 1993 *Employment Outlook* examined in-depth the regulations and requirements for the use of temporary work arrangements, in particular fixed-term contracts and temporary work through temporary work agencies. Given the important differences in definitions and regulations of temporary employment across OECD countries, cross-country comparisons of the incidence of temporary employment are hazardous.

This section addresses the following issues: First, how has temporary employment varied across countries by age, gender and time? Second, is there any evidence that temporary job arrangements exhibit cyclical behaviour? Third, using retrospective data from labour force surveys, what was the previous labour force status of persons currently holding temporary jobs? In particular, the section considers flows from unemployment and the temporary/permanent job split. Finally, use is made of longitudinal data for several countries (France, Germany, Great Britain and Spain). The importance of such data is that it is possible to examine the critical question of whether or not workers get trapped in a series of short-term jobs or whether such jobs are simply stepping stones eventually leading to more stable and permanent employment.[1]

2. The evolution of temporary employment

The data come from the European Union Labour Force Survey, supplied by EUROSTAT, and from national labour force surveys. The relevant coverage and definitions are outlined in Table 1.5. It is obvious from the table that definitions can differ considerably. For example, in Ireland reference is to occasional or seasonal jobs, in Germany the focus is on limited duration contracts, in France there is a wide variety of temporary contractual arrangements, and in Australia this group refers to casual employment.[2] In addition, countries differ in the way that questions are asked. In some, respondents are simply asked to describe whether or not their job is temporary or of limited duration. In others, a series of questions are posed to distinguish a variety of work/contract arrangements. Because of such dissimilarities, caution is required in interpreting cross-country differences in this form of employment.

Table 1.6 shows that the incidence of temporary employment differs greatly by age and, to some extent, by gender. Thus, in all countries, employed teenagers are generally far more likely to be in temporary jobs. Indeed, in both France and Spain in 1994 at least eight out of every ten teenage workers were in temporary jobs. However, the incidence of temporary work declines steadily with age in all countries. Finally, in all countries, employed women are more likely than employed men to be in a temporary work arrangement of some kind.

Trends in temporary employment also differ considerably across countries (Chart 1.1). Contrary to some widely-held beliefs, the data in Table 1.6 and Chart 1.1 show that temporary work arrangements have not grown much in most OECD countries. As a proportion of total employment, it has grown considerably since the early 1980s in Australia, France, the Netherlands and, especially, Spain. At the same time, it has decreased somewhat in Belgium, Greece, Luxembourg and Portugal. In Germany, Japan, Denmark and Italy, it has remained relatively constant, while it is pro-cyclical in the United Kingdom, and, perhaps, Sweden. In the cases of Spain and France, the growth of temporary work is clearly related to changes in legislation.

While there are differences in levels as between men and women, the evolution in the incidence of temporary employment has tended to be similar (Table 1.6). That is, where it has increased for men, it has also increased among women. The only exceptions are Japan and Germany, where temporary employment increased slightly among men and declined slightly among women, and Denmark, which shows the opposite pattern. In countries where the incidence of temporary employment has increased substantially, *e.g.* Australia, France and Spain, it has also increased, often substantially, *within* every age group. On the other hand, where it has not varied much overall (examples are Denmark and the United Kingdom), the incidence has declined among teenagers, while increasing somewhat among young and mature adults.[3]

Table 1.5. **Definitions of temporary employment in selected OECD countries' labour force surveys**

	Coverage	Questionnaire ask whether the job is:	Are fixed-term contracts separable from agency working?	Is agency working included?	Special categories identifiable
Australia	Employees	Casual	Not applicable	Not known	
Belgium	All working (including self-employment)	Temporary job or fixed-term contract	No	Yes	Probationary contracts and participants in special mesures
Canada	Paid workers, employees	Job with a specific end-date			
Denmark	Employees	Temporary job	Not applicable	Yes	No
Finland	Employees	Fixed-term contract, contract for a specific task, replacement contract or job creation participants	Yes	Not known	Participants in special measures
France	Employees	Agency work, apprentices, trainees (including those on special measures), time-limited or seasonal contracts	Yes, time-limited and seasonal also separable	Yes	Temporary employees in the public sector
Germany	Employees	Time-limited contracts including apprenticeships	Not applicable	No (have open-ended contracts)	Apprentices
Greece	Employees	Temporary job or fixed-term contract	No	No (not permitted)	Probationary contracts
Ireland	All working (including self-employment)	Occasional or seasonal job	No	Yes	No
Italy	Employees	Temporary job	Not applicable	No (not permitted)	Probationary contracts
Japan	Employees	Employed on a contract lasting more than 1 month, but less than 1 year	No	Not known	Day workers
Luxembourg	Employees	Time-limited contracts, including apprenticeships	Not applicable	Yes	Probationary contracts and apprentices
Netherlands	Employees	Agency work, on-call contract or replacement contract	Yes	Yes	Probationary contracts and temporary contracts, unless there is no time limit
Portugal	All working (including self-employment)	Non-permanent contract	Not applicable	Yes	No
Spain	Employees	Temporary contract or job	No	Allowed recently, very strict limitations	Probationary contracts, seasonal or temporary work
United Kingdom	Employees not in special measures	Seasonal job, fixed-term contract, agency work, casual work, and other temporary work	Yes	Yes	Participants in special measures and temporary workers (no time limit on contract)
United States	All working (including self-employment)	Lack of an implicit or explicit contract for ongoing employment	Not applicable	Yes	Workers who do not expect their job to last

Sources: Updated from Bernard Casey (1994) (EU countries); United States: *Report on the American Workforce*, US Department of Labor, 1995; Canada: *Perspectives on Labour and Income,* 1995; and Japan: Houseman and Osawa (1995).

Table 1.6. **Incidence of temporary employment by age and gender**

Percentages

	1983	1994	Mean (1983-1994)	Standard deviation	Men 1983	Men 1994	Women 1983	Women 1994	Aged 16-19 years 1983	Aged 16-19 years 1994	Aged 20-24 years 1983	Aged 20-24 years 1994	Aged 25 years 1983	Aged 25 years 1994
Australia [a]	15.6	23.5	19.6	2.7	9.0	17.9	26.2	30.6	29.8	58.7	14.0	26.1	14.0	19.5
Belgium	5.4	5.1	5.6	0.7	3.8	3.5	8.5	7.5	29.2	38.6	12.9	16.0	3.2	3.6
Canada [b]	7.5	8.8	..	..	6.9	9.2	8.2	8.5	13.6	16.7	..	..	6.0	7.3
Denmark	12.5	12.0	11.4	0.8	12.2	11.1	12.7	12.9	40.1	28.6	25.7	33.1	6.6	7.6
Finland [c]	11.3	13.5	11.8	1.1	9.3	12.3	13.3	14.7	..	..	..	..	..	..
France	3.3	11.0	7.8	2.9	3.3	9.7	3.4	12.4	36.5	80.8	5.9	35.0	1.4	7.6
Germany [d]	10.0	10.3	10.6	0.6	9.0	9.8	11.5	11.0	62.3	74.0	16.9	23.2	3.5	5.9
Greece [e]	16.2	10.3	15.7	3.6	16.6	10.2	15.4	10.5	33.8	29.6	25.9	20.3	14.0	8.8
Ireland	6.1	9.4	8.2	1.0	4.7	7.4	8.8	12.1	18.4	32.8	7.2	14.3	3.9	6.8
Italy	6.6	7.3	5.8	1.0	5.2	6.1	9.4	9.3	15.1	24.0	10.2	14.5	5.6	5.9
Japan [f]	10.3	10.4	10.5	0.2	5.3	5.4	19.5	18.3	17.0	31.7	8.5	11.8	10.2	9.4
Luxembourg	3.2	2.9	3.5	0.6	2.2	2.0	5.5	4.4	17.1	28.5	3.5	7.0	1.6	1.7
Netherlands	5.8	10.9	8.6	1.5	4.1	7.9	9.3	15.0	19.0	40.5	9.9	20.7	4.3	7.4
Portugal [g]	14.4	9.4	14.8	3.8	13.5	8.5	15.9	10.5	39.8	27.2	28.3	22.7	9.3	6.4
Spain [h]	15.6	33.7	28.2	6.4	14.4	31.4	18.4	37.9	48.2	87.5	31.6	70.6	11.0	26.5
Sweden [h]	12.0	13.5	11.2	1.2	9.7	12.3	13.9	14.6	57.0	61.1	26.5	39.5	6.9	9.6
United Kingdom	5.5	6.5	6.0	0.6	4.2	5.5	7.3	7.5	20.4	15.7	5.7	10.1	3.9	5.4
United States [i]	..	2.2	..	..	..	2.0	..	2.4	..	8.1	..	5.1	..	1.4

.. Data not available.
a) 1984 and 1994. The age group is 15 to 19.
b) 1989 and 1994. The age group is 15 to 24.
c) 1982 and 1993.
d) 1984 and 1994. Data refer to western Germany prior to 1992.
e) Due to a definitional change in 1992, the data are not strictly comparable with 1983.
f) The age group is 15 to 19. Data by age refer to non-agricultural industries only.
g) 1986 and 1994. Due to a definitional change in 1992, the data are not strictly comparable with 1986.
h) 1987 and 1994.
i) February 1995.
Sources: Secretariat calculations from the European Labour Force Survey data supplied by EUROSTAT, plus labour force survey data supplied by national authorities.

Given the cross-country differences in the overall patterns of change in temporary employment, it is not surprising that its contribution to overall annual employment changes also differs greatly. In France, Spain, the Netherlands (since 1992) and Sweden (since 1992), temporary employment arrangements have been the main contributor to employment change (Table 1.7). In Australia, both have contributed to growth in employment, especially in 1994.

3. Temporary employment and the economic cycle

It is not clear, *a priori* whether the incidence of temporary employment should show any cyclical pattern. On the one hand, if temporary employment arrangements are allowed, in particular when they imply a lower cost and/or easier procedures of hiring and firing, economic growth might lead to employment growth mainly through such jobs. In a slump, employers would tend to let these workers go first. During upturns, the bulk of hirings would then be in the form of temporary work arrangements. The incidence of temporary work should thus increase in upturns and decrease in downturns.

On the other hand, temporary work arrangements may also be used as an "intermediate" form of employment allowing firms to screen out good from bad job matches. It can also be used as a way of providing access to employment for certain vulnerable groups (*e.g.* youth and the long-term unemployed) as in some targeted active labour market programmes.[4] In this case, temporary employment may not be at all cyclical. Indeed, it could be countercyclical to the extent that temporary work arrangements are used more widely in recessions.

The data in Chart 1.1 suggest little evidence of cyclicality. Individual country regressions[5] (though subject to the fact that the time series is short) also suggest no statistically significant relation, except in Denmark, Portugal and the United Kingdom, where there is a significant positive relationship. Temporary employment is likely to be driven by many, not necessarily well-understood, factors. Cross-country differences and changes in institutional and legal settings

Table 1.7. **Contribution of permanent and temporary employment to employment growth**

Annual growth rates

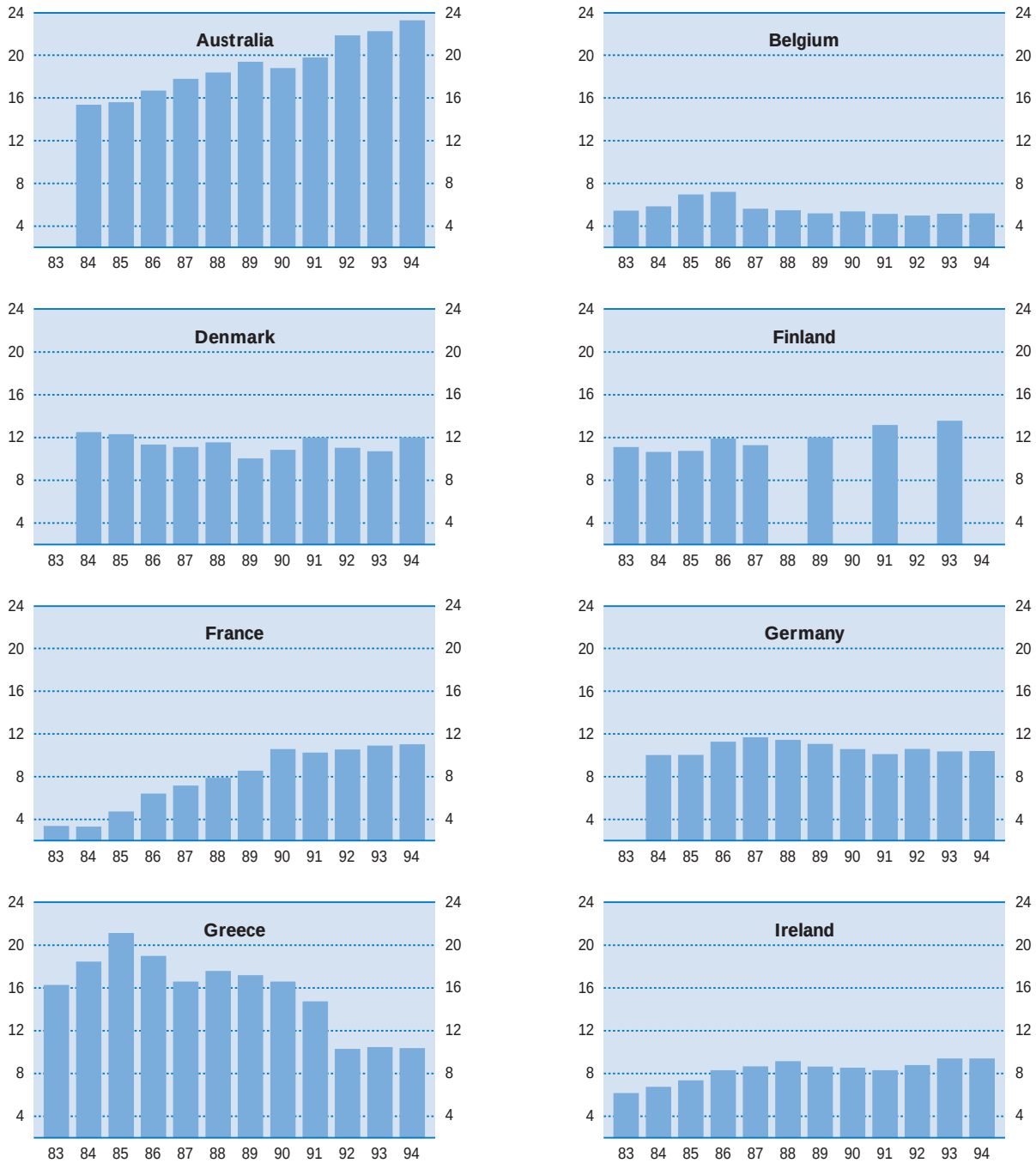
	Employment growth	Due to				Employment growth	Due to		
		Permanent	Temporary	Other [a]			Permanent	Temporary	Other [a]
Australia					**Italy**				
1985	3.2	1.8	0.6	0.8	1984	–1.1	–0.6	–1.2	0.5
1989	4.9	3.4	0.8	0.7	1989	–1.4	–0.9	0.4	–0.8
1992	–0.2	–1.5	1.8	–0.4	1992	–4.1	–4.6	1.3	–0.8
1993	0.0	–0.4	0.3	0.2	1993	–1.4	0.3	–1.1	–0.5
1994	3.5	1.2	1.5	0.8	1994	–1.5	–2.0	0.8	–0.3
Belgium					**Japan**				
1984	1.4	–0.8	0.3	1.9	1984	0.6	0.9	0.1	0.7
1989	3.0	1.3	–0.2	1.8	1989	2.0	2.0	0.3	–0.8
1992	1.4	0.6	–0.1	0.8	1992	1.1	1.7	0.1	–0.8
1993	–0.7	–0.7	0.1	–0.1	1993	0.2	1.1	0.2	–0.6
1994	0.1	0.2	0.0	–0.2	1994	0.1	0.5	0.0	–0.3
Denmark					**Luxembourg**				
1985	2.5	2.6	0.2	–0.2	1984	1.5	0.9	0.7	–0.4
1989	–2.0	–0.4	–1.5	–0.1	1989	1.0	1.1	–0.2	–0.4
1992	0.0	0.9	–0.8	–0.1	1992	1.7	2.4	–0.3	–0.7
1993	–2.6	–1.8	–0.5	–0.3	1993	0.1	–0.8	0.1	–1.1
1994	–1.2	–1.3	1.1	–1.0	1994	–0.1	0.2	–0.1	–0.5
Finland					**Netherlands**				
1983	0.5	–0.3	–0.1	0.9	1985	3.0	1.4	1.8	–0.2
1989	1.9	2.9	0.9	–1.8	1989	2.0	1.9	0.0	0.1
1993	–12.9	–9.2	–1.1	–2.6	1992	3.2	0.8	2.1	0.3
					1993	0.4	–0.2	0.2	0.4
					1994	1.0	–0.6	0.8	0.8
France					**Portugal**				
1984	–0.1	–0.3	–0.1	0.3	1987	3.0	–0.5	1.8	1.7
1989	1.2	1.0	0.7	–0.5	1989	2.6	2.1	0.6	–0.2
1992	–0.3	–0.3	0.2	–0.3	1992	–7.5	2.7	–3.9	–6.3
1993	–0.5	0.1	0.4	–1.0	1993	–1.1	–0.1	–1.0	0.0
1994	–0.7	–0.5	0.0	–0.2	1994	–0.4	–1.3	–0.5	1.4
Germany [b]					**Spain**				
1985	0.0	0.6	0.1	–0.7	1988	3.4	–1.9	5.5	–0.3
1989	1.5	1.7	–0.2	–0.1	1989	4.1	0.3	4.1	–0.3
1992	–1.2	–1.7	0.3	0.2	1992	–1.3	–2.2	0.3	0.6
1993	–0.8	–0.7	–0.3	0.2	1993	–4.7	–1.4	–2.1	–1.2
1994	–0.5	–0.7	0.0	0.2	1994	–1.2	–1.6	0.8	–0.4
Greece					**Sweden**				
1984	0.5	–0.3	1.2	–0.4	1988	1.4	1.5	–0.1	–0.1
1989	0.3	1.2	0.0	–0.8	1989	1.5	2.0	–0.8	0.3
1992	1.4	2.5	–2.3	1.2	1992	–4.3	–4.7	0.2	0.3
1993	1.0	1.0	0.2	–0.2	1993	–5.8	–6.2	0.1	0.3
1994	1.9	0.9	0.1	0.9	1994	–0.9	–2.7	1.6	0.2
Ireland					**United Kingdom**				
1984	–1.8	–1.6	0.4	–0.5	1984	1.7	–0.1	0.6	1.2
1989	0.4	1.0	–0.3	–0.4	1989	3.7	2.4	–0.4	1.7
1992	1.2	0.0	0.4	0.8	1992	–2.9	–2.4	0.1	–0.5
1993	0.7	0.6	0.6	–0.5	1993	–1.1	–1.0	0.2	–0.3
					1994	0.9	–0.1	0.5	0.4

a) Persons, such as the self-employed, not classified as permanent/temporary.
b) Data refer to western Germany prior to 1992.
Sources: See Table 1.6.

Chart 1.1.

Temporary employees as a proportion of total employees, 1983-1994

Percentages

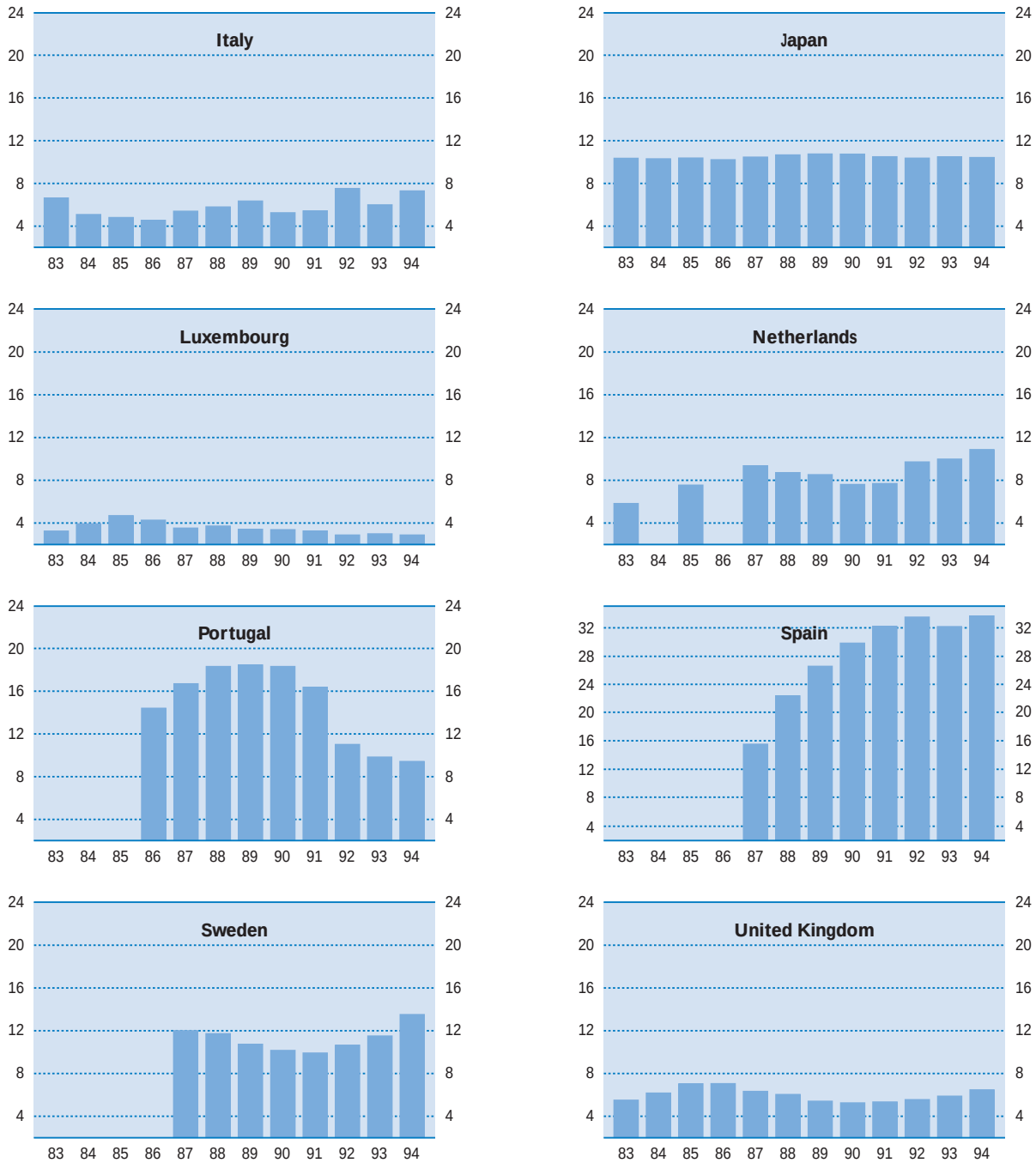


Sources: See Table 1.6.

Chart 1.1. *(cont.)*

Temporary employees as a proportion of total employees, 1983-1994

Percentages



Note: The scale is the same for all countries, except Spain.

are two of them. For example, the liberalisation of regulations on temporary contracts in Spain in the mid-1980s has clearly been the dominant factor in that country, together with the more strict regulation of permanent contracts. In France, different types of temporary work arrangements show different cyclical behaviour which offset each other in the aggregate [Belloc and Lagarenne (1996].

4. Flows into temporary employment

Cross-section and time series data on temporary and permanent employment provide useful information about their significance. However, they cannot be used to describe the underlying labour force dynamics showing where, in the sense of prior labour force status, these workers came from. Analysis of labour force flows can help shed light on this process. Accordingly, this subsection uses retrospective information from the European Union Labour Force Surveys to analyse the following issues:[6] first, what is the probability of an unemployed person at time *t* being employed one year later? Second, conditional upon finding a job, what is the temporary/permanent split? Third, to what extent are there differences across countries and time?

Table 1.8 shows the probability of an over-the-year change in labour force status among people who said they were unemployed a year prior to the survey. In general, people previously unemployed remain unemployed one year later. For 1994, the chance of moving into employment is highest in Luxembourg (just over half), followed by France and the United Kingdom (about one-third), and is lowest in Belgium and Ireland. The time profile of this likelihood has been quite constant over the period (data not shown), except in the case of Spain and the United Kingdom. The likelihood of remaining unemployed decreased in Spain during the 1987-1990 expansion, remained constant through 1991-1992, and then increased sharply during the 1993-1994 recession. In the United Kingdom, it decreased continuously until 1989-1990, increased again during the last recession and fell again in 1994. In both countries, this was accompanied by an opposite movement in the likelihood of becoming employed.

Table 1.9 shows that, among those unemployed who found wage and salary work, the mix of permanent and temporary jobs differs greatly between countries. In 1994, a higher proportion entered employment through permanent jobs, except in France, Portugal and Spain. Indeed, France has seen a reversal over the period. Over the 1980s, among the unemployed who moved into employment, a figure roughly the same for the three years shown in Table 1.8, well over half were in positions considered permanent. However, by 1994 over 50 per cent were in temporary jobs. The Spanish case shows that

Table 1.8. **Current labour force status of people unemployed one year earlier, selected years** [a]

Percentages

	1983 [b]				1989				1994			
	Total	Employed	Unemployed	Not in labour force	Total	Employed	Unemployed	Not in labour force	Total	Employed	Unemployed	Not in labour force
Belgium	100.0	21.0	71.6	7.4	100.0	20.3	67.3	12.5	100.0	18.3	51.3	30.5
Denmark	100.0	35.8	51.1	13.2	100.0	40.5	40.6	18.9	100.0	28.3	32.2	39.5
France	100.0	35.0	47.5	17.5	100.0	34.1	46.3	19.6	100.0	32.7	52.5	14.8
Germany [c]	100.0	14.3	51.1	34.7	100.0	15.2	47.0	37.8	100.0	27.1	49.7	23.3
Greece	100.0	37.5	55.7	6.8	100.0	35.7	58.1	6.3	100.0	25.9	62.3	11.8
Ireland	100.0	20.6	65.8	13.6	100.0	19.4	66.1	14.5	100.0	17.7	58.3	24.0
Italy	100.0	31.9	61.6	6.6	100.0	..	..	..	100.0	23.3	46.6	30.1
Luxembourg	100.0	47.2	45.5	7.3	100.0	65.9	26.5	7.6	100.0	50.8	42.8	6.4
Netherlands [d]	100.0	23.7	65.0	11.3	100.0	27.6	55.7	16.8	100.0	22.0	30.2	47.7
Portugal	100.0	27.4	58.5	14.0	100.0	39.8	44.6	15.6	100.0	28.9	45.5	25.6
Spain	100.0	28.4	66.1	5.5	100.0	35.0	60.0	5.1	100.0	26.4	66.8	6.7
United Kingdom	100.0	27.7	56.6	15.7	100.0	39.4	44.7	15.8	100.0	33.4	49.3	17.3

.. Data not available.
a) All employed people (employees and self-employed).
b) Denmark, 1985; Germany, 1985; Portugal, 1986; and Spain, 1987.
c) Data refer to western Germany prior to 1992.
d) The Central Bureau for Statistics (CBS) constructs "proxy-flows", which are the basis of the data used here. However, these are considered to be of low reliability. The flow data under-represent the unemployed. Therefore, these data should be interpreted with particular caution.
Sources: See Table 1.6.

Table 1.9. **People unemployed a year ago who are currently employees by their permanent-temporary status, selected years** [a]

Percentages

	1983 [b]			1989			1994		
	Total	Permanent	Temporary	Total	Permanent	Temporary	Total	Permanent	Temporary
Belgium	100.0	67.5	32.5	100.0	71.5	28.5	100.0	71.3	28.7
Denmark	100.0	57.6	42.4	100.0	59.6	40.4	100.0	54.8	45.2
France	100.0	81.5	18.5	100.0	57.3	42.7	100.0	45.1	54.9
Germany [c]	100.0	68.5	31.5	100.0	66.1	33.9	100.0	62.1	37.9
Greece	100.0	60.7	39.3	100.0	56.6	43.4	100.0	63.8	36.2
Ireland	100.0	71.4	28.6	100.0	59.4	40.6	100.0	51.1	48.9
Italy	100.0	65.3	34.7	100.0	..	..	100.0	61.2	38.8
Luxembourg	100.0	81.8	18.2	100.0	79.8	20.2	100.0	81.1	18.9
Netherlands [d]	100.0	59.4	40.6	100.0	56.1	43.9	100.0	61.9	38.1
Portugal	100.0	33.9	66.1	100.0	29.4	70.6	100.0	47.3	52.7
Spain	100.0	39.0	61.0	100.0	22.7	77.3	100.0	9.8	90.2
United Kingdom	100.0	76.6	23.4	100.0	83.9	16.1	100.0	77.6	22.4

.. Data not available.
a) Wage and salary workers only.
b) Denmark, 1985; Germany, 1985; Portugal, 1986; and Spain, 1987.
c) Data refer to western Germany prior to 1992.
d) See note *d* in Table 1.8.
Sources: See Table 1.6.

temporary work arrangements have been by far the main route for the unemployed to gain employment.

The fact that, in most countries, unemployed people who found work are more likely to enter permanent employment, sometimes considerably more likely as in Belgium and the United Kingdom, partly reflects the fact that permanent jobs are the biggest component of wage and salary employment (Table 1.6). At the same time, however, given the relative size of the temporary job pool, the data indicate that a disproportionate number of the unemployed find work *via* temporary jobs.

Table 1.10 shows, for 1994, gender differences in the likelihood of being employed, unemployed or not in the labour force for those previously unemployed one year earlier. Unemployed women tend to be less likely than men to be employed one year later, except in Ireland, Luxembourg and the United Kingdom. Women are also less likely to be unemployed at both dates than men, except in Germany, Greece and Spain. It follows that women are more likely to be counted as out of the labour force if they were previously unemployed compared with men. Though not shown here, these differences have changed little over time.

As shown in Table 1.11, in most countries, previously unemployed women who were in a wage and salary job at the time of the survey are somewhat more likely to be in a temporary one compared with men. There are, however, exceptions and these gender differences are usually rather small. In the two countries where temporary employment increased the most, Spain and France, the proportion moving from unemployment to employment who say it is a temporary job has also risen greatly for both men and women. Where the incidence of temporary employment has not changed much over time, there has been, equally, little change in the permanent/temporary split among the unemployed moving into jobs.

There are some important differences across age groups (Table 1.12). Regarding the flow into temporary employment, this likelihood is higher for teenagers compared with adults. Exceptions are the Netherlands, where there has been a great deal of variability in this likelihood across age groups and over time; Belgium, where those aged 20 to 24 seem to have the highest likelihood and Ireland and Luxembourg, where those aged 20 to 24 have the lowest likelihood. As a general rule, however, young unemployed people seem to gain employment through temporary work more frequently than do adults.

Table 1.13 focuses on the previous labour market status of people *currently* in temporary employment arrangements. In all countries, the majority of temporary employees were previously employed (however, it is not known what their employment status was one year earlier). However, this varies from around 73 per cent in Germany, Greece and Portugal to 53 per cent in Ireland. The more interesting result is that the

Table 1.10. **Current labour force status of people unemployed one year earlier by gender, selected years**

Percentages

	Employed			Unemployed			Not in the labour force		
	1983 [a]	1989	1994	1983 [a]	1989	1994	1983 [a]	1989	1994
Belgium									
Men	26.4	24.3	22.0	67.1	64.9	52.1	6.5	10.7	25.9
Women	17.2	17.6	15.4	74.8	68.8	50.6	8.0	13.6	33.9
Denmark									
Men	52.8	43.4	34.5	37.4	41.1	36.5	9.8	15.6	29.0
Women	46.8	38.7	24.2	35.7	40.3	29.3	17.5	21.0	46.5
France									
Men	39.7	40.0	34.0	47.0	44.3	55.5	13.3	15.8	10.5
Women	31.2	29.0	31.5	47.9	48.1	49.6	20.9	22.9	18.9
Germany [b]									
Men	16.6	17.7	28.0	62.1	56.7	51.3	21.3	25.6	20.7
Women	12.5	13.3	26.3	42.4	39.8	48.3	45.1	46.9	25.4
Greece									
Men	48.8	45.5	35.7	48.0	49.7	55.0	3.2	4.8	9.3
Women	26.4	28.6	19.1	63.3	64.1	67.3	10.3	7.3	13.5
Ireland									
Men	18.2	17.4	16.4	69.9	68.8	60.6	11.9	13.8	23.0
Women	28.8	27.0	21.8	51.7	55.7	51.1	19.5	17.3	27.1
Italy									
Men	37.7	..	25.6	57.9	..	47.2	4.4	..	27.2
Women	26.4	..	20.5	65.0	..	45.9	8.6	..	33.6
Luxembourg									
Men	44.0	63.7	43.9	50.3	28.7	47.1	5.7	7.6	9.0
Women	51.2	68.1	61.6	40.2	23.4	36.2	8.7	8.5	2.2
Netherlands [c]									
Men	21.5	26.2	24.1	67.7	57.3	36.2	10.8	16.5	39.7
Women	29.7	31.2	20.5	57.6	51.4	25.7	12.7	17.4	53.8
Portugal									
Men	34.7	47.4	33.0	55.8	41.4	47.5	9.4	11.3	19.5
Women	21.5	34.7	25.8	60.7	46.8	43.9	17.8	18.5	30.3
Spain									
Men	34.0	42.7	31.7	61.9	53.2	63.1	4.1	4.1	5.2
Women	20.5	25.9	20.9	72.0	67.9	70.8	7.5	6.2	8.3
United Kingdom									
Men	25.8	37.6	31.4	59.9	49.5	55.1	14.3	13.0	13.5
Women	32.2	43.3	37.6	48.6	34.9	37.1	19.2	21.8	25.3

.. Data not available.
a) Denmark, 1985; Germany, 1985; Portugal, 1986; and Spain, 1987.
b) Data refer to western Germany prior to 1992.
c) See note *d* in Table 1.8.
Sources: See Table 1.6.

second most important prior labour market situation is to have been outside the labour force, the sole exceptions being Spain and Italy. The same pattern is generally seen for both men and women.

The retrospective data examined above provide some useful information on where flows into a permanent or temporary job come from, but they do not provide information on what happens to people holding a temporary job. For example, do they move continuously in and out of such jobs, or is a more permanent work arrangement eventually found? The next subsection considers this issue with longitudinal data. These data are only available for few countries (France, Germany, Spain, and Great Britain).

5. Longitudinal analysis of temporary employment

This sub-section examines the transition rates from temporary employment to other labour market states, the proportion of people originally in temporary employment remaining in temporary employ-

Table 1.11. **People unemployed a year ago who are currently employees by their permanent-temporary status and gender, selected years** [a]

Percentages

	1983 [b]		1989		1994	
	Permanent	Temporary	Permanent	Temporary	Permanent	Temporary
Belgium						
Men	74.8	25.2	80.6	19.4	72.9	27.1
Women	59.7	40.3	62.9	37.1	69.7	30.3
Denmark						
Men	71.0	29.0	68.4	31.6	61.4	38.6
Women	46.7	53.3	53.3	46.7	48.5	51.5
France						
Men	83.7	16.3	58.3	41.7	47.8	52.2
Women	79.3	20.7	56.2	43.8	42.4	57.6
Germany [c]						
Men	70.3	29.7	63.4	36.6	65.0	35.0
Women	66.6	33.4	68.8	31.2	59.6	40.4
Greece						
Men	60.7	39.3	52.5	47.5	60.8	39.2
Women	60.7	39.3	61.1	38.9	67.4	32.6
Ireland						
Men	70.2	29.8	56.8	43.2	48.9	51.1
Women	73.7	26.3	65.3	34.7	55.8	44.2
Italy						
Men	64.9	35.1	..	..	63.1	36.9
Women	65.8	34.2	..	..	58.7	41.3
Luxembourg						
Men	88.2	11.8	80.0	20.0	93.5	6.5
Women	75.0	25.0	79.4	20.6	67.1	32.9
Netherlands [d]						
Men	62.1	37.9	54.7	45.3	64.1	35.9
Women	54.5	45.5	59.1	40.9	59.8	40.2
Portugal						
Men	34.0	66.0	30.6	69.4	51.2	48.8
Women	33.8	66.2	28.3	71.7	43.6	56.4
Spain						
Men	37.5	62.5	22.6	77.4	8.9	91.1
Women	42.6	57.4	22.9	77.1	11.1	88.9
United Kingdom						
Men	76.6	23.4	83.7	16.3	78.0	22.0
Women	76.6	23.4	84.3	15.7	77.2	22.8

.. Data not available.
a) Wage and salary workers only.
b) Denmark, 1985; Germany, 1985; Portugal, 1986; and Spain, 1987.
c) Data refer to western Germany prior to 1992.
d) See note *d* in Table 1.8.
Sources: See Table 1.6.

ment for each of a number of successive periods, and the labour market status previous to and after spells of temporary and/or permanent employment. Annex 1.A provides definitions, which differ significantly across countries and must be borne in mind when interpreting the results, and explanations of the data sets used.

Table 1.14 reports the current labour market status of individuals who were previously in a temporary job for France (interim and fixed term contracts only[7]), Germany, Spain and Great Britain. The proportion of people who remain employed a year later is similar in all four countries. However, the distribution between temporary, permanent and other

Table 1.12. **People unemployed a year ago who are currently employees by permanent-temporary status and age groups, selected years** [a]

Percentages

	Age groups	Permanent			Temporary		
		1983 [b]	1989	1994	1983 [b]	1989	1994
Belgium	15-19	50.5	71.0	65.0	49.5	29.0	35.0
	20-24	62.8	62.6	64.3	37.2	37.4	35.7
	25+	74.1	75.1	75.3	25.9	24.9	24.7
Denmark	15-19	45.3	62.9	60.4	54.7	37.1	39.6
	20-24	58.7	75.9	54.8	41.3	24.1	45.2
	25+	58.0	54.5	54.4	42.0	45.5	45.6
France	15-19	66.4	34.2	25.0	33.6	65.8	75.0
	20-24	81.6	47.5	38.3	18.4	52.5	61.7
	25+	84.5	64.4	47.7	15.5	35.6	52.3
Germany [c]	15-19	46.4	41.7	46.6	53.6	58.3	53.4
	20-24	63.6	56.2	60.7	36.4	43.8	39.3
	25+	72.7	69.7	62.6	27.3	30.3	37.4
Greece	15-19	57.4	57.7	69.5	42.6	42.3	30.5
	20-24	51.1	61.8	68.5	48.9	38.2	31.5
	25+	64.4	54.1	61.1	35.6	45.9	38.9
Ireland	15-19	66.5	61.5	58.2	33.5	38.5	41.8
	20-24	71.2	69.2	63.8	28.8	30.8	36.2
	25+	73.6	54.6	44.2	26.4	45.4	55.8
Italy	15-19	73.3	..	63.8	26.7	..	36.2
	20-24	67.0	..	63.3	33.0	..	36.7
	25+	59.1	..	59.9	40.9	..	40.1
Luxembourg	15-19	84.6	75.0	76.2	15.4	25.0	23.8
	20-24	82.9	83.9	89.7	17.1	16.1	10.3
	25+	77.4	79.3	80.0	22.6	20.7	20.0
Netherlands [d]	15-19	61.1	72.1	60.3	38.9	27.9	39.7
	20-24	53.7	58.7	57.9	46.3	41.3	42.1
	25+	62.6	53.6	63.1	37.4	46.4	36.9
Portugal	15-19	32.2	23.3	41.0	67.8	76.7	59.0
	20-24	34.5	26.2	45.9	65.5	73.8	54.1
	25+	34.8	34.4	50.2	65.2	65.6	49.8
Spain	16-19	36.4	20.4	8.7	63.6	79.6	91.3
	20-24	40.8	22.4	8.8	59.2	77.6	91.2
	25+	38.7	23.6	10.4	61.3	76.4	89.6
United Kingdom	16-19	76.5	89.7	77.7	23.5	10.3	22.3
	20-24	76.1	84.5	79.7	23.9	15.5	20.3
	25+	76.8	82.9	77.0	23.2	17.1	23.0

.. Data not available.
a) Wage and salary workers only.
b) Denmark, 1985; Germany, 1985; Portugal, 1986; and Spain, 1987.
c) Data refer to western Germany prior to 1992.
d) See note *d* in Table 1.8.
Sources: See Table 1.6.

employment differs. The figures show that in Germany and Spain around two-thirds of those who were in temporary employment a year ago are still in temporary employment, while the figure is only 40 per cent for Great Britain and 30 per cent for France (this last proportion has, however, increased from 16 per cent in 1984-1985). France, with 32 per cent, and Great Britain, with 25 per cent, have the highest percentage of people in permanent employment a year later. In Spain the figure is only 9 per cent. On the other hand, one-quarter or more were not employed one year later in France, Spain and Great Britain, compared with just 16 per cent in Germany.

Table 1.15 provides the transition matrix over time for people who were in temporary employment according to their successive labour market statuses.

Table 1.13. **People currently in temporary employment by their labour force status one year earlier, 1994**

Percentages

	Total [a]	Employed	Unemployed	Not in the labour force
Belgium	100.0	68.1	13.3	18.6
Denmark	100.0	64.3	11.3	23.8
France	100.0	56.1	21.1	22.7
Germany	100.0	71.1	9.1	19.7
Greece	100.0	76.9	12.7	10.4
Ireland	100.0	53.0	18.3	28.7
Italy	100.0	67.1	21.0	12.0
Luxembourg	100.0	60.3	7.8	31.9
Netherlands [b]	100.0	67.3	8.7	24.0
Portugal	100.0	72.4	11.0	16.6
Spain	100.0	62.7	25.0	8.7
United Kingdom	100.0	64.5	10.3	20.4

a) Figures do not always add up to 100.0 because of missing data on previous labour force status.
b) See note *d* in Table 1.8.
Sources: See Table 1.6.

The German data cover four years, the British data two years and the Spanish data five quarters. In Great Britain, 30 per cent of those originally in temporary employment were still in that state two years later, 39 per cent were in permanent employment and one-quarter were jobless. In Germany, 47 per cent after three years and 38 per cent after four years were still in temporary employment. In Spain, after six quarters 59 per cent remained in temporary employment, only 12 per cent were in permanent jobs, and 21 per cent were unemployed. Conditional upon being in a job, Spain shows the most persistence of temporary work: by the second quarter of 1994, 8 out of 10 were still in a temporary job.

Table 1.16 presents information on the sources and destinations of the total number of temporary and permanent job *spells* for Great Britain and Spain (see Annex 1.A). The data are not comparable because the Spanish data refer to spells from the first quarter of 1993 through the second quarter of 1994, while for Great Britain the spells are a retrospective construction of labour market histories since leaving full-time education, leaving much room for recall bias. The definitions also differ greatly. The British survey simply asks respondents if the job in question was considered temporary or permanent, and the interpretation of responses is not clear. For example, individuals could "recall" a prior job as temporary because they only stayed in it for a short time, whereas the job could have been more permanent. However, the data for both countries show a similar picture. Temporary job spells are more likely than permanent ones to follow a spell of unemployment, another temporary job or a spell involving family responsibilities (the number is much higher for Spain). Only 10 per cent of temporary job spells in Spain, and 30 per cent in Great Britain were started by those who had previously held a permanent job. On

Table 1.14. **People in a temporary job at time *t* distributed by their labour market status a year later**

Percentages

	France [a, b]	Germany	Spain	Great Britain
	March 1992-1993	1992-1993	First quarter 1993-1994	1992-1993
Incidence of temporary employment at time *t*	10.2	15.0	31.5	9.3
Employed	68.0	84.2	75.0	74.9
of which:				
Temporary	30.3	68.4	64.0	39.8
Permanent	31.7	14.6	8.9	25.3
Self-employment	6.0	1.2	2.1	9.7
Unemployed	25.3	10.9	18.4	5.7
Not in the labour force	6.7	4.9	6.6	19.5
Total	100.0	100.0	100.0	100.0

a) Data refer to Temporary Agency (*Interim*) and Fixed-term contracts (*CDD*) only. These comprise just 40.1 per cent of all temporary employment.
b) Permanent refers to employment of unlimited duration in both the public and private sector, including "collectivités territoriales", but excluding trainees.
Sources: France: Secretariat calculations from INSEE (1995) from *Enquêtes emploi*, INSEE.
Germany: Secretariat calculations from the German Socio-Economic Panel (GSOEP).
Spain: Secretariat calculations from the linked records of the Spanish labour force survey.
United Kingdom: Secretariat calculations from the British Household Panel Survey (BHPS).

Table 1.15. **Transitions from temporary employment as measured in longitudinal surveys**

GERMANY: People in temporary employment in 1990 [a] by their labour market status over the following four years

	1991	1992	1993	1994
Employed	90.8	88.3	80.8	77.3
of which:				
Temporary	76.4	59.3	46.9	37.7
Permanent	14.1	28.5	33.1	38.5
Self-employment	0.3	0.5	0.8	1.1
Unemployed	2.4	2.7	6.5	10.6
Not in the labour force	6.8	8.9	12.7	12.2
Total	100.0	100.0	100.0	100.0

a) The incidence of temporary employment in 1990 was 12.7 per cent.
Source: Secretariat calculations from the German Socio-Economic Panel, waves 7-11.

SPAIN: People in temporary employment in the first quarter of 1993 [b] by their labour market status over the following 5 quarters

	2Q 1993	3Q 1993	4Q 1993	1Q 1994	2Q 1994
Employed	86.4	78.7	77.2	75.0	72.8
of which:					
Temporary	78.9	68.1	66.2	64.0	58.5
Permanent	6.4	8.8	9.1	8.9	11.5
Self-employment	1.2	1.8	2.0	2.1	2.7
Unemployed	9.9	16.2	17.2	18.4	20.6
Not in the labour force	3.7	5.0	5.6	6.6	6.6
Total	100.0	100.0	100.0	100.0	100.0

b) The incidence of temporary employment in the first quarter of 1993 was 31.5 per cent.
Source: Secretariat calculations from the linked records of the Spanish labour force survey.

GREAT BRITAIN: People in temporary employment in 1991 [c] by their labour market status over the following two years

	1992	1993
Employed	72.5	75.0
of which:		
Temporary	34.3	29.4
Permanent	30.1	38.6
Self-employment	8.1	7.0
Unemployed	5.9	6.4
Not in the labour force	21.6	18.6
Total	100.0	100.0

c) The incidence of temporary employment in 1991 was 10.4 per cent.
Source: Secretariat calculations from the British Household Panel Survey, waves 1-3.

Table 1.16. **Labour force status before and after temporary and permanent job spells**

Percentages

SPAIN: First quarter 1993 to second quarter 1994

	Temporary job spells		Permanent job spells	
	Status before spell	Status after spell	Status before spell	Status after spell
Unemployment	31.6	31.9	2.8	6.4
Permanent employment	9.9	15.0	81.4	75.5
Temporary employment	45.4	40.3	10.3	8.7
Other employment	3.2	3.4	3.3	4.1
Not in the labour force	9.8	9.5	2.2	5.4
Total	100.0	100.0	100.0	100.0

Source: Secretariat calculations from the linked records of the Spanish labour force survey.

GREAT BRITAIN: Retrospective data on job histories

	Temporary job spells		Permanent job spells	
	Status before spell	Status after spell	Status before spell	Status after spell
Unemployment	8.4	11.1	4.2	7.3
Permanent employment	29.7	48.4	50.0	61.5
Temporary employment	14.0	17.8	2.5	3.0
First labour force status [a]	26.0	..	28.9	..
Looking after family or home	14.3	9.7	8.3	12.3
Other	7.7	12.9	6.1	15.9
Total	100.0	100.0	100.0	100.0

a) First status after leaving full-time education.
Source: Retrospective data on labour market status and job histories contained in waves two and three of the British Household Panel Survey.

the other hand, fully one-half of all jobs spells considered as permanent followed on another permanent job in Great Britain, and the figure was 80 per cent in Spain.

Considering destinations, just under half of all temporary employment spells ended in permanent employment in Great Britain, compared with just over 60 per cent for permanent spells. For Spain, the figures are 15 per cent and 75 per cent. It is also important to note that compared with spells of permanent employment, a relatively high proportion of temporary employment spells end up in unemployment or another temporary job, particularly in Spain. Especially in Spain, temporary jobs are not great stepping stones into permanent ones.

D. CONCLUSIONS

The slowdown in output growth intensified late last year, and the growth rate during the first half of 1996 was about 1.7 per cent in the OECD area. However, recent indicators suggest that activity is strengthening in North America, while growth in Europe should pick up later this year. In Japan recovery is now under way. Across the OECD as a whole, output growth in 1996 is expected to be 2.1 per cent. Employment growth will, however, be fairly weak, especially in Europe. OECD area unemployment is estimated at 7.7 per cent in 1996, and little improvement is expected over the next two years.

This chapter has also taken an in-depth look at temporary jobs. The main findings are: first, despite differences in definitions, it is clear that the magnitude of temporary employment varies greatly across OECD countries. The evolution over time also varies considerably. Temporary work arrangements have grown in importance only in Australia, France, the Netherlands and Spain. In some other countries, there has been very little overall change – Belgium, Canada, Denmark, Germany, Japan and the United Kingdom are examples. Second, temporary, as

opposed to permanent employment, has not been the main contributor to employment change, except in France, Spain, the Netherlands and, recently, in Sweden.

Third, employed women and, in particular, youth are more likely to be in temporary work than men and adults, respectively. Between 1983 and 1994, the incidence of temporary employment among employed youth increased in most countries; especially noticeable increases were registered in France, Spain and Australia. Indeed, in these latter three countries, as well as in Germany, Ireland, Italy, the Netherlands and Sweden, the incidence has increased across all age groups. Fourth, the incidence of temporary work tends to show little cyclical pattern.

Fifth, in general, unemployed people who find work are more likely to enter permanent rather than temporary work arrangements. The clear exceptions are Spain and France. Nonetheless, bearing in mind the small share of temporary jobs in total employment, in most countries, there is a disproportionate flow from unemployment to temporary jobs. Sixth, unemployed teenagers are more likely to become employed and less likely to stay unemployed than any other age group. And, when they do find employment, it is more likely through temporary work, while, for adults, it is more likely to be permanent employment.

Finally, a longitudinal and retrospective analysis of temporary employment for a few countries, suggests several tentative conclusions: First, considered over a 12-month period, half or more of those in temporary jobs at the start date and employed a year later are still in temporary jobs. Second, from 15 to 30 per cent of them are out of work one year later. Third, over a longer period of time there is more movement from temporary to permanent work, except in Spain, although over 50 per cent are either still in temporary work or out of work in the three countries for which data were available. Fourth, the analysis of spells, although difficult to interpret, indicates some significant differences between permanent and temporary job spells. In both Great Britain and Spain, permanent jobs that, for whatever reason, ended are much more likely to be followed by another spell of permanent employment compared with a temporary job that ended. Finally, the status of people prior to entering a temporary or permanent job appears quite different. Compared with those in permanent jobs, a higher proportion of previously-employed workers in temporary jobs came from a temporary job.

Notes

1. A further issue, not addressed here, concerns the reasons for being in temporary employment. The European Union Labour Force Survey provides some indication of these reasons from the point of view of employees. Getting a solid handle on this issue is difficult because in some countries, such as France and Germany, many give no reason whatsoever. Nonetheless, taking only those who respond shows that the proportion of people with a temporary job because they could not find a permanent one ranges from 86 per cent in Spain to 47 and 43 per cent in the Netherlands and the United Kingdom, respectively.
2. In Australia, there is a common law distinction between casual and permanent employment, based on the notion that permanent employees have an ongoing contract of employment, while casual employees do not. This situation is complicated by the operation of legally enforceable awards and/or agreements. While there is no universal definition of casual employment in awards, one factor common to most awards is the front-loading of pay to casual employees to compensate them for not receiving benefits such as sick pay and annual leave. The Australian Bureau of Statistics (ABS) uses this characteristic of casual employment to identify them in surveys. For the purpose of most of these surveys, permanent employees are defined as: ''employees who are entitled to annual and/or sick leave in their main job''. Casual employees are those who are not entitled to them in their main job.
3. Data on the composition of temporary employment shows that, even though employed teenagers have the highest likelihood of being in a temporary job, and this has increased in many OECD countries, the proportion of temporary jobs held by them decreased everywhere, except in Australia and the Netherlands. This is obviously driven both by declines in the youth population relative to adults and, in many countries, declining youth employment/population ratios.
4. Temporary employment may also be a way to provide special expertise or skills to firms needing them on an occasional basis [Abraham (1990)]. OECD (1993) found that a large percentage of temporary employees worked in seasonal industries, including agriculture and construction. Service sector employment, such as retail and wholesale trade, also had relatively high shares of temporary workers. These facts do not suggest a high proportion of ''professionalization'' in temporary work. However, more disaggregated data by industry and by occupation would be needed to investigate this further.
5. The proportion of employees working under temporary arrangements was regressed on GDP growth and a time trend. Similar results were obtained from a regression substituting the unemployment rate for GDP growth. A pooled regression, combining all the countries and introducing country dummies, also showed no evidence of any cyclical behaviour. As the dependent variable could not be uniformly measured across all observations, the results cannot be conclusive. However, the country dummies were strongly statistically significant.
6. These data must be used carefully. The information on labour force status one year previously is based on a retrospective question at the time of the survey and there are well-known problems associated with recall bias. In addition, the data inherently underestimate the full labour force dynamics because they do not capture changes in labour force status that have occurred within the year.
7. There is a significant contrast between the different forms of temporary employment with respect to the next year situation in France. Only 54 per cent of ''stagiaires'' and ''emplois aidés'' are employed a year after, 32 per cent are unemployed and 14 per cent inactive, compared with 68, 25 and 7 per cent, respectively, for interim and fixed-term contracts.

ANNEX 1.A

Longitudinal data sets used for the analysis of temporary employment

France

The data were taken from the March-March linked records of the labour force survey, as provided in INSEE (1995) and Belloc and Lagarenne (1996).

The data reported in Table 1.14 do not correspond to the full range of temporary employment arrangements as defined in the labour force survey. The data include only limited duration contracts and agency work, which represented 29.9 per cent and 10.2 per cent, respectively, of total temporary employment in France in 1994.

Germany

The longitudinal data set used is the German Socio-Economic Panel (GSOEP), waves 7 to 11, 1990-1994, covering all of Germany.

The GSOEP provides the labour market status of the individual in each wave and the type of employment arrangement: limited contract; unlimited contract; and self-employed. The sample used in Table 1.14 consisted of those with a limited contract in 1992 who were interviewed the following year. The sample used in Table 1.15 consisted of those with a limited contract in 1990 who were successfully interviewed in each of the next four years. Each year their labour force status was determined to establish whether or not a change had occurred.

Spain

The National Statistical Institute (INE) provides linked records of the labour force survey (EPA). All individuals are asked about their labour market status, and employees are asked whether their contract is of unlimited duration or temporary. The latter includes several types of temporary work arrangements allowed (*e.g.* seasonal, fixed-term or training). Individuals remain in the survey for six consecutive quarters.

The data set constructed from the EPA contains all individuals interviewed for the first time in the first quarter of 1993 and who were interviewed in consecutive quarters up to and including the second quarter of 1994. Those found to be in a temporary employment in the first quarter of 1993 form the sample used for Tables 1.14 and 1.15.

The OECD Secretariat also constructed a data set of temporary and permanent job spells covering these six quarters as reported in Table 1.16. Spells are defined as periods of activity, during which the labour force status and the job performed remained unchanged. It is assumed that the job performed changed when either the occupation, the industry or both, at the one-digit level, changed. Individuals can have more than one spell of temporary or permanent employment over the period. The calculations of the labour force status previous to and after the temporary-permanent spell do not include those spells which were unbroken over the six quarters.

Great Britain

The data are from the British Household Panel Survey (BHPS). The base for the transition matrix is all individuals who were in a temporary job arrangement at the time of the first wave of interviews, in late 1991. These individuals were followed through waves two and three to obtain information on subsequent labour market statuses as reported in Tables 1.14 and 1.15. Temporary and permanent jobs are based on the self-assessment of the respondent.

In the second and third waves of the BHPS, individuals were asked retrospective questions on their labour force status and job histories from the time they first left full-time education up to the end of 1990. They were also asked whether each job held was temporary or permanent. This self-assessment information is used here to construct data on the number of temporary and permanent job *spells*, in the sense defined above, and on the labour force status of individuals both prior to entering and after leaving a spell of temporary/permanent work. The results are reported in Table 1.16.

The sample used for the job history analysis includes those individuals, interviewed in both waves two and three, for whom both labour force status and job spell information were available, and who reported at least one period of employment since leaving full-time education. The information comes from combining the lifetime labour force status history and lifetime job history. The combination of the two allows the calculation of the starting and ending date of each spell to be identified, even when an individual has been employed throughout the period.

There could well be problems with recall bias in distinguishing between permanent and temporary jobs. For example, individuals might define a job as temporary simply because it lasted for only a short period of time, when in principle it could have been permanent. Also, individuals could recall a job as temporary because they intended it to be so, while the employer believed the job to be permanent.

Bibliography

ABRAHAM, K.G. (1990), "Restructuring the Employment Relationship: The Growth of Market-Mediated Arrangements", in Abraham, K.G. and McKersie, R.B. (eds.), *New Developments in the Labour Market: Toward a New Institutional Paradigm*, MIT Press, Cambridge, MA.

BELLOC, B. and LAGARENNE, C. (1996), "Emplois Temporaires et Emplois Aidés", *Données Sociales*, INSEE, Chapter 3.

BENTOLILA, S. and DOLADO, J.J. (1994), "Labour Flexibility and Wages: Lessons from Spain", *Economic Policy*, No. 18, pp 53-100.

CASEY, B. (1994), "Identifying Temporary Workers in OECD Employment Statistics", Report to the OECD Secretariat, mimeo.

EUROPEAN COMMISSION (1995), *Employment in Europe*.

FAGAN, C., RUBERY, J. and SMITH, M. (1995), "Changing Patterns of Work and Working Time in the European Union and the Impact on Gender Divisions", Report for the Equal Opportunities Unit, DGV, Commission of the European Communities, mimeo.

GRUBB, D. and WELLS, W. (1993), "Employment Regulation and Patterns of Work in EC Countries", *OECD Economic Studies*, Winter, pp 7-53.

HOUSEMAN, S. and OSAWA, M. (1995), "Part-time and Temporary Employment in Japan", *Monthly Labor Review,* October, pp. 10-18.

INSEE (1995), "Le travail à durée limitée", *Liaisons Sociales*, DARES, Les Dossiers Thématiques.

MARULLO, S. (ed.) (1995), "Comparison of Regulations on Part-Time and Temporary Employment in Europe", UK Department of Employment Research, Series No. 52.

OECD (1993), *Employment Outlook*, Paris, July.

OECD (1996), *Economic Outlook*, No. 59, Paris, June.

STATISTICS CANADA (1995), *Perspectives on Labour and Income*, Winter.

CHAPTER 2

Making work pay[1]

A. INTRODUCTION AND MAIN FINDINGS

1. Introduction

Taxes and benefits are the most direct way in which governments can affect the financial incentives for individuals to work and for employers to hire them. But current tax and benefit systems owe many of their features to a bygone era and have failed to keep pace with recent changes in the labour market.

The OECD *Jobs Study* highlighted tax and benefit systems as a cause of some labour market problems. Taxes increase the costs of employing workers, particularly low-wage workers; and benefit systems are alleged to leave little incentive to work, especially for low-wage families.

This chapter highlights two ways in which taxes and benefits may fail to "make work pay":[2]

- *the unemployment trap:* benefits paid to the unemployed and their families are high relative to expected earnings in work so they have little incentive to find a job; and
- *the poverty trap:* incremental increases in earnings or income lead to withdrawal of benefits and higher tax and social security payments, so people on low incomes receiving benefits are discouraged from additional effort.

Tax and benefit systems can only be restructured to raise work incentives when this is consistent with their fundamental purpose. Taxes must raise revenues and benefits are intended to provide for those with insufficient incomes. Nearly all reforms which "make work pay" involve trade-offs between these fundamental objectives. Reforms of the tax and benefit system require political judgements, as well as sound economic analysis.

This chapter treats the financial incentives to work as important, for three reasons. The first is that they matter *at the margin*. Many people will seek work even if they would get more money receiving benefits, but even more will seek work when there is a financial incentive to do so. Secondly, taking up work involves costs for travel, work clothing and equipment and possibly childcare. If work does not pay, those with very few resources may not be able to afford to undertake it without denying resources to their children. Partly for this reason, employers will not offer jobs at wages which they know no job-seeker could accept without being worse off than they would be were they to remain unemployed. The third reason for discussing the financial incentives to work is that empirical studies suggest they matter [see OECD (1994*b*)].

This focus on the financial incentives is not to deny the importance of other factors which influence whether people work or not. Sometimes rational people will opt to work even where this seems, at first sight, to be irrational, since their income would be higher if they were not working. If there is no immediate financial reward to working, a low-paid job is nevertheless often the first step on the ladder towards higher earnings (see Chapter 3). There may be significant non-pecuniary benefits from working, such as better health and social status. People might also wish to work because they *like* working.

The chapter is structured as follows. Section B outlines labour market changes of special importance for tax and benefit systems. The unemployment and poverty traps are discussed in Sections C and D respectively. The final section draws some conclusions.

2. Main findings

An index of benefit entitlements suggests that gross replacement rates have on average increased since the beginning of the 1960s. During the 1990s, some countries have reduced benefit entitlements. Overall, however, the OECD-wide average value of the index has risen slightly since 1989. In 1995 it stood at 30 per cent of previous earnings compared with 16 per cent in 1961 and 28 per cent in 1989. Examination of incomes in and out of work (taking account of taxation, family benefits, housing benefits and social assistance benefits) suggests that net replacement rates can be much higher, even for those on average earnings. In particular, the unemployment trap for families with children can be particularly pronounced, reflecting society's anxiety to ensure a reasonable standard of living for children.

The effective unemployment trap is even deeper for some of those without jobs. In-work expenses, in particular for child-care, can eliminate any financial reward from working. Those receiving unemployment or related benefits may be entitled to additional benefits, such as subsidised medical care, which is not readily available to those in work, even if on low wages. Delays in paying benefits to those in work and retention of taxes at source create a further barrier to those wishing to enter employment. Furthermore, lack of knowledge about tax and benefit systems can lead the unemployed to conclude that incomes in work are too uncertain to risk giving up their low, but secure, benefit income. Finally, the use of disability and early-retirement benefits as alternative means of supporting those without work withdraws people from the labour force, but does not reduce the dependency of family incomes on benefits.

The most straightforward solution to the unemployment trap would be to cut benefit entitlements. However, making major cuts would be likely to exacerbate poverty among vulnerable groups. Hence most government have opted either to make only small cuts in benefit entitlements or to tighten controls on job-search activity and make eligibility conditions more onerous.

A poverty trap is particularly likely when benefits are means-tested against family incomes. Such benefits have been growing in importance across the OECD area, including countries where insurance benefits have traditionally played the dominant role in social policy. The combination of taxation and withdrawal of benefits leaves part-time work unattractive in many countries. Other countries have allowed the combination of part-time work and reduced benefit receipt. But in making part-time work more attractive than no work, it can also be made more attractive than full-time work. Some countries have sought to restrict such policy changes to those for whom full-time work may not always be a realistic option, such as the long-term unemployed and lone parents. Badly designed means-tests can also contribute to the polarising of families into ''work-rich'' and ''work-poor'' households. Means-tests can leave no incentive to work for the spouses of unemployed persons. Australia has recently tackled this problem by giving individuals within a household their own benefit entitlement which is partially independent of that of other household members.

The most notable recent innovation in tax and benefit policy in recent years is the use of employment-conditional tax credits or benefits. These now exist in six OECD countries. They can reduce the extent of the unemployment trap by increasing incomes in-work without reducing out-of-work incomes. But in order to be restricted to a reasonable cost, they must be withdrawn from individuals as their earnings rise, so reducing the incentive to increase earnings. Such policies can increase participation and (probably) aggregate labour supply. They are therefore a useful policy tool. However, their importance should not be exaggerated. There are administrative difficulties in running such schemes which can reduce their effectiveness. Furthermore, they will work best when they can significantly raise the family incomes of those with low earnings, without being paid to more than a minority of those in employment. This suggests that they will be most effective in countries with wide earnings' distributions and low tax rates.

B. TAXES AND BENEFITS AND THE CHANGING NATURE OF THE LABOUR MARKET

The 1994 Australian White Paper recently stated, in proposing major reforms, that

''Social Security arrangements for unemployed people still largely reflect the unemployment benefit system introduced in the 1940s, around the time of the release of the White Paper on Full Employment [in 1945].'' [Australia (1994), p. 143.]

This observation applies with equal justification to most OECD countries. Unemployment benefits were designed for situations where unemployment was infrequent and of limited duration, and youth unemployment and lone-parent families (other than widows) were not of policy concern. Other areas of social policy – housing, early retirement, and invalidity – could be treated as separate from the support given to the unemployed. The welfare system was designed for a population where participation rates were high among men and low among women, and people could expect an uninterrupted working life. Cyclical variations in employment were mainly absorbed by women withdrawing from the labour market during recessions, and entering it during upswings.

In these circumstances, it was relatively easy to design benefit systems to be welfare-enhancing. Risk-averse individuals wanted insurance against loss of earnings as a result of a spell of unemployment and were content to pay premiums related to expected calls on the benefit system. Benefits were only to be required for some limited amount of time; the expectation was that new work would be found relatively quickly.

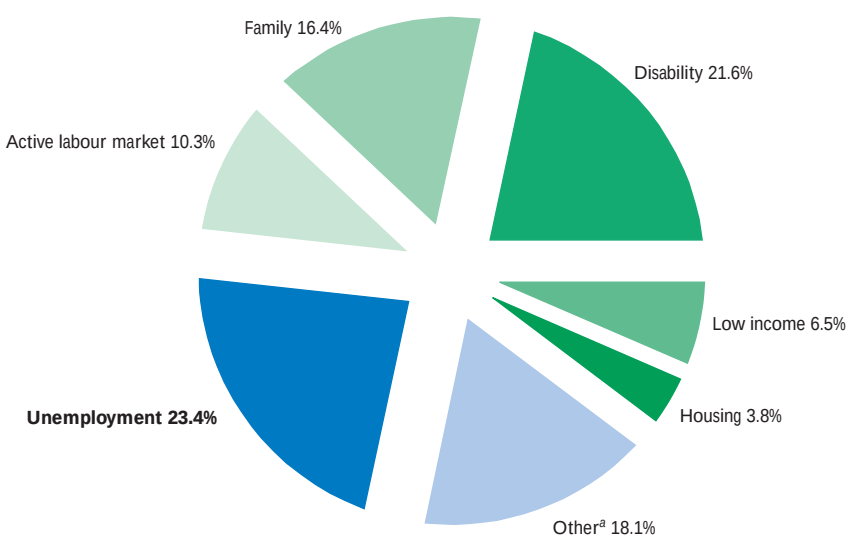
However, there have been some major changes to OECD labour markets since benefit systems were first designed. Benefit systems have responded to these changes by distinguishing between more labour market and family situations, and differentiating according to labour market and family situation. The most important changes in labour markets are:

– unemployment is generally at a much higher level than when current unemployment insurance schemes were put in place after 1945;
– one-third of the unemployed are out of work for more than a year in around half of OECD countries (Statistical Annex, Table Q). Many who lose jobs suffer extended bouts of unemployment and as a result exhaust their basic unemployment benefit entitlement;
– youth unemployment is high and has increased in many countries (Chapter 4). Youths have limited or no work experience: they have not contributed to insurance schemes and so are often not entitled to these benefits;
– the labour force participation of adult men has declined. Many of those withdrawing from the labour force nevertheless receive benefits for invalidity, sickness or early retirement. Female participation has grown. As a result, two-earner couples are more common, as are lone-parent families.[3] The traditional model of the male breadwinner supporting wife and children has become ever less typical. Insuring individual workers against loss of wages is less effective in ensuring adequate *family* incomes and well-being when increasing numbers of households of working age are not part of the labour force;
– part-time work has grown in most OECD countries (Statistical Annex, Table E). The relationship of the benefit system to part-time work is complex. Not all part-time workers have rights to insurance benefits, leaving a gap in the coverage of the working population by the insurance benefit system. Sometimes working part-time is consistent with benefit receipt, sometimes not; and
– the earnings distribution appears to have widened markedly in some countries during the 1980s (Chapter 3). Without benefit income, some families with a single full-time earner

Chart 2.1.

Distribution of social outlays

Expenditures as a percentage of outlays directed towards the non-aged population (1993)



a) Other: sickness, maternity, and occupational injury and disease.
Source: OECD Social Expenditure database.

might not reach a socially acceptable standard of living. The dispersion of the distribution of original income (*i.e.* before taxes and transfer payments) has widened since 1980 in Australia, Japan, the Netherlands, Sweden, the United Kingdom and the United States. However, in some countries, the tax and benefit systems have meant that changes in the distribution of disposable incomes of households may have been small.

As working and family patterns have become more diverse, so have the types of benefits received. Chart 2.1 shows that, although unemployment benefits are the largest single form of social expenditure directed at people below retirement age, they account for less than 25 per cent on average across the OECD. Family benefits, other income maintenance benefits and disability benefits are all often individually more important than is unemployment benefit. Families will take account of the relationship between net incomes in and out of work allowing for all taxes and benefits, not just unemployment benefits, when making work decisions. Therefore, the tax and benefit system must be considered in its entirety when attempting to assess the differing work incentives facing the working population.

C. THE UNEMPLOYMENT TRAP

1. Replacement rates

The unemployment benefit system provides insurance against job loss which individuals would find extremely difficult, if not impossible, to obtain from private insurers. This is a source of welfare gain. Benefits also allow the unemployed to search for a job which matches their abilities, rather than being forced by financial hardship into accepting the first available job offer. Having the right people in the right jobs raises productivity and reduces the chance of them becoming unemployed in future. In this way, unemployment benefits can help labour markets work more effectively.

But unemployment benefits can also have negative effects on labour markets and social welfare. By "freeing" the unemployed from having to take less ideal jobs, they increase the duration of unemployment spells. Unemployment benefits also alter incentives in wage bargaining. If the financial consequences of unemployment are harsh, workers will be wary of pushing up wages and so risking their jobs. Furthermore, unemployment benefits can subsidise seasonal employment patterns. Without countervailing factors, the higher benefits are relative to earnings (the so-called "replacement rate"), the higher unemployment will be.

Have unemployment benefit systems become more generous?

As part of the OECD *Jobs Study*, an index was constructed for almost all OECD countries, summarising gross (*i.e.* before-tax) unemployment benefit entitlements relative to gross earnings. It was found that growth in unemployment benefit entitlements, from an OECD (unweighted) average of 16 per cent of earnings in 1961 to 29 per cent in 1991, could have contributed to the rise in unemployment over that period. But it also found that there were long time-lags of up to a decade or more before the full effects were felt.[4]

Chart 2.2 updates this series to 1995. The index does not indicate that the response of most governments to high and persistent unemployment has been to cut benefit entitlements (see Box 1). Indeed, the area-wide summary index has risen slightly since 1991, to 31 per cent in 1995.

The index does not capture all changes in unemployment benefit generosity and (its limitations are discussed in detail in OECD, 1994*b*). In particular, it focuses on changes in benefit levels and durations, not on eligibility or administrative controls on job-search requirements. For example, since 1979, Belgium, Denmark, France, Germany, Greece, the Netherlands, Sweden, Switzerland and the United Kingdom have all increased the period of employment required to qualify for unemployment insurance. But these changes do not affect the index of benefit entitlement.

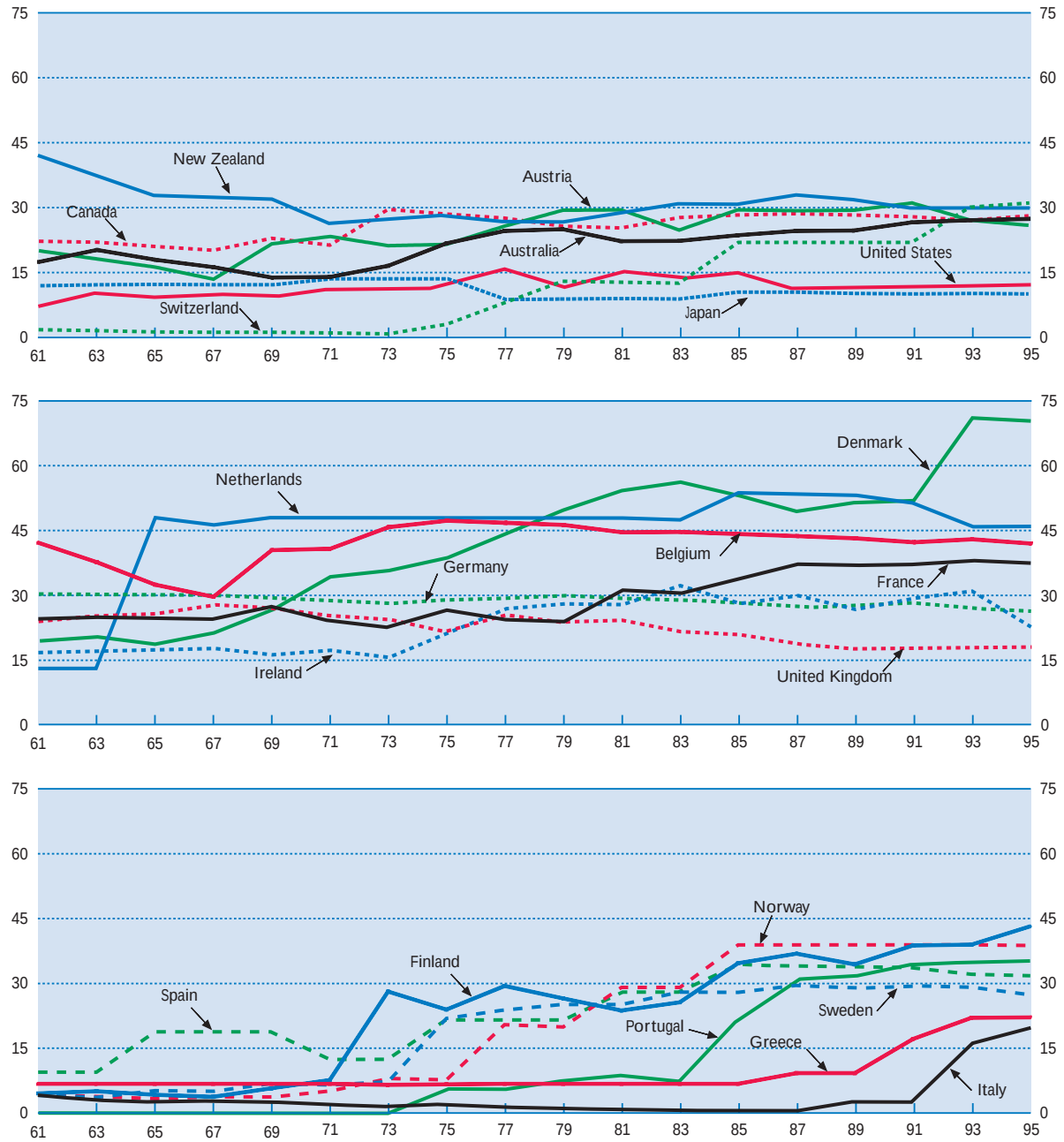
Typical net replacement rates

Gross replacement rates of 30 to 40 per cent, which Chart 2.2 shows are common in many OECD countries, suggest that benefit systems do not impose large work disincentives. But a more detailed examination of incomes in and out of work suggests that such a conclusion would be premature. Taxation (including social security contributions), benefits to children, social assistance and housing benefits, which are not included in the index in Chart 2.2, can have large impacts on the level of replacement rates. Table 2.1 presents a comparison of gross and net (after-tax) replacement rates which different families might face in different circumstances. Columns 1 and 2 are similar to two of the three cases which make up the index of Chart 2.2;[5] the other columns are refinements of that measure. [See OECD (forthcoming), for a more detailed discussion of replacement rates facing a wider variety of family types than are considered here.] Gross earnings are related to those earned by the average production worker (APW) in each country [see OECD (1995*c*) for a description].

Chart 2.2.

Index of benefit entitlements,[a] 1961-1995[b]

Percentages



a) The average of the unemployment benefit replacement rates for two earnings levels, three family situations and three durations of unemployment. For futher details, see OECD, *The OECD Jobs Study: Evidence and Explanations*, Chapter 8. The earnings data used to compute replacement rates for 1995 are Secretariat estimates.

b) Final year data refer to 1994 for the United States.

Source: OECD database on Unemployment Benefit Entitlements and Replacement Rates.

Box 1
Recent changes in unemployment benefit systems and their impact on the index of benefit entitlements

The index is an average of replacement rates, calculated at average earnings and two-thirds of average earnings, for people unemployed for one year, for 2 to 3 years and for 4 to 5 years, and for single people, married people with an employed spouse, and married people with an unemployed spouse. The index does not give an average level of *actual* unemployment benefit receipts. For example, a cut in entitlement in the fourth and fifth year of unemployment would affect very few of the actual unemployed, but would have a relatively large effect on the index. The index is, on the other hand, a good indicator of the generosity of a country's unemployment benefit system. If high benefits were paid in the first months of unemployment but nothing thereafter, most people, actual and potential recipients, would conclude that it is a less generous system than one which paid a lower level of benefit indefinitely. However, average benefit receipt would be higher in the former system than in the latter. It is also perfectly possible for changes in the benefit system to have resulted in budgetary savings while at the same time increasing the index of unemployment benefit entitlements. (For more discussion, see Annex 8*a* of the OECD *Jobs Study: Evidence and Explanations,* Part II, 1994.)

Some recent changes in benefit systems and their effects on the index are as follows:

Australia: a shift to independent entitlements for husband and wife and reduction in benefit withdrawal rates in 1995. Both changes make it easier for a member of the household to have some earnings without losing all benefit entitlements. Earnings are assumed to be high in the ''working spouse'' case in the index, so the changes have had no effect on the summary measure.

Austria: reduction in maximum benefit levels in 1993. Minimum contribution period increased to 26 weeks in 1995.

Belgium: recent restrictions in access to benefits and tighter policing of job search are not captured by the index.

Canada: a reduction in benefit amounts for couples in 1993.

Denmark: extensions in the legal duration of benefit entitlements to seven years in 1994 have increased the index markedly. However, as it was relatively easy in the 1980s to re-qualify for the benefit through public work and training programmes, the *de jure* change has appeared to increase the generosity of the scheme whereas the *de facto* outcome may have been to reduce it.

Finland: means-testing of the basic unemployment allowance was ended in 1994. The Labour Market Support benefit introduced in 1994 has increased gross benefit entitlement.

France: the level of benefit declines the longer someone is unemployed. Benefit reductions are now smaller, but more frequent, than previously. The system is more generous in the second year of unemployment, less generous in years 4 and 5 of unemployment than previously. But the net effect of these changes has been to raise the index slightly.

Germany: insurance benefit was reduced in 1993 by 3 percentage points for single people and 1 percentage point for couples.

Greece: eligibility conditions changed making it easier to get longer UI benefits in 1989 and UA benefit entitlement was extended in 1991, increasing the index.

Ireland: benefits were increased more rapidly than inflation until 1993; in 1995 the earnings-related element was abolished.

Italy: in 1991, a mobility benefit was introduced for certain categories of the unemployed. Mobility benefit is included in the OECD index, unlike the benefit for short-time working, the Cassa Integrazione Guadagni Straordinaria, which is not included because its recipients are not formally counted as unemployed. The basic unemployment benefit was increased in stages to 30 per cent and then to 40 per cent of average earnings over the previous three years. An average of the mobility benefit and the ordinary UI benefit, based on the number of recipients of these two benefits has been use to compute the index post-1990.

Netherlands: conditions for receipt of earnings-related insurance benefits were tightened in 1993. The work test in social assistance was tightened in 1996.

New Zealand: in 1991, benefits were reduced (for example, by 25 per cent for young single adults). Tests and sanctions were tightened and waiting periods increased.

Portugal: increased benefit entitlement.

Spain: a reform in 1993 altered contribution periods and rate structures. The index decreased.

Sweden: unemployment insurance was reduced first to 80 per cent of previous earnings, and more recently to 75 per cent.

Switzerland: duration increased in 1993 with a small cut in the replacement rate. The overall effect of the changes has been to increase the index.

Table 2.1. **Replacement rates[a] for single-earner households, 1994**

Panel A. Replacement rates at the average production worker (APW) level of earnings

	Replacement rates in first month of unemployment: no social assistance					60th month of unemployment: including social assistance	
	Gross replacement rates (before tax)		Net replacement rates (after tax and other benefits)			Gross replacement rates (before tax)	Net replacement rates (after tax and other benefits)
	(1) Single	(2) Couple, no children	(3) Couple, no children	(4) Couple, 2 children	(5) Couple, 2 children housing benefits	(6) Couple, no children	(7) Couple, 2 children, housing benefits
Australia[b, c, d]	22	40	49	64	71	40	71
Belgium	46	46	64	66	66	42	70
Canada	55	55	63	67	67	0	47
Denmark[e]	60	60	69	73	83	60	83
Finland	53	53	**63**	**75**	**88**	25	98
France	57	57	69	71	80	36	65
Germany	37	42	60	71	78	37	71
Ireland[c]	23	37	49	64	64	37	64
Italy	30	30	37	47	47	0	11
Japan[c]	37	37	**43**	**42**	**42**	0	68
Netherlands	70	70	77	77	84	0	80
New Zealand[c, d]	26	43	48	64	70	43	70
Norway	62	62	**67**	**73**	**73**	0	83
Spain	70	70	75	75	74	0	46
Sweden[b, e]	80	80	**81**	**84**	**89**	0	99[b]
Switzerland	70	70	77	89	89	0	89
United Kingdom[c]	16	26	35	51	77	25	77
United States[f]	50	50	60	68	68	0	17
Average (unweighted)	52	52	60	68	73	19	67

The main conclusions to draw from Table 2.1 are:

– taxation means that net replacement rates are invariably higher than gross replacement rates. Benefits are sometimes untaxed and are usually not subject to social security contributions. Even when they are taxed, credits, allowances and progressive marginal tax rates usually ensure that those with earnings face a higher average tax rate than if they were out of work. Comparing columns 2 and 3, it can be seen that the difference is particularly large when benefits are not taxed (as in Germany and Belgium). But the difference can be large for other reasons. For example, in France the structure and level of personal income tax allowances has a similar result;

– benefits paid to families with children are often higher than for those without children. In countries like Australia, Germany, Ireland and the United Kingdom, this means that replacement rates are also higher for families with children. In other countries, such as Belgium and France, provisions in the tax system mean that net incomes in work are also relatively high for families with children. In these countries, replacement rates for families with and without children are similar;

– fourteen countries have some form of income-related housing benefits payable to the unemployed and those on low incomes.[6] Column 5 indicates that replacement rates appear relatively low in the United Kingdom compared with other countries unless housing benefits are taken into account;[7]

– net replacement rates at ⅔ APW earnings are sometimes little different from those at APW earnings in the first month of unemployment (compare panels A and B). The exceptions are countries with either flat-rate benefits (Australia, Ireland, New Zealand and the United Kingdom), or minimum benefit levels (Belgium and France) which have a strong effect on replacement rates at this level of earnings. Families with children in the United States can receive food stamps even when they are working. Replacement rates are lower for low-earning families with children than for higher-earning families; and

– after 60 months, unemployment benefits are often lower or sometimes not paid at all

Table 2.1. **Replacement rates[a] for single-earner households, 1994** *(cont.)*

Panel B. Replacement rates at 2/3 of the average production worker (APW) level of earnings

	Replacement rates in first month of unemployment: no social assistance					60th month of unemployment: including social assistance	
	Gross replacement rates (before tax)		Net replacement rates (after tax and other benefits)			Gross replacement rates (before tax)	Net replacement rates (after tax and other benefits)
	(1) Single	(2) Couple, no children	(3) Couple, no children	(4) Couple, 2 children	(5) Couple, 2 children housing benefits	(6) Couple, no children	(7) Couple, 2 children, housing benefits
Australia[b, c, d]	34	61	66	76	78	61	78
Belgium	60	60	**75**	**76**	**76**	55	91
Canada	55	55	64	67	67	0	61
Denmark[e]	86	86	92	93	95	86	95
Finland	60	60	**67**	**83**	**89**	37	100
France	65	65	79	81	88	54	83
Germany	40	44	**60**	**70**	**77**	39	80
Ireland[c]	35	66	67	70	70	66	70
Italy	30	30	36	45	45	0	14
Japan[c]	43	43	**49**	**48**	**48**	0	86
Netherlands	70	70	**79**	**78**	**84**	0	95
New Zealand[c, d]	38	64	70	80	86	64	86
Norway	62	62	**66**	**75**	**75**	0	100
Spain	70	70	74	78	77	0	66
Sweden[b, e]	80	80	**82**	**85**	**89**	0	121[b]
Switzerland	70	70	**75**	**87**	**87**	0	97
United Kingdom[c]	24	39	52	67	90	38	90
United States[f]	50	50	66	60	60	0	19
Average (unweighted)	54	60	68	73	77	28	80

Notes: In the first month of unemployment it is assumed that families possess enough assets to be ineligible for social assistance. In the 60th month it is assumed that they no longer have such assets and so social assistance (SA) is assumed to be paid where it is higher than other benefits to which they may still be entitled. Figures in **bold** indicate those cases where families would be entitled to SA on the basis of their income, were they not to have been assumed to have been disqualified by an assets test. The replacement rates reflect a strict application of legal provisions rather than common practice, where these differ.

a) It is assumed that the worker is 40 years old, and started work at 18. The replacement rates are for the first month of unemployment, after waiting periods have been satisfied. This entitlement is then multiplied by 12 to give an annualised equivalent, on which tax is calculated. The person is fully unemployed. Social assistance is calculated according to a "typical rate" for the country concerned. This may involve making assumptions about housing costs.

b) Benefit amounts for couples are calculated on the basis of both spouses actively seeking work.

c) Figures for Australia, Ireland, New Zealand and the United Kingdom are for 1995. Unemployment benefit parameters for Japan are for 1996.

d) There is no social insurance in Australia or New Zealand. All figures in the table, including columns 1-5, refer to the assistance benefit.

e) Social assistance is only available when there is a "social event" such as unemployment. Low earnings are not themselves a social event.

f) The taxes and benefits are calculated using the rules applying in Detroit, Michigan. All figures include aid to families with dependent children (AFDC) and food stamps. If these are treated as being equivalent to social assistance, columns 3, 4, and 5 would read 60, 59 and 59 at the level of APW, and 59, 52 and 52 at 2/3 APW.

Source: OECD database on taxation and benefit entitlements.

(compare column 6 with column 2). However, if the individual who has been unemployed for 5 years is eligible for social assistance, replacement rates can still be relatively high, except in Italy and the United States (compare column 7 with column 5). Indeed, in eight countries, the estimated net replacement rates exceed 90 per cent.

Social assistance complicates the pattern of employment incentives. Columns 1 to 5 are calculated for the main unemployment benefit, usually unemployment insurance. However, social assistance rates can be higher than the unemployment insurance level; they can even be higher than the 2/3 APW earnings level assumed in the lower panel of Table 2.1. Cases where social assistance is payable at a higher rate than unemployment benefit are highlighted in bold in Table 2.1. However, eligibility for social assistance is circumscribed to some extent by income and asset tests which, in some cases, are very restrictive. In Sweden, for example, the social assistance rate suggested by the government (the benefit

is administered by local authorities) for a family with two children exceeds the APW level of income. In order to receive this benefit for more than a short time, all assets must be sold, including owner-occupied housing if alternative rental accommodation is available.[8] In other countries, social assistance is discretionary. Finally, where employment rates remain high and unemployment is low, fewer households need assistance. Although the level of social assistance may be high in some countries, relatively few people of working age may receive such benefits for one or more of these reasons (for example, Switzerland and Japan). This contrasts with other countries, such as Finland, where access to social assistance is easier.

Benefits supplementing incomes of families with low earnings are used to raise work incentives in Australia, Canada, Ireland, Italy, New Zealand (where a new Independent Family Tax Credit was recently announced), the United Kingdom and the United States. These benefits are often focused on groups who would otherwise have high replacement rates, particularly families with children. In most cases, the upper limits for earnings eligibility mean that most full-time employees do not receive such benefits. However, they can make a dramatic difference to replacement rates for groups not included in Table 2.1, such as part-time workers (and in particular for lone parents).[9]

Duration of benefits

The likelihood of an unemployed person leaving unemployment increases markedly in the period before a fall in benefit entitlement [Atkinson and Micklewright (1991)]. But the destination can be either a job or inactivity (including another benefit, such as invalidity or early retirement). Unemployment benefit systems often have limited durations of entitlement. Chart 2.3[10] summarises the major benefit transitions which an unemployed person will face over an eight-year spell of unemployment. Unemployment insurance duration often varies by employment record (Germany, Greece, Japan, the Netherlands, Spain and Switzerland) or by age (Austria, Germany,[11] Luxembourg and Portugal), or by family type (Belgium). Furthermore, in practice, durations may be more complex than examination of the benefit rules might imply. In Sweden, benefit entitlement can be renewed by participation in labour market programmes. Similar complications arise in other (especially Nordic) countries. With durations ranging from 3 months (Japan) to unlimited (Belgian families[12]), the initial replacement rate upon entry into unemployment is an inadequate guide to benefit generosity.

The distribution of work incentives over the population

Microsimulation models can be used to calculate labour market incentives by comparing the incomes of those currently employed with what they might expect to receive if they became unemployed. The labour market incentives are hypothetical – based on assumptions about what might happen if employed people lose their jobs, or those without jobs find them.[13] The tax and benefit system can have particularly large disincentive effects on some of the latter groups.

Incentives facing employees

The pattern of incentives found using microsimulation models for 12 OECD countries,[14] summarised in Chart 2.4, broadly confirms the picture from the hypothetical cases in Table 2.1.[15] In Australia and the United States, the most common replacement rate[16] is in the 21 to 40 per cent range. This means that wages after tax are 60 to 80 per cent more than the net benefits they would receive were they unemployed. In Denmark and Sweden, replacement rates are concentrated in the 81 to 100 per cent range. In Germany, Ireland, New Zealand and the United Kingdom, the most common replacement rates are in the range 41 to 60 per cent and in Belgium, Canada, Italy and Norway they are between 61 and 80 per cent. Few workers in any country will benefit financially from moving into unemployment.[17]

Incentives facing those without jobs

If unemployed persons expect to receive a large increase in net income if they started work, they will be more likely to search for employment. The incentive to work, of course, depends on the expected wage. At the median full-time wage, the replacement rate is under 40 per cent for most Australians and Americans who are not currently working,[18] much higher for non-working Danish and Swedish persons, and somewhere in between for other countries. If only low-wage jobs are available (at the lowest decile of earnings), at least a third of people without jobs in Canada and the United States would face replacement rates of over 100 per cent. In Sweden, the proportion of those unemployed with replacement rates below 80 per cent is much higher in the bottom household income decile than for those with higher incomes. This is because unemployment insurance is voluntary and a higher proportion of those in the bottom decile are not insured. Those unemployed who are not covered by insurance receive lower benefits and, as a result, have relatively low replacement rates.

Chart 2.3.

Duration of unemployment benefit entitlements in 1996

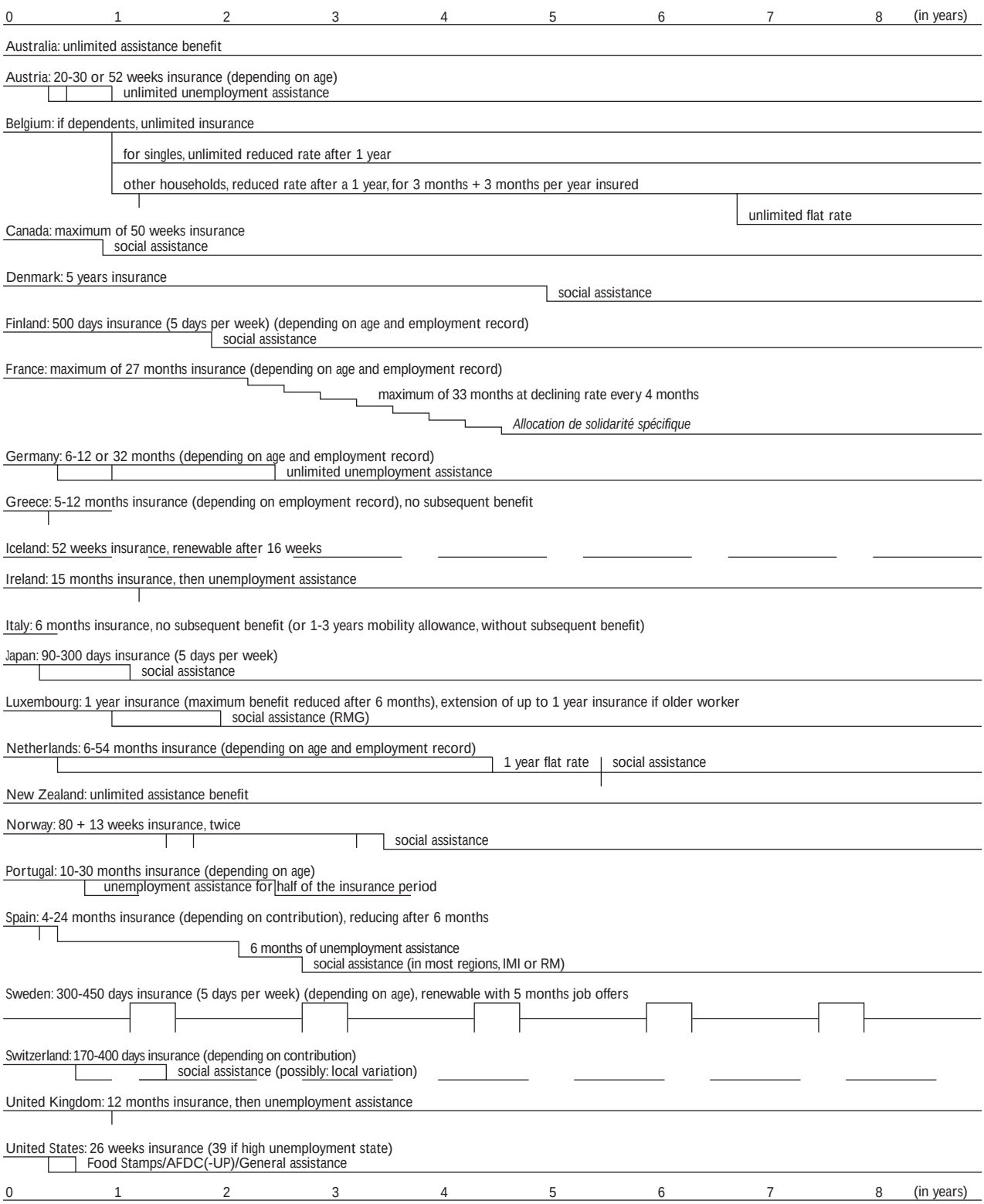
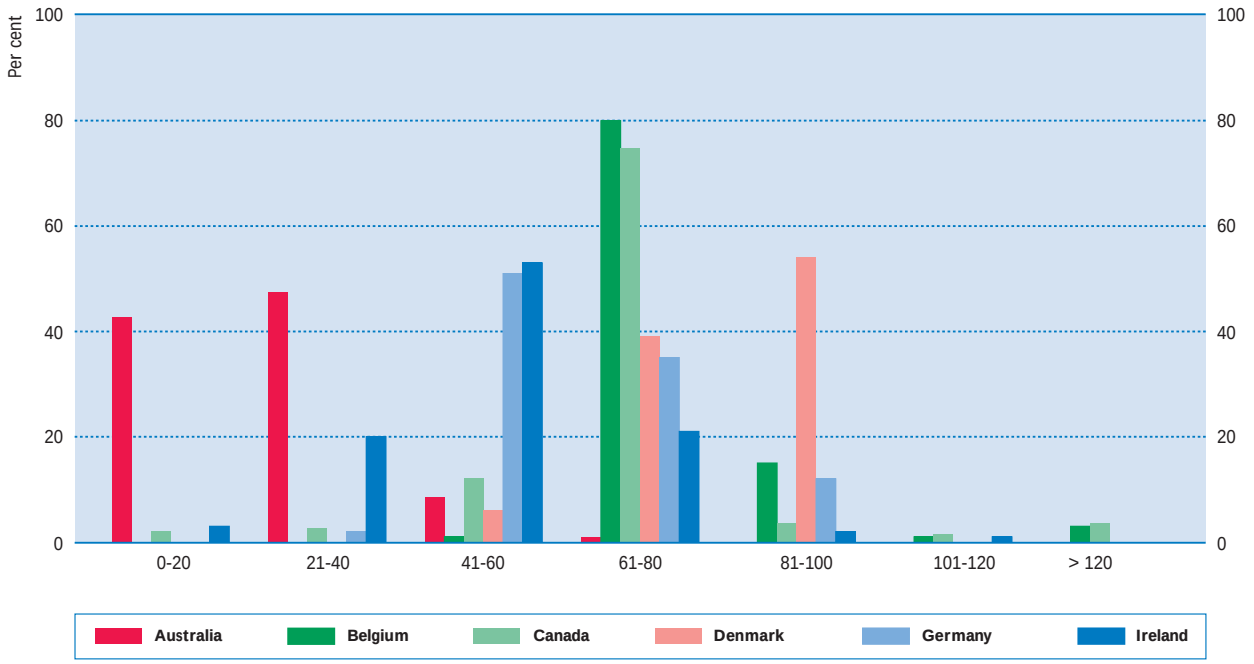
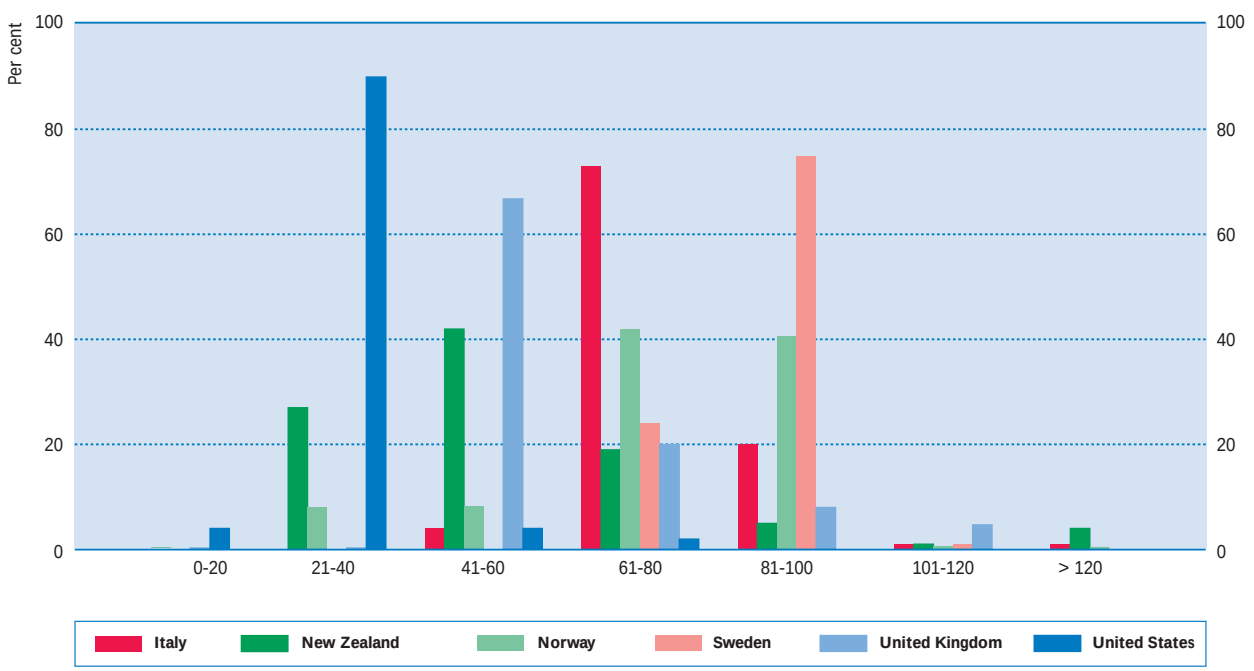


Chart 2.4.

Distribution of work incentives

Replacement rates of the employed





Note: Replacement rates are individualised.
Source: National microsimulation models: see text.

Generally, the unemployed face higher replacement rates (and therefore lower work incentives) than others without jobs. For example, two-thirds of the unemployed in Denmark face replacement rates of 80 per cent or more. In Italy, the unemployed have replacement rates of 61 to 80 per cent, whereas others without jobs are found predominantly in the 41 to 60 per cent region. In New Zealand, around half the unemployed have replacement rates of 61 to 80 per cent, whereas other without jobs have much lower replacement rates.

Incentives facing different family types

Chart 2.5 shows how high replacement rates are concentrated on particular family types. If the bar is above the line, a disproportionately large proportion of that family type has replacement rates of over 80 per cent. For example, in Denmark, Germany, Italy and New Zealand there are fewer single people and couples with no children with high replacement rates than lone-parent families and couples with children. Low labour market incentives are concentrated in families with children and are a consequence of societies' unwillingness to allow children to grow-up in poverty. In Belgium, Canada, Ireland, Norway, Sweden and the United Kingdom, the pattern is different. Although benefits to families with children in Canada, Ireland and the United Kingdom are higher than for families without children, these countries also provide benefits and tax concessions targeted to families in employment, reducing replacement rates for this group. High replacement rates in Belgium and Norway are concentrated on single people, with or without children. Replacement rates for couples with children are relatively low because the tax system is relatively generous to spouses and dependent children.

Are replacement rates "too high"?

The question of whether benefits paid to those out of work are "too high" or not is more complex than a simple trade-off between economic efficiency and social preferences (see Box 2). A range of factors outside the scope of this Chapter, such as the role of the public employment service and active labour market policies, should also be considered when setting benefit levels.

People may work despite high replacement rates for a number of reasons, including administrative controls, social pressures and expectations of higher future wages. But, in the longer term, high replacement rates will tend to undermine work incentives. Systems have been reformed in some countries with the highest replacement rates (see Box 1). In many cases, the main reason for reform has been the high budgetary cost of the benefits, although the subsidiary effect has been to improve work incentives.

However, some of these apparent reductions in generosity are illusory. Sweden, for example, has eased conditions for regaining eligibility for unemployment insurance following a period out of work. In Finland, as in most other countries, the social assistance benefit can be used to "top-up" incomes below the social assistance level, and, while unemployment insurance has been reduced, social assistance has not. There was a large rise in the number of social assistance recipients (from 165 000 households in 1989 to 333 000 in 1994). Although higher levels of unemployment amongst those not eligible for insurance benefits and increased take-up as a result of greater awareness of social assistance contributed to this increase, the "top-up" of the insurance benefit was the main cause. In 1989, 18 per cent of social assistance recipients were also receiving unemployment payments. By 1994, the proportion had risen to 52 per cent. Furthermore, Finland introduced a new benefit (Labour Market Support) to cover those no longer eligible for the main benefit. Benefit reforms must take account of these kinds of system-wide interdependencies.

2. Other barriers to work caused by the tax and benefit system

Replacement rates only give a partial picture of incentives to enter employment. Two other factors must be taken into account to get a fuller picture. First, benefits that do not require active job search, such as invalidity and early retirement benefits, may sometimes be used as alternatives to unemployment benefits. Secondly, aspects of the benefit system other than generosity can also influence the labour market through effects on the transition from unemployment to employment.

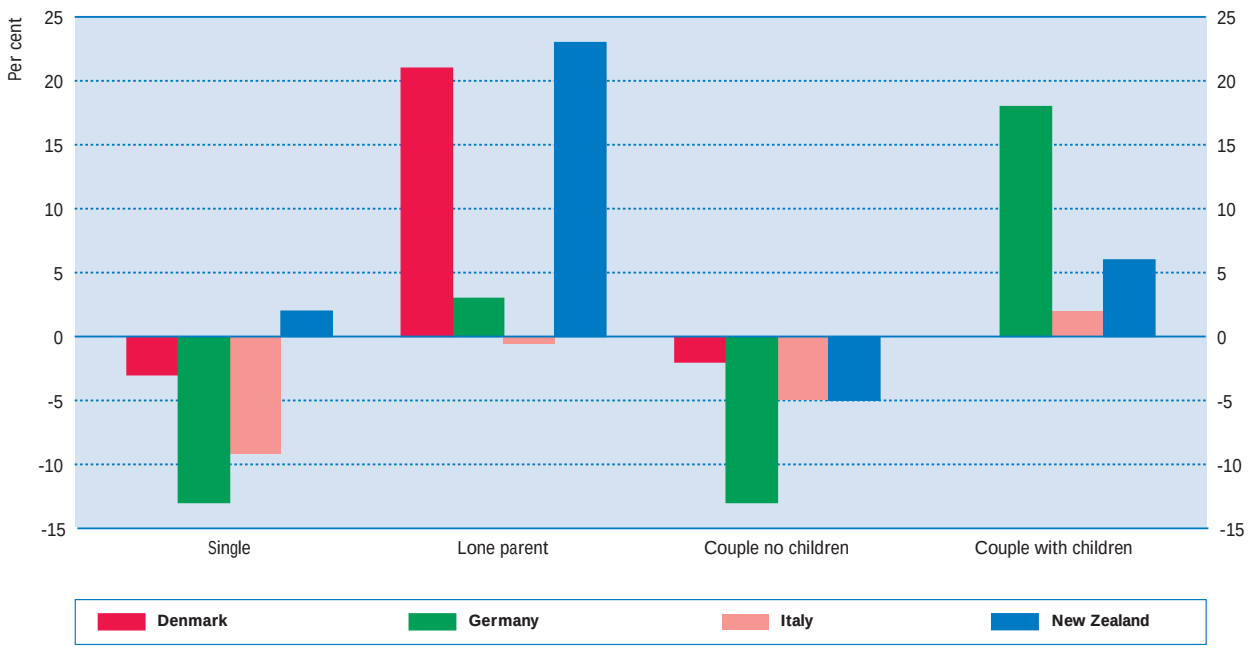
Other out-of-work benefits and unemployment benefits

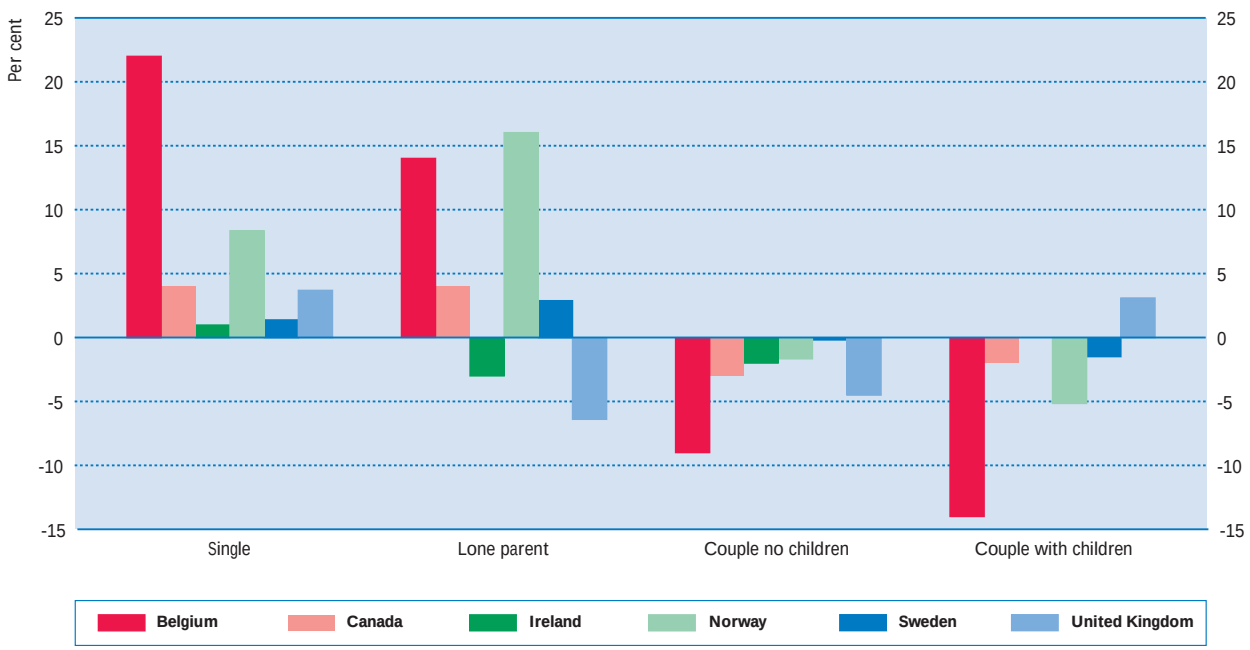
In many OECD countries more people of working age receive benefits which do not require any job search than are supported by unemployment benefits or active labour market programmes. Recipients of invalidity benefits outnumbered the registered unemployed in 1990 in 12 of the 23 OECD countries for which data[19] are available. Their number has been growing rapidly, increasing by over 50 per cent since 1980 in Greece, Ireland, Luxembourg, Spain, Sweden and the United Kingdom [Blondal and Pearson (1995)]. Along with early retirement schemes, invalidity benefits remove a substantial part of the working-age population from the labour force.

Chart 2.5.

Which family types face strong work disincentives?

Over or under representation compared with the average of the country, of family types facing replacement rates of more than 80%





Note: Replacement rates are individualised.
Source: National microsimulation models: see text.

Box 2
Considerations in setting benefit levels

Social policy objectives are best served by high levels of benefits, but this can have negative labour market consequences. The level of out-of-work benefits should take the following factors into account:

Risk-aversion of workers

Benefits should be high when people want to insure themselves against loss of earnings arising from unemployment or other risks such as disability. This risk aversion will vary between individuals and over time. The degree of risk aversion may also vary between countries: in some societies people may be more prepared to gamble with their incomes than in others.

Relationship between wages and benefit levels

If benefits are high, wages may be pushed higher as well, increasing the cost of labour and causing unemployment. The responsiveness of wages to out-of-work benefit levels will depend on institutional factors and the degree of competition in labour and product markets.

Benefit financing

High benefit levels require high taxes or social contributions to finance them. If taxes on labour are high, there is a risk that the cost of labour will be increased, causing unemployment.

Job search

Most people wish to work not just for financial reasons, but because of a strong work ethic, or because of the social interactions work provides. Where this is the case, high replacement rates will not reduce the effort the unemployed put into searching for work. Otherwise, benefit systems rely upon administrative controls to ensure that the unemployed search for work. If these controls are effective, high replacement rates will not extend the duration of unemployment unduly. Where they are ineffective, some may adapt to living off benefit income, and not look for work, so increasing unemployment and its persistence

Public employment service

If public employment services or their private-sector equivalents are effective, jobs appropriate to the abilities of the unemployed will be rapidly brought to their attention. Benefits will only need to be sufficient to cover a short period of unemployment as longer job-search will not find better job-offers. If the unemployed have to rely on their own resources in searching for jobs, benefits have to be sufficiently high to support a reasonable length of job-search. Otherwise the unemployed may be forced by financial considerations into accepting inappropriate jobs for their skills.

Active labour market policies (ALMPs)

By improving the productivity and employability of the unemployed, active labour market policies can reduce the disincentive effects of any given replacement rate. Conversely, "If the unemployment benefits system is generous and poorly managed, it is very difficult to operate ALMPs in ways which increase labour market efficiency and reduce structural unemployment" [see OECD (1996)].

Marginal effective tax rates (METRs)

Increases in earnings may bring very little net increase in family incomes. The result is a reduced incentive to increase earnings. The higher the out-of-work benefit, the higher the METR will have to be and/or the larger the income range over which high METRs apply (see Section D), so deepening or widening this work disincentive.

Source: This discussion is based in part on Snessens and van den Linden (1994).

If invalidity benefits were restricted to those incapable of work, there would be few grounds for concern. However, there is evidence that invalidity and other out-of-work benefits substitute for unemployment benefits in some countries as a means of supporting those who would otherwise be counted as unemployed. Other benefits are usually unlimited in duration and do not require evidence of job-search. They are also often at a higher level than unemployment benefits. For example, Blondal and Pearson (1995) compare gross invalidity, sickness and early retirement benefits with the index of unemployment benefit entitlements shown in Chart 2.2. Under similar assumptions about earnings before receiving benefit, they found replacement rates for the partially disabled were usually much higher than for the unemployed, and for those fully disabled were on average 25 percentage points higher. A range of early-retirement benefits was found to have even higher replacement rates, especially where the beneficiary had been in employment for a long period before benefit receipt.

For these reasons, it is often better from the individual perspective to receive one of these benefits rather than unemployment benefit. In addition, governments reap the political gain from lower headline unemployment rates and employers may find it easier to reduce their work forces if those losing their jobs receive relatively generous benefits for an unlimited period. Invalidity benefits may be used in this way if medical requirements are not rigidly enforced (either as explicit government policy or by default), as appears to have happened in Austria, Germany, Italy, the Netherlands, Norway, Sweden, and the United Kingdom. A similar trend may be starting in Finland and New Zealand.

Early retirement schemes differ in purpose. Some are merely arrangements whereby individuals can retire early on actuarially reduced pensions. These sorts of early retirement can be justified on the grounds of individuals' control over their own labour supply or of horizontal equity. More controversial are schemes explicitly designed to remove from the labour force those who might otherwise be unemployed. Such schemes may well reduce measured unemployment temporarily, but they will do nothing to reduce the number of families relying on benefits as their main or only source of income.[20]

Income support for lone parents raises similar issues. In some countries, such as Sweden, child care is available on demand and all lone parents applying for income support are required to seek work in the same way as other unemployed people. But in many other countries, lone parents are not required to look for work until their youngest child reaches a certain age (16 in Australia and the United Kingdom).

The use of benefits that do not require active job search may lead to complex labour market effects even if the stated intention of these benefits appears to be unrelated to the labour market. In particular, their use as *de facto* unemployment benefits can artificially reduce unemployment rates, without addressing the fundamental causes of unemployment. Furthermore, due account must also be taken of the debilitating effects on families of living on benefits. Paying people not to work when they are able to do so is a waste of resources and harmful to the work ethic.

Incomes and expenses in and out of work

Cash benefits only account for some of the help given to those who find themselves without jobs. Sometimes benefits in-kind are also provided. For example, although housing benefits can be included in replacement rate calculations (see Table 2.1 above), it is difficult to value other types of help such as provision of social housing. Sometimes help may be restricted to those in receipt of benefits (see Table 2.2).[21]

The most substantial of these payments is probably Medicaid in the United States, which covers health care costs for some low-income groups. Since 1991, more has been spent on Medicaid for the 12.1 million recipients of Aid to Families with Dependent Children (AFDC) ($21.9 bn in 1991), than was spent on AFDC cash benefits themselves ($20.9 bn) [US House of Representatives (1994*a*)]. Medicaid is received until AFDC entitlement is exhausted. In order to reduce the disincentive to work which this rule implies, Medicaid entitlement is kept for 9 to 15 months after losing AFDC. Ireland has a similar scheme whereby the long-term unemployed continue to receive health-care cover for three years after taking a new job. In Luxembourg, there is a sudden drop in income when earnings exceed a certain level because housing benefits are conditional on social assistance receipt. Other recent reforms to the provision of non-cash benefits include the 1996 reforms in New Zealand, which increased the qualifying income for a Community Services card by 7.7 per cent, thereby extending benefits to more low-income, in-work families and so smoothing the transition from unemployment to work.

Apart from loss of benefits which are available to those without work, there are increased costs for those in work. These may include commuting expenses, the costs of special clothing and tools, trade union dues and child-care.[22] Conversely, the unemployed may have out-of-work expenses – such as job search costs – which are not incurred in work.[23]

Fourteen OECD countries report deductions for work-related expenses in the personal income tax

Table 2.2. **Typical extra benefits which can be given to those receiving social assistance or unemployment benefits**

	Some of the items which can be made available to those on benefit income
Australia	Health care card (reduced cost medicines). Public and private providers sometimes use the card as a passport for other concessions of which reduced cost transport is the most important. (Benefit recipients get these cards as a right; low-earning households can get them on application.) School uniforms, books, help with utility payments are given in some states.
Canada	Clothing, health premiums, prescriptions, dental, optical (varies by province), educational costs, removal costs. For example, Ontario pays a winter clothing allowance of C$104, and a ''back-to-school'' allowance of C$126. Six out of ten Provinces give these benefits to those on low wages as well.
Denmark	Medical expenses.
Finland	Various one-off payments. Health care costs sometimes covered.
Germany	Medical insurance, prescriptions, lower price public services.
Ireland	Back-to-school allowance. Free school meals/transport. Fuel allowance. Medicard.
Japan	Exempted from inhabitants' tax (local tax). Cheap rail travel.
Luxembourg	Free transport. Medical insurance.
New Zealand	Health-care costs (including prescriptions). Available to all those with low incomes, not just benefit recipients.
Norway	Municipal services (child care, etc.) are often income related.
Spain	Health insurance.
Sweden	Prescription costs, glasses, dental.
United Kingdom	If on income support: cold-weather payments; school meals; prescriptions; optical and dental. Other people on low incomes must apply for some of these payments.
United States	Medical insurance (Medicaid).

Source: Eardley *et al.* (1996) and information provided by national authorities.

[OECD (1995*c*)] at the earnings of the average production worker (see below for a discussion of child-care), although they vary enormously in value.[24] Some countries – Belgium, Denmark, Finland, Germany, the Netherlands, Switzerland and the United States – also have specific rules relating to the deductibility of commuting expenses. Although the cost of providing such deductions is difficult to assess, tax expenditure accounts give an indication. In France, for example, identifiable revenues foregone for work-related expenses in 1992 include contributions to trades unions (FF 190 m), child-care costs (FF 1 bn for the purchase of such care; providers also receive concessions on the social contributions they are required to make); food vouchers or work canteens (FF 650 m); holiday vouchers (FF 25 m); and transport costs (FF 255 m) [France, ministère des Finances (1993)].

As these data on revenues foregone indicate, child-care costs are often the most substantial in-work expense. They are commonly identified as a barrier to taking employment, especially for lone-parent families or when one partner is already working. Public policies to provide access to affordable child-care facilities for parents who wish to work are many but diverse [Ergas (1990)]. Publicly provided day-care facilities may be subsidised by central or local government, with only nominal charges to users.

Other countries, including Belgium, Canada, the Netherlands, New Zealand and Norway allow some or all of expenses on formal child-care to be deducted from personal income tax liabilities.[25] Although administratively straightforward, these deductions may be worth more to people paying higher tax rates, and nothing for those earning below the tax threshold. They have little effect on replacement rates of the low-paid.

Table 2.3 underlines the fact that child-care costs can be a serious barrier to work. Columns 2 and 5 show the gain in net income a one-earner couple receives from working compared with being unemployed (it reflects the first-month unemployment assumption of Table 2.1, including all benefits). At both APW and ⅔ APW earnings, there is a clear financial gain from working in all the countries included in the table. Columns 3 and 6 show the gain in net income if the child-care costs of column 1 are taken into account (it is assumed that child care is

Table 2.3. **Child-care costs and benefits: a barrier to work?**

Percentage gain in net income from work, for a one-earner couple with two children taking account of child-care costs and benefits

	Child-care cost assumption	2/3 of APW			APW		
	(1) $ per week	(2) Ignoring child-care costs and benefits	(3) After child-care costs for those in work	(4) After child-care costs and benefits for those in work	(5) Ignoring child-care costs and benefits	(6) After child-care costs for those in work	(7) After child-care costs and benefits for those in work
Australia	167 (max)	28	–27	–1	41	–25	–5
	75	28	–21	3	41	–19	0
Canada	140 (max)	50	5	20	50	18	45
	75	50	3	18	50	15	43
Finland	(145)[a]	15	–43[a]	15	16	–32[a]	16
Japan[b]	(242)[a]	108	50[a]	108	138	92[a]	115
United Kingdom	60 (max)	27	–2	50	54	27	30
	75	27	–10	45	54	21	24

Notes: In columns 2 and 5, child-care costs and benefits are ignored. In columns 3, 4, 6 and 7, it is assumed that when in work the costs in column 1 must be incurred. When unemployed the family is assumed not to use child-care facilities (see text for a discussion of the treatment of child care for the unemployed). The table gives the percentage increase in net income compared with that which would be received when in the first month of unemployment. In Australia, Canada and the United Kingdom, two cases are included in the table. The maximum level of child-care costs which will qualify for help may be above typical child-care costs, so the effects of having costs of $75 per week are illustrated. The gains in net income are calculated for a one-earner couple with two children (except in the United Kingdom, where the benefit provision applies only to lone-parents). The pattern of incentives for other family types closely follows that in the table; the case of a one-earner couple is included as this family type is discussed in more detail in Table 2.1.

a) In Finland and Japan, payments for child care are made according to income. There is therefore no underlying child-care cost. The figure here refers to the maximum that would be paid for two children. In each country, this amount would only be paid by someone with substantially more than average earnings. Columns 3 and 6 refer to the net gain in income were the family to pay the maximum amount, as opposed to the amount relevant for someone with their income level.

b) The figures here reflect payments in the Osaka municipality.

Source: OECD database on taxation and benefit entitlements.

purchased only when employed). Work no longer brings significant financial reward; on the contrary, in some of the cases in Table 2.3, the family would be better off remaining on benefit than working. Columns 4 and 7 show that special provisions in tax and benefit systems can substantially reduce the barriers to work from child-care costs.

Such barriers will be particularly important where informal arrangements for child care are unavailable, in particular for lone-parent families and families where both earners wish to work.[26] These are two of the groups which most estimates suggest are particularly responsive to financial incentives to work. Australia has increased the level of support for child care through subsidising provision and through cash rebates and benefits. In the United Kingdom, up to £40 per week of child-care costs can now be disregarded when determining benefit receipt. It is estimated that 40 000 extra lone parents will work as a result of this change in the rules [Duncan *et al.* (1994)]. New Zealand also offers an earnings disregard to lone parents with child-care costs (along with a general income-tested child-care subsidy).

Cash-flow and the transition to work

Even where there is an apparent financial benefit in becoming employed, the short-term consequences may be the opposite. For households which are (almost by definition) short of money, this may appear to the families concerned an almost insurmountable barrier to taking a job. The cash-flow consequences of taking employment can be unfortunate if there is a hiatus in public support. For example, several countries have one system of supporting those who are unemployed and another which supplements the income of those who have low earnings. In some cases, they are administered by different agencies, causing co-ordination problems. The transition from one benefit regime to another can lead to delays in payment, causing severe hardship to the families in question and discouraging attempts to move off benefit.

Transitional problems are likely to be of most consequence in countries with low benefit levels. This has been identified as a problem in the United Kingdom, where a commitment has now been made

to process all claims for the employment-conditional Family Credit in a maximum of two days. In the United States, the Earned Income Tax Credit gives a substantial boost to in-work incomes (see below). But it may have had a limited labour supply impact in practice because it is generally paid annually when tax returns have been filed, rather than on an ongoing basis when it would have most impact. In New Zealand, some out-of-work benefits will continue to be paid for a period until in-work benefits are granted, with an end-of-year reconciliation.[27] In Australia, unemployment benefits are paid two weeks in arrears, meaning that benefits will continue to be received for a short period when moving into work.

"Back-to-work bonuses" have a similar effect. Not only do they help the transition to employment, but they can also be structured to encourage job search. Such a system is in place in Japan, where the more rapidly an unemployed person finds a job, the larger is the bonus paid, up to a maximum equal to 4 months of benefit. Some long-term unemployed in Australia receive a payment of A$ 100 on entry into employment. New Zealand pays NZ$ 250 towards the back-to-work expenses of those who find work after a year or more of unemployment. Experiments with similar schemes in the United States suggested that they encouraged enough benefit recipients to find jobs more quickly than they otherwise would have done for the schemes to more than cover their costs.[28]

Uncertainty and the transition to work

The calculations referred to so far imply that a replacement rate can be identified for individuals and they will respond in a predictable way to the resultant incentives. However, calculating the net incomes of someone in and out of work, taking account of family allowances, earnings additions, peculiarities of the tax system, the interactions of benefits and the timing of payments, requires knowledge of many pages of regulations. Small wonder, then, that surveys suggest people have very little idea of how much net income they might have were they to move from being employed to unemployed or vice versa. For example, in reviewing changes in Australia, researchers concluded that "the majority of respondents were largely unaware of how the income test works and the effect that earning income had on their allowance or pension. The impact of social income tests tends to be misinterpreted in that they are generally viewed as being harsher than they actually are" [Puniard and Harrington (1993)]. In the United Kingdom, the employment-conditional Family Credit is not widely understood: many recipients underestimate how much they might be able to earn without exhausting their rights to the benefit [Marsh and McKay (1993)].

This lack of understanding about the benefit system and the incomes which can be expected in and out of work has three possible effects. First, when combined with the effects of the administrative burden placed on claimants, the result is that the take-up of certain key benefits may be low. Low take-up has historically been a particular problem with benefits paid to those on low incomes in-work. Hence, provisions of the benefit system which in theory should have positive effects on the incentive to work may have a lesser effect in practice. Secondly, misperceptions of net incomes in and out of work may lead people to behave irrationally. In theory, the effects of such misperceptions on employment and unemployment are unclear. People might over- or under-estimate net incomes in employment or unemployment. Thirdly, lack of knowledge adds to the uncertainty surrounding incomes in work as opposed to incomes out of work. Taking a job involves assessing the values of a host of unknown variables – work expenses, tax bills, benefit entitlements[29] – which those without jobs are unable to gauge with much accuracy. Complex administrative procedures add to the belief that actual benefit receipts are something of a lottery. The requirement to reapply for benefits if any job is lost again implies that families must throw themselves on the mercy of an ill-understood and apparently arbitrary system, so discouraging the acceptance of "risky" jobs.[30]

The uncertainty over incomes in and out of work is caused by a lack of transparency in tax and benefit systems. Transparency could be increased by simplifying them. Short of this, there are still several policy options which have been tried in different OECD countries. Information campaigns in the United Kingdom have had a dramatic effect on take-up of Family Credit, the main employment-conditional benefit. Several countries have identified a particular problem with the long-term unemployed being unaware of net incomes in work, and attempt to target information campaigns on them. Employers may be a source of advice to prospective employees when job-offers are made, so it is important that they too understand the tax and benefit system.[31]

3. Policy responses to promote employment

Although the effects of replacement rates on unemployment are relatively uncontroversial in sign, it is often questioned whether the social cost resulting from cuts in benefits is a price worth paying. General reforms to reduce replacement rates have therefore been rare (see Box 1). Most recent reforms have usually been targeted. Reforms in Denmark in 1994 and 1995 restricted the maximum amount of social assistance compared with lost earnings[32] and the period over which high levels of social assistance

can be received. Maximum rates of housing benefit in the United Kingdom will be reduced.[33] In addition, some countries have up-rated their benefits or the minima and maxima in the insurance benefits in line with price inflation rather than earnings. This led to a slight increase in replacement rates around 1992-1993, as real earnings fell. Over a longer period of time, however, this has more often led to a reduction in replacement rates (*e.g.* in the United Kingdom). Young people have been the focus of a general trend, with removal of rights to benefit for 16- to 17-year-olds in Canada and New Zealand, restrictions on the amount of benefit paid to young people in the Netherlands and the duration of benefits for young people in Denmark.[34]

Other than cutting replacement rates, reforms have concentrated on other aspects of policy mentioned in Box 2 or recommended in the *Jobs Study* [OECD (1994*a*, 1995*b*)]. They include:

- *reinforcing the insurance principle*. This has taken various forms. Some countries are looking to reduce heavy individual use of the unemployment insurance system. Canada is considering a reform which would reduce entitlements to those who repeatedly become unemployed. Austria may experience-rate employers' social security contributions to reflect the numbers they lay-off. Other countries are reducing entitlements to unemployment insurance benefits (Belgium and Norway have reformed unemployment insurance for part-time work; longer contribution periods before receipt of unemployment insurance benefits are now required in Spain and Sweden). In Finland, access to the basic unemployment insurance for those without work experience was restricted in 1994, with a new means-tested benefit introduced for those who no longer qualify. In the Netherlands, access to wage-related benefit has been tightened;
- *encouraging job search*. Belgium has tightened administration of the requirement to search for work. As a result 35 000 people lost their unemployment insurance entitlements in 1993. A similar tightening has recently taken place in Denmark and the United Kingdom. In the Netherlands, 90 000 recipients of unemployment insurance were ''sanctioned'' in 1993 compared with around 40 000 in 1990. In 1996, more detailed proof of job-search activity was required to gain access to the means-tested benefit in the Netherlands. Job-search requirements were tightened in Spain in 1992;
- *improving access to child-care*. Some countries with relatively poor records in providing child-care have recently focused more attention on this area. In Australia, child-care costs are refunded in part according to parental income, suppliers are subsidised and a third of remaining expenditures is granted a cash rebate. Some families pay as little as A$ 19 for a full week of child care (12 per cent of the cost of provision). Government expenditures on child care now amount to A$ 1 bn (12 per cent of expenditure on unemployment benefits). The United Kingdom increased the earnings which are disregarded for expenditure on child care and has started a programme giving vouchers to parents of young children which can be used to purchase nursery school places; and
- *increasing in-work incomes*. Tax reductions for those on low incomes can increase net incomes in work, although the effect on replacement rates depends on the tax treatment of benefits and the financing of the tax reduction. An area of tax and benefit policy which has received much more attention is the payment of benefits or income tax credits on condition that the recipient is in employment. But they raise another labour market problem, that of high marginal effective tax rates, which is considered next.

D. THE POVERTY TRAP AND HIGH MARGINAL EFFECTIVE TAX RATES

1. What causes high METRs?

If benefits were withdrawn as soon as earnings rose above zero, there would be a severe disincentive to work – the unemployment trap would be very deep. Hence, countries withdraw benefits *gradually* as earnings rise. In many countries, a significant number of people with earnings continue to receive benefits even while they are paying taxes and social security contributions. The rate at which benefits are withdrawn and taxes and social security contributions are increased as earnings rise is known as the marginal effective tax rate (METR). People facing very high METRs have very little financial reward for increased work hours and effort, and lose very little if they work less. METRs can be lowered by cutting the benefit reduction rate (BRR), but only at the cost of extending benefit entitlements further up the income distribution.

Table 2.4 shows that many examples of high METRs arise from policy towards families (as in Australia, Germany, Ireland, the United Kingdom and the United States). Child tax allowances and universal child benefits are paid in most OECD countries but the budgetary cost means that they are usually not

Table 2.4. **Incidence and causes of high marginal effective tax rates (METR) caused by cumulative benefit receipt**

One-earner couples

	METR	Region where METR applies (% of APW earnings)	Tax and benefit combinations causing high METRs
Australia	90%	38-62%	Income tax (20%), parenting allowance (70%).
	38%	62-78%	Income tax (34%), low-income rebate withdrawal (4%).
	104%	78-84%	Income tax (34%), Medicare payments (20%), additional family payment (50%).
	85%	84-100%	Income tax (34%), additional family payment (50%), Medicare levy (1.45%).
France	78%	57-91%	*Revenu minimum d'insertion (RMI)* disregard (50%), social security (18.7%), *Contribution sociale généralisée (CSG)* (2.3%), housing benefit (16.5% average).
Germany	89%	72-82%	*Milderungszone* [phase out of income-tax free zone (this has now been abolished)]: income tax (51%), social security (18.3%), housing benefit (20%).
Ireland	105.5%	62-76%	Social security (5.5%), income tax (40%), family income supplement (60%).
Sweden	72%	147-160%	Income tax (20%), social security contributions (2%), local tax (31%), housing benefit (20%).
United Kingdom	97%	46-65%	Income tax (20%), social security (10%), family credit (70%), housing benefit (65%), Council tax benefit (20%).
	80.5%	65-77%	Income tax (25%), social security (10%), family credit (70%).
United States	72%	62-71%	Social security (7.65%), income tax (15%), local tax (5%), food stamps (24%), earned income tax credit (17.68% for family with two children).

Notes: 1994 systems, except for Australia and the United Kingdom (1995). Family credit is only revised every 6 months, so the long-term METR given in the table for the United Kingdom may be substantially higher than that faced in the short term. Fewer than half of Ireland's family income supplement recipients are on earnings' levels that are exposed to the METR indicated. The benefit level, once set, is not revised downwards for 12 months, even if income increases in the meantime. The long-term rate presented in the table is substantially higher than that faced in the short term. Figures for individual taxes and benefits do not sum to the overall METR in France and the United Kingdom because benefits are withdrawn against net, rather than gross income. The 38% rate for Australia is included to give a more complete impression of Australian METRs.

Source: OECD database on taxation and benefit entitlements.

very high. In those countries where unemployment benefit levels are low, such payments are insufficient to prevent child poverty, and as a result additional child payments are sometimes made to families receiving benefits.

To avoid the sudden loss of family income on entering employment referred to above, two policies have been followed. In some countries, including Australia, Germany and New Zealand, the family payment is withdrawn gradually as income rises (although the means tests for family payments were eliminated in Germany in 1996). In Ireland and the United Kingdom, a separate benefit is paid to families in employment, which again is withdrawn as incomes increase. In each case, the withdrawal of the benefit leads to high METRs.

High METRs are more general, both in these and other countries, than Table 2.4 suggests. Payments which are means-tested on family income are often reduced by the amount of all other income – the METR is 100 per cent. In such circumstances, it is sometimes said that recipients face a poverty trap – any attempt to increase earnings has no effect on household incomes. The numbers of benefit recipients who have exhausted their unemployment insurance benefits or who, having never worked have never contributed to unemployment insurance schemes, have risen, leading to greater reliance on means-tested benefits. Some of the more dramatic increases are noted in Table 2.5. In addition, most special benefits for lone-parents are means-tested.

2. High METRs and the labour market

Sometimes, it is argued that the importance of high METRs is exaggerated. Most labour market decisions are not ''marginal'' in the sense of working only a few more hours, or trying to earn a slightly higher wage. Instead they consist of large, discrete changes in status – for example, from not working to working

Table 2.5. **Growth in receipt of means-tested benefits**
(1980 = 100)

	1980	1985	1990	1992
Austria (unemployment assistance)	100	1 233	1 067	967
Belgium (Minimex)	100[a]	174[b]	195	252[c]
Canada (social assistance)	100[a]	144	144	228[c]
Finland (social assistance) (number of persons)	100	143	187	343[c]
France (*RMI*)	–	–	100	155[d]
Germany (*Sozialhilfe*)	100	156	219	276
Germany (unemployment assistance)	100	549	355	–
Netherlands (*RWW* – unemployment assistance)	100	378	319	300
Spain (assistance benefit)	100	562	581	687[e]
Sweden (social assistance) (number of persons)	100	156	150	208
United Kingdom (income support, excluding disabled or over age 60)	100	238[b]	178	247
United States (food stamps)	100	104	104	139[d]

Notes: Number of households, except where noted otherwise. The French *RMI* was introduced in 1989. Figures for the United Kingdom are for supplementary benefit in 1980 and 1986.
a) 1981.
b) 1986.
c) 1994.
d) 1993.
e) 1991.
Source: Eardley *et al.* (1996).

full-time. Where high METRs exist for only a short range of earnings, they are unlikely to distort labour market behaviour. But there are cases where high METRs do matter. Where the marginal rates are high over a relatively wide range of earnings they indicate a breaking of the link between effort and reward which reduces work incentives.[35] One of the many country-specific examples which could be cited concerns elderly workers in Japan. Beyond the age of 60, if earnings were relatively low, they could be combined with 80 per cent of the full pension. Above a certain threshold of earnings, the amount of pension would be reduced to 60 per cent of the full pension, and so on. As a result, earnings of those entitled to a pension were highly concentrated just below the level which would result in a big loss of pension. No such pattern was observed for those with no pension entitlement. People apparently do respond to the incentives facing them [Seike (1994); Seike and Shimada (1995)] and the Japanese authorities have responded by reforming this system.

The other area where high METRs have a strong impact on the labour market is when they affect the most disadvantaged groups. Social assistance recipients often face METRs of 100 per cent. The consequence is that it is not possible, in these circumstances, to increase disposable income unless a full-time job can be found. Thus, tax and benefit systems can interact to prevent formal part-time work, and thereby encourage fraud and long-term benefit dependency. METRs are particularly important in three policy areas: the poverty trap; the use of employment-conditional taxes and benefits; and the taxation of the family.

The poverty trap

Two problems arise in the application of means-tests to families receiving social assistance. First, after work-related expenses, the family can find itself with *reduced* disposable income if one member undertakes low-paid or part-time work. This is a ''poverty trap'': income is low, but a few hours of work might leave them worse off than relying on benefits as the sole source of family income. In the absence of full-time work, they are discouraged from any contact with the labour market. Lack of contact with the labour market over a long period reduces the effectiveness with which people can search for jobs, while there is an increasing risk that employers will regard such individuals as ''unemployable''. A study of AFDC recipients in the United States concluded that, after taking account of work expenses, METRs can be more than 100 per cent, with ''pernicious'' effects [Giannarelli and Steuerle (1994)].

The second problem is that the incentive for one member of the family to work is affected by the labour market position of other family members. The earnings of one spouse reduce the benefit entitlement of the other. This has long been recognised as a problem in countries with extensive means-testing, such as Australia and the United Kingdom [Scherer (1978)]. Disincentives in the benefit system are not the sole cause of the strong correlation between spouses' employment. Spouses usually have similar

educational profiles and, of course, are usually searching for jobs in the same local labour market. However, econometric analyses in Germany, the Netherlands and the United Kingdom,[36] controlling for characteristics which might explain wives' participation rates, suggest that the shortfall in employment rates of women married to unemployed men cannot always be explained by these factors alone.

If earnings' potential is low, more than one wage may be necessary to lift families off benefit income. But the structure of the benefit system may mean that, if one member of a household is unemployed, other members may have little incentive to work. To get out of this trap, both members of a couple must find a job simultaneously. Hence, poorly-designed means-tested benefits run the risk of polarising the population into so-called "work-rich" and "work-poor" households. In the former, at least one member of the household works and the other faces high incentives to work as well; in the latter, the incentive to work of both spouses is low.

Recent reforms in Australia have addressed this problem by giving each partner in a household where neither partner has a high level of earnings an individual benefit entitlement and reducing the METR below 100 per cent.[37] The Australian White Paper (1994, p. 187) put it thus: "The major rationale for moving towards individual entitlement is that it would encourage greater and more effective job search by both partners of a married couple. This would respond to the fact that many of the job opportunities are more likely to be gained by women than men given the increase in part-time work and the greater increase in jobs in traditionally female areas of the labour force." Similar effects can be achieved by employment-conditional benefits paid to those with low incomes. Increasingly, recipients of Family Credit in the United Kingdom are not the unemployed finding low-paid jobs, but spouses in two-earner couples when one partner loses a job [Marsh and McKay (1993)].

Employment-conditional benefits and tax credits

The distinguishing feature of employment-conditional tax credits and benefits is that they are income-tested, but payable only to those in work. These benefits are designed to shift the balance between incomes in and out of work to encourage labour force participation. By phasing out the benefit as earnings rise, resources are wholly targeted on low-paid workers. This is difficult to achieve with other policy instruments such as changing the structure of income tax or social security contributions. This phasing out, however, means higher METRs reach further up the earnings' scale, reducing work incentives for those already in work. Table 2.6 gives a brief description of the main examples of such benefits in OECD countries.

In the United States, the value of the EITC (Earned Income Credit) increases as gross earnings rise, reaches a plateau at the maximum credit and is then phased out at higher earnings. Around 3.5 million families will lie in the phase-in range when the extensions of the credit envisaged in the Omnibus Budget Reconciliation Act 1993 are fully implemented. The mean marginal rate from the federal income tax and social security contributions will be minus 21.3 per cent (*i.e.* a credit). For the 2.5 million families on the plateau, the marginal rate is unchanged (averaging 17 per cent), but marginal rates for 9.8 million families in the phase-out region are increased to around 44 per cent [Holtzblatt *et al.* (1994)]. Many more families face higher marginal rates than lower as a result of the EITC. This creates an incentive for workers to reduce their hours of work. However, by increasing net income in work at all levels of earnings up to the end of the phase-out, the effect on the incentive to take a job is unambiguously positive. Canada introduced a more modest tax credit for working families with children as part of a more general reform of child support in 1993. In addition, the province of Quebec operates a generous employment-conditional benefit*: Aide aux parents pour leurs revenus du travail*, APPORT.[38]

The Irish employment-conditional benefit, Family Income Supplement (FIS), in contrast to the American one, tends to be received by those in the middle of the income distribution. As a poverty-prevention measure, it is less well targeted. Because of this, FIS raises METRs substantially. Its interaction with income tax and social security contributions allows METRs to exceed 100 per cent. But FIS also enhances the incentive to take a job. Microsimulations which assume full take-up of FIS (an important assumption, as discussed in Box 3), suggest that replacement rates are reduced substantially (by over 10 percentage points) for 8 200 families; 6 400 see a reduction of 5 to 10 percentage points and 11 900 see a smaller reduction compared with a system without this benefit.[39]

The employment-conditional benefit in the United Kingdom requires claimants to work 16 hours or more, while social assistance is restricted to those working fewer than 16 hours. The net cost of Family Credit, taking account of reduced receipt of other benefits, is two-thirds of the gross expenditure shown in Table 2.6. The effect of Family Credit on incentives follows the pattern in Ireland and the United States. METRs are increased for four-fifths of the 0.5 million recipients to 70 per cent or more. Replacement rates are reduced for nearly all recipients. However, about 250 000 two earner couples who together earn just too much to be eligible for Family Credit have a

Table 2.6. **Employment-conditional tax credits and benefits**

	Canada	Ireland	Italy	New Zealand	United Kingdom	United States
Name	Child tax benefit	Family income supplement	Family benefits for employees [a]	Independent Family Tax Credit (IFTC, to be introduced)	Family credit	Earned income tax credit (EITC)
Cost	C$250 m = $200 m	Ir£21.3 m = $33.9 m	L5 763 bln = $3.76 bln	NZ$210 m = $142.7 m	£1.1 bln = $1.7 bln	$26.7 bln
Number of recipients	0.7 m	11 000	–	150 000	0.5 m	19 m
Average receipt	C$357	Ir£1 925 = $3 075	–	NZ$27	£2 400 = $3 800	$1 450
Responsible department	Tax administration	Social welfare	Social security	Tax administration	Social security	Tax administration
Maximum benefit	C$500 pa	[b]	L2.76 m pa	NZ$15 pw (per child)	£67.80 pw[c]	$2 152/$3 556/ $323 pa
Minimum earnings	C$3 750	None	[d]	–	None	$0
Phase in rate	8%	None	None	–	None	34/40/7.65%
Earnings when phasing out begins	C$20 921	Immediately	L15 984 m	–	£73 pw	$11 610/$11 610/ $5 280 pa
Withdrawal rate	10% of gross income	60% of gross income	10% of gross income	18% between NZ$20 000 and NZ$27 000, 30% above[e]	70% of net income	16.0/21.1/7.7% of gross income
Minimum hours worked	No limit	20 hours (19 from July 1996)	No limit[f]	–	16 hours. Supplement for 30 hours or more.	No limit
Family type	Families with children	Families with children[g]	Families receiving unemployment benefit	–	Families with children. Pilot scheme for childless	First figure is for 1-child families, 2nd for 2 or more children, 3rd for no children

Key: m = million bln = billion pa = per annum pw = per week

Notes: Data on the entitlement rules refer to 1995 except for New Zealand (IFTC, 1997) and the United States (1996). Data on costs, number of recipients etc. refer to 1993 for Canada and Ireland, 1990 for Italy and 1994 for the United Kingdom and United States. IFTC figures for New Zealand are forecasts for when the scheme is fully implemented in 1998-99. The pre-existing Guaranteed Minimum Family Income, which is a smaller employment-conditional payment, will continue to be paid. The GMFI is paid to lone parents working more than 20 hours and couples working more than 30 hours. The maximum benefit is around NZ$110 per week. The difference between family income and NZ$320 is paid. As all eligible families receive family benefits, and there is a minimum wage of around NZ$6.25 per hour, maximum benefit for lone parents is around NZ$110, substantially less (around NZ$30) for single-earner couples. It has approximately 5 000 recipients. It is operated through the tax administration. Figures for the EITC are total programme costs including the outlay on repayments and the tax expenditure component (the reduction in tax liabilities).

a) In addition to this payment, Italy has income-related tax credits for dependent spouses and children.

b) Payment is 60 per cent of the difference between family income before tax and a weekly threshold of Ir£165 plus Ir£20 per child with a minimum payment of Ir£5.

c) Rates depend on age and number of children. The above figure is for 2 children aged under 11 years old.

d) Ordinary unemployment benefit only lasts for 6 months in Italy, so the allowance operates *de facto* as an employment-conditional benefit.

e) IFTC and Family Support are subject to the same means test.

f) At least 70 per cent of family income must be from earnings (or pensions).

g) There are other employment-conditional benefits in Ireland. The *part-time job incentive scheme* is open to the long-term unemployed (15 months or more) who work for less than 24 hours a week. A flat-rate payment (Ir£40 per week for singles, Ir£66 for one-earner couples) is paid where this is more beneficial than means-tested unemployment assistance. The *Back-to-Work Allowance* is paid to the long-term unemployed (1 year or more) who are aged 23 years or more and to lone parents (no age limit) where the person takes up self-employment or a new job (*i.e.* additional in the economy). 75 per cent of the standard means-tested unemployment or lone parent assistance are paid in the first year, 50 per cent in the second year and 25 per cent in the third year.

Sources: United Kingdom Department of Social Security (1994); US House of Representatives (1994*b*) and information supplied by national authorities.

reduced incentive to work. If one of them were to leave their job, the family would be entitled to Family Credit and net family income would be little reduced. Incentives for those out of work to take a low-paid job are increased.

Employment-conditional credits and benefits (and indeed all benefits paid to those in work) involve a trade-off between increasing the incentive for people to take a low-paid job and encouraging those in work to reduce their hours of work. Evaluating this trade-off is an empirical question. Simulations by Scholz (1996) suggest that the increase in employment as a result of the EITC in 1996 will be around 350 000. The proportion of lone parents working will increase by 6.6 percentage points [see also Dickert, *et al.* (1995)]. A smaller, 0.4 percentage point, rise is predicted for married couples, since one partner in most couples already works. For secondary earners, a small reduction in participation results because their additional earnings often take a family into the phase-out range, thus reducing the credit received. Scholz also estimates the reduction in hours among those working in response to the higher METR. With an assumption about the hours of those encouraged to take jobs, he estimates that the negative effect on current workers offsets around one third of the effect of increased participation. On balance, the EITC increases aggregate hours worked (by around 90 million hours in aggregate). Similar results were found by Eissa and Liebman (1995) in their analysis of the 1987 expansion of the EITC.[40]

The hours rule for Family Credit in the United Kingdom was reduced from 24 to 16 hours in 1992. Dilnot and Duncan (1992) investigated the effect of the new incentive to work between 16 and 24 hours. They found that over 4 per cent of lone parents would increase their labour supply, many of whom were not working previously. Three per cent of lone parents would reduce hours, mainly Family Credit recipients moving from above the old ceiling to between 16 and 24 hours.

Policy reforms are often discussed on the basis of their aggregate effects. If the hours worked by those entering employment as a result of a policy reform exceed the reduction in hours worked by those already in employment, a policy reform is judged to be a good one. The above discussion suggests that existing employment-conditional benefits and tax credits probably would pass a criterion of success defined on this basis, but only just. However, using *aggregate* hours as a way of determining policy desirability implies that the *distribution* of hours worked is of no interest. For both social and labour market reasons, it may be desirable to introduce reforms which promote employment of those who would otherwise be excluded from the labour market, even if the net effect is to reduce total labour supply. On this latter basis, it is rather clearer that such policies can be desirable.

Even so, caution is required about using such policies for two additional reasons. First, the benefits reduce the difference between the net incomes of those with low skills and those with high skills, reducing the incentive to invest in education and training. Second, a general payment to those with low earnings may lead to lower wages as a result of increased supply of low-wage labour in response to the benefit. There are two ways of viewing such an effect. One is that, although this will reduce the incentive effect on individuals, it will indirectly reduce the cost of hiring low-wage workers, potentially promoting their employment. The other is that wages may be reduced below the value of the labour supplied, artificially boosting the profits of employers of low-wage labour. Concerns of this sort have led to suggestions that employment-conditional benefits should be combined with a minimum wage so as to prevent excessive reductions in wage rates.[41]

There are grounds for believing that employment-conditional benefits have had positive effects in the countries where they already exist. Whether this means that they can be introduced in other countries with equal success is far less clear. To be worthwhile, the benefit must raise in-work incomes for low-wage families significantly above out-of-work incomes. But on grounds of cost and because of the effects of high METRs on work incentives, the benefit must be fully withdrawn from earnings which are received by the bulk of the working population. These constraints suggest that employment-conditional benefits will be most successful in countries where benefits are low relative to average earnings and/or the earnings' distribution is wide.

These results, however, fail to take into account the issue of how exactly the employment-conditional benefit or credit is designed. Policy design, including whether the payment should be made through the tax or benefit system, may be crucial to the success or otherwise of the policy (see Box 3).

3. Tax and benefit systems and part-time work

Unemployment benefit systems were introduced when part-time work was not a major feature of the labour market. Policy towards part-time work oscillates between competing views. One view holds that it is desirable to encourage part-time work as a way of keeping benefit recipients in touch with the labour market. This suggests that paying benefits to supplement part-time earnings may be appropriate. On the other hand, the benefit system is intended to support those who cannot support themselves. By providing a

Box 3
The design of employment-conditional tax credits and benefits

Transparency: the impact of employment-conditional benefits depends on workers correctly perceiving the change to their net income received at a particular level of earnings. In the United States, fewer than 1 per cent of recipients use the advance payment option enabling their employers to pay the credit through the year. The credit is therefore mainly received as a tax refund after the year end. Although this occurs in part due to ignorance of the option, in many cases people were unwilling to ask their employer for a regular payment or were concerned that they might have to re-pay the credit at the year-end if their circumstances changed [US General Accounting Office (1992)]. Given the marginal rate structure resulting from the credit, fluctuating income and non-cumulative withholding of income tax, the fear of over-payment is justified [Alstott (1994, 1995); Holt (1992)]. Over half of EITC (Earned Income Tax Credit) recipients also rely on professional assistance in preparing their income tax returns, so may not understand the relationship between their work effort and net incomes [Olson and Davis (1994)]. The new Independent Family Tax Credit in New Zealand will either be received fortnightly with Family Support or paid at the end of the year as a lump-sum tax credit. The link between the end-of-year credits in these schemes and work experience during the year is not likely to be clear. In contrast, payments made through the benefit system may be more transparent although there may be a trade-off with benefit take-up [Whitehouse (1996).]

Take-up: if people do not claim their in-work benefit entitlement, due to stigma, costs of claiming or ignorance, then again the beneficial effect on incentives is lost. Assessment for taxation is automatic and private compared with claiming means-tested benefits. In the United States, a taxpayer will be informed by the Internal Revenue Service if they have filed a return appearing to be eligible for the EITC but have not claimed it. Empirical studies tend to show EITC take-up of over 80 per cent [Scholz, (1990, 1994)]. The figures for means-tested benefits are much lower: for food stamps, the rate is 59 per cent [US House of Representatives (1993)]. Similarly, Family Credit and Family Income Supplement suffer from less than full take-up. The take-up rate is around 25 per cent in Ireland [Callan *et al. (*1995)]. In the United Kingdom, it has risen from a little over 50 per cent when Family Credit was introduced in 1988 to around 80 per cent now [UK Department of Social Security (1994)].

Non-compliance: take-up of the EITC exceeds the number of families eligible. The IRS (Internal Revenue Service) conducted a study of 1 000 EITC claimants who filed electronically in a two-week period in January. (These taxpayers may not be typical, because the majority file paper returns and the filing season extends into April.) The study found that the total credit paid out exceeded entitlements by 26 per cent. The study did not take account of IRS enforcement work or recent modifications to the EITC. If these changes are included, the rate of over-claim falls to 19 per cent. It has been suggested that the EITC is vulnerable to deception [Steuerle (1993); Yin and Forman (1993)]. The benefit means-testing process is often more rigorous than a tax audit. A problem with Family Credit is that once a claim is settled, the resulting entitlement is paid for six months regardless of fluctuations in income. The initial assessment covers earnings over a period of six weeks. This opens the scheme to deliberate manipulation of earnings to ensure eligibility, with no reassessment for six months. There is no evidence on the degree of manipulation, but estimates suggest that one half of recipients would not be eligible given their *current* income [Fry and Stark (1993)].

Assessment of entitlement: tax and benefit systems operate very different sets of rules about the unit of assessment (individual or family), period of assessment (weekly, monthly, annual), the definition of income and the treatment of wealth. Using the family as the unit of assessment targets help on those with high replacement rates. Under an individual system, women married to relatively well-off men, for example, would be eligible, although they face few work disincentives from the tax and benefit system. Hence, most of these schemes are focused on families with children. In the majority of OECD countries, individual assessment of income tax and the fact that tax authorities do not collect information on children would preclude use of the tax system to implement an employment-conditional payment. The definition of income for tax purposes is often less comprehensive than the one used in assessing benefits. The EITC is assessed against gross earnings and ''adjusted gross income'' (taxable income), which excludes certain income sources which are exempt from income tax (such as a portion of social security and interest from municipal bonds). According to the United States General Accounting Office (1995), including all social security benefits, tax-exempt interest and non-taxable pensions in the measure of income used to determine EITC eligibility would save almost 6 per cent of total expenditure. But it would add significantly to the burden of administering the income tax [see also O'Neil and Nelsestuen (1994)]. From 1996, taxpayers will be ineligible for the EITC if income from interest, dividends, rents and royalties exceeds $2 350, excluding around 3 per cent of EITC recipients. The US General Accounting Office (1995) concluded that operating a wealth test in the EITC would be ''impractical''. In contrast, means-tested benefit systems can successfully operate assets tests (including Family Credit in the United Kingdom and AFDC in the United States).

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In-work benefits and wages: if gross wages are relatively sensitive to changes in taxation, wage rates will fall in response to employment-conditional benefits. The benefit will in effect act as a wage subsidy. If wages adjust fully, then net incomes in work are unchanged, and no labour supply response can be expected. Due to the shift in labour costs, a demand-side response may occur, however. There is no empirical evidence of whether this is the case. Attitudinal evidence in the United Kingdom suggests that employers are insufficiently aware of the structure of Family Credit for it to have a direct effect on the setting of wages or hours of work [Callender *et al.* (1994)]. There may, however, be an unconscious response to increased labour supply at low wages.

sustainable alternative to full-time work or unemployment, labour supply may be reduced.

Increasingly, policies have been aimed at reducing the resulting disincentives. For example, those currently receiving the Revenu Minimum d'Insertion in France face a withdrawal rate of 50 per cent of earnings. Employers' social contributions are also reduced by 30 per cent for some categories of part-time workers. In Germany, an unemployed person (who was formerly in full-time employment) is allowed to work up to 18 hours per week with half of his pay deducted from benefits. Denmark allows a recipient of social assistance to earn up to DKr 2 000 per month for 6 months after 3 months benefit receipt. Subject to certain limits, half of all earnings of the unemployed in the United Kingdom are paid as a re-employment bonus when they find a full-time job. Ireland has a part-time job incentive scheme paid to those receiving the long-term rate of unemployment assistance who work for less than 24 hours a week. In Canada, provinces disregard some earnings (typically C$ 50 to C$ 200 per month, depending on family size) in the social assistance means-tests. The first $90 per month is disregarded from AFDC benefits in the United States, with a further $175 per month available for childcare expenses.

In many of these cases, special rules allowing part-time work to be combined with benefits are limited to those who were previously unemployed. Australia has gone further and allows those who were working full-time and whose hours have been sufficiently reduced to be entitled to means-tested benefit (although benefit entitlement remains conditional on availability for full-time work if it is offered). About 15 per cent of Australian unemployment benefit recipients work part-time.

Table 2.7 illustrates the effects of the various disregards and special schemes that apply to part-time work. It is assumed that an unemployed person with a family and two children works two days a week, earning two-fifths of the APW level of earnings (other assumptions are as in Table 2.1).

The first year of unemployment in Ireland, in Norway when social assistance is received, and in the United Kingdom when less than 16 hours are worked, all follow the "traditional" social assistance model. Apart from (small) earnings disregards, there is no immediate financial incentive to work part-time.[42] In other cases, the features of the benefit system mentioned above have an impact. Hence, the incentive to work part-time is sometimes significant, for example, in Australia. But the trade-off is apparent: the higher is the incentive to work part-time, the less attractive is full-time work.

The effective administration of job-search tests is important when there is an incentive to work part-time. The experiences of Belgium and Norway illustrate the problems caused by increasing the attraction of part-time relative to full-time work. Both employers and employees altered their behaviour to take advantage of the possibility of working part-time while claiming benefit. The result was "a costly growth in the incidence of part-time work among people who would otherwise be working full-time" [OECD (1994*b*)]. Both countries have since attempted to reduce such unintended use of the benefit system. New Zealand has recently experienced rapid growth in part-time and seasonal employment. Administrative measures and an extension of the waiting period for re-qualification for benefits are being used to prevent inappropriate combinations of these work patterns with benefit receipt. In the United Kingdom, Family Credit is paid to those who work at least 16 hours. A supplement has recently been introduced for those working 30 hours to provide an incentive to move beyond part-time work.

One partial response to the dilemma of wanting to promote part-time work without unnecessarily discouraging full-time work is to recognise that for some groups, such as lone parents, part-time work may be a more realistic option than full-time work. Benefit systems could be adjusted so that benefit reduction rates for these groups are lowered, increasing the incentive to take part-time work, albeit at the cost of making full-time work less attractive [Duncan and

Table 2.7. **The incentive to work part-time for an unemployed person with two children**

	Benefit	Percentage of net income in full-time work	
		Fully unemployed	Part-time worker earning 40 per cent of full-time weekly wages
Australia	Job-search allowance	71	86
Denmark	Unemployment insurance	83	88
Germany	*Arbeitslosengeld* (unemployment insurance)	78	92
Ireland	Unemployment insurance/unemployment assistance	64	64
	Unemployment assistance/part-time job incentive	64	84
Netherlands	Unemployment insurance	84	91
	Social assistance with disregard	80	91
	Social assistance without disregard	80	82
Norway	Unemployment insurance	73	84
	Social assistance	83	84
Spain	Unemployment insurance	74	85
United Kingdom	Income support (less than 16 hours work)	74	78
	Family credit (more than 16 hours work)	74	79

Notes: Incomes are expressed as percentages of net incomes in full-time work at APW wages. Figures are for a couple with 2 children. An earnings disregard of 15 per cent of benefit is applied for a maximum of 2 years in the Netherlands. Thereafter, there is no earnings disregard.
Source: OECD database on taxation and benefit entitlements.

Giles (1996)]. Similarly, METRs for the long-term unemployed on the first segment of earnings could be reduced to encourage them to maintain contact with the labour market even where it is not possible to lift someone fully off benefit.

Similar issues are raised by ''short-term work'' – temporary, often casual employment. An earnings credit scheme, as recently introduced in Australia, can help make such work worthwhile for the long-term unemployed. Each benefit assessment period's earnings disregard can be accumulated (up to a certain limit). When someone who has been unemployed gets a short-term job, they can use this cumulated disregard to reduce the impact on their benefit. In the same way that means tests must trade-off incentives to part-time work with disincentives to full-time work, an earnings credit must trade-off incentives to occasional casual work with some disincentives to continuing work.

4. Policy responses to reduce high METRs and tackle the poverty trap

High METRs have become more important as a policy issue. First, increasing numbers of people are receiving means-tested benefits, in part because of tightening of the conditions for receipt of insurance benefits. Second, social policy concerns have meant that unemployment benefits are supplemented by child benefits or family allowances. Extending these latter benefits to those in work on low earnings to avoid sharp falls in income on entering employment have extended the range of high METRs. Third, the desire to ensure that there is a financial incentive to work has resulted in a recourse to employment conditional benefits in some countries.

The consequences of these developments have been disincentives to work part-time and/or for spouses of the unemployed to work. Recent policy reforms have sought to reduce these disincentives:

– *earning while receiving benefits.* Some countries have increased the amount which can be earned before means-tested benefits are reduced or otherwise altered the benefit system to permit a modest amount of part-time work. These earnings disregards provide an incentive for those on social assistance to maintain a link with the labour market. Such reforms have taken place in Australia, Canada, Denmark, Ireland, the Netherlands, New Zealand and the United Kingdom. Benefits specifically for those in part-time work have

been introduced in Ireland. However, Belgium and Norway have restricted the extent to which part-time work and benefits can be combined, in order to curb abuses. Italy provides direct subsidies to employers and reductions in employers' social security contributions, and France has recently extended its contributions exemption for part-time work. Spain reduces employer contributions for some categories of part-time work;

– *reducing the prevalence of high METRs.* Taxes on low earnings have been reduced in several countries (Denmark, New Zealand, the United Kingdom), but budgetary constraints limit the possibilities of extending this and many other policies. Benefit reduction rates for older workers have been cut sharply in Japan. The current reform in New Zealand will lower the reduction rate from 70 to 30 per cent over a NZ$ 100 earnings range for lone parents and invalidity benefit recipients; and
– *ensuring women married to unemployed men have an incentive to work.* Australia has reduced very high METRs by individualising the benefit system. Some incentive to work is retained by the spouses of the unemployed, even where they are in receipt of means-tested benefits. A similar effect is achieved through employment-conditional benefits, as in Ireland and the United Kingdom, which reduce the incentive for both spouses to leave employment when one becomes unemployed.

E. CONCLUSIONS

If work does not pay, people will be reluctant to work. For the majority of the population in the OECD area, there are clear, immediate, financial incentives to work. But such incentives may be lacking for many people with low potential wages, particularly if they have children. Some will work in spite of this, because work experience improves long-run job prospects or for other reasons. Nevertheless, for these groups, social and labour market goals may clash. Benefits need to be high enough to ensure income is adequate, but this may mean that taking a job brings little or no extra income, trapping families in a cycle of dependency.

Two problems caused by tax and benefit systems were considered in this chapter. The first is the "unemployment trap" which occurs when benefits are high compared with expected incomes when working. The second problem is the "poverty trap": low-wage workers have little immediate financial incentive to increase their hours worked. Also, the incentive to work part-time or to invest in education and training to move up the wage ladder is blunted.

There are no easy or obvious solutions to these two problems. Cutting benefits is the simplest way of increasing the incentive to work, but it is not necessarily the best and the social costs may be unacceptable. If benefits are reduced to an inadequate level or if job-search is inefficiently short, poverty may increase. Few countries have opted for more than marginal cuts in benefits. Nevertheless, if benefits are higher than potential in-work incomes, long-term benefit dependency out of work may be encouraged. The benefit level may need to be cut. In addition, the duration of earnings-related benefits should be designed to encourage reappraisal of acceptable wages by those who do not rapidly find work.

Another potential solution which has attracted much interest in recent years, is employment-conditional tax credits or benefits. These can reduce the unemployment trap by increasing in-work incomes for the low-paid at lower budgetary cost than general tax cuts. But such policies are not appropriate everywhere. The wider is the earnings' distribution and the lower are METRs before introducing the benefit, the greater is the likelihood that employment-conditional benefits will increase aggregate labour supply. These schemes are best limited to families with children because they usually have higher benefit entitlements and therefore smaller work incentives.

Two areas where balancing the various objectives of tax and benefit systems is particularly difficult are the benefit position of spouses of unemployed persons and the combination of part-time work with benefit receipt. The number of recipients of means-tested benefits has increased rapidly in nearly every OECD country because of failure to qualify for, and exhaustion of, insurance benefits, growth in youth unemployment and in the number of lone-parent families. Depending on the design of the means-test, it can reduce the incentive to work part-time or for low earnings not just by the unemployed person but also by their spouse. Means-tested benefits should be designed so that each member of the household has an incentive to work, *e.g.* by separating benefit entitlements for individuals. Part-time work which promotes contact with the labour market should be encouraged for those such as lone-parents or the long-term unemployed for whom full-time work may not be a realistic option. Allowing part-time work to be combined with reduced benefit receipt for a limited period will help such groups. But experience suggests that it is important to maintain tight controls on part-time unemployment benefits to guard against abuses.

Tax and benefit systems are pursuing multiple objectives, including, *inter alia,* raising revenue;

insuring against labour-market risk; supporting families without resources; and trying to preserve incentives to work. It is inevitable that not all of these goals can be achieved simultaneously. But this chapter has identified avoidable barriers to employment caused by administrative complexities, poor integration of the various parts of the tax and benefit systems and badly designed means-tests. It has also indicated several policy areas where policies will increase employment opportunities for the most disadvantaged, but reduce work incentives for the majority. The social and labour market consequences of permanently excluding a significant minority of the population from the world of work are apparent in too many OECD countries for such policies to be spurned.

Notes

1. This chapter is based on a larger report to be published later this year under the title "Making Work Pay: A Thematic Review of Taxes, Benefits, Employment and Unemployment".
2. The effects of taxation on labour costs are discussed in OECD (1995*a*).
3. In the United States, the proportion of "traditional" households (couples with the husband as sole earner) has declined from 70 to 20 per cent since 1940. Two-earner households have increased from 9 to 40 per cent [Hayghe (1990)]. The number of lone-parent families has doubled in almost all OECD countries since the early 1970s and accounted for 15 per cent of all families with children in 1990-1991 [OECD (1993); Ermisch (1990); Eurostat (1995)].
4. "This comparison [between unemployment benefits and aggregate unemployment rates] suggests that, although there is not an immediate statistical link between unemployment rates and unemployment benefit entitlements, the hypothesis of a longer-term link is plausible [OECD (1994 *b*)]." However, using the same data, Blondal and Pearson (1995) find that the index is also statistically linked with labour force participation. Higher benefits encourage labour force participation. Hence, there is no statistically significant effect of the index on the employment to population ratio.
5. Table 2.1 considers the first month of unemployment. The index in Chart 2.2 relates to an average of replacement rates over time. Otherwise, the benefits included and their calculation are same.
6. Countries with no benefit payments for housing costs are Belgium, Ireland (although an element can be added to Social Welfare payments), Italy and the United States (although local schemes exist).
7. It is assumed that housing costs are always 20 per cent of gross APW earnings regardless of the income level or family type. This approximates to actual average housing costs across the OECD area, but may not be representative of the housing costs of families on benefit in any one country. Replacement rates are expressed *before* housing costs. In this respect, the income definition differs from that adopted by the Seven Country Study (1996) which uses an income concept net of housing costs including utility costs, and that of the Dutch Central Planning Bureau (1995), which uses an income concept net of housing costs and private medical insurance. As discussed in Martin (1996), these differences in the income definition account for nearly all the large variation in net replacement rates reported in the different studies for certain countries.
8. Even so, countries have recently recognised the problems caused by having social assistance at a level higher than unemployment insurance. The maximum in Denmark, for example, is limited now to 90 per cent of the maximum UI benefit.
9. For example, in the United Kingdom, someone working 16 hours per week at £5 per hour would earn £80 gross. A lone parent would typically be entitled to benefit income of £133 per week, so there would be little incentive to work. However, with the employment-conditional benefit, Family Credit, worth in this case £68 per week, the replacement rate drops dramatically to 65 per cent. Employment-conditional benefits must be withdrawn from those with higher incomes leading to high marginal tax rates (in the United Kingdom case above, the marginal tax rate would be over 86 per cent). See United Kingdom DSS (1995) for full details of the United Kingdom tax and benefit system.
10. For more detail on benefit transitions in some countries, see the Seven Country Study (1996).
11. Those aged over 45 also have a longer duration of benefit.
12. Although theoretically unlimited, in practice unemployment insurance in Belgium may be limited to one-and-a-half times the average duration for similar unemployed people.
13. There is relatively little evidence on what happens when people actually change labour force status, but what evidence there is confirms the picture given in this chapter. The results of a study of how much people actually gained when they moved into employment from being without work in the United Kingdom showed that most gained a large amount, the mean difference between earnings and benefits being £69 per week. However, 3 per cent of the sample were worse-off in work than when unemployed, and a third of females earned less than 20 per cent more than they received in benefit. When considering the benefit/earnings ratio (approximately the same concept as replacement rate), high ratios were predominantly found in those families with children and who get housing benefit.
14. Definitions of employment status, family type, earnings and taxation have been standardised as much as possible. Nevertheless, insofar as sample sizes differ; the year of the data underlying the models differ; and other features of the models cannot be made identical, the estimates are not strictly comparable. For more details of the models and the procedures followed, see OECD (forthcoming).
15. Italy is an exception: microsimulation analysis points to much higher replacement rates than in the stylised cases. This reflects both the complexity of the Italian benefit system and, in particular, the treatment of the mobility allowance, the Cassa Integrazione Guadagni

Straordinaria and employers' social security contributions [see OECD (forthcoming)].

16. The replacement rates are "individualised" (otherwise known as average effective tax rates). They are the change in net family income as a percentage of the change in earnings as employment status changes. The replacement rate is calculated for the first week of unemployment, ignoring waiting periods. In the absence of evidence to the contrary, it is assumed that previously employed individuals qualify for unemployment insurance [see OECD (forthcoming)].
17. Very high (over 100 per cent) replacement rates are often the result of special provisions in the benefit system. For example, in Norway the benefit level is based on income in the previous year or the average of the income over the past 3 years. A decline in earnings can leave the benefit based on the latter rule appearing to be relatively high. Furthermore, older workers are entitled to a minimum benefit based on a wage level which may be higher than their current earnings, again resulting in high replacement rates.
18. Those not working include the unemployed and those who are non-employed but who are in a position to work. They exclude students in full-time education and those in receipt of invalidity or early-retirement benefits.
19. Austria, Finland, Greece, Iceland, Italy, Japan, Luxembourg, Netherlands, Norway, Portugal, Sweden and Switzerland.
20. See Blondal and Pearson (1995) for an econometric examination of the effects of non-employment benefits on unemployment, employment and labour force participation rates.
21. An Irish study suggests that the value of the non-cash benefits (medicard, butter, footwear and fuel) is nearly IR£ 12 per week for a couple with two children. This is 10 per cent of the cash assistance the family can receive [Irish Department of Enterprise and Employment (1996)].
22. Garman *et al.* (1992) found that two-thirds of the unemployed in the United Kingdom reported average travel-to-work costs of nearly 7 per cent of earnings. Of the unemployed moving into a job, 18 per cent reported increased expenses, mainly one-off, "back-to-work" costs, such as tools or clothing.
23. Over four-fifths of the unemployed reported regular job-search expenses averaging £5 per week in the United Kingdom [Garman *et al. (*1992)]. Typical weekly job-search costs in Ireland are IR£ 6.40 per week [Irish Department of Enterprise and Employment (1996)].
24. The largest deduction is in Norway (nearly 14 per cent of APW earnings). Generally, deductions are 3-7 per cent of APW earnings [OECD (1995*c*)].
25. For example, in Canada these are limited to two-thirds of earnings and C$ 5 000 for children under 7 and C$ 3 000 for children aged 7 to 14 (1994 figures). In the United Kingdom, employer-provided child-care has not been taxed as a benefit-in-kind since 1990.
26. These family types were not included in Table 2.3 in order to retain comparability with the single-earner family cases discussed in more detail in Table 2.1. However, the size of the barriers to work caused by child-care costs are similar to those indicated in Table 2.3.
27. The tax system can also reduce the cash-flow returns to working. In most OECD countries, personal income tax is withheld from earnings at source at a rate which will approximate at year-end the annual tax liability. If someone enters employment after a period of receiving benefit, there will be an over-retention of earnings at source in a progressive tax system. There will eventually be a repayment of the excess tax paid, but, in the meantime, the cash-constrained individual has in effect been obliged to give a loan to the government.
28. See O'Leary *et al.* (1995) and Meyer (1995) for a summary of these experiments and their results.
29. For example, Corden and Craig (1991) report that *no-one* they interviewed who had taken a low-paid job in the United Kingdom had calculated how much Family Credit to which they were entitled.
30. Sometimes such suspicion is justified. Current benefit provisions in the United Kingdom mean that many of those who leave benefit for a job, which they subsequently lose, will find that they receive less housing benefit than before.
31. The head of the Commission of the French Assembly investigating the use of public funds to promote employment noted that the first role of the commission would be to identify all such schemes. He stated that "if we, who are supposed to be competent, don't know [which schemes are available], how can an employer know about them? Therefore, he does not use all the schemes which are in theory available to him" (Michel Péricard, translation of remarks reported in *La Tribune Desfossés,* 22 March 1996). Few employers understand how Family Credit works in the United Kingdom [Callender *et al.* (1994)].
32. The rule pre-exists 1994, but it was possible to receive more than 90 per cent if total income was less than 80 per cent of the maximum unemployment benefit.
33. Maximum rents covered by housing benefit for new claimants will be restricted to the average for the type of accommodation and area.
34. An exception to the trend is Belgium, where benefit receipt has been extended to 18-21 year olds.
35. Means-tests can have effects outside the labour market as well. Assets can be held in such a way as to ensure that incomes are minimised, so avoiding the means-test. Furthermore, it has been argued that because rules seem unreasonable and cannot easily be enforced, non-compliance can become widespread, contributing to reduced standards of public morality [see Field (1995)].
36. For Germany, see Giannelli and Micklewright (1995); for the Netherlands, see Kersten *et al.* (1993); and for the United Kingdom, see Kell and Wright (1990) and Davies *et al.* (1992). However, a recent Australian study [Bradbury *et al.* (1995)] suggests that all the differences in employment rates of married women can be explained by differences in background characteristics.

37. Individual income testing cannot in itself promote participation in part-time work by the wives of unemployed men unless means tests are structured to permit this, as in Australia [Heady and Smyth (1989); Moylan *et al.* (1984)].

38. APPORT is paid in respect of each month in which earnings exceed C$ 100. The benefit for a two-earner couple with two children earning C$ 14 000 is over $3 800. Housing allowances of up to C$ 1 080 and child-care expenses can be paid on top.

39. Results provided to the Secretariat by the ESRI, Dublin. See OECD (forthcoming) for a discussion of the microsimulation models used in this chapter.

40. Other studies have focused only on the effect on hours worked and not on participation [US General Accounting Office (1993); Holtzblatt *et al.* (1994)].

41. For example, Howard Davies, the former director-general of the Confederation for British Industry and now Deputy Governor of the Bank of England, has suggested that such a policy might be necessary to prevent exploitation of the government by "cowboy employers" (as reported in *The Independent*, 22 September 1995).

42. This is so unless part-time work is not declared to the authorities. Thus, when means-tests are reduced, it is not possible to measure the extent to which any declared increase in part-time work is a genuine increase or simply increased reporting.

Bibliography

ALSTOTT, A.L. (1994), "The Earned Income Tax Credit and Some Fundamental Institutional Dilemmas of Tax-Transfer Integration", *National Tax Journal,* No. 3, pp. 609-619.

ALSTOTT, A.L. (1995), "The Earned Income Tax Credit and the Over-simplified Case for Tax-Based Welfare Reform", *Harvard Law Review,* Vol. 108.

ATKINSON, A.B. and MICKLEWRIGHT, J. (1991), "Unemployment Compensation and Labour Market Transitions: A Critical Review", *Journal of Economic Literature*, No. 4, pp. 1679-1727.

AUSTRALIA (1994), *Working Nation: The White Paper on Employment and Growth,* Canberra.

BLONDAL, S. and PEARSON, M.A. (1995), "Unemployment and Other Non-Employment Benefits", *Oxford Review of Economic Policy*, No. 1, pp. 136-169.

BRADBURY B., KING, M. and MCHUGH J. (1995), *Why Do the Wives of Unemployed Men Have Such Low Employment Rates?,* Social Policy Research Centre, Sydney.

CALLAN, T., O'DONOGHUE, C. and O'NEILL, C. (1995), *Analysis of Basic Income Schemes for Ireland,* Economic and Social Research Institute, Dublin.

CALLENDER, C., COURT, G., THOMPSON, M. and PATCH, A. (1994), *Employers and Family Credit*, Research Report No. 32, Department of Social Security, HMSO, London.

CORDEN, A. and CRAIG, P. (1991), *Perceptions of Family Credit*, HMSO, London.

DAVIES, R.B., ELIAS, P. and PENN, R. (1992), "The Relationship Between a Husband's Unemployment and His Wife's Participation in The Labour Force", *Oxford Bulletin of Economics and Statistics,* No. 2, pp. 145-171.

DICKERT, S., HOUSER, S. and SCHOLZ, J.K. (1995), "The Earned Income Tax Credit and Transfer Programs: A Study of Labour Market and Program Participation", in Poterba, J. (ed.), *Tax Policy and the Economy,* Vol. 9, MIT Press and the National Bureau of Economic Research, Cambridge, pp. 1-50.

DILNOT, A. W. and DUNCAN, A.S. (1992), "Lone Mothers, Family Credit and Paid Work", *Fiscal Studies*, No. 1, pp. 1-21.

DUNCAN, A.S. and GILES, C. (1996), "Labour Supply Incentives and Recent Family Credit Reforms", *The Economic Journal,* pp. 142-155.

DUNCAN, A.S., GILES, C. and WEBB, S.J. (1994), *Social Security and Women's Independent Incomes*, Equal Opportunities Commission, Manchester.

DUTCH CENTRAL PLANNING BUREAU (1995), "Replacement Rates: A Transatlantic View", Working Paper No. 80, The Hague, September.

EARDLEY, T., BRADSHAW, J., DITCH, J., GOUGH, I. and WHITEFORD, P. (1996), *Social Assistance in the OECD Countries*, HMSO, London.

EISSA, N. and LIEBMAN, J.B. (1995), "Labour Supply Response to the Earned Income Tax Credit", Working Paper No. 5158, National Bureau of Economic Research, Washington, DC.

ERGAS, Y. (1990), "Child-care Policies in Comparative Perspective: An Introductory Discussion", in *Lone-Parent Families: The Economic Challenge*, OECD, Paris, pp. 173-199.

ERMISCH, J. (1990), "Demographic Aspects of the Growing Number of Lone-parent Families", *Lone-Parent Families: The Economic Challenge*, OECD, Paris, pp. 27-41.

EUROSTAT (1995), *Demographic Statistics,* Luxembourg.

FIELD, F. (1995), *Making Welfare Work,* Institute of Community Studies, London.

FRANCE, MINISTÈRE DES FINANCES (1993), *Project de loi des finances pour 1993: Évaluation des voies et moyens,* Tome II, Imprimerie Nationale, Paris.

FRY, V. and STARK, G.K. (1993), *The Take-up of Means-tested Benefits 1984-90*, Institute for Fiscal Studies, London.

GARMAN, A., REDMOND, G. and LONSDALE, S. (1992), *Incomes In and Out of Work, A Cohort Study of Newly Unemployed Men and Women,* Research report No. 7, Department of Social Security, HMSO, London.

GIANNARELLI, L. and STEUERLE, E. (1994), "It's Not What You Make, It's What You Keep: Tax Rates Faced by AFDC Recipients", Paper presented to the Association for Public Policy Analysis and Management, Chicago, October.

GIANNELLI, G. and MICKLEWRIGHT, J. (1995), "Why Do Women Married to Unemployed Men Have Low Participation Rates?", *Bulletin of Economics and Statistics,* Vol. 57 No. 4, pp. 471-486.

HAYGHE, M.V. (1990), "Change in American Families", *Monthly Labour Review*, March, pp. 114-119.

HEADY, P. and SMYTH, M. (1989), *Living Standards During Unemployment: The Results,* Vol. I, HMSO, London.

HOLT, S. (1992), "Improvement of the Advance Payment Option of the Earned Income Credit", *Tax Notes*, Vol. 60, p. 1583.

HOLTZBLATT, J., MCGUBBIN, J. and GILLETTE, R. (1994), "Promoting Work Through the EITC", *National Tax Journal,* No. 3, pp. 591-607.

IRISH DEPARTMENT OF ENTERPRISE AND EMPLOYMENT (1996), *Growing and Sharing Our Employment: Strategy Paper on the Labour Market,* Dublin.

KELL, M. and WRIGHT, J. (1990), ''Benefits and the Labour Supply of Women Married to Unemployed Men'', *The Economic Journal,* Vol. 100, pp. 119-126.

KERSTEN, A., JEHOEL, G., SMIT, L., SIEGERS, J. and VAN OORSCHOT, W. (1993), *Samen zonder werk? Niet geindividualiseerde de sociale zekerheidsuitkeringen en de arbeitsparticipatie van vrouwen*, SVR Report R 93/7, Zoetemeer, Sociale Verzerkeringsraad.

MARSH, A. and MCKAY, S. (1993), *Families, Work and Benefits,* Policy Studies Institute, London.

MARTIN, J.P. (1996), ''Measures of Replacement Rates for the Purpose of International Comparisons: A Note'', *OECD Economic Studies,* OECD, Paris, forthcoming.

MEYER, B.D. (1995), ''Lessons from the US Unemployment Insurance Experiments'', *Journal of Economic Literature*, Vol. XXXIII, pp. 91-131.

MOYLAN, S., MILLAR, J. and DAVIES, R. (1984), ''For Richer, for Poorer: The DSS Cohort Study of Unemployed Men'', DHSS Research Report No. 11, HMSO, London.

OECD (1993), ''Breadwinners or Child-Rearers: The Dilemma for Lone Mothers'', Labour Market and Social Policy Occasional Papers No. 12, Paris.

OECD (1994*a*), *The OECD Jobs Study: Facts, Analysis, Strategies*, Paris.

OECD (1994*b*), *The OECD Jobs Study: Evidence and Explanations*, Paris.

OECD (1995*a*), *The OECD Jobs Study: Taxation, Employment and Unemployment*, Paris.

OECD (1995*b*), *The OECD Jobs Study: Implementing the Strategy*, Paris.

OECD (1995*c*), *The Tax/Benefit Position of Production Workers: 1995 Edition*, Paris.

OECD (1996), *The OECD Jobs Strategy: Enhancing the Effectiveness of Active Labour Market Policies,* Paris.

OECD (forthcoming), *Making Work Pay: A Thematic Review of Taxes, Benefits, Employment and Unemployment*, Paris.

O'LEARY, C.J., SPIEGELMAN, R.G. and KLEIN, K.J. (1995), ''Do Bonus Offers Shorten Unemployment Insurance Spells? Results from the Washington Experiment'', *Journal of Policy Analysis and Management*, No. 2, pp. 245-269.

OLSON, L. and DAVIS, A. (1994), ''The Earned Income Tax Credit: Views from the Street Level'', Working Paper No. 94-1, Centre for Urban Affairs and Policy Research, Northwestern University.

O'NEIL, C.J. and NELSESTUEN, L.B. (1994), ''The Earned Income Tax Credit: The Need for a Wealth Restriction for Eligibility Determination'', *Tax Notes*, Vol. 63, p. 1189.

PUNIARD, A. and HARRINGTON, C. (1993), ''Working Through Poverty Traps: Results of the Survey of Sole Parents, Pensioners and Unemployed Beneficiaries'', *Social Security Journal,* December, pp. 1-17.

SCHERER, P. (1978), ''The Perverse Additional Worker Effect in Australia'', *Australian Economic Papers*, December, pp. 261-275.

SCHOLZ, J.K. (1990), ''The Participation Rate of the Earned Income Tax Credit'', Working Paper, Institute for Poverty Research, University of Wisconsin.

SCHOLZ, J.K. (1994), ''The Earned Income Tax Credit: Participation, Compliance and Antipoverty Effectiveness'', *National Tax Journal*, No. 1, pp. 63-85.

SCHOLZ, J.K. (1996), ''In-work Benefits in the United States: The Earned Income Tax Credit'', *The Economic Journal,* Vol. 106, pp. 156-169.

SEIKE, A. (1994), ''The Employment of Older People in Japan and Policies to Promote It'', *Japan Labour Bulletin*, December.

SEIKE, A. and SHIMADA, H. (1995), ''Social Security Benefits and the Labour Supply of the Elderly in Japan'', in Noguchi Y. and Wise D. (eds.), *Ageing in the United States and Japan*, University of Chicago Press, Chicago.

SEVEN COUNTRY STUDY (1996), *Unemployment Benefits and Social Assistance in Seven European Countries*, HMSO, London, forthcoming.

SNESSENS, H.R. and VAN DER LINDEN, B. (1994), ''De l'optimalité des systèmes d'assurance-chômage : quelques réflexions'', *Recherches Économiques de Louvain,* No. 2, pp. 129-162.

STEUERLE, E. (1993), ''The IRS Cannot Control the New Superterranean Economy'', *Tax Notes,* Vol. 61, p. 1839.

UK DEPARTMENT OF SOCIAL SECURITY (1994), *Social Security Statistics,* HMSO, London.

UK DEPARTMENT OF SOCIAL SECURITY (1995), *Tax Benefit Model Tables,* Government Statistical Service, London.

US GENERAL ACCOUNTING OFFICE (1992), *Earned Income Tax Credit: Advance Payment Option is Not Widely Known or Understood by the Public*, Washington, DC.

US GENERAL ACCOUNTING OFFICE (1993), *Earned Income Tax Credit: Design and Administration Could be Improved*, Washington, DC.

US GENERAL ACCOUNTING OFFICE (1994), *Earned Income Credit: Data on Non-Compliance and Illegal Alien Recipients*, Washington, DC.

US GENERAL ACCOUNTING OFFICE (1995), *Earned Income Credit: Targeting to the Working Poor*, Washington, DC.

US HOUSE OF REPRESENTATIVES (1993), *Overview of Entitlement Programs: 1993 Green Book*, Government Printing Office, Washington DC.

US HOUSE OF REPRESENTATIVES (1994*a*), *Medicaid Source Book: Background Data and Analysis*, Government Printing Office, Washington DC.

US HOUSE OF REPRESENTATIVES (1994*b*), *Overview of Entitlement Programs: 1994 Green Book*, United States Government Printing Office, Washington DC.

WHITEHOUSE, E.R. (1996), ''Implementing in-Work Benefits in Different Labour Markets'', *The Economic Journal*, Vol. 106, pp. 129-141.

YIN, G. and FORMAN, J. (1993), ''Redesigning the Earned Income Tax Credit Programme to Provide More Effective Assistance for the Working Poor'', *Tax Notes*, No. 7, pp. 951-960.

CHAPTER 3

Earnings inequality, low-paid employment and earnings mobility

A. INTRODUCTION AND MAIN FINDINGS

1. Introduction

Evidence that the broad post-war trend toward narrowing earnings distributions reversed during the 1980s in many OECD countries has generated much research and debate about its extent, causes and consequences [OECD (1993), Chapter 5]. This is a natural consequence of the pervasive importance of the distribution of earnings. From the perspective of business enterprises, the relative wages of different groups of workers are an important determinant of hiring, training, technology use and many other decisions. From the perspective of individual workers, their earnings levels and its evolution over the course of their working lives are important determinants of their level of economic well-being, while also influencing important choices, such as whether or not to pursue higher education or to train for a specific trade. The distribution of earnings also has consequences for public policy. For example, the prevalence of low-paid employment and unstable earnings influences the need for and costs of social insurance and anti-poverty programmes.

This chapter is intended to fill several gaps in the understanding of the distribution of earnings. Section B examines how the dispersion of earnings has changed during the first half of the 1990s. Has the broad trend toward rising inequality continued or even spread to countries that maintained stable or even falling earnings dispersion during the 1980s? Section C analyses the incidence of low-paid employment. One of the most troubling aspects of increased wage dispersion during the 1980s was the declining relative earnings – and, in some countries, the declining real earnings – of low-paid workers. Does the incidence of low pay differ across countries and can it be ascribed to particular policies or labour market institutions? Do policies and institutions that reduce the incidence of low-paid employment result in lower employment rates for low-skill workers? Section D seeks to incorporate earnings *mobility* into the comparative analysis of earnings inequality. Does mobility of individuals through the earnings distribution offset the increase in the inequality of labour market outcomes that otherwise would be associated with comparatively high or rising levels of earnings dispersion? Do policies that seek to increase employment by deregulating relative wages increase the inequality of *life-time* earnings as much as they appear to increase the inequality of earnings *at a single point in time*? While there have been several previous international studies of earnings mobility, they have at most included four countries whereas eight countries are compared in Section D.

The analysis is subject to two important limitations, in addition to the usual problems of data comparability that plague international comparisons. First, the analysis of earnings inequality is mostly restricted to *gross cash earnings* of wage and salary workers. Although cash earnings are an important component of family incomes, there are large national differences in the relationship between the distribution of earnings across workers and the distribution of family incomes and consumption levels [OECD (1995); Gottschalk and Smeeding (1996)]. The primary rationale for analysing the distribution of gross cash earnings, rather than take-home pay or total labour compensation, inclusive of non-wage benefits, is that data on gross earnings are available for a larger number of countries. This choice also facilitates comparisons with the large literature on trends in earnings inequality, which largely adopts this definition of earnings (Freeman and Katz, 1995). Nonetheless, it must be borne in mind that data on gross cash earnings alone are not adequate to analyse trends in income distribution or labour market incentives (Chapter 2). A second limitation is that the relationships between cross-sectional earnings dispersion and economic policies, employment rates, and earnings mobility are very complex and the analysis undertaken in the chapter is exploratory. In particular, attempts to compare earnings mobility across different countries are hindered by fundamental conceptual and empirical difficulties.

2. Main findings

While earnings inequality rose in many countries over the 1980s, Section B shows that there has not been a broad increase across the OECD area during the first half of the 1990s. Only the United Kingdom and the United States have continued to experience a

rapid rise in inequality. In other countries, where the rise in earnings dispersion has been more recent, this would appear to have been more closely associated with substantial labour and product market reforms. While the tendancy towards increased inequality appears to have slackened somewhat, only a few countries, notably Canada, Finland and Germany,[1] have experienced a decline in earnings dispersion over the last 5 to 10 years. For some countries – Australia, New Zealand and the United States – a rise in earnings inequality has implied falls, or only weak growth, in real wages over the past decade for most jobs held by men in the bottom half of the earnings distribution.

As shown in Section C, the incidence of low pay tends to be highest in those countries where earnings inequality is the most pronounced. In the case of the United States, one-quarter of all full-time workers earn less than two-thirds of median earnings compared with around 7 per cent or less in Belgium, Finland and Sweden. The distribution of low-paid employment is, however, more uniform across countries. Youths and women are the most likely to be working in low-paid jobs which, typically, are heavily concentrated in the wholesaling, retailing and catering sectors. A white-collar job is not an automatic guarantee to receiving a well-paid job as the incidence of low pay for sales and personal service workers and, in some countries, clerical workers is as high, if not higher, than for blue-collar workers.

The analysis in Section C suggests that higher rates of unionisation and collective bargaining coverage reduce the incidence of low-paid employment. Other institutional factors, such as legal minimum wages set at high levels and generous welfare benefits, also appear to create a binding wage floor, and lower the incidence of low pay. The impact of these wage floors on labour market outcomes is uncertain. The simple correlations presented suggest that there is no significant tendency for employment to be lower and unemployment higher for inexperienced or low-skilled workers in countries where there are relatively few low-paid jobs available.

While labour-market institutions and the incidence of low pay vary considerably across countries, the analysis in Section D suggests that the similarities with respect to earnings mobility are more marked than the differences. In all eight countries analysed, approximately half of all workers moved at least one quintile in the earnings distribution between 1986 and 1991. Country rankings are quite sensitive to the measure used, and there is not any one country for which earnings mobility is consistently the highest. Countries with higher cross-sectional earnings inequality do not appear to have correspondingly higher relative earnings mobility, so that international differences in earnings inequality at a single point in time probably provide a good approximation of the differences in life-time earnings inequality. However, the absolute volatility of earnings appears to increase with cross-sectional inequality. Across all countries, younger workers typically display the greatest upward mobility as they gain experience and establish careers. Another empirical regularity is that mobility increases as the time span considered lengthens.

Only a minority of low-paid workers continue to be in low-paid jobs over a five-year period, but this share varies substantially aross the countries (6 per cent of Danish, but 34 per cent of American workers continued to earn less than two-thirds the median wage). Moreover, much of the movement is out of full-time employment altogether, and a considerable share of workers in low-paid jobs had also been in low-paid jobs 5 years earlier or had experienced downwards mobility. Overall, movements into and out of low-paid jobs suggest that low-paid workers have very diverse career prospects and histories. Thus, low-wage employment cannot be simply characterised as either providing a stepping-stone into a more stable and higher-paid career or as a permanent trap. Finally, countries with high cross-sectional earnings inequality tend to have lower upward mobility among low-paid workers. The United States stands out in this respect.

B. RECENT TRENDS IN EARNINGS INEQUALITY

The substantial rise in earnings inequality over the 1980s in the United States and the United Kingdom and the smaller rise in a number of other OECD countries has spawned a major debate about the causes of this phenomenon and raised fears that a growing number of workers, particularly those with few qualifications or little work experience, face a future of low-paid jobs or no job at all. Several explanations for rising inequality have been put forward: some relate to country-specific institutional features such as declining union membership [see, for example, Freeman (1993)]; others refer to forces of a more universal nature, such as skill-biased technical change [see, for example, Katz and Murphy (1992)] or trade with low-wage developing countries [see, for example, Wood (1994)]. However, the 1993 *Employment Outlook* provided evidence that, while earnings inequality had, indeed, risen over the 1980s in many countries, there were also several, mainly European, countries where it had remained stable. It is important to establish whether these trends have persisted into the 1990s.

Table 3.1 provides information on recent trends in the distribution of earnings for 18 OECD countries

Table 3.1. **Trends in earnings dispersion,[a] 1979-1995**

		1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	Average 5 yearly change[b] 1979-1989	Average 5 yearly change[b] 1989 onwards
Australia																				
Males	D9/D5	1.69	1.70	1.74	1.73	1.68	1.67	1.62	1.70	1.70	1.72	1.68	1.62	1.74	1.79	1.76	1.77	1.75	0.00	0.06
	D5/D1	1.62	1.60	1.64	1.65	1.64	1.64	1.61	1.64	1.64	1.68	1.67	1.68	1.64	1.63	1.64	1.66	1.68	0.03	0.01
Females	D9/D5	1.50	1.53	1.51	1.55	1.60	1.59	1.58	1.63	1.61	1.59	1.59	1.59	1.62	1.62	1.59	1.59	1.60	0.04	0.01
	D5/D1	1.60	1.66	1.65	1.70	1.72	1.70	1.67	1.67	1.64	1.66	1.64	1.65	1.62	1.58	1.58	1.60	1.58	0.02	–0.05
Total	D9/D5	1.67	1.70	1.68	1.73	1.71	1.69	1.66	1.71	1.68	1.72	1.70	1.66	1.71	1.72	1.72	1.75	1.77	0.02	0.06
	D5/D1	1.64	1.67	1.68	1.67	1.69	1.71	1.64	1.68	1.67	1.68	1.69	1.69	1.66	1.64	1.62	1.64	1.65	0.02	–0.04
Austria																				
Males	D9/D5	..	1.62	..	..	..	..	..	..	1.65	1.67	1.65	..	..	..	..	..	..	0.02	..
	D8/D5	..	1.39	..	..	..	..	..	..	1.41	1.43	1.43	1.43	1.42	1.43	1.43	1.44	..	0.02	0.01
	D5/D1	..	1.63	..	..	..	..	..	..	1.57	1.65	1.65	1.67	1.68	1.67	1.67	1.67	..	0.02	0.01
Females	D9/D5	..	1.74	..	..	..	..	..	..	1.77	1.78	1.79	1.79	1.80	1.81	1.81	1.82	..	0.03	0.03
	D8/D5	..	1.41	..	..	..	..	..	..	1.44	1.45	1.45	1.45	1.46	1.46	1.46	1.47	..	0.02	0.02
	D5/D1	..	1.93	..	..	..	..	..	..	1.96	1.95	1.93	1.96	1.99	2.00	2.02	2.03	..	0.00	0.10
Total	D9/D5	..	1.78	..	..	..	..	..	..	1.80	1.81	1.81	1.80	1.78	1.78	1.79	1.82	..	0.02	0.00
	D8/D5	..	1.46	..	..	..	..	..	..	1.46	1.47	1.47	1.48	1.47	1.47	1.47	1.47	..	0.00	0.00
	D5/D1	..	1.94	..	..	..	..	..	..	1.93	1.96	1.94	1.95	1.98	1.99	2.00	2.01	..	0.00	0.07
Belgium																				
Males	D9/D5	..	..	..	..	..	..	..	1.72	1.73	1.76	1.60	1.57	..	..	..	..	..	..	..
	D8/D5	..	..	..	..	..	..	1.38	1.39	1.40	1.41	1.37	1.37	1.37	1.37	1.37	..	..	..	–0.01
	D5/D1	..	..	..	..	..	..	1.40	1.39	1.39	1.39	1.41	1.40	1.39	1.40	1.38	..	..	..	–0.03
Females	D9/D5	..	..	..	..	..	..	1.67	1.61	1.61	1.62	1.56	1.56	1.55	1.55	1.54	..	..	..	–0.03
	D8/D5	..	..	..	..	..	..	1.40	1.37	1.38	1.38	1.35	1.35	1.35	1.36	1.35	..	..	..	0.00
	D5/D1	..	..	..	..	..	..	1.37	1.37	1.37	1.36	1.40	1.41	1.42	1.42	1.44	..	..	..	0.05
Total	D9/D5	..	..	..	..	..	..	..	1.65	1.68	1.70	1.61	1.60	1.58	1.58	1.57	..	..	..	–0.05
	D8/D5	..	..	..	..	..	..	1.38	1.38	1.38	1.39	1.37	1.37	1.37	1.37	1.36	..	..	..	–0.02
	D5/D1	..	..	..	..	..	..	1.46	1.45	1.45	1.44	1.45	1.44	1.44	1.45	1.43	..	..	..	–0.02
Canada																				
Males	D9/D5	..	..	1.67	..	..	..	..	1.68	..	1.71	..	1.75	1.75	1.74	1.73	1.73	..	0.04	–0.03
	D5/D1	..	..	2.07	..	..	..	..	2.40	..	2.23	..	2.28	2.25	2.26	2.19	2.18	..	0.11	–0.12
Females	D9/D5	..	..	1.76	..	..	..	..	1.76	..	1.86	..	1.75	1.78	1.79	1.84	1.78	..	–0.01	0.04
	D5/D1	..	..	2.12	..	..	..	..	2.41	..	2.24	..	2.28	2.16	2.21	2.10	2.25	..	0.09	–0.03
Total	D9/D5	..	..	1.79	..	..	..	..	1.83	..	1.86	..	1.85	1.88	1.82	1.82	1.84	..	0.03	–0.01
	D5/D1	..	..	2.24	..	..	..	..	2.43	..	2.39	..	2.38	2.23	2.33	2.21	2.28	..	0.08	–0.13
Czech Republic																				
Total	D9/D5	..	..	..	..	..	..	..	..	..	1.44	..	..	..	1.54	..	..	..	..	..
	D5/D1	..	..	..	..	..	..	..	..	..	1.67	..	..	..	1.78	..	..	..	..	..
Denmark																				
Total	D9/D5	..	1.52	1.53	1.55	1.57	1.58	1.54	1.55	1.56	1.55	1.57	1.57	..	..	..	..	..	0.03	..
	D5/D1	..	1.41	1.41	1.40	1.38	1.39	1.41	1.42	1.41	1.40	1.39	1.38	..	..	..	..	..	–0.01	..
Finland																				
Males	D9/D5	..	1.67	..	..	1.70	..	..	1.73	1.69	1.69	1.73	1.72	1.71	1.70	1.65	1.73	..	0.04	–0.01
	D5/D1	..	1.46	..	..	1.48	..	..	1.50	1.51	1.51	1.51	1.49	1.47	1.44	1.44	1.46	..	0.03	–0.05
Females	D9/D5	..	1.47	..	..	1.49	..	..	1.51	1.55	1.57	1.57	1.54	1.52	1.50	1.50	1.52	..	0.06	–0.06
	D5/D1	..	1.40	..	..	1.39	..	..	1.40	1.40	1.37	1.38	1.37	1.37	1.36	1.30	1.30	..	–0.01	–0.08
Total	D9/D5	..	1.65	..	..	1.69	..	..	1.70	1.70	1.68	1.71	1.70	1.68	1.66	1.65	1.70	..	0.03	–0.02
	D5/D1	..	1.49	..	..	1.48	..	..	1.47	1.48	1.46	1.50	1.47	1.44	1.42	1.39	1.40	..	0.00	–0.10
France																				
Males	D9/D5	2.04	2.03	2.05	2.06	2.06	2.06	2.08	2.10	2.11	2.12	2.14	2.13	2.13	2.12	2.13	2.13	..	0.05	–0.01
	D5/D1	1.66	1.66	1.65	1.64	1.62	1.61	1.61	1.61	1.61	1.62	1.63	1.62	1.61	1.61	1.61	1.61	..	–0.01	–0.02
Females	D9/D5	1.70	1.69	1.69	1.69	1.68	1.67	1.68	1.68	1.69	1.68	1.71	1.72	1.73	1.74	1.73	1.72	..	0.01	0.01
	D5/D1	1.59	1.61	1.63	1.64	1.60	1.57	1.57	1.61	1.62	1.65	1.65	1.66	1.67	1.69	1.70	1.71	..	0.03	0.06
Total	D9/D5	1.94	1.93	1.93	1.94	1.94	1.93	1.95	1.96	1.97	1.97	1.99	1.99	1.99	1.97	1.99	1.99	..	0.02	0.01
	D5/D1	1.67	1.69	1.67	1.65	1.62	1.60	1.60	1.62	1.62	1.64	1.65	1.64	1.64	1.64	1.64	1.65	..	–0.01	0.00
Germany																				
Males	D9/D5	..	..	..	..	1.63	1.65	1.66	1.66	1.63	1.65	1.65	1.65	1.57	1.65	1.64	..	..	0.01	–0.01
	D5/D1	..	..	..	..	1.46	1.48	1.42	1.43	1.41	1.42	1.39	1.40	1.35	1.37	1.37	..	..	–0.06	–0.03
Females	D9/D5	..	..	..	..	1.56	1.60	1.58	1.62	1.58	1.58	1.59	1.58	1.62	1.57	1.59	..	..	0.02	0.01
	D5/D1	..	..	..	..	1.70	1.67	1.59	1.57	1.53	1.49	1.52	1.52	1.43	1.48	1.42	..	..	–0.15	–0.13
Total	D9/D5	..	..	..	..	1.63	1.66	1.65	1.64	1.64	1.62	1.64	1.64	1.61	1.65	1.61	..	..	0.01	–0.03
	D5/D1	..	..	..	..	1.65	1.68	1.59	1.58	1.55	1.55	1.50	1.53	1.49	1.48	1.44	..	..	–0.12	–0.08
Italy																				
Males	D9/D5	1.46	1.43	1.46	1.50	1.46	1.50	..	1.53	1.56	..	1.56	..	1.55	..	1.65	..	..	0.05	0.12
	D5/D1	1.57	1.63	1.49	1.54	1.53	1.53	..	1.44	1.45	..	1.39	..	1.43	..	1.60	..	..	–0.09	0.27
Females	D9/D5	1.33	1.33	1.46	1.38	1.42	1.35	..	1.33	1.39	..	1.38	..	1.45	..	1.49	..	..	0.02	0.14
	D5/D1	2.25	2.00	2.16	2.00	1.88	1.73	..	1.85	1.65	..	1.57	..	1.65	..	1.88	..	..	–0.34	0.39
Total	D9/D5	1.50	1.46	1.41	1.50	1.47	1.50	..	1.43	1.60	..	1.44	..	1.53	..	1.60	..	..	–0.03	0.19
	D5/D1	1.96	1.81	1.90	1.61	1.70	1.67	..	1.75	1.51	..	1.50	..	1.58	..	1.75	..	..	–0.23	0.32

Table 3.1. **Trends in earnings dispersion,[a] 1979-1995** *(cont.)*

		1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	Average 5 yearly change[b] 1979-1989	Average 5 yearly change[b] 1989 onwards
Japan																				
Males	D9/D5	1.63	1.63	1.65	1.66	1.65	1.68	1.68	1.69	1.68	1.70	1.73	1.73	1.72	1.72	1.71	1.73	..	0.05	0.00
	D5/D1	1.59	1.60	1.61	1.63	1.64	1.65	1.65	1.64	1.65	1.64	1.65	1.64	1.64	1.62	1.61	1.60	..	0.03	–0.04
Females	D9/D5	1.54	1.55	1.56	1.58	1.57	1.57	1.62	1.62	1.65	1.65	1.65	1.63	1.61	1.60	1.59	1.59	..	0.05	–0.06
	D5/D1	1.42	1.40	1.40	1.41	1.41	1.40	1.41	1.42	1.41	1.42	1.42	1.41	1.43	1.41	1.41	1.41	..	0.00	–0.02
Total	D9/D5	1.76	1.76	1.77	1.79	1.82	1.83	1.81	1.83	1.84	1.85	1.86	1.87	1.86	1.85	1.84	1.85	..	0.05	–0.02
	D5/D1	1.71	1.71	1.72	1.72	1.72	1.72	1.72	1.72	1.71	1.70	1.70	1.69	1.67	1.64	1.65	1.63	..	0.00	–0.07
Netherlands																				
Total	D9/D5	..	..	..	..	..	..	1.62	1.64	1.64	1.66	1.66	1.66	1.66	1.66	1.68	1.66	..	..	0.00
	D5/D1	..	..	..	..	..	..	1.55	1.55	1.54	1.56	1.57	1.57	1.57	1.57	1.54	1.56	..	..	–0.01
New Zealand																				
Males	D9/D5	..	..	..	..	..	1.66	..	1.61	..	1.64	..	1.76	..	1.75	..	1.79	..	..	0.04
	D5/D1	..	..	..	..	..	1.64	..	1.69	..	1.74	..	1.75	..	1.79	..	1.77	..	..	0.02
Females	D9/D5	..	..	..	..	..	1.54	..	1.55	..	1.53	..	1.56	..	1.62	..	1.57	..	..	0.01
	D5/D1	..	..	..	..	..	1.57	..	1.63	..	1.64	..	1.74	..	1.67	..	1.67	..	..	–0.08
Total	D9/D5	..	..	..	..	..	1.70	..	1.67	..	1.68	..	1.74	..	1.74	..	1.76	..	..	0.02
	D5/D1	..	..	..	..	..	1.70	..	1.70	..	1.74	..	1.75	..	1.77	..	1.73	..	..	–0.03
Norway																				
Total	D9/D5	..	1.46	..	..	1.50	..	..	..	1.49	..	..	..	1.50	..	..	..	..	..	..
	D5/D1	..	1.41	..	..	1.37	..	..	..	1.45	..	..	..	1.32	..	..	..	..	..	..
Portugal																				
Males	D9/D5	..	..	..	..	..	..	2.13	..	..	..	2.24	..	2.39	2.43	2.40	..	..	..	0.20
	D5/D1	..	..	..	..	..	..	1.56	..	1.61	..	1.72	..	1.75	1.72	1.72	..	..	..	0.00
Females	D9/D5	..	..	..	..	..	..	1.84	..	2.12	..	2.10	..	2.27	2.29	2.34	..	..	..	0.30
	D5/D1	..	..	..	..	..	..	1.52	..	1.33	..	1.33	..	1.25	1.32	1.39	..	..	..	0.07
Total	D9/D5	..	..	..	..	..	..	2.14	..	..	..	2.24	..	2.24	2.48	2.47	..	..	..	0.29
	D5/D1	..	..	..	..	..	..	1.69	..	1.54	..	1.56	..	1.56	1.61	1.64	..	..	..	0.10
Sweden																				
Males	D9/D5	..	1.61	1.56	1.57	1.55	1.55	1.58	1.60	1.58	1.57	1.60	1.56	1.60	1.62	1.62	..	..	0.02	0.03
	D5/D1	..	1.31	1.33	1.32	1.30	1.31	1.35	1.34	1.33	1.34	1.35	1.33	1.36	1.35	1.36	..	..	0.02	0.01
Females	D9/D5	..	1.32	1.35	1.34	1.36	1.35	1.36	1.35	1.39	1.39	1.38	1.40	1.42	1.40	1.40	..	..	–0.01	0.02
	D5/D1	..	1.25	1.31	1.29	1.26	1.29	1.28	1.33	1.33	1.30	1.29	1.22	1.29	1.30	1.30	..	..	0.02	0.01
Total	D9/D5	..	1.57	1.55	1.53	1.50	1.52	1.59	1.57	1.57	1.56	1.57	1.52	1.55	1.57	1.59	..	..	0.02	0.03
	D5/D1	..	1.30	1.32	1.31	1.30	1.33	1.30	1.32	1.33	1.34	1.35	1.32	1.36	1.34	1.34	..	..	0.01	0.00
Switzerland																				
Males	D9/D5	..	..	..	..	..	..	..	..	..	..	..	..	1.68	1.66	1.65	1.64	1.68	..	0.00
	D5/D1	..	..	..	..	..	..	..	..	..	..	..	..	1.45	1.46	1.51	1.49	1.51	..	0.08
Females	D9/D5	..	..	..	..	..	..	..	..	..	..	..	..	1.57	1.57	1.56	1.56	1.59	..	0.02
	D5/D1	..	..	..	..	..	..	..	..	..	..	..	..	1.72	1.58	1.58	1.56	1.60	..	–0.16
Total	D9/D5	..	..	..	..	..	..	..	..	..	..	..	..	1.69	1.67	1.67	1.68	1.71	..	0.03
	D5/D1	..	..	..	..	..	..	..	..	..	..	..	..	1.61	1.60	1.62	1.58	1.59	..	–0.02
United Kingdom																				
Males	D9/D5	1.58	1.62	1.68	1.69	1.70	1.71	1.71	1.73	1.76	1.78	1.80	1.81	1.83	1.84	1.86	1.86	1.86	0.11	0.05
	D5/D1	1.55	1.55	1.56	1.59	1.60	1.62	1.64	1.66	1.68	1.70	1.71	1.72	1.73	1.74	1.74	1.74	1.78	0.08	0.06
Females	D9/D5	1.58	1.60	1.72	1.68	1.67	1.66	1.64	1.70	1.72	1.78	1.80	1.79	1.81	1.83	1.82	1.82	1.82	0.11	0.01
	D5/D1	1.43	1.46	1.47	1.49	1.50	1.51	1.52	1.54	1.56	1.58	1.59	1.60	1.62	1.64	1.65	1.65	1.68	0.08	0.08
Total	D9/D5	1.65	1.67	1.73	1.74	1.75	1.77	1.77	1.78	1.81	1.82	1.83	1.84	1.85	1.85	1.86	1.86	1.87	0.09	0.03
	D5/D1	1.69	1.67	1.68	1.70	1.70	1.72	1.73	1.74	1.77	1.78	1.79	1.79	1.77	1.79	1.79	1.78	1.81	0.05	0.02
United States																				
Males	D9/D5	1.73	1.76	1.74	1.80	1.78	1.86	1.84	1.87	1.91	1.99	1.97	1.96	1.95	2.00	2.00	2.01	2.04	0.12	0.06
	D5/D1	1.84	1.85	1.92	1.97	1.99	1.98	2.03	2.07	2.06	2.05	2.05	2.02	2.01	2.04	2.06	2.13	2.13	0.11	0.07
Females	D9/D5	1.73	1.76	1.85	1.77	1.79	1.80	1.80	1.85	1.87	1.77	1.92	1.92	1.94	1.96	1.96	2.03	2.03	0.09	0.09
	D5/D1	1.77	1.66	1.62	1.77	1.79	1.83	1.86	1.87	1.87	1.99	1.90	1.91	1.89	1.90	1.90	1.98	1.95	0.06	0.04
Total	D9/D5	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2.03	2.07	2.10	..	..
	D5/D1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2.05	2.10	2.09	..	..

.. Data not available.

a) D1 and D9 refer to the upper earnings limits of, respectively, the first and ninth deciles of employees ranked in order of their earnings from lowest to highest, *i.e.* 10 per cent of employees earn less than the D1 earnings limit and 90 per cent earn less than the D9 earnings limit. D8 and D5 are defined similarly and, thus, D5 corresponds to median earnings.

b) The 5 yearly averages have been calculated across the largest span of years in each period for which data are available and have been adjusted where necessary to correspond to a standard 5-year period.

Sources: See Annex 3.A.

from 1979 to the mid-1990s [see OECD (1993), Table 5.2, for data covering earlier periods]. Trends in the overall dispersion of earnings, as measured by the ratio of the upper earnings limit of the ninth decile of workers to the upper limit of the first decile (D9/D1), are plotted in Chart 3.1. No clear tendency emerges of a generalised increase in earnings inequality over the first half of the 1990s. Of the 16 countries for which recent information is available, dispersion increased in half, and was either broadly unchanged or declined somewhat in the rest. In fact, the United Kingdom and the United States stand out as the only countries where there has been a continuation of a pronounced rise in earnings inequality. In the United States, the recession of the early 1990s was accompanied by a temporary pause in the rise of earnings inequality for men, but the recovery led to a renewed increase. Earnings for higher-paid workers relative to the median have continued to drift upwards in a number of countries, such as Austria, Australia, France and Sweden, which had experienced a small rise in earnings dispersion over the 1980s, but this trend has neither been very strong nor consistent for both male and female workers. In Canada, the relative earnings of high-paid workers have declined somewhat since the mid-1980s, following a substantial rise in the first half of the 1980s. At the opposite end of the spectrum in terms of changes in earnings inequality, the earnings distribution has continued to become more compressed in Germany.

In several countries, a long-term trend towards stable or declining earnings inequality has been reversed over the past few years in the wake of substantial labour market reforms. In Italy, a large rise in earnings dispersion between 1989 and 1993 was associated with the abolition of automatic cost-of-living wage indexation (*scala mobile*) and the ending of synchronised wage bargaining across different sectors [Bank of Italy (1995)]. Earnings inequality has also grown in New Zealand, but the rise was fairly modest, given the extent of labour and product market reforms over the past decade.[2] The dispersion of earnings has also been increasing since the late 1980s in Mexico (data not shown) and the Czech Republic. In Mexico, it appears that significant economic restructuring and trade liberalisation has not, in fact, led to an increase in the wages of the lower-skilled, but, instead, has raised those of the higher skilled [Alarcón and McKinley (1995)]. In the Czech Republic, it was an almost inevitable consequence of the shift to a market economy following several decades of an extremely compressed structure of earnings differentials under the former command economy [Večerník (1995)]. A substantial rise in the relative earnings of higher-paid workers also occurred in Portugal.

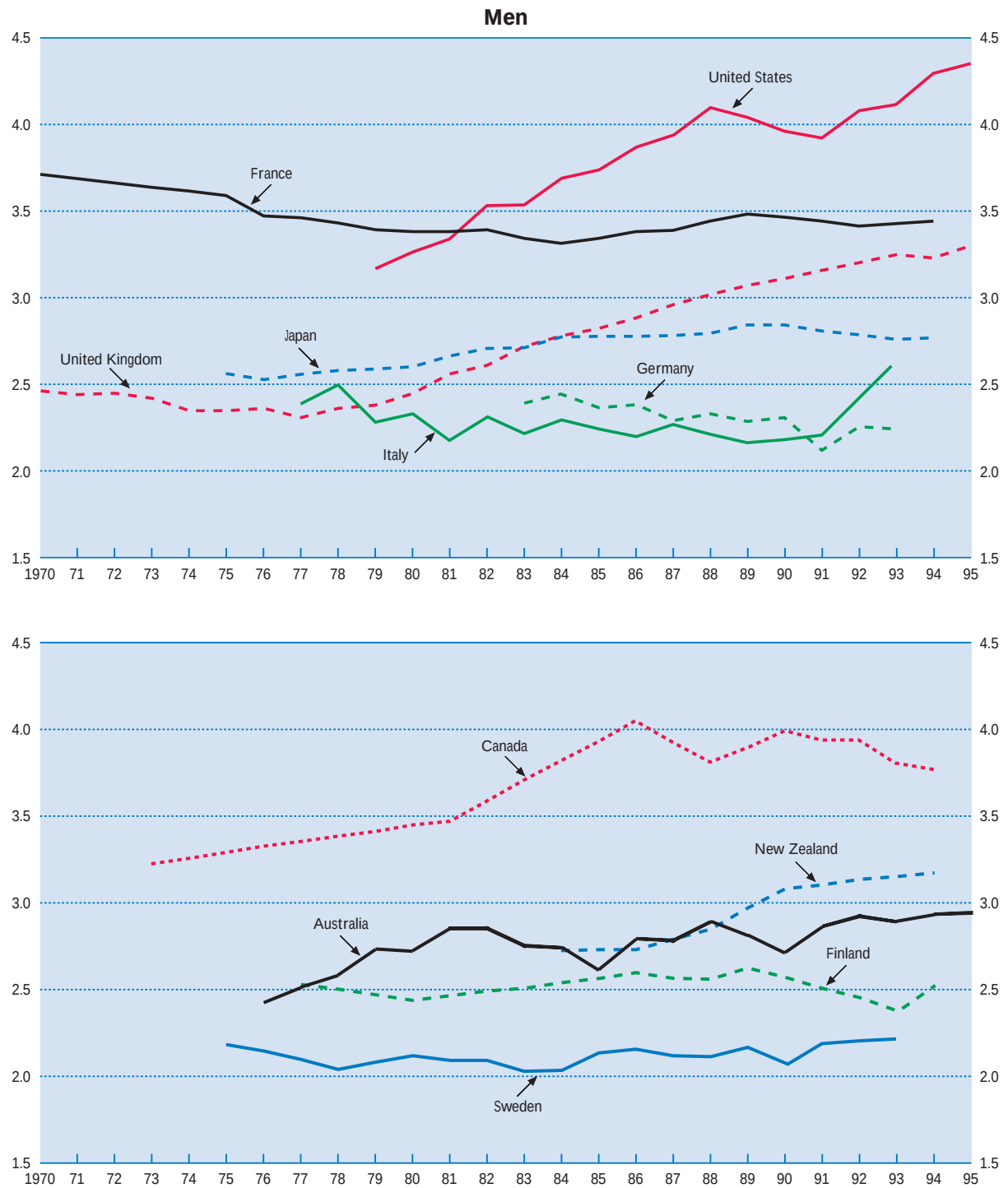
The absence of any dominant trend across countries may be partly the result of the early 1990s recession. During an economic downturn, lay-offs are likely to be concentrated amongst those in the bottom of the earnings distribution. This could have the mechanical impact of lowering earnings inequality, particularly in the bottom half of the distribution.[3] On the other hand, Burtless (1990) analysed *annual* earnings of all workers in the United States, whether they worked all year round or not, and found that earnings inequality, tended to rise during a recession.

Given that the data in Table 3.1 mainly refer to weekly or hourly earnings rather than to annual earnings, it could be that, for a number of countries, the recession of the early 1990s has either muted or completely masked an underlying, upwards trend in earnings inequality. In Chart 3.2, the evolution of the D5/D1 ratio (men only) over the most recent downturn and recovery is compared with the pattern observed in the previous cycle. The United Kingdom stands out for the constancy of the rise in inequality over the past two recessions. In Australia, Japan and the United States, while the most recent recession was accompanied by an initial compression in the bottom half of the earnings distribution, this was not the case during the previous recession. In France, the decline in inequality was less pronounced during the recent recession and in Sweden there was a small rise compared with a previous decline. Thus, no uniform picture emerges either across countries or over time of a cyclical pattern in the dispersion of earnings.[4]

A widening in the earnings distribution in a number of countries has implied very different outcomes in terms of real wage growth for low-paid and high-paid workers. Real wages for low-paid men (first decile of male workers) in New Zealand and the United States are over 10 per cent lower than they were a decade ago, and they have also fallen in Australia (Chart 3.3). In all three countries, real wages for the entire bottom half of the male earnings distribution have either fallen or risen only slightly. The United Kingdom is somewhat of an exception; despite a strong rise in inequality, real wage gains have occurred both at the top and the bottom of the earnings distribution, albeit more at the top. Across all OECD countries, women have generally achieved larger increases in real earnings than men, narrowing somewhat the gender gap in earnings. This is not simply because of a substantial rise in the earnings of more qualified women. Wage growth for the lowest decile of female workers has not only been greater compared with the lowest decile of male workers but, in most countries, also compared with the median earnings of male workers.

Chart 3.1.

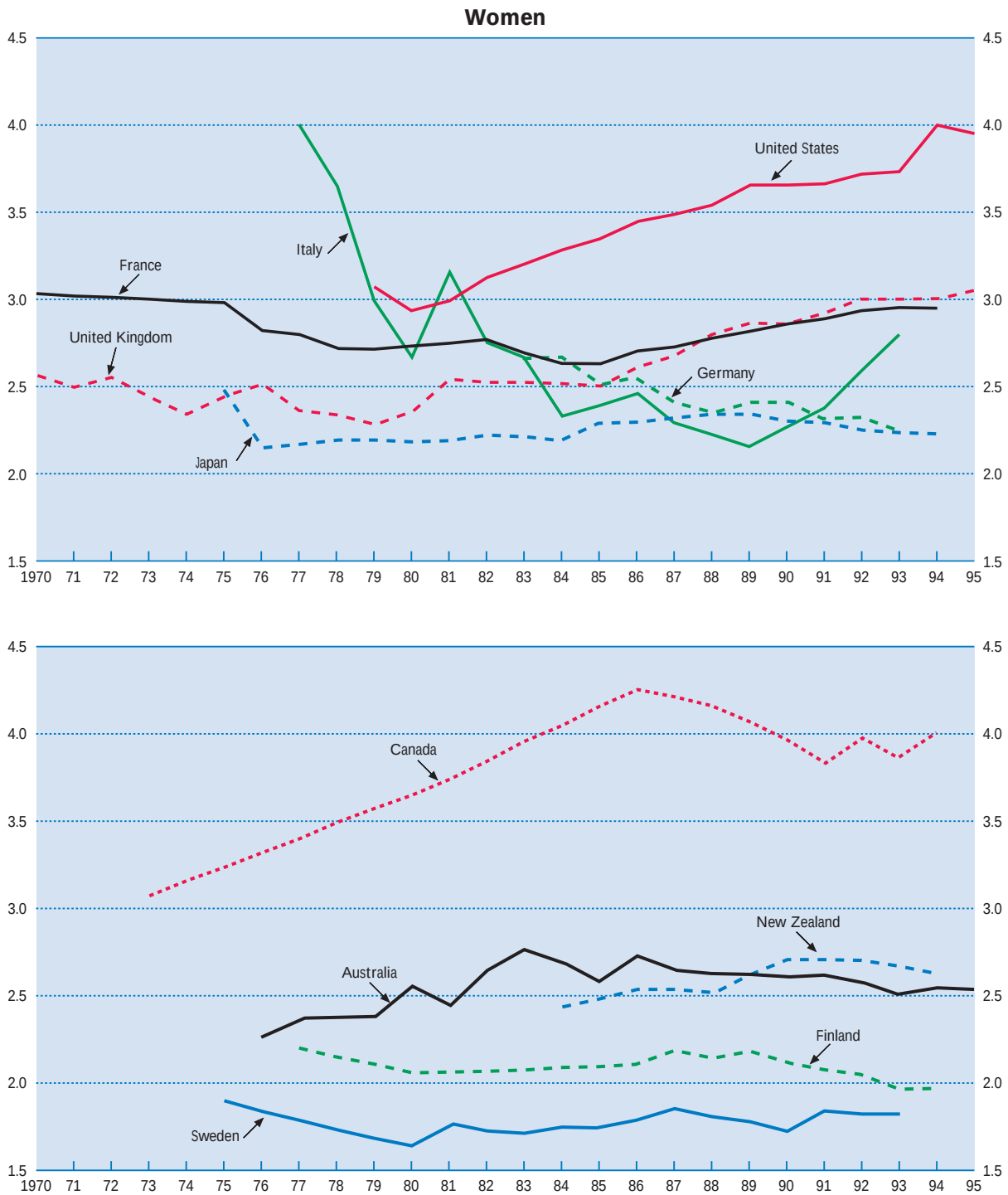
Trends in earnings dispersion:[a] D9/D1



a) For Canada, Italy, New Zealand and Sweden, the data have been interpolated for missing years.
Sources: See Annex 3.A.

Chart 3.1. *(cont.)*

Trends in earnings dispersion:[a] D9/D1



a) For Canada, Italy, New Zealand and Sweden, the data have been interpolated for missing years.
Sources: See Annex 3.A.

Chart 3.2.

Comparison of male earnings inequality (D5/D1) over business cycles[a]

a) Ratios are indexed to 100 at each cyclical peak (year 0).
Sources: See Annex 3.A.

Chart 3.3.

Real wage growth[a] over the last 10 years for low, median and high-paid workers

Percentage changes, not annualised

a) Earnings deflated by the consumer price index.
b) Decile 9 for men refers to decile 8.
c) Rescaled to represent a percentage change over 10 years.
Sources: See Annex 3.A.

Box 1
Measuring low-paid employment

Low-pay cut-offs

Low pay can be defined in either absolute or relative terms.[1] On the one hand, low pay can be measured with reference to a subsistence level of income (usually fixed in real terms). For example, several US studies have used the official poverty line in studies of the "working poor" [Gardner and Herz (1992); US Bureau of the Census (1992); US Department of Labor (1995)]. Other studies have defined low pay relative to median earnings [CERC (1991); Salverda (1994); OECD (1994)] or in relation to the level of the minimum wage [Salverda (1994); Netherlands Central Bureau of Statistics (1994)]. Alternatively, it has been identified as those workers at the bottom of the earnings distribution accounting for a fixed percentage of all workers [Salverda (1994)].

The choice of measure partly depends on the issues being addressed. If the main interest is in the relationship between low pay and poverty, it may be appropriate to use an absolute measure of low pay. But, this approach poses a number of problems for making international comparisons. For instance, what has been defined as the poverty level in one country will not necessarily correspond to the one used in another country. To some extent, the notion of a subsistence or poverty level of income is itself a relative concept, varying over time and across societies. However, even if a universally accepted basket of goods and services corresponding to a minimum standard of living could be agreed upon, there would still be a problem of determining the sum of money which would be required to purchase this basket in terms of each country's national currency.[2]

The risk of social exclusion or a sense of deprivation may be a function of the extent to which a worker's earnings fall below the median, even if subsistence needs can be met. This would be best captured by a relative measure of low pay. A relative measure also avoids many of the problems encountered when using an absolute measure to make international comparisons. Nevertheless, some problems of comparability remain. For example, the measurement of low pay will be sensitive to country differences in both the definition of earnings (see below) and the sources and methods used to compile earnings data.[3] The use of a relative measure also requires a choice of cut-off point for determining low pay. The choice is not only likely to change substantially the level of the incidence of low pay for each country, but may also alter the corresponding country rankings.[4]

Trends in the incidence of low pay are also likely to be sensitive to the measure adopted. For example, if workers at all points in the earnings distribution receive real increases in earnings, the incidence of low pay will fall when measured using an absolute cut-off (fixed in real terms), irrespective of whether high-paid workers have received much larger increases than low-paid workers. The United Kingdom is an example. Although earnings inequality has been rising strongly (Chart 3.1), real wages have risen for both low- and high-paid workers (Chart 3.3). In the United States, on the other hand, earnings inequality has also been rising strongly, but this has also been accompanied by falls in real earnings in the bottom half of the earnings distribution. Consequently, the incidence of low pay, measured relative to the official poverty line, for year-round, full-time workers rose sharply over the 1980s from 10.5 per cent in 1979 to just under 17 per cent in 1990 [US Bureau of the Census (1992)]. However, using a relative measure, such as two-thirds of median earnings, results in a much smaller rise in the incidence of low-paid employment from just under 25 per cent in 1979 to just below 26 per cent in 1989. By contrast, the incidence of low pay in the United Kingdom according to the same relative measure has risen somewhat more steeply over the same period from 16 to 19 per cent.

Net versus gross earnings

The incidence of low pay is also likely to be sensitive to whether earnings are measured net or gross of taxes and allowances. In general, income taxes are progressive, and so the incidence of low pay using a relative measure would tend to be higher based on gross, rather than net, earnings. It is difficult to predict how differences across countries in the progressivity of their tax systems would affect country rankings if a net rather than a gross measure of earnings were used to measure the incidence of low pay. However, given the focus of this chapter and the consideration of data availability, low pay is generally measured in terms of gross earnings.[5]

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1. A third alternative would be a subjective measure. For example, the perceptions of respondents to survey questions about adequate or minimum income has been used in a number of studies of poverty [for example, Van den Bosch *et al.* (1993)]. See Förster (1994) for a more extensive discussion of different measures of low income and poverty.
2. While Purchasing Power Parities (PPPs) have been constructed for national accounts aggregates, such as total private consumption expenditure, they may not necessarily be appropriate for a subsistence basket of goods and services.

(continued on next page)

(continued)

3. Annex 3.B provides details of the sources and definitions for the data used to calculate the incidence of low pay as well as, for some countries, estimates of low pay using alternative sources.
4. In actual fact, country rankings appear to be quite stable with respect to a wide range of cut-offs relative to median earnings. For instance, the incidence of low pay for a number of countries is compared in OECD (1994, Chapter 1, Table 1.11) using 50, 66 and 80 per cent of median earnings as cut-offs. The rank correlation coefficients between the various pairs of cut-offs (assigning 0 to "not significant" values for the 50 per cent cut-off) are: 0.86 between the 50 and 66 per cent cut-offs; 0.91 between the 66 and 80 per cent cut-offs; and 0.71 between the 50 and 80 per cent cut-offs.
5. In France the earnings data are net of employee social security contributions (see Annex 3.B). However, to the extent that these contributions are levied at a flat rate they will not affect the measure of the incidence of low pay. While there are ceilings to these rates, they normally lie above median earnings and so have no impact on the measure used here. Similarly, the various earnings floors, before contributions are levied, are probably too low to alter substantially the incidence of low pay amongst *full-time* workers, whether measured net or gross of social security contributions. For Austria and Italy, the data refer to earnings net of both payroll and income taxes.

C. THE INCIDENCE AND DISTRIBUTION OF LOW-PAID EMPLOYMENT

1. Introduction

The strong rise in earnings inequality in some countries has raised concerns that this could result in a growing proportion of the work force falling into the category of the "working poor". On the other hand, some view declining relative wages as the mechanism through which competitive markets enable the less skilled to remain in jobs, despite diminishing demand for their services.[5] In order to throw some light on this complex issue, this section considers the following questions: How does the incidence and distribution of low-paid employment differ across countries? What are some of the factors behind these differences? Is there a relationship between the incidence of low-paid work and the employment and unemployment rates of different labour force groups?

2. The incidence and distribution of low-paid employment

There are many ways to measure low-paid employment, and the choice partly depends on the issues being addressed (see Box 1). The use of an absolute measure poses difficult conceptual and methodological problems for making international comparisons of the incidence of low pay. As the primary focus in this chapter is on labour market outcomes and earnings dispersion at the lower end of the distribution, low pay is compared across countries using a *relative* measure. Low-paid workers are defined as full-time workers who earn less than two-thirds of median earnings for all full-time workers.[6] This cut-off has been chosen as a compromise between a lower value of, for example, 50 per cent, which in some countries would fall below the legal minimum wage, and a value of, say, 75 per cent, which, in many countries, would include more than one-third of all full-time workers. Part-time workers are excluded to avoid the additional complication of disentangling differences in the incidence of part-time employment from differences in relative wages. In addition, information on the distribution of hourly earnings for all workers is only available for a few countries.

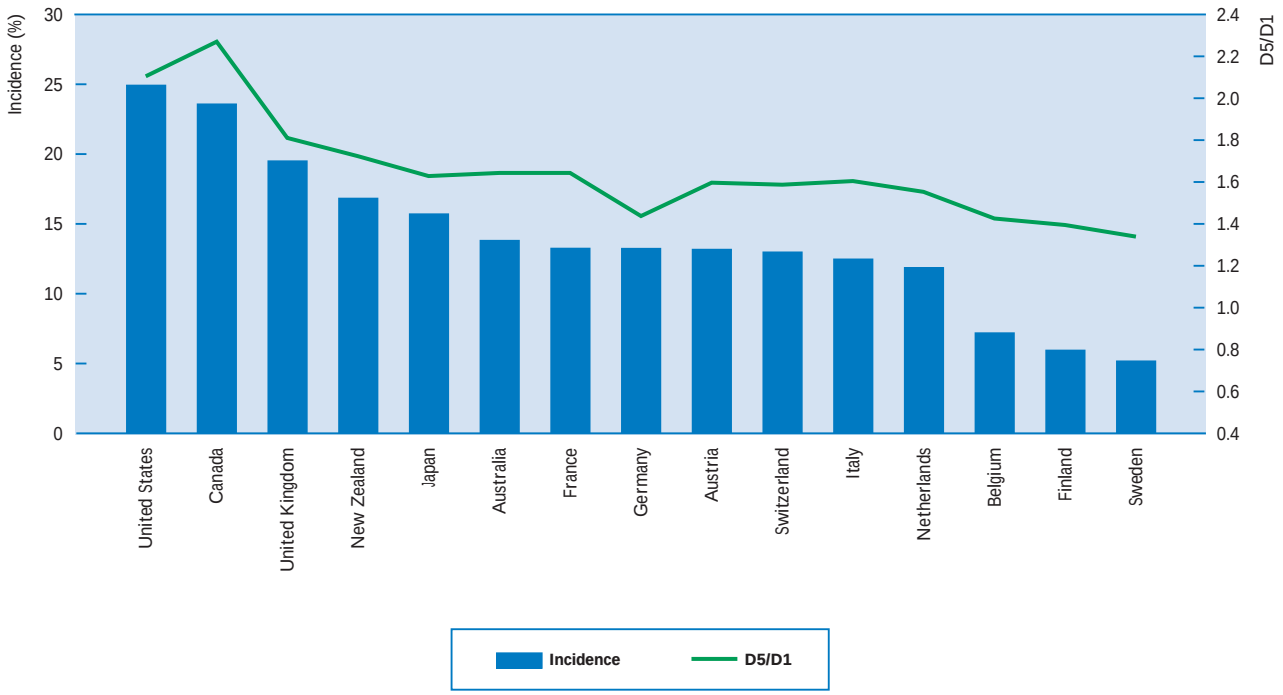
Of course, the use of a relative measure implies that the absolute cut-off point for determining low pay differs across countries. In fact, when each country's cut-off point is converted to a monthly equivalent for the year 1994, and expressed in US dollars using purchasing power parities for GDP, there are substantial differences (data not shown), indicating that a relative measure cannot be used to make inferences about international differences in the incidence of poverty or the working poor relative to a universal standard. For example, the level of median earnings, expressed in a common currency, is much higher in the United States than in Belgium. Thus, some of the "low-paid" in the United States may receive earnings well above the limit defining low-paid work in Belgium. Nevertheless, the relative measure is a useful indicator of the dispersion of earnings in the lower half of the distribution which can be broken down by different worker characteristics.

Given these caveats, the overall incidence of low-paid employment is shown in Chart 3.4. The variation across countries is striking: one-quarter of all full-time workers in the United States are in low-paid jobs compared with under 6 per cent in Finland and Sweden. The pattern closely mirrors differences in the simple D5/D1 measure, and the simple correlation between the two is very high (0.94). Thus, not surprisingly, those countries with large earnings inequality are also the ones with a higher incidence of low-paid jobs.

As shown in Panel A of Table 3.2, the incidence of low-paid employment also varies according to the

Chart 3.4.

Incidence of low pay and earnings inequality (D5/D1)[a]



a) The incidence of low pay refers to full-time employment only. Low pay is defined as less than two-thirds of median earnings for all full-time employees. The D5/D1 ratio refers to earnings of all full-time workers. See Table 3.2 for the reference year for each country.

Sources: For the incidence of low pay, see Annex 3.B; for the ratio D5/D1, see Annex 3.A.

demographic, occupational and industry characteristics of workers. Given that wages tend to increase with experience and tenure, it is not surprising that women and younger workers are much more likely to be in low-paid jobs than men and older workers.[7] In several countries, low-paid work accounts for around one-third, or more, of all female employment.[8] Youth face an even greater risk of low-paid employment than women. In the United States, in particular, nearly two-thirds of full-time employed youth were low-paid. In some countries, most noticeably Japan and the United Kingdom, older workers are also more likely to be in low-paying jobs than prime-age workers.

There has been considerable debate about whether high-paid jobs in the shrinking manufacturing sector are increasingly being replaced by low-paid jobs in the growing services sector. For the majority of countries, the incidence of low pay is, indeed, somewhat higher in the services sector. Japan and Italy are noticeable exceptions, with low pay being much more prevalent in manufacturing than in services. However, Table 3.2 only provides point-in-time estimates of the incidence of low pay and does not provide any information about whether employment growth is occurring mainly in relatively low-paid or high-paid jobs. Moreover, while the overall incidence of low-paid employment is generally higher in the services sector than in manufacturing, there is considerable variation within the former. Typically, a high proportion of all jobs in wholesale/retailing, hotels and restaurants are low-paid, whereas there are relatively few low-paid jobs in transport and communications, and public administration.

The incidence of low pay also varies considerably within both blue-collar and white-collar occupations. For instance, Panel A of Table 3.2 shows that being a white-collar worker is not an automatic guarantee of being in a relatively high-paid job. Sales workers and, in some countries, clerical workers, face a higher risk of being employed in low-paid jobs than trades and craft workers. On the other hand, very few managerial,

technical and professional workers are in low-paid jobs.

Where are most low-paid jobs located? As is shown in Panel B of Table 3.2, the bulk are in services. In most countries, wholesale and retail trade, including hotels and restaurants, and personal services account for half or more of all low-paid jobs. Many of these jobs are held by women who, overall, comprise the majority of low-paid workers, except in Australia and New Zealand. By age, prime-age workers make up the largest share, except in Australia and Italy,[9] but this simply reflects their high share of total employment.

Given that the overall incidence of low-paid employment varies considerably across countries, it is difficult to discern whether it is much more concentrated amongst certain groups of workers in some countries than in others. An indicator of concentration which abstracts from these country differences in the overall incidence of low pay can be constructed by dividing the incidence for each category of worker by the overall incidence (see Panel C of Table 3.2).[10] A value greater (lower) than one for a specific group of workers indicates that the risk of low pay for that group is greater (lower) than the average risk for all workers.

Women are much more likely to be working in low-paid jobs than men in all countries, particularly in Belgium, Germany, Japan and Switzerland. In these countries, the risk of low-paid employment for women in full-time jobs is at least twice as high, if not higher, than for all workers. Younger workers also face a much higher than average incidence of low-paid employment, with only Austria (lower) and Finland (higher) departing significantly from the central figure of two-and-a-half times the average risk. Japan and, to a lesser extent, the United Kingdom, are the only countries where the incidence of low-paid employment is significantly higher for older workers than for prime-age workers. By industry, low-paid employment is highly concentrated in wholesale/retailing, hotels and restaurants in nearly all countries. Consequently, it is also tends to be highly concentrated amongst sales and personal services workers, as well as unskilled labourers.

Low pay also depends on other factors which are not shown in Table 3.2, such as educational qualifications, job tenure and experience, nationality and firm size. The incidence of low pay among workers with less than upper secondary education is typically more than twice the average for all workers. Similarly, the risk is higher for immigrants than nationals. For example, in Austria, foreign workers are more than twice as likely to be in low-paid jobs than national workers. Workers in smaller firms are also more likely to be working in low-paid jobs than workers in larger firms.

3. Low-paid employment and labour market outcomes

One explanation for the large differences across countries in the overall incidence of low pay could be that the skill distribution of workers is much wider in countries with a higher incidence of low-paid employment. However, at best, this can only be a partial explanation because the differences between countries in the incidence of low pay for workers in similar occupations or with similar educational qualifications are as large as, if not larger than, differences in the overall incidence.[11] For example, under 10 per cent of workers in France with upper secondary education have low-paid jobs compared with over 32 per cent in the United States[12] – a gap of over 20 percentage points, compared with just 12 percentage points in the overall incidence.

Another explanation centres on wage-setting practices and social security arrangements as important determinants of the incidence of low pay. For example, a number of countries have mandatory minimum wages which, if they are legally enforced, may truncate the earnings distribution from below. In the extreme, as the minimum wage approaches the cut-off limit used in this chapter for determining low pay, its incidence must approach zero. This may partly explain the large differences between France and the United States: both countries have a legal minimum wage but, in the case of France, it corresponds to almost 60 per cent of median earnings compared with only around 34 per cent in the United States.[13] Mishel and Bernstein (1994) and Dinardo *et al.* (1994) suggest that the decline in the relative value of the minimum wage in the United States may have been an important factor in rising earnings inequality, particularly for women workers. In the United Kingdom, minimum wages in a number of low-pay sectors prior to 1993 were established by Wages Councils which have subsequently been abolished. Machin and Manning (1994) have estimated that, in these sectors, the decline in the minimum relative to the average wage over the 1980s accounted for between 9 to 20 per cent of the rise in the dispersion of earnings.

Other features of wage setting may have an impact. As shown in Table 3.3, the simple cross-country correlations between the incidence of low pay, collective bargaining coverage and trade union density are quite high and negative, *i.e.* higher coverage and density rates are associated with a lower incidence. A number of US studies have also found that the decline in unionisation partly contributed to rising earnings inequality [Freeman (1993); Mishel and Bernstein (1994); Dinardo *et al.* (1994)]. In their international study, Blau and Kahn (1996) also find that institutional features, such as high rates of unionisation and collective bargaining coverage,

Table 3.2. **Incidence, distribution and concentration of low-paid employment** [a]

A. Incidence [b]

	Australia	Austria	Belgium	Canada	Finland	France	Germany	Italy	Japan	Netherlands	New Zealand	Sweden	Switzerland	United Kingdom	United States
	1995	1993	1993	1994	1994	1995	1994	1993	1994	1994	1994/95	1993	1995	1995	1994
Total	**13.8**	**13.2**	**7.2**	**23.7**	**5.9**	**13.3**	**13.3**	**12.5**	**15.7**	**11.9**	**16.9**	**5.2**	**13.0**	**19.6**	**25.0**
By sex															
Men	11.8	7.0	3.9	16.1	3.3	10.6	7.6	9.3	5.9	..	14.4	3.0	6.8	12.8	19.6
Women	17.7	22.8	14.2	34.3	8.7	17.4	25.4	18.5	37.2	..	20.7	8.4	30.4	31.2	32.5
By age [c]															
Under 25	34.5	19.5	22.2	57.1	27.1	49.5	50.4	27.0	36.4	..	41.3	18.7	44.0	45.8	63.0
25-54	8.8	12.1	5.3	20.1	5.5	10.6	6.7	6.7	9.6	..	11.6	4.3	9.0	15.0	21.2
55 and over	12.5	9.6	4.9	20.8	4.4	10.5	5.4	7.4	19.8	..	15.6	2.9	9.2	22.9	23.7
By industry [d]															
Manufacturing	13.6	10.9	5.1	18.9	4.0	11.5	10.6	14.2	20.9	10.8	15.3	..	12.1	17.8	20.9
Construction	15.1	8.4	1.8	23.4	7.0	14.6			9.6	8.2	20.3	..	7.9	13.7	24.9
All services	13.4	14.7	8.5	25.3	6.3	13.2	14.7	8.7	14.8	13.1	16.2	..	13.6	20.8	25.8
Wholesale/retail trade	20.4	23.8	15.7	40.3	11.1	22.6	22.9	24.2	14.4	24.4	30.9	..	23.4	36.1	40.4
Transport/Communication	8.2	8.7	..	15.8	4.3	4.5	12.4	2.6	8.1	5.1	10.1	..	8.6	10.8	13.1
Finance/Business	9.9	6.3	2.7	20.8	4.6	12.2	9.7		14.5	10.4	6.7	..	9.7	17.0	23.4
Public administration	7.5	6.4	6.8	8.9	2.0	4.6	6.1	6.6	..	4.9	13.9	..	2.7	11.3	10.1
Personal services	12.7	16.5		23.8	6.9	14.3	16.6		18.5	12.1		..	13.2	20.0	24.9
By occupation															
Professional/Technical	4.1	4.3	..	14.6	0.6	2.5	5.2	..	..	..	6.8	..	5.7	3.8	8.7
Managers	9.6	1.8	..	13.7		0.7	0.0	..	..	..	8.3	..	2.2	5.5	9.0
Clerical	12.7	9.0	..	32.3	8.5	7.3	11.9	..	..	..	12.2	..	13.2	29.3	29.6
Sales	20.2	23.3	..	31.6		39.5	22.4	..	..	..	42.5	..	37.4	40.1	28.4
Personal services		27.1	..	44.8	12.3	38.2	26.6	..	..	..	31.4	..		39.7	53.4
Trade/craft	19.9	11.3	..	20.9	6.6	9.1	14.7	..	..	..	22.0	..	11.0	16.1	18.0
Labourers	18.9		..	20.3		36.8		..	..	..		..	23.1	28.2	36.4

Table 3.2. **Incidence, distribution and concentration of low-paid employment**[a] *(cont.)*

B. Distribution[e]

	Australia	Austria	Belgium	Canada	Finland	France	Germany	Italy	Japan	Netherlands	New Zealand	Sweden	Switzerland	United Kingdom	United States
	1995	1993	1993	1994	1994	1995	1994	1993	1994	1994	1994/95	1993	1995	1995	1994
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**	**100.0**	**100.0**
By sex															
Men	55.7	32.2	36.6	40.0	28.2	47.8	38.9	48.2	25.8	..	52.5	34.4	49.1	41.7	45.4
Women	44.3	67.8	63.4	60.0	71.8	52.2	61.1	52.2	74.2	..	47.5	65.6	50.9	58.3	54.6
By age[c]															
Under 25	46.6	24.3	34.7	22.9	11.5	26.1	58.6	60.9	41.4	..	41.0	25.9	38.8	28.5	21.6
25-54	47.1	72.4	60.8	69.9	82.7	68.5	37.9	30.8	43.9	..	51.9	67.4	53.8	59.8	68.7
55 and over	6.2	3.2	4.6	7.2	5.8	5.4	3.7	8.5	14.7	..	7.1	6.8	7.5	11.7	9.8
By industry[d]															
Manufacturing	18.2	24.1	18.1	15.8	18.2	21.0	33.4	42.7	43.7	22.1	19.9	..	24.5	22.4	17.8
Construction	6.6	6.2	1.8	3.9	3.3	8.0			4.8	6.0	6.1	..	5.1	2.9	4.9
All services	67.9	66.2	72.0	76.6	71.8	66.8	60.7	40.6	51.2	70.2	60.4	..	67.5	72.8	73.9
Wholesale/retail trade	30.5	31.1	29.9	33.4	19.4	25.2	16.0	16.4	17.5	35.4	28.0	..	32.5	28.9	29.7
Transport/Communication	4.5	5.1	..	5.1	5.2	2.4	4.7	1.4	4.9	3.5	4.5	..	5.5	4.3	4.4
Finance/Business	10.0	3.5	1.5	6.0	9.4	12.8	2.9		5.6	11.1	4.8	..	10.9	14.8	10.3
Public administration	3.6	4.6	40.7	3.4	2.7	3.6	4.9	22.7	..	4.0	23.1	..	1.3	5.1	2.8
Personal services	19.3	21.4		28.6	35.2	22.8	32.2		23.1	16.1		..	17.3	19.6	26.7
By occupation															
Professional/Technical	6.9	4.1	..	11.7	3.3	3.8	7.6	..	..	..	10.1	..	15.0	4.0	6.5
Managers	6.2	0.8	..	11.2		0.3	0.0	..	..	..	7.2	..	1.0	4.7	5.6
Clerical	16.4	12.2	..	20.2	44.8	15.0	21.5	..	..	..	10.9	..	15.8	29.1	18.7
Sales	16.9	11.9	..	10.3		9.6	10.2	..	..	..	11.3	..	27.3	10.4	11.6
Personal services		35.4	..	20.5	22.4	16.5	16.8	..	..	..	12.0	..		14.4	22.9
Trade/craft	23.2	32.2	..	12.7	22.7	18.2	25.6	..	..	..	37.1	..	19.9	9.9	8.6
Labourers	30.3		..	10.2		29.6		..	..	..		..	19.4	27.5	22.6

Table 3.2. **Incidence, distribution and concentration of low-paid employment**[a] *(cont.)*

C. Concentration[f]

	Australia	Austria	Belgium	Canada	Finland	France	Germany	Italy	Japan	Netherlands	New Zealand	Sweden	Switzerland	United Kingdom	United States
	1995	1993	1993	1994	1994	1995	1994	1993	1994	1994	1994/95	1993	1995	1995	1994
Total	**1.0**	**1.0**	**1.0**	**1.0**	**1.0**	**1.0**	**1.0**	**1.0**	**1.0**	**1.0**	**1.0**	**1.0**	**1.0**	**1.0**	**1.0**
By sex															
Men	0.9	0.5	0.5	0.7	0.6	0.8	0.6	0.7	0.4	. .	0.9	0.6	0.5	0.7	0.8
Women	1.3	1.7	2.1	1.4	1.5	1.3	1.9	1.5	2.4	. .	1.2	1.6	2.3	1.6	1.3
By age[c]															
Under 25	2.5	1.5	3.1	2.4	4.6	3.7	3.8	2.2	2.3	. .	2.4	3.6	3.4	2.3	2.5
25-54	0.6	0.9	0.7	0.8	0.9	0.8	0.5	0.5	0.6	. .	0.7	0.8	0.7	0.8	0.8
55 and over	0.9	0.7	0.7	0.9	0.7	0.8	0.4	0.6	1.3	. .	0.9	0.6	0.7	1.2	0.9
By industry[d]															
Manufacturing	1.0	0.8	0.7	0.8	0.7	0.9	0.8	1.1	1.3	0.9	0.9	. .	0.9	0.9	0.8
Construction	1.1	0.6	0.3	1.0	1.2	1.1			0.6	0.7	1.2	. .	0.6	0.7	1.0
All services	1.0	1.1	1.2	1.1	1.1	1.0	1.1	0.7	0.9	1.1	1.0	. .	1.0	1.1	1.0
Wholesale/retail trade	1.5	1.8	2.2	1.7	1.9	1.7	1.7	1.9	0.9	2.0	1.8	. .	1.8	1.8	1.6
Transport/Communication	0.6	0.7	. .	0.7	0.7	0.3	0.9	0.2	0.5	0.4	0.6	. .	0.7	0.6	0.5
Finance/Business	0.7	0.5	0.4	0.9	0.8	0.9	0.7		0.9	0.9	0.4	. .	0.7	0.9	0.9
Public administration	0.5	0.5	0.9	0.4	0.3	0.3	0.5	0.5	. .	0.4	0.8	. .	0.2	0.6	0.4
Personal services	0.9	1.2		1.0	1.2	1.1	1.3		1.1	1.0		. .	1.0	1.0	1.0
By occupation															
Professional/Technical	0.3	0.3	. .	0.6	0.1	0.2	0.4	. .	. .	. .	0.4	. .	0.4	0.2	0.3
Managers	0.7	0.1	. .	0.6		0.1	0.0	. .	. .	. .	0.5	. .	0.2	0.3	0.4
Clerical	0.9	0.7	. .	1.4	1.4	0.5	0.9	. .	. .	. .	0.7	. .	1.0	1.5	1.2
Sales	1.5	1.8	. .	1.3		3.0	1.7	. .	. .	. .	2.5	. .	2.9	2.0	1.1
Personal services		2.1	. .	1.9	2.1	2.9	2.0	. .	. .	. .	1.9	. .		2.0	2.1
Trade/craft	1.4	0.9	. .	0.9	1.1	0.7	1.1	. .	. .	. .	1.3	. .	0.8	0.8	0.7
Labourers	1.4		. .	0.9		2.8		. .	. .	. .		. .	1.8	1.4	1.5

. . Data not available.

a) The data refer to full-time employees only. Low pay is defined as less than two-thirds of median earnings for all full-time workers.

b) Percentage of workers in each category who are low paid.

c) For Italy, the age groups refer to: under 31; 31 to 50; and 51 and over.

d) The wholesale and retail trade sector includes hotels and restaurants. For Belgium, the transport and communications sector is included in the sector comprising public administration and personal services.

e) Percentage share of all low-paid employment in each category.

f) Incidence of low-paid employment in each category divided by overall incidence of low-paid employment.

Sources: See Annex 3.B.

Table 3.3. **Cross-country correlations between the incidence of low pay and earnings inequality, institutional factors and labour-market outcomes** [a]

Correlated with	Incidence of low pay	
	Overall	Group specific [b]
Earnings inequality		
Earnings decile ratio (D5/D1)	0.94**	
Institutional factors		
Collective bargaining coverage, 1994	–0.78**	
Union density, average 1990-1994	–0.65**	
Unemployment benefit replacement rates [c]		
Gross, 1995	–0.59*	
Net, 1994/1995	–0.58*	
Labour-market outcomes		
Unemployment rates, average 1990-1994		
All persons	0.03	
Women	–0.10	–0.41
Women relative to men	–0.29	–0.10
Youth (under 25)	–0.08	–0.08
Youth relative to adults (aged 25-64)	–0.12	–0.28
Unemployment rates by skill [d] 1992		
Low-skilled	0.28	
Low- relative to high-skilled	–0.04	
Full-time employment/population ratios, average 1990-1994		
All persons	0.17	
Women	0.08	–0.17
Women relative to men	–0.01	–0.31
Youth (under 25)	0.13	–0.01
Youth relative to adults (aged 25-64)	0.08	–0.03
Total employment/population ratios by skill, [d] 1992		
Low-skilled	–0.17	
Low- relative to high-skilled	–0.07	

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

a) See Table 3.2 for the countries included in the correlations and for the reference year of the incidence of low pay and earnings inequality measures. The reference years for the other variables are indicated in the table.

b) The group specific incidence of low pay refers to women and to youth for the correlations with the labour market outcomes of, respectively, women and youth. The Netherlands is not included in the group specific correlations.

c) The gross (net) replacement rate refers to the before-tax (after-tax) level of unemployment benefit entitlements relative to gross (net) earnings. The replacement rates refer to an average across different types of family situations, durations of unemployment spells and earnings categories (for more details, see Chapter 2 of this *Outlook* and Chapter 8 of *The OECD Jobs Study: Evidence and Explanations, 1994*). Housing benefits are included in the calculation of the net replacement rate only. Austria is excluded from the correlation with the net replacement rate.

d) Skill is defined with respect to educational attainment: persons with less than upper secondary education are classified as low-skilled and those with higher (tertiary level) education as high-skilled.

Sources: The incidence of low pay and the D5/D1 ratio are from, respectively, Tables 3.2 and 3.1; the estimates of collective bargaining coverage and union density are updates by the OECD Secretariat of data presented in Chapter 5 of the 1994 *Employment Outlook;* the unemployment benefit replacement rates are from the OECD database on taxation and benefit entitlements; full-time employment/population ratios and unemployment rates by sex and age are from OECD, *Labour Force Statistics,* Part III, and the OECD full-time and part-time employment database; employment/population ratios by skill are taken from OECD, *Education at a Glance,* 1995.

appear to create wage floors and reduce earnings dispersion, particularly in the bottom half of the distribution. It is also possible that unemployment and related benefits may create a wage floor below which workers will be reluctant to accept jobs (see Chapter 2, which discusses the work disincentives which may arise from the interaction of the tax and benefits systems). Table 3.3 shows that there is a negative and significant correlation between gross and net benefit replacement rates and the incidence of low pay.

Different institutional settings do, indeed, affect the incidence of low pay. However, does this occur because low-paid workers are effectively "pushed" up the earnings ladder or are many potential workers excluded from even gaining a foothold on the ladder? This is a difficult question to answer. Some partial evidence is provided in the lower half of Table 3.3, in the form of simple cross-country correlations between the incidence of low-paid employment and various employment and unemployment rates for

selected groups. If low-paid jobs provide an entry into employment for the low-skilled and inexperienced, one might expect a positive correlation between the incidence of low pay and their employment/population ratios. The same reasoning would also suggest that the correlation would be negative with their unemployment rates. In the case of employment/population ratios for youth and women, the sign of the correlation coefficient changes according to whether it refers to the overall or group-specific incidence of low pay; in all cases, the correlations are low and not significant. The correlations with unemployment rates for youth and women are always negative, but are never significant. Employment and unemployment rates for low-skilled workers also do not appear to be strongly correlated with the incidence of low-paid work.

These correlations only provide indicative evidence because of the small number of countries in the sample and because no other factors are taken into account. However, based on the analysis of comparable micro-data, Card *et al.* (1996) also find little evidence that less wage flexibility over time in Canada and France compared with the United States has generated substantially different patterns of relative employment growth by skill. On the other hand, Blau and Kahn (1996)[14] find in their study of a larger number of countries than Card *et al.* that employment/population ratios for the low skilled tend to be lower in those countries where the earnings distribution is the most compressed. In the case of youth, the evidence presented in Chapter 4 suggests that other factors, such as overall labour market conditions and institutional differences across countries in training, may be more important in explaining their labour-market outcomes.

To summarise, while the overall incidence of low pay varies substantially across OECD countries, it tends to be concentrated amongst the same workers in the same jobs virtually everywhere. Low-skilled and less-experienced workers face the greatest risk – the incidence is highest for youth and women and is heavily concentrated amongst sales and personal services workers and unskilled labourers. Different institutional settings, with regard to wage bargaining, legal minimum wages and the generosity of unemployment and other related benefits, appear to account for some of the wide variation across countries in the overall incidence of low pay. However, there is little solid evidence to suggest that countries where low-paid work is less prevalent have achieved this at the cost of higher unemployment rates and lower employment rates for the more vulnerable groups in the labour market, such as youth and women.

D. EARNINGS MOBILITY[15]

1. Introduction

Section B showed that the dispersion of individual earnings widened in a number of OECD countries over the 1980s and first half of the 1990s. However, analysis of earnings inequality at different points in time needs to be supplemented by longitudinal analysis of earnings mobility in order to gauge fully trends in inequality. If the forces causing wider earnings dispersion within a single year also create a more fluid labour market, in which the relative position of workers within the earnings distribution varies more over time, then life-time inequality of earnings will increase by less than what is observed cross-sectionally. It is also possible for rising cross-sectional inequality to be accompanied by declining earnings mobility, so that inequality over longer horizons increases more sharply than the inequality of annual earnings. Clearly, data on earnings mobility can greatly enrich the analysis of trends in earnings inequality.

Prior studies of earnings mobility in a single country and historical period

Although there is a large literature on earnings mobility, comparative analysis is in its infancy. Valuable lessons can, however, be gleaned from studies that examine samples of workers from a single country during a single period of time. This section briefly discusses several of those lessons, relying heavily on Atkinson, Bourguignon and Morrison's (1992) useful survey. Several recent comparative studies of earnings mobility are then reviewed.

Conceptual issues

There is no single correct approach for incorporating mobility into the analysis of earnings inequality. It is intuitively clear that the "effective" degree of inequality associated with any given level of cross-sectional inequality is reduced if the positions of workers within the earnings distribution change substantially over time. If changes in relative earnings were predictable (*e.g.* they reflected stable career progressions) and no capital market imperfections impeded the shifting of purchasing power from high to low-earnings years, differences in the discounted value of earnings cumulated over entire working lives would provide a natural benchmark for assessing inequality. A similar logic applies to unpredictable, but transitory, variations in earnings around a predictable, permanent level. In practice, the evolution of workers' earnings are only partially predictable and it may be costly or impossible for individuals with

temporarily low earnings to finance current consumption by borrowing against the anticipation of higher future earnings. Thus, two individuals with the same discounted level of life-time earnings, or of earnings averaged over an intermediate period, may not have equally desirable earnings trajectories. Less stable and less predictable histories would tend to be less desirable than more stable and predictable ones, on the assumption that most individuals are risk averse. In sum, the existence of earnings mobility means that measures of annual inequality overstate life-time inequality, but quantifying the magnitude of this effect is difficult.

Just as different inequality indices, such as the Gini coefficient and the Theil index, reflect different aspects of inequality at a point in time [Atkinson (1983); Jenkins (1991)], different mobility measures capture different aspects of the diverse ways in which individuals' earnings change over time. It follows that comparisons of mobility that are robust across a range of indices are likely to be more firmly grounded than those relying on a single measure.

Data issues

Data limitations are also important. Mobility analysis requires longitudinal or panel data which follow the same workers over time.[16] Until recently, the limited availability of such data has greatly restricted analysis.

Even when available, panel data tend to exacerbate the problems of nonresponse and measurement error already present in cross-sectional data. Nonresponse tends to cumulate over time in panel data, because it is not always possible to track individuals or to induce them to continue to participate in the survey. The resulting sample attrition can be very high and, if non-random, can lead to false conclusions [Westergård-Nielson (1989); Baudelot (1983)]. For example, if individuals whose economic fortunes change significantly are more difficult to follow because they are more likely to move or refuse to be interviewed, panel data would tend to underestimate the extent of earnings mobility unless an adjustment is made for the unrepresentative character of the remaining sample. Longitudinal analysis may also be particularly susceptible to measurement error in earnings or other variables. For example, it might not matter greatly for a cross-sectional analysis of earnings if individuals report their earnings somewhat imprecisely, say within a range of plus or minus five per cent of the true value. However, the same reporting error would tend to have a much larger effect on the results of an analysis of earnings mobility, because year-to-year changes in random reporting error would tend be much more than five per cent of the true changes in earnings. Several validation studies of the Panel Study of Income Dynamics in the United States are somewhat reassuring about these issues, in that these problems were not found to be serious [Hill (1992); Bound *et al.* (1994)]. Nonetheless, relatively little is known about how accurately panel data sets reflect the true distributions of individual histories, due to the absence of reliable benchmarks.

Common findings

Differences in mobility measures, which groups of workers are studied, for which years and subject to how much and what sort of measurement error, greatly limit the comparability of past studies. Despite this, Atkinson *et al.* (1992) have identified several tentative empirical regularities. These include: *i)* mobility increases with the length of the time period considered; *ii)* mobility is highest for young adults just beginning their careers; and *iii)* approximately two-thirds of the cross-sectional variance in annual earnings reflects persistent differences in relative earnings. The first two findings have great intuitive appeal, but the third is rather surprising. It says that mobility is essentially constant everywhere, in the sense that it causes long-run or life-time inequality to be approximately two-thirds of cross-sectional inequality, despite large differences in labour market institutions and economic conditions. It is unclear what economic process would produce such a constancy across countries, because there is no well-developed theory of international differences in earnings mobility.

Prior studies comparing earnings mobility over time or across countries

Gittleman and Joyce (1995, 1996), Gottschalk and Moffit (1994), Rose (1993, 1994, 1995) and Schiller (1994) all used panel data for the United States to examine whether an increase in earnings mobility between the 1970s and the 1980s prevented the inequality of permanent earnings from rising as rapidly as the inequality of annual earnings. All concluded that relative earnings mobility did not change significantly. Thus, the large increase in cross-sectional earnings dispersion was accompanied by an approximately proportionate increase in long-run inequality. Gottschalk and Moffit (1994) emphasise that the relative constancy of mobility, despite a large increase in cross-sectional earnings dispersion, implies that the variance of transitory earnings (*i.e.* the instability of earnings) increased at about the same rate as the variance of permanent earnings. Morissette's (1996) analysis for Canada reached similar conclusions.

Several recent studies have compared earnings mobility across several countries. Aaberge *et al.*

Box 2
Interpreting the mobility measures

This study uses correlation coefficients and transition matrices to summarise and compare earnings mobility. These common and intuitive measures are closely related to the issue of how much mobility reduces the inequality of earnings over longer periods of time below the level of inequality observed in a single year. Mobility reduces inequality because some of the differences in earnings for a single year reflect transitory factors, unusually high earnings for some workers and unusually low for others. These factors tend to cancel out over longer observation periods, leaving the residual level of permanent differences in earnings levels.

Correlation coefficients for earnings in two years provide a summary measure of the degree of *persistence* in individual earnings. A value of one indicates that the relative position of individual workers was unchanged, while a value of zero indicates no persistence of relative position and equality of long-run earnings. In the simplest version of the "permanent income model," which provides a starting point for much analysis of mobility, the correlation coefficient is equal to the proportion of the total cross-sectional variation of earnings which is due to the *permanent* differences in earnings [Atkinson, Bourguignon and Morrison (1992)]. The relationship between the correlation coefficient and permanent inequality is more complicated for more complex models, but higher values of the correlation coefficient continue to indicate that more of the inequality within a single year persists.

Although the correlation coefficient is a valuable summary measure of the persistence of inequality, it does not provide much descriptive information about the pattern of changes in the position of workers. Transition matrices are a useful way to summarise this information. Each year, workers are ordered from lowest to highest earnings and grouped into equal strata, *e.g.* by deciles or quintiles. Interest then focuses on transition probabilities, such as the likelihood that a worker beginning in the first quintile is still in the first quintile five years later. The probabilities can be grouped into a transition matrix in which the rows indicate earnings strata in the origin year and the columns indicate destination-year strata. Individuals on the primary diagonal have maintained their position in the earnings distribution, while those above (below) the diagonal have experienced upward (downward) mobility. The more that individuals' positions change over time, the stronger is the effect of mobility on reducing permanent inequality below cross-sectional inequality.

The transition-matrix analysis reported here includes two extensions. First, transitions between nonemployment and positions in the earnings distribution are examined. Second, transition patterns are analysed across earnings bands defined by proportions of the median wage, rather than by quantiles. Mobility measures derived from transition probabilities between quintiles, or other quantile ranges, are purely relative. In a country with a low level of cross-sectional earnings inequality, a modest increase in earnings could cause a large change in an individual's relative position. For example, a 10 per cent increase in earnings might move a worker from the bottom (first) quintile to the middle (third) quintile. The same quintile transition in a second country, with high cross-sectional inequality, would require a larger percentage increase in earnings. Thus, equal quintile transition probabilities for these two countries would indicate similar relative mobility, in the sense that the frequency of changes in the earnings rankings of workers is the same in both countries, but much more volatility in the level of individual earnings in the second country (with its wider quintile bands). Both the extent of relative mobility and the absolute magnitude of intertemporal changes of earnings are important dimensions of labour market mobility. A high level of relative mobility means that inequality over longer periods will tend to be significantly lower than annual inequality, while large absolute changes in earnings suggest either strong ageing effects or high earnings volatility.

(1996) compared Denmark, Norway, Sweden and the United States; Burkhauser and his various collaborators [Burkhauser and Holtz-Eakin (1994); Burkhauser *et al.* (1995*a, b*); Burkhauser and Poupore (1996)] compared Germany and the United States; Bigard *et al.* (1996) compared private-sector workers in France and Italy; and Asplund *et al.* (1996) compared manufacturing workers in Finland and Denmark. Two tentative conclusions emerged. First, it appears that it is now possible to compare earnings mobility systematically across a number of countries, at least for the period since the mid-1980s. Second, initial results suggest more similarities than differences across countries.

Overview of mobility analysis

The remainder of this section presents comparative measures of earnings mobility for eight countries: Denmark, Finland, France, Germany, Italy, Sweden, the United Kingdom, and the United States. These countries have well-documented panel data sets that trace the earnings histories of broadly-based samples of the work force since the mid-1980s. Although

descriptive measures of mobility are presented for the entire working-age population during the period 1986-1991, most of the analysis is restricted to full-time workers, so that differences in rates of pay can be better isolated from differences in hours worked. The earnings measure used throughout is gross earnings of wage and salary workers. Tax payments, non-cash fringe benefits, and self-employment earnings are not taken into account.[17] The analysis considers two broad questions. First, what are the commonalities and differences in overall earnings mobility across these eight countries? Second, how ''high'' is the earnings mobility of low-paid workers and does it differ across countries?

Table 3.4 provides an overview of the longitudinal data-sets used for this analysis. Although selected for their suitability for comparative analysis, a number of important noncomparabilities require emphasis. One is that some data are based on administrative sources and some come from surveys. The German and United States data are exclusively from household surveys, while the Danish, French and Italian data are derived exclusively from administrative sources. The Finnish and Swedish data are primarily from household surveys, but administrative tax data were used to refine the earnings measures for some of the observations. The data for the United Kingdom are also a hybrid. The sample of workers is drawn from administrative data, but most of the information – including workers' earnings – was gathered from a survey of employers. When comparing mobility measures, it should be borne in mind that the earnings data collected from administrative sources are almost certainly more accurate than those collected from survey interviews [Westergård-Nielsen (1989)]. A second difference is that some of the data sets do not cover the entire working-age population, or even the entire wage and salary work force. This is particularly a problem for some of the panels constructed from administrative data. For example, the French and Italian data are collected from social security records that exclude much of the public sector and all non-workers. Third, the quality of the working-time measures varies considerably. In the data for Finland, it is not possible to distinguish part-time from full-time workers, and measurement error appears to be relatively severe for the working-time variable used to calculate monthly earnings. Finally, the statistical reliability of the different data sets varies considerably due to large differences in sample sizes and attrition rates. Sample sizes are particularly small for Sweden. The surveys for Germany and the United States provide sophisticated probability weights intended to correct for attrition bias and these weights have been used in the analysis. Analogous corrections could not be made for the other data sets.

2. Summary measures of earnings mobility

Summary measures of earnings mobility for full-time wage and salary workers, between 1986 and 1991, are presented in Table 3.5 (see Box 2). They are juxtaposed with measures of cross-sectional earnings dispersion (see Section B) and with the mobility levels that would prevail in hypothetical labour markets characterised by either perfect (*i.e.* fully random) mobility or the total absence of mobility.[18]

The correlation coefficients range from 0.65 for Denmark to 0.79 for Germany, clearly indicating that no country closely approximates the polar cases of total mobility or immobility.[19] (The correlation coefficient for Finland is much lower, at 0.36, but is not strictly comparable. Both the inclusion of part-time workers and measurement error appear to exaggerate the level of earnings mobility in Finland.) The clustering of the correlations around 0.7 is broadly consistent with the finding in many earlier studies that approximately two-thirds of the inequality observed in a single year persists, while the remainder reflects transitory factors. Since five years is considerably shorter than a working life, these estimates understate the extent to which life-time earnings inequality is lower than annual inequality. It probably is not the case, however, that lengthening the observation period would reveal large international differences in mobility not evident for the 1986-1991 period. Aaberge *et al.* (1996) examined earnings mobility for both 1986-1990 and 1980-1990. Mobility was higher for the longer period, but continued to be quite similar in the four countries studied.

The conclusion that similar and substantial levels of mobility prevail across countires is also confirmed when movements across earnings quintiles are examined. Approximately half of the workers in all of the countries were in a different earnings quintile in 1991 than in 1986, and between 11 and 17 per cent (22 per cent for Finland) were at least two quintiles higher or lower than they had been, indicating large changes in relative earnings. Both indices suggest that Denmark, the United Kingdom and the United States (and, perhaps, Finland) had somewhat higher rates of earnings mobility than France, Germany, Italy and Sweden. But the overall picture is, nevertheless, one of considerable similarity.[20]

Table 3.5 also shows transition probabilities for moving between ''equal-width'' earnings bands, where the ranges are defined as proportions of the median wage.[21] These measures are a useful complement to those used above, because national differences in cross-sectional earnings inequality and, hence, quintile widths are substantial. Cross-country results differ between quintile measures and median-proportions measures. Earnings mobility in Denmark and Sweden appears much higher when measured by

Table 3.4. **Overview of longitudinal datasets used in earnings mobility analysis**

Source of data		Type of data	Wage and salary workers missed by sampling frame	Data on the non-employed	Sample size		Earnings concept
					Total working age population	Full-time wage and salary workers in both 1986 and 1991 [a]	
Denmark	Data from the Danish Longitudinal Database (DLD), supplied by Niels Westergard-Nielsen and Paul Bingley, Centre for Labour Market and Social Research, Aarhus Business School.	Administrative.	–	Yes	14 438	6 422	Gross weekly earnings
Finland	Data from the Census Longitudinal Dataset (CLD), supplied by Tor Eriksson and Lajos Parkatti, Centre for Labour Market and Social Research, Aarhus Business School.	Household survey (sampled from the Population Census and matched to administrative tax data).	–	Yes	358 773	203 519	Gross monthly earnings
France	Data from Déclarations Annuelles des Données Sociales (DADS), supplied by Yves Guillotin and Alain Bigard, Groupe d'Analyse des Itinéraires et Niveaux Salariaux (GAINS), Université du Maine.	Administrative.	General governement	No	856 422	287 821	Gross monthly earnings
Germany	Data from the German Socio-Economic Panel (GSOEP), supplied by Viktor Steiner, Zentrum für Europäische Wirtschaftsforschung (ZEW), Mannheim.	Household survey.	–	Yes	8 775	2 168	Gross monthly earnings
Italy	Data from the Instituto Nazionale de Previdenza Sociale Dataset (INPSD), supplied by Claudio Malpede, Lia Pacelli, Riccardo Revelli, Ricerche e Progetti, Torino.	Administrative.	General government	No	143 851	52 877	Gross monthly earnings
Sweden	Data from the HUS, supplied by Anders Klevmarken, University of Uppsala.	Household survey (matched to administrative tax data).	–	Yes	1 362	615	Gross monthly earnings
United Kingdom	Data from the New Earnings Survey Panel Dataset (NESPD), supplied by Peter Elias, Warwick University.	Establishment survey (sampled from administrative data).	Very low earners	No	219 201	71 453	Gross monthly earnings
United States	Data from the Panel Study of Income Dynamics (PSID), supplied by David Fasenfest, Purdue University.	Household survey.	–	Yes	9 776	3 915	Gross weekly earnings

a) For Finland, full-time or part-time wage and salary workers in both 1986 and 1991.

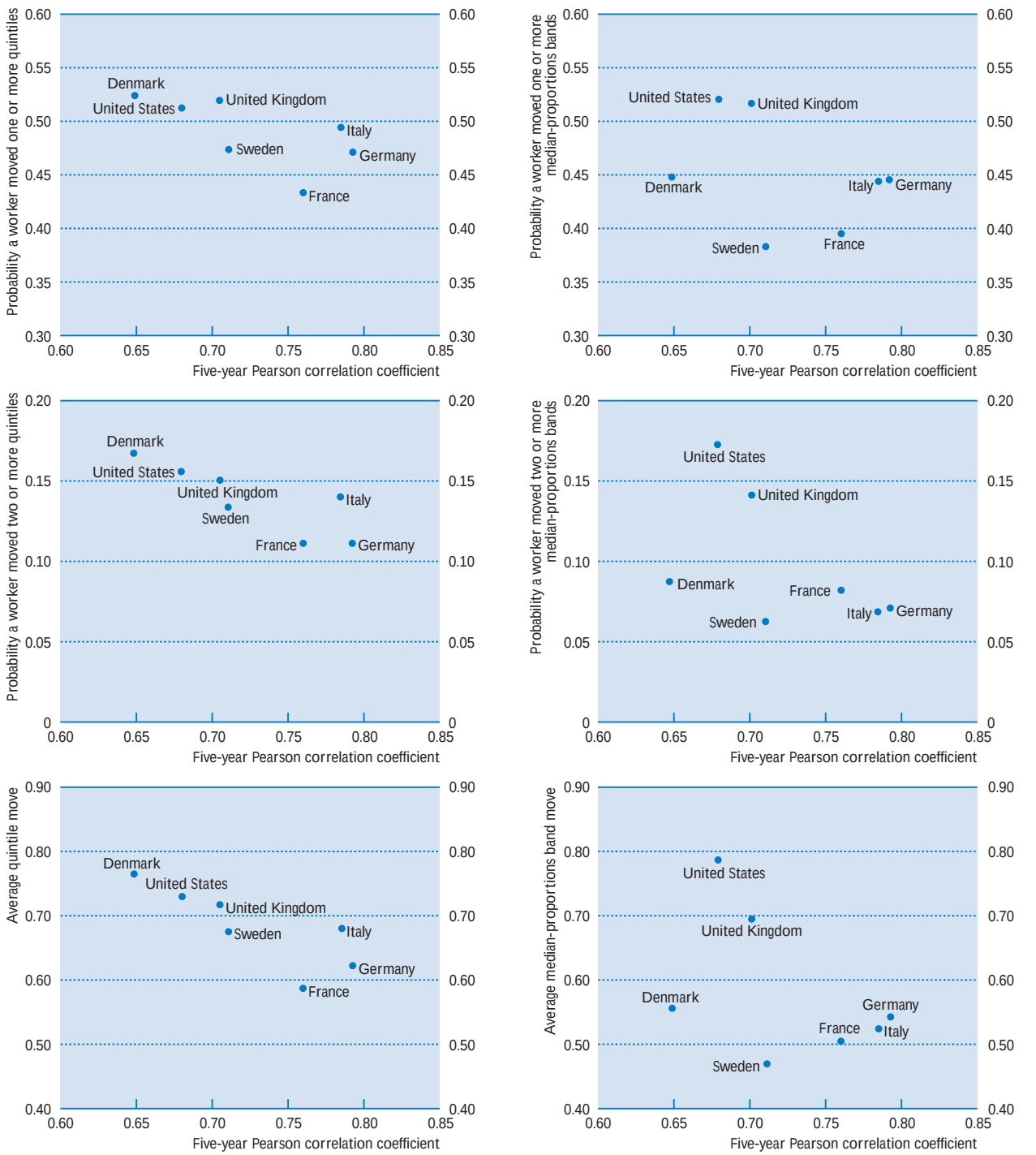
Table 3.5. **Alternative measures of five-year earnings mobility for full-time wage and salary workers, 1986-1991**

	Cross-sectional earnings inequality		Correlation of 1986 and 1991 earnings		Transitions among quintiles				Transitions among 5 earnings bands based on proportions of median earnings [a]			
	Ratio of 90th to 10th percentile wage, 1991	1986-1991 trend in D9/D1 ratio [b]	Pearson correlation coefficient	Spearman rank correlation coefficient	Average quintile move	Stayed in same quintile (%)	Moved up or down one quintile (%)	Moved 2 or more quintiles (%)	Average band move	Stayed in same band (%)	Moved up or down one band (%)	Moved 2 or more bands (%)
Denmark	2.15	–	0.649	0.652	0.764	47.6	35.6	16.8	0.555	55.2	36.1	8.8
Finland [c]	2.47	0	0.363	0.540	0.891	44.1	34.4	21.5	0.796	46.1	36.0	17.9
France	3.26	+	0.760	0.754	0.587	56.8	32.0	11.2	0.506	60.5	31.2	8.3
Germany	2.52	–	0.793	0.754	0.621	53.0	35.7	11.2	0.541	55.3	37.6	7.1
Italy	2.64	0	0.785	0.725	0.679	50.6	35.3	14.1	0.524	55.6	37.6	6.9
Sweden	2.11	0	0.711	0.695	0.676	52.7	33.8	13.5	0.468	61.6	32.1	6.3
United Kingdom	3.28	++	0.705	0.709	0.716	48.1	36.8	15.1	0.697	48.2	37.6	14.2
United States	3.66	++	0.680	0.674	0.732	48.8	35.5	15.7	0.784	47.8	35.0	17.3
Perfect mobility	x	x	0.000	0.000	1.6	20.0	32.0	48.0	x	x	x	x
No mobility	x	x	1.000	1.000	0.0	100.0	0.0	0.0	0.0	100.0	0.0	0.0

x Not applicable.
a) The five earnings bands relative to the median are: Less than 0.65, 0.65 to 0.95, 0.95 to 1.25, 1.25 to 1.55, and greater than 1.55.
b) The symbols ++, +, – and 0 denote strongly rising, rising, falling and approximately stable earnings dispersion.
c) Five-year earnings mobility is calculated for the years 1985-1990 and for all wage and salary workers.
Sources: See Table 3.4.

Chart 3.5.

Alternative measures of earnings mobility over five years, 1986-1991



Sources: See Table 3.4.

transitions across quintiles than across median-proportions earnings bands. The cross-sectional earnings distribution in these two countries is relatively compressed, causing relatively small changes in individual earnings to result in relatively large movements across quintiles. At the other extreme, the United States has considerably higher mobility, in terms of median-proportions earnings bands, than the other seven countries and, hence, the largest absolute changes in individual earnings over 1985-1991. The relatively high cross-sectional dispersion of wages in the United States explains why relative earnings mobility is similar in Denmark, Sweden and the United States, even though individual earnings are much more volatile in the United States.

Chart 3.5 presents bivariate associations between the Pearson correlation coefficient and mobility measures based on transition probabilities, which confirm that alternative measures can produce significantly different country rankings. Higher correlations tend to be associated with less movement among quintiles, although these measures capture somewhat different aspects of relative earnings mobility. There is no such correspondance between the correlation coefficients and measures based on median-proportions earnings bands. Countries in which absolute earnings changes are relatively large also tend to have relatively high cross-sectional earnings dispersion, so that the net effect on relative mobility is indeterminant.

Chart 3.6 (Part A) examines the relationships between cross-sectional inequality and relative and absolute mobility. Earnings dispersion in a single year has no apparent relationship to mobility across quintiles. This implies that international comparisons of cross-sectional inequality probably provide a reliable indication of relative levels of inequality measured over longer periods, because high static inequality is not offset by high relative mobility. There is some indication of a positive relationship between cross-sectional inequality and mobility across median-proportions earnings bands. This suggests that individual earnings tend to be more volatile in countries with high cross-section inequality, although it should be emphasized that this conclusion is greatly influenced by the case of the United States.

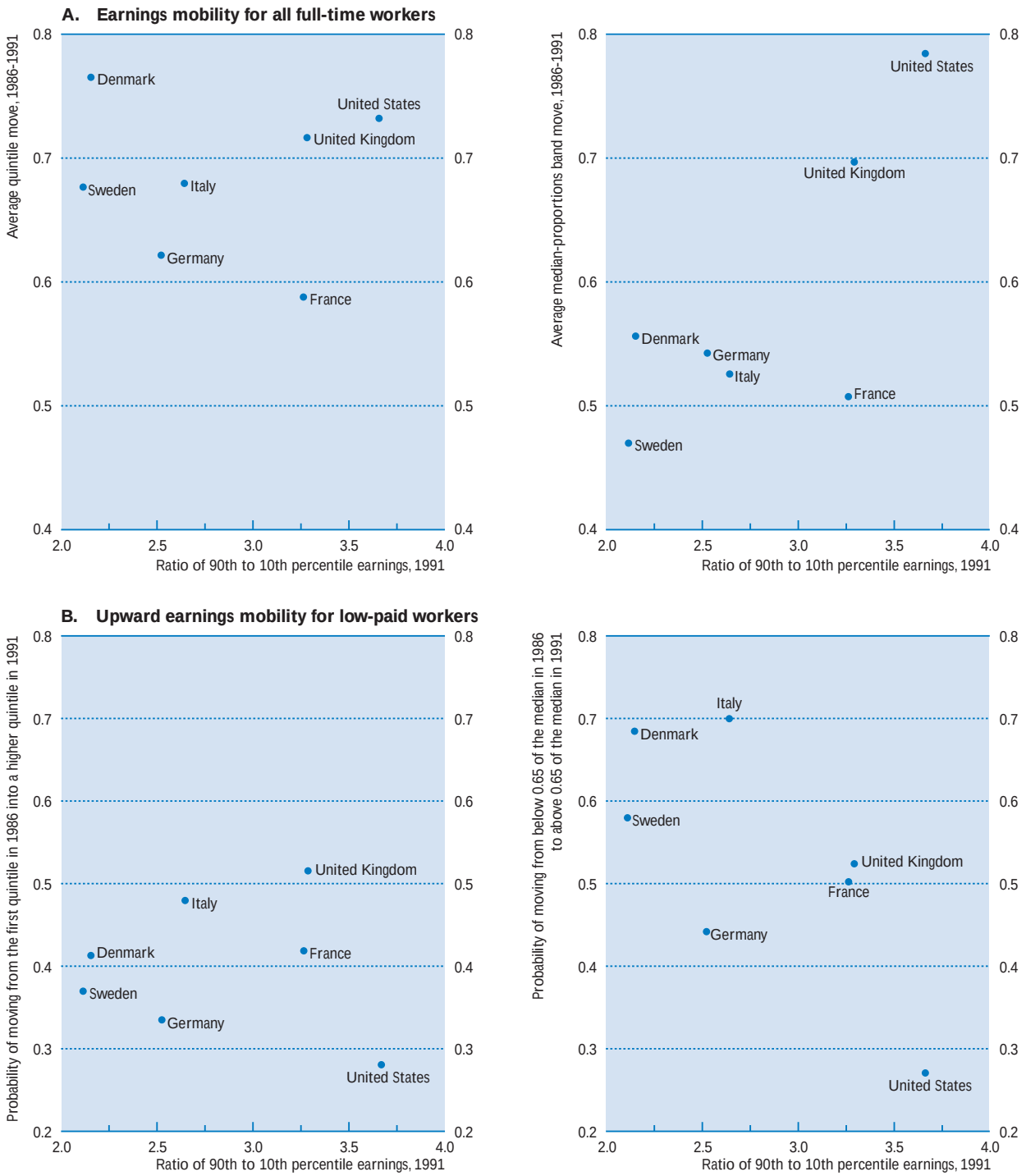
Focusing on persistently full-time workers tends to understate total earnings mobility. Table 3.6 provides measures of mobility for a broader population, and for men and women separately. Even focusing on a constant cohort (individuals between the ages of 15 and 64 in 1986), there was substantial movement both into and out of full-time employment over 1986-1991.[22] In Denmark, Germany and Sweden, approximately 20 per cent of full-time workers in 1986 were no longer full-time workers in 1991, while 31 per cent exited full-time employment in the United States. Among those not employed full-time in 1986, between 18 and 36 per cent entered full-time employment over the five-year period. Exit rates from full-time employment are higher for women than for men, reflecting less continuous work patterns. Importantly, both entries and exits tend to be concentrated in the bottom quintile, a pattern that is especially strong for women. This means that focusing solely on persistently full-time workers disproportionately excludes low and intermittent earners and may, thus, understate the extent of low and unstable earnings. However, it is not straightforward to incorporate non-earners into an analysis of earnings mobility, because their *potential* earnings may be of greater interest than their actual (zero) earnings, but are unobservable.[23] Nonetheless, it is important to place earnings mobility patterns for continuously employed workers within the context of large movements in and out of full-time employment.

When earnings mobility is examined for all workers, it tends to be a little higher than for just full-time workers (Table 3.6, right-hand side). More detailed analysis (not shown here) indicates that workers moving between full-time and part-time status typically experienced large changes in earnings. However, this greater variability does not consistently show up as higher quintile transition rates, because the increase in the width of the quintiles moving from the full-time to the total sample is approximately proportional to the increase in intertemporal earnings variability. Mobility measured across median proportions-based earnings bands does increase modestly. Nonetheless, the basic conclusion is the overall similarity of measured mobility within countries, whether analysing all workers or just those working full-time. Thus, the rest of this section will only consider full-time workers.

Earnings mobility among persistently full-time workers is moderately higher for women than for men in Denmark, Finland, France, Germany, and Italy, but a bit lower in Sweden and the United Kingdom, and about the same in the United States.[24] Mobility is particularly high for Danish women, 18 per cent of whom moved two or more quintiles in the earnings distribution. Differences by age are larger, with workers under 35 experiencing much more mobility than older workers (Table 3.7*a*). It is also predominately upward, as these young workers gain experience and establish careers. By contrast, although earnings are quite stable overall for the 50-64 age group, downward mobility is substantially more common for this group than is upward. Earnings tend to be most stable for workers with a university degree and those in managerial and profession occupations, who are particularly unlikely to experience downward mobility (Table 3.7*b*).

Chart 3.6.

Cross-sectional earnings inequality and five-year earnings mobility for full-time workers



Sources: See Table 3.4.

Table 3.6. **Five-year earnings mobility for full-time and for all wage and salary workers, 1986-1991**

	Full-time wage and salary workers									All wage and salary workers								
	Pearson correlation coefficient	Average quintile move	Stayed in the same quintile (%)	Moved one quintile (%)	Moved 2 or more quintiles (%)	Left full-time employment [a] (%)	Share of leavers in bottom quintile in 1986 (%)	Entered full-time employment [b] (%)	Share of entrants in bottom quintile in 1991 (%)	Pearson correlation coefficient	Average quintile move	Stayed in the same quintile (%)	Moved one quintile (%)	Moved 2 or more quintiles (%)	Left wage and salary employment (%)	Share of leavers in bottom quintile in 1986 (%)	Entered wage and salary employment [c] (%)	Share of entrants in bottom quintile in 1991 (%)
Denmark																		
Total	0.649	0.764	47.5	35.6	16.8	19.2	26.6	29.7	34.1	0.615	0.812	46.2	34.8	19.0	16.6	25.3	33.2	33.9
Male	0.667	0.736	49.0	35.0	15.9	16.0	14.9	32.6	21.8	0.634	0.769	49.1	32.8	18.0	16.3	15.2	34.7	24.8
Female	0.446	0.807	45.4	36.5	18.1	21.0	41.4	27.8	42.9	0.415	0.860	42.8	37.1	19.9	16.9	36.1	32.0	41.6
Finland [d]																		
Total	. .	. .	. .	. .	. .	. .	. .	. .	. .	0.363	0.891	44.1	34.4	21.5	19.4	28.0	41.7	35.4
Male	. .	. .	. .	. .	. .	. .	. .	. .	. .	0.390	0.841	47.1	33.0	19.9	17.1	24.2	43.2	30.7
Female	. .	. .	. .	. .	. .	. .	. .	. .	. .	0.256	0.947	40.9	36.0	23.2	21.2	31.5	40.3	40.3
France																		
Total	0.760	0.587	56.8	32.0	11.2	13.0	30.2	49.3	25.3	0.718	0.683	53.0	32.4	14.6	. .	. .	. .	. .
Male	0.776	0.582	57.3	31.5	11.2	11.0	23.8	60.1	16.6	0.733	0.670	54.1	31.6	14.3	. .	. .	. .	. .
Female	0.629	0.595	55.9	33.0	11.1	16.4	37.9	41.2	35.2	0.588	0.704	51.4	33.5	15.2	. .	. .	. .	. .
Germany																		
Total	0.793	0.621	53.0	35.7	11.2	23.4	30.9	17.7	37.0	0.777	0.647	52.3	35.3	12.4	21.4	29.4	17.1	49.6
Male	0.774	0.659	53.6	34.5	11.9	18.1	16.3	13.1	17.7	0.744	0.652	53.7	32.8	13.4	17.6	14.5	10.7	22.3
Female	0.759	0.727	51.7	38.3	10.1	34.7	47.3	28.1	57.2	0.703	0.637	49.7	39.7	10.5	27.2	44.3	26.3	65.7
Italy																		
Total	0.785	0.679	50.6	35.3	14.1	8.3	48.5	55.3	28.7	0.782	0.685	50.3	35.4	8.5	. .	. .	. .	. .
Male	0.788	0.659	52.1	34.2	13.6	2.2	41.7	16.8	18.3	0.786	0.656	52.2	34.3	13.4	. .	. .	. .	. .
Female	0.704	0.726	46.8	38.1	15.0	13.8	49.6	62.1	32.8	0.684	0.749	46.2	37.8	16.0	. .	. .	. .	. .
Sweden																		
Total	0.711	0.716	52.7	33.8	13.5	19.2	28.7	35.9	33.3	0.741	0.684	50.5	36.1	13.4	12.7	24.4	47.3	27.1
Male	0.665	0.720	52.5	32.7	14.8	14.7	8.3	41.6	16.9	0.653	0.692	51.0	35.6	13.4	10.7	7.3	41.9	9.0
Female	0.800	0.707	53.1	36.2	10.7	26.5	48.7	33.4	42.5	0.709	0.676	50.0	36.7	13.3	14.7	36.8	63.8	40.9
United Kingdom																		
Total	0.705	0.716	48.1	36.8	15.1	6.4	35.5	30.6	37.0	0.726	0.660	51.4	35.4	13.2	. .	. .	. .	. .
Male	0.679	0.720	48.7	35.7	15.6	2.7	13.8	69.8	19.9	0.663	0.660	51.8	34.9	13.2	. .	. .	. .	. .
Female	0.725	0.707	46.5	39.7	13.8	14.6	44.3	26.5	41.7	0.719	0.660	50.7	36.2	13.2	. .	. .	. .	. .
United States																		
Total	0.680	0.732	48.8	35.5	15.7	30.8	26.9	23.0	36.0	0.685	0.758	47.2	36.4	16.4	28.0	27.3	26.5	38.9
Male	0.715	0.747	48.6	35.3	16.1	26.3	14.7	29.5	24.1	0.707	0.751	48.7	35.0	16.4	24.7	13.2	30.2	19.7
Female	0.465	0.708	49.1	35.8	15.1	37.0	38.6	19.4	46.0	0.498	0.767	45.3	38.2	16.4	31.9	40.1	24.3	53.4

. . Data not available.

a) For France, Italy and the United Kingdom, only exits into part-time, wage and salary employment are included in the calculation.

b) Share of working age population not employed full-time in 1986, who were employed full-time in 1991, except that entry rates for France, Italy and the United Kingdom only refer to part-time, wage and salary workers in 1986.

c) Share of working age population not employed in 1986, who were employed in 1991.

d) Five-year earnings mobility is calculated for the years 1985-1990.

Sources: See Table 3.4.

Table 3.7*a.* **Five-year earnings mobility for full-time wage and salary workers by age, 1986-1991**[a]

	Pearson correlation coefficient	Transitions among quintiles					
		Average quintile move	Stayed in the same quintile (%)	Moved one quintile (%)	Moved 2 or more quintiles (%)	Moved to a higher quintile (%)	Moved to a lower quintile (%)
Denmark							
Under 25	0.225	1.159	32.9	35.2	31.9	49.4	17.7
25-34	0.561	0.813	43.5	38.5	18.1	33.3	23.2
35-49	0.715	0.617	54.3	34.1	11.6	22.9	22.9
50-64	0.781	0.598	55.3	33.9	10.8	15.7	29.0
Finland [b]							
Under 25	0.120	1.225	29.1	37.7	33.1	47.4	23.5
25-34	0.331	0.857	44.5	35.6	19.9	30.1	25.4
35-49	0.457	0.663	55.4	30.8	13.8	17.2	27.4
50-64	0.478	0.698	56.2	28.4	15.4	13.8	30.0
France							
Under 25	0.286	0.975	35.6	40.6	23.9	52.6	11.7
25-34	0.636	0.610	53.4	35.8	10.8	32.9	13.7
35-49	0.801	0.436	66.4	26.6	7.0	17.6	15.9
50-64	0.825	0.492	64.3	26.5	9.2	14.5	21.1
Germany							
Under 25	0.391	0.939	39.2	40.0	20.8	52.9	7.8
25-34	0.729	0.693	49.0	37.6	13.4	33.7	17.4
35-49	0.871	0.470	59.9	33.7	6.4	15.3	24.8
50-64	0.886	0.500	59.2	32.3	8.4	9.5	31.3
Italy							
Under 25	0.385	0.934	37.2	40.2	22.6	42.7	20.1
25-34	0.701	0.725	47.5	37.2	15.3	30.9	21.6
35-49	0.834	0.526	59.1	31.6	9.2	18.6	22.4
50-64	0.840	0.561	57.4	32.3	10.3	18.2	24.4
Sweden							
Under 25	0.654	0.673	53.1	28.5	18.3	38.8	8.2
25-34	0.478	0.748	44.3	42.7	13.1	38.3	17.4
35-49	0.700	0.662	53.9	33.6	12.5	26.5	19.5
50-64	0.817	0.639	57.4	27.8	14.8	12.0	30.6
United Kingdom							
Under 25	0.482	1.118	29.7	39.9	30.4	61.7	8.6
25-34	0.653	0.719	45.3	40.8	13.9	37.7	17.0
35-49	0.746	0.553	56.7	33.7	9.6	21.8	21.5
50-64	0.755	0.582	55.7	33.7	10.6	16.2	28.1
United States							
Under 25	0.523	0.944	36.1	40.2	23.7	53.5	10.4
25-34	0.634	0.715	46.4	39.5	14.0	40.2	13.5
35-49	0.725	0.712	51.1	34.0	14.9	23.4	25.5
50-64	0.702	0.690	55.3	28.3	16.4	18.0	26.6

a) Age as measured for 1986 (1985 for Finland).
b) Five-year earnings mobility is calculated for the years 1985-1990 and for all wage and salary workers.
Sources: See Table 3.4.

Table 3.8 shows, not surprisingly, that mobility increases as the time-span considered increases. While not a very demanding test, this finding is consistent with virtually all prior studies, thereby providing some support for the validity of the data and methods used here. It is theoretically possible that international comparisons of mobility could differ for different durations. For example, the same level of single-year mobility in two countries could lead to different amounts of five-year mobility, if the proportion of single-year changes in earnings that persisted was higher in one country. The limited data presented in Table 3.8 do not provide any clear evidence that these countries differ much in the extent to which year-to-year changes in earnings persist. There is also no consistent evidence that persistence differs between men and women.

Table 3.7*b.* **Five-year earnings mobility for full-time wage and salary workers by education/occupation, 1986-1991**[a]

	Pearson correlation coefficient	Transitions among quintiles					
		Average quintile move	Stayed in the same quintile (%)	Moved one quintile (%)	Moved 2 or more quintiles (%)	Moved to a higher quintile (%)	Moved to a lower quintile (%)
Denmark (education)							
Less than upper secondary school-leaving certificate	0.624	0.701	50.3	34.6	15.1	25.4	24.3
Upper secondary school-leaving certificate	0.802	0.500	69.0	21.4	9.5	16.7	14.3
Tertiary education but no university degree	0.723	0.641	52.1	36.0	12.0	26.7	21.2
First university degree or higher	0.637	0.518	61.3	29.5	9.3	27.3	11.5
France (occupation)							
Blue-collar	0.627	0.480	60.9	32.3	6.8	22.7	16.4
Clerical, sales and service	0.672	0.476	62.5	30.0	7.5	22.4	15.1
Managerial, professional and technical	0.772	0.375	72.0	22.0	6.1	15.4	12.6
Germany (education)							
No vocational training	0.827	0.499	60.3	34.6	5.1	28.7	11.0
Vocational training without university degree	0.754	0.537	56.2	35.8	8.0	32.2	11.6
University degree or comparable vocational training	0.893	0.299	73.8	22.9	3.4	18.1	8.1
Italy (occupation)							
Blue-collar	0.687	0.771	41.1	44.3	14.6	44.8	14.1
Clerical, sales and service	0.830	0.544	57.8	32.0	10.2	38.5	3.7
Manager	0.824	0.280	80.2	12.6	7.1	16.5	3.3
Sweden (education)							
Less than intermediate school-leaving examination	0.644	0.750	43.0	45.0	12.0	33.0	24.0
Intermediate school-leaving examination	0.600	0.840	41.5	41.5	17.0	27.7	30.9
Higher school examination (*gymnasium*)	0.637	0.580	56.8	34.1	9.1	25.0	18.2
College/university examination	0.611	0.492	68.9	22.9	8.2	24.6	6.6
United Kingdom (occupation)							
Blue-collar	0.593	0.722	45.8	39.4	14.8	25.2	29.0
Clerical, sales and service	0.738	0.566	53.5	37.8	8.7	32.4	14.1
Managerial, professional and technical	0.706	0.490	59.7	33.3	7.0	28.7	11.6
United States (education)							
Less than upper secondary school-leaving certificate	0.267	0.995	40.8	32.5	28.7	18.6	40.6
Upper secondary school-leaving certificate	0.704	0.644	51.5	37.1	11.4	31.7	16.7
Tertiary education but no university degree	0.685	0.780	41.8	42.5	15.7	42.9	15.3
First university degree or higher	0.738	0.540	57.0	34.2	8.8	35.7	7.3

a) Mobility tabulations are for ages 35-49 only, with education/occupation and age as measured for 1986 (1985 for Finland).
Sources: See Table 3.4.

The above analysis suggests more broad commonalties than differences across these countries, despite large differences in their labour market institutions, performance and economic structure. This suggests that cross-country differences in "life-time" inequality are probably quite similar to the differences in earnings inequality for a single year, although it would be desirable to verify this finding for longer panels and more countires. The analysis also suggests that earnings tend to be more volatile in countries with a greater point-in-time dispersion. While overall earnings mobility is shown to be substantial, the mobility of low-paid workers is of particular interest. Yet, summary measures of mobility throughout the entire earnings distribution may not provide a reliable indication of the extent to which workers in low-paid jobs are vulnerable to becoming trapped at a low earnings level. This issue is taken up next.

3. Earnings mobility of low-paid workers

One of the dilemmas facing policymakers is the possibility that policies designed to raise minimal

Table 3.8. **Earnings mobility of full-time wage and salary workers over 1, 2, 3, 4 and 5 years** [a]

	Males					Females				
	Pearson correlation coefficient	Average quintile move	Stayed in the same quintile (%)	Moved one quintile (%)	Moved 2 or more quintiles (%)	Pearson correlation coefficient	Average quintile move	Stayed in the same quintile (%)	Moved one quintile (%)	Moved 2 or more quintiles (%)
Denmark										
1986-1987	0.853	0.488	62.1	29.6	8.3	0.756	0.612	56.8	30.4	12.8
1986-1988	0.789	0.609	55.5	32.8	11.7	0.629	0.769	49.6	32.7	17.8
1986-1989	0.761	0.667	52.6	33.6	13.9	0.588	0.828	45.5	35.2	19.3
1986-1990	0.696	0.724	49.1	36.1	14.8	0.517	0.898	41.6	37.1	21.3
1986-1991	0.667	0.777	46.3	36.5	17.2	0.446	0.923	40.1	38.4	21.5
France										
1986-1987	0.823	0.364	71.4	23.2	5.4	0.711	0.427	68.7	23.3	8.0
1986-1988	0.823	0.443	65.6	27.4	7.0	0.696	0.500	63.5	27.0	9.5
1986-1989	0.768	0.519	59.8	31.7	8.5	0.672	0.542	60.2	29.5	10.1
1986-1991	0.776	0.584	56.6	32.6	10.9	0.629	0.621	55.6	31.9	12.6
Germany										
1986-1987	0.906	0.371	68.8	26.4	4.8	0.925	0.348	70.1	25.8	4.1
1986-1988	0.892	0.423	65.1	29.2	5.7	0.882	0.463	61.1	33.1	5.8
1986-1989	0.859	0.506	59.8	32.0	8.1	0.822	0.605	53.1	37.0	9.8
1986-1990	0.832	0.598	53.7	35.8	10.5	0.781	0.665	51.0	35.6	13.3
1986-1991	0.774	0.646	51.8	36.5	11.7	0.759	0.750	45.6	38.3	16.1
Italy										
1986-1987	0.897	0.417	66.0	28.2	5.8	0.817	0.485	63.8	27.2	9.0
1986-1988	0.861	0.537	57.9	33.1	9.0	0.774	0.624	55.5	31.5	12.8
1986-1989	0.809	0.617	53.8	34.4	11.9	0.708	0.712	51.3	32.4	16.4
1986-1990	0.795	0.660	51.4	35.4	13.2	0.700	0.757	48.5	34.0	17.5
1986-1991	0.788	0.679	50.2	36.0	13.8	0.704	0.789	44.9	35.9	19.2
Sweden										
1984-1986	0.840	0.451	64.2	29.4	6.4	0.786	0.616	54.9	33.9	11.2
1986-1991	0.665	0.766	46.3	38.4	15.3	0.800	0.821	43.9	40.3	15.8
United States										
1986-1987	0.838	0.488	61.1	31.6	7.3	0.717	0.514	59.8	32.8	7.4
1986-1988	0.723	0.625	54.3	33.9	11.8	0.687	0.630	52.4	37.2	10.4
1986-1989	0.681	0.700	48.8	37.6	13.6	0.754	0.675	52.3	33.3	14.4
1986-1990	0.651	0.804	42.5	41.0	16.5	0.714	0.718	48.2	37.3	14.5
1986-1991	0.715	0.787	46.6	35.7	17.7	0.465	0.741	48.9	35.5	15.6

a) Earnings quintiles calculated separately for males and females.
Sources: See Table 3.4.

Table 3.9. **Five-year earnings mobility of low-paid workers, 1986-1991**

Percentages of full-time wage and salary workers

	Low-paid defined as bottom quintile									Low-paid defined as below 0.65 median earnings								
	Share of low-paid workers in 1986	1991 earnings status of 1986 low-paid workers				1986 earnings status of 1991 low-paid workers				Share of low-paid workers in 1986	1991 earnings status of 1986 low-paid workers				1986 earnings status of 1991 low-paid workers			
		No longer employed full-time	Still in bottom quintile	Moved to second quintile	Moved to quintiles 3-5	Not employed full-time	In bottom quintile	In second quintile	In quintiles 3-5		No longer employed full-time	Still below 0.65 median	0.65 to 0.95 median	Above 0.95 median	Not employed full-time	Below 0.65 median	0.65 to 0.95 median	Above 0.95 median
Denmark																		
Total	**20.0**	**26.7**	**32.1**	**20.5**	**20.7**	**38.3**	**33.3**	**15.3**	**13.2**	**6.5**	**25.7**	**6.0**	**43.1**	**25.2**	**52.7**	**10.4**	**25.2**	**11.8**
Sex: Male	10.3	27.9	19.6	18.6	33.9	35.4	21.5	19.8	23.3	3.9	25.3	4.8	28.5	41.4	50.6	10.1	15.7	23.6
Female	34.4	26.3	37.6	21.3	14.9	39.4	38.2	13.4	9.0	10.3	25.9	6.7	51.4	16.0	53.6	10.5	29.2	6.7
Age: Under 25	51.2	22.6	27.8	20.9	28.8	54.6	29.9	7.8	7.7	24.7	21.1	3.6	44.5	30.8	69.1	6.4	18.1	6.4
25-34	17.1	26.1	30.1	23.3	20.6	24.9	34.0	23.0	18.1	4.3	22.2	10.1	46.5	21.2	30.4	17.9	32.1	19.7
35-49	11.8	24.6	41.6	21.2	12.6	27.3	36.7	18.2	17.7	1.9	44.6	7.1	42.9	5.4	19.5	11.1	47.2	22.2
50-64	11.7	51.9	34.6	9.9	3.7	27.5	37.6	22.2	12.8	2.0	–	–	–	–	–	–	–	–
Finland [a]																		
Total	**20.0**	**26.3**	**28.8**	**20.1**	**24.8**	**32.8**	**28.9**	**16.1**	**22.2**	**16.1**	**27.6**	**26.7**	**25.0**	**20.7**	**33.2**	**25.3**	**21.7**	**19.8**
Sex: Male	15.0	27.1	30.1	14.5	28.4	36.4	29.0	10.7	24.0	12.6	28.8	30.0	18.0	23.2	34.5	27.4	14.6	21.6
Female	25.4	25.8	28.0	23.7	22.6	30.3	28.9	19.8	21.0	19.9	26.8	24.5	29.8	18.9	30.9	23.8	26.8	18.6
Age: Under 25	35.0	19.2	24.3	25.3	31.2	37.2	29.2	17.4	16.3	27.1	19.8	20.8	33.2	26.2	37.0	23.6	25.4	14.0
25-34	15.8	25.4	28.9	20.1	25.7	26.0	27.1	18.6	28.3	12.8	26.6	26.6	24.9	22.0	26.5	23.6	24.5	25.4
35-49	12.7	29.6	40.1	14.0	16.3	32.0	31.0	12.9	24.0	10.8	31.1	39.6	15.7	13.7	33.2	29.6	15.5	21.7
50-64	17.4	61.3	30.0	4.7	4.0	40.9	29.4	9.0	20.7	15.2	62.1	30.0	4.7	3.2	42.2	27.8	11.9	18.0
France [b]																		
Total	**20.0**	**22.5**	**35.7**	**23.8**	**18.0**	**19.9**	**45.3**	**20.4**	**14.5**	**11.0**	**26.2**	**23.2**	**35.4**	**14.8**	**22.3**	**29.9**	**33.7**	**14.1**
Sex: Male	15.0	20.2	28.5	27.8	23.5	16.3	40.2	23.2	20.4	7.9	23.1	17.5	39.4	20.1	17.9	26.1	34.0	22.0
Female	28.9	24.7	42.4	20.0	12.9	22.7	49.2	18.2	9.9	39.8	29.6	28.0	32.0	10.5	25.1	32.3	33.6	9.1
Age: Under 25	46.2	22.9	29.1	25.6	22.4	26.6	50.7	16.0	6.8	25.9	25.1	18.0	39.9	17.0	28.1	34.0	32.8	5.0
25-34	18.7	21.2	38.0	24.5	16.3	17.9	46.5	21.8	13.9	9.9	25.8	26.4	34.5	13.3	20.3	31.7	34.8	13.2
35-49	11.6	23.3	42.6	20.3	13.8	17.1	41.3	22.2	19.4	6.3	29.8	27.5	28.8	13.8	20.4	27.0	32.9	19.8
50-64	13.4	24.3	46.4	18.6	10.8	14.1	35.0	24.1	26.9	7.7	32.4	30.4	27.4	9.8	16.9	19.7	35.0	28.4
Germany																		
Total	**20.0**	**39.3**	**27.4**	**16.8**	**16.6**	**39.1**	**32.1**	**22.0**	**6.8**	**18.7**	**40.5**	**15.5**	**29.7**	**14.3**	**45.5**	**28.2**	**23.3**	**3.0**
Sex: Male	11.3	30.5	14.4	21.4	33.7	35.9	23.1	26.5	14.5	10.7	30.9	10.7	29.2	29.2	42.5	26.0	21.9	9.6
Female	38.5	44.3	34.6	14.2	6.9	40.3	35.4	20.3	4.0	35.9	46.0	18.2	30.0	5.8	42.1	28.9	23.9	5.1
Age: Under 25	59.1	51.4	24.9	21.8	1.9	43.8	45.5	10.8	0.0	56.1	34.8	11.7	37.3	16.2	54.3	35.0	10.7	0.0
25-34	12.0	43.4	19.3	14.5	22.9	42.9	19.1	33.3	4.8	10.5	48.0	12.0	20.0	20.0	49.2	14.8	34.4	1.6
35-49	7.4	42.4	42.4	6.1	9.1	38.9	21.4	29.8	9.9	6.9	43.4	28.3	20.0	8.3	43.9	25.8	30.3	0.0
50-64	8.6	61.2	36.7	2.0	0.0	17.7	35.3	21.6	25.5	8.3	62.5	29.2	8.3	0.0	20.0	35.0	27.5	17.5
Italy [b]																		
Total	**20.0**	**8.3**	**43.8**	**25.1**	**22.8**	**1.4**	**51.8**	**26.5**	**20.4**	**10.0**	**10.8**	**19.4**	**52.0**	**17.8**	**2.1**	**42.5**	**40.6**	**14.8**
Sex: Male	13.9	2.2	37.2	30.1	30.6	0.6	46.0	25.1	28.3	6.9	2.9	15.3	56.4	25.4	0.8	39.9	36.8	22.5
Female	32.0	13.8	49.8	20.7	15.8	2.1	56.4	27.6	13.9	16.1	17.7	23.0	48.2	11.1	2.9	44.2	43.0	9.9
Age: Under 25	43.6	5.0	43.7	28.4	22.9	1.3	63.2	23.3	12.2	22.7	5.6	13.1	64.6	16.8	1.9	44.2	45.8	8.1
25-34	16.9	10.4	38.6	24.1	26.8	1.9	41.1	29.4	27.7	7.4	16.1	21.4	39.8	22.7	2.7	32.9	41.8	22.7
35-49	10.9	14.8	48.1	18.5	18.6	1.5	41.8	29.4	27.3	5.6	20.5	32.7	29.5	17.3	2.5	48.3	32.2	17.1
50-64	12.3	14.4	54.7	14.1	17.0	0.2	47.7	27.1	25.0	6.3	22.1	44.7	20.0	13.2	0.5	46.4	38.3	14.8

Table 3.9. **Five-year earnings mobility of low-paid workers, 1986-1991** *(cont.)*

Percentages of full-time wage and salary workers

	Low-paid defined as bottom quintile									Low-paid defined as below 0.65 median earnings								
	Share of low-paid workers in 1986	1991 earnings status of 1986 low-paid workers				1986 earnings status of 1991 low-paid workers				Share of low-paid workers in 1986	1991 earnings status of 1986 low-paid workers				1986 earnings status of 1991 low-paid workers			
		No longer employed full-time	Still in bottom quintile	Moved to second quintile	Moved to quintiles 3-5	Not employed full-time	In bottom quintile	In second quintile	In quintiles 3-5		No longer employed full-time	Still below 0.65 median	0.65 to 0.95 median	Above 0.95 median	Not employed full-time	Below 0.65 median	0.65 to 0.95 median	Above 0.95 median
Sweden																		
Total	**20.0**	**27.6**	**35.5**	**18.4**	**18.4**	**43.4**	**32.5**	**13.3**	**10.8**	**5.0**	**31.6**	**10.5**	**34.2**	**23.7**	**62.8**	**11.4**	**20.0**	**5.7**
Sex: Male	9.0	13.7	22.7	25.0	38.6	28.9	22.2	20.0	28.9	2.4	–	–	–	–	–	–	–	–
Female	40.0	34.3	40.7	15.7	9.3	48.8	36.4	10.7	4.1	9.6	–	–	–	–	–	–	–	–
Age: Under 25	63.1	25.8	39.0	17.1	18.1	40.6	50.0	9.4	0.0	21.5	–	–	–	–	–	–	–	–
25-34	16.3	41.6	29.2	16.7	12.5	61.5	18.0	12.8	7.7	4.1	–	–	–	–	–	–	–	–
35-49	18.0	16.1	39.7	22.1	22.1	38.6	36.0	14.7	10.7	3.7	–	–	–	–	–	–	–	–
50-64	11.1	52.6	21.1	10.5	15.8	30.0	20.0	15.0	35.0	2.3	–	–	–	–	–	–	–	–
United Kingdom [b]																		
Total	**20.0**	**12.9**	**35.8**	**27.8**	**23.6**	**19.0**	**51.9**	**17.3**	**11.9**	**17.7**	**13.3**	**33.8**	**34.6**	**18.3**	**19.7**	**49.1**	**21.9**	**9.3**
Sex: Male	11.0	3.9	30.7	27.5	37.9	5.7	43.2	25.7	25.3	9.5	3.9	28.1	37.2	30.8	5.9	40.3	33.2	20.6
Female	38.5	18.2	38.7	27.9	15.1	27.2	57.2	12.0	3.6	34.6	18.7	37.0	33.1	11.2	27.8	54.3	15.2	2.6
Age: Under 25	48.1	9.3	25.6	31.5	33.6	13.3	71.1	10.9	4.7	43.9	9.3	23.6	40.6	26.5	13.7	68.1	14.3	3.8
25-34	12.1	14.8	36.5	28.3	20.4	20.4	43.8	20.2	15.6	10.3	16.0	35.6	33.3	15.1	21.4	40.9	25.3	12.4
35-49	11.3	15.7	48.9	24.0	11.4	26.6	42.7	17.9	12.8	9.7	16.9	47.6	28.1	7.4	27.5	40.1	22.7	9.7
50-64	14.3	22.1	57.5	16.3	4.1	10.8	49.3	22.7	17.2	12.4	23.1	55.4	18.7	2.9	11.7	46.9	27.9	13.5
United States																		
Total	**20.0**	**41.4**	**30.6**	**16.7**	**11.3**	**37.8**	**35.5**	**12.4**	**14.3**	**27.5**	**39.2**	**33.9**	**17.2**	**9.7**	**35.0**	**42.3**	**10.4**	**12.3**
Sex: Male	11.8	32.7	29.4	17.4	20.6	29.9	30.1	15.9	24.2	16.7	31.5	31.2	21.9	15.5	27.5	35.7	14.8	22.0
Female	31.2	45.9	31.2	16.3	6.6	42.7	38.9	10.3	8.1	42.2	43.4	35.4	14.6	6.7	39.6	46.3	7.7	6.4
Age: Under 25	43.2	36.9	26.5	19.4	17.2	45.3	46.1	5.6	3.0	54.7	36.0	31.8	19.6	12.5	37.8	55.5	4.4	2.3
25-34	20.5	36.9	28.7	19.3	15.2	36.5	43.3	15.8	4.4	28.6	34.2	29.6	21.4	14.8	33.0	48.3	13.5	5.2
35-49	15.7	38.9	36.0	17.6	7.5	35.4	30.5	12.6	21.5	21.7	36.2	41.6	15.6	6.6	34.3	37.7	9.6	18.3
50-64	16.7	60.2	29.0	6.9	3.9	39.2	29.5	12.8	18.5	24.3	57.0	29.9	9.6	3.5	37.0	35.5	12.8	14.8

– Value not reported because the data refer to fewer than 30 observations.
a) Five-year earnings mobility is calculated for the years 1985-1990 and for all wage and salary workers.
b) Calculations exclude workers leaving wage and salary employment altogether.
Sources: See Table 3.4.

standards for pay and other job characteristics may reduce the labour-market opportunities of low-skilled workers by "pricing" them out of the labour market. The actual quantitative terms of any trade-off between job quality and quantity have yet to be seriously analysed. Furthermore, the job-quality dimension has a dynamic element that has received very little attention – the trade-off, if any, between minimal job standards and mobility.

Table 3.9 presents summary measures of earnings mobility of low-paid workers. Two different definitions are considered: workers in the bottom quintile; and workers earning less than 0.65 of median earnings. The latter corresponds best to the idea of minimum job standards and is essentially identical to that used in Section C.[25] The quintile definition is more easily compared with some previous studies [Schiller (1994)] and avoids the problem of small sample sizes that arise in some countries for the median-based cut-off.

There is considerable movement out of low-paid jobs, but it is not possible to generalise about the prospects of these workers (Chart 3.7). Only a minority of low-paid workers in 1986 were still low-paid workers in 1991 in all countries, and this share was especially low in Denmark and Sweden for the median-based definition. However, much of the movement is out of full-time wage and salary employment altogether, rather than into higher earnings ranges. For example, only 15.5 per cent of German workers below the 0.65 median earnings cut-off in 1986 were still in that earnings range in 1991, but nearly as many had dropped out of full-time employment (40.5 per cent) as had moved up the earnings distribution (44.0 per cent).[26] From the perspective of policy, it would be desirable to know why such a substantial number left full-time employment. Two insights can be gleaned from the data assembled for this chapter. First, in the five countries in which workers leaving wage and salary employment can be tracked, it is always the case that a large majority of those leaving full-time employment left employment altogether, rather than moving into part-time jobs or self-employment. Second, the exit rate is substantially higher for workers with low earnings than for better-paid workers. Averaging over the eight countries, first-quintile earners were about twice as likely to leave full-time employment as were third-quintile workers.

Table 3.10 presents additional data on the mobility of low-paid workers, restricting the analysis to those who remain in full-time employment. Cross-country differences in the share of 1986 low-earners who moved significantly higher in the earnings distribution by 1991 are quite large, especially when low-pay is defined as less than 0.65 median earnings. Chart 3.8 examines the relationship between overall earnings mobility and the upward mobility of low-paid workers. Surprisingly, there is, at most, a very weak positive relationship with relative earnings mobility, as measured by quintile transitions, while absolute earnings volatility is more strongly, but *negatively*, related to their prospects of moving up. However, the key underlying relationship may be that low-paid workers have greater difficulty moving up in labour markets in which cross-sectional inequality is higher (Chart 3.6, Part B). More detailed and longer career history data will be required to characterise adequately the complex dynamics of low-paid jobs and how they are affected by overall mobility and the level of wage inequality.

Upwards earnings mobility, particularly large gains, are more common for young workers than for prime-age and older workers. Thus, low-paid employment may frequently provide valuable experience for young workers beginning their careers. The pay-off for women appears to be low. Even among these full-time workers, women are significantly less likely to move up than are men, except in Finland. Both the heterogeneity of mobility paths and the lower upward mobility rates for women and older workers suggest that some do become trapped in low-paid jobs, or cycle between them and nonemployment.

The patterns of movement into low-paid jobs also suggest that low-paid workers in any given year have very diverse prospects and histories (Tables 3.9 and 3.10). There is, for example, a large flow of young people into low-paid, full-time employment from part-time work or nonemployment. For many of them, this will be a relatively brief phase of the school-to-work transition (see Chapter 4 for a fuller discussion of the youth labour market). However, a considerable share of low-paid workers in 1991 were either also low-paid workers in 1986 or had experienced downward earnings mobility. The former group shows considerable persistence in low-paid employment and probably has relatively poor prospects for obtaining significantly better jobs. The prospects of workers experiencing downward mobility are more difficult to assess and are probably quite diverse. However, studies of displaced workers in the United States have found substantial persistence of wage losses [Podgursky and Swaim (1987); Ruhm (1991)].

E. CONCLUSIONS

Contrary to what might have been predicted at the end of the 1980s, only a relatively few countries experienced a significant increase in earnings inequality over the first half of the 1990s. A strong, persistent, trend rise in inequality is evident only for the United Kingdom and the United States. In other

Chart 3.7.

Earnings mobility of low-paid workers

A. 1991 earnings status of full-time workers who were in the bottom quintile in 1986

a) Calculations are for the years 1985-1990 and for all wage and salary workers.
b) Calculations exclude workers leaving wage and salary employment.
Sources: See Table 3.4.

Chart 3.7. *(cont.)*

Earnings mobility of low-paid workers

B. 1991 earnings status of full-time workers who were earning less than 0.65 times median earnings in 1986

a) Distributions not presented when fewer than thirty observations were available.
b) Calculations are for the years 1985-1990 and for all wage and salary workers.
c) Calculations exclude workers leaving wage and salary employment.
Sources: See Table 3.4.

countries where the dispersion of earnings has risen, the increase has either been modest or a relatively recent phenomenon and closely associated with substantial labour and product market reforms. A few countries, notably Canada, Finland and Germany, experienced declines in inequality over the past decade.

Despite the absence of a generalised trend, rising earnings inequality in some OECD countries has raised concerns that skill-biased technical change or growing trade with low-wage countries could result in a growing polarisation between workers with good jobs and those with bad jobs. These concerns have been reinforced by the fact that real wage growth over the past 10 years in countries such as Australia, New Zealand and the United States, has been either weak or negative for most jobs held by men in the bottom half of the earnings distribution. Not surprisingly, the incidence of low-paid employment tends to be highest in those countries where earnings inequality is greatest, accounting for one-quarter of all full-time workers in the United States, compared with 6 per cent or less in Finland and Sweden. In all countries, the incidence of low pay tends to be concentrated amongst low-skilled and inexperienced workers. Women and youth face a higher-than-average risk in all countries of being employed in low-paid jobs, particularly in the wholesale and retail trade and catering sectors. Nevertheless, there are some country differences in this pattern. Relative to the average for all workers, the risk of being in a low-paid job is particularly high for women in Belgium, Germany, Japan and Switzerland, for youth in Finland and for older workers in Japan and the United Kingdom.

Different institutional settings in terms of wage-setting practices and welfare provisions do appear to have an impact on the incidence of low pay. Typically, countries with high rates of collective bargaining coverage and trade unionisation tend to have a low incidence of low-paid employment. In countries where the legal minimum wage is high in relation to average earnings, the incidence of low pay tends to be low. There is also some evidence that generous welfare benefits create a binding wage floor. It is less clear whether these wage floors, which limit the number of low-paid jobs, also adversely affect the overall chances of finding employment for lower-skilled and inexperienced workers. The employment or unemployment rates of youth, women and unskilled workers do not appear to be significantly correlated across countries with the incidence of low-paid employment. This suggests that factors other than relative wages, such as the overall level of aggregate demand or the amount of training received, may be more important for determining labour-market outcomes of these groups.

In many respects, earnings mobility is quite similar in the countries examined in detail, with approximately half of the workers moving one or more quintiles over a five-year period. The level of mobility over the period 1986-1991 suggests that approximately two-thirds of the inequality observed in a single year is permanent, or at least quite persistent, in all of these countries. It follows that international comparisons of cross-sectional inequality in earnings probably provide a reliable indication of relative levels of inequality measured over longer periods, although it would be desirable to verify this finding for longer time periods and more countries. There is considerable turnover in low-paid jobs in all of the countries. But, the share of low-paid workers in 1986 who were still low-paid in 1991 ranged from below 10 per cent in Denmark to approximately one-third in the United States. For many youths, these jobs appear to provide an initial toe-hold in the labour market which initiates a period of significant wage growth. Older workers in low-paid jobs are much less likely than youths to experience upward mobility and frequently move between them and nonemployment. Countries with higher cross-sectional inequality of earnings appear to have higher earnings volatility and lower upward mobility among low-paid workers, a pattern most evident in the United States.

A number of issues concerning earnings inequality and mobility are touched upon in this chapter, but merit further attention. Whether countries face a trade-off between ''allowing'' earnings inequality to rise or worsening the employment prospects of low-skilled workers is far from resolved. Earnings inequality has risen slightly or remained stable in a number of countries, but there is little evidence that the relatively low incidence of low-paid jobs in these countries is associated with lower employment rates for low-skilled and inexperienced workers. From a dynamic perspective, the situation is even more complex. Low-paid workers in any one year tend to have very diverse career and earnings prospects, with many moving up the earnings ladder, but also many leaving full-time employment altogether. The factors determining why some workers move into better jobs, but others do not, are not well understood. The relationship between trends in earnings inequality at any point in time and lifetime inequality of earnings needs to be developed further. Thus, the growth of earnings inequality and its causes and consequences are likely to remain topics of intense study and debate for some time to come.

Table 3.10. **Five-year earnings mobility of low-paid workers who were employed full-time both in 1986 and in 1991**

Percentages

	Low-paid defined as bottom quintile						Low-paid defined as below 0.65 median earnings					
	1991 earnings status of 1986 low-paid workers			1986 earnings status of 1991 low-paid workers			1991 earnings status of 1986 low-paid workers			1986 earnings status of 1991 low-paid workers		
	Still in bottom quintile	Moved to second quintile	Moved to quintiles 3-5	In bottom quintile	In second quintile	In quintiles 3-5	Still below 0.65 median	0.65 to 0.95 median	Above 0.95 median	Below 0.65 median	0.65 to 0.95 median	Above 0.95 median
Denmark												
Total	**43.8**	**27.9**	**28.3**	**54.0**	**24.7**	**21.3**	**8.1**	**58.1**	**33.9**	**22.0**	**53.2**	**24.8**
Sex: Male	27.2	25.8	47.5	33.3	30.6	36.1	6.5	38.1	55.4	20.5	31.8	47.7
Female	51.0	28.9	20.2	63.0	22.1	14.9	9.0	69.4	21.6	22.7	62.9	14.4
Age: Under 25	35.9	27.0	37.2	65.9	17.1	17.1	4.6	56.4	39.0	20.7	58.6	20.7
25-34	40.7	31.5	27.8	45.3	30.6	24.2	13.0	59.7	27.3	25.6	46.2	28.2
35-49	55.2	28.2	16.7	50.5	25.1	24.4	12.9	77.4	9.7	–	–	–
50-64	71.8	20.5	7.7	51.9	30.6	17.6	–	–	–	–	–	–
Finland [a]												
Total	**39.1**	**27.3**	**33.6**	**43.0**	**23.9**	**33.0**	**36.9**	**34.6**	**28.5**	**37.0**	**32.4**	**29.7**
Sex: Male	41.3	19.9	38.9	45.6	16.8	37.7	42.1	25.3	32.6	43.2	22.9	33.9
Female	37.7	31.9	30.4	41.5	28.4	30.1	33.5	40.7	25.8	34.4	38.7	26.7
Age: Under 25	30.1	31.3	38.6	46.5	27.7	25.9	26.0	41.4	32.7	37.4	40.4	22.2
25-34	38.7	26.9	33.4	36.7	25.1	38.2	36.2	33.9	29.9	32.1	33.3	34.6
35-49	56.9	19.9	23.2	45.6	19.0	35.4	57.5	22.7	19.8	44.3	23.2	32.5
50-64	77.6	12.1	10.3	49.8	15.2	35.0	79.3	12.3	8.4	48.2	20.6	31.2
France												
Total	**49.8**	**28.9**	**21.4**	**50.6**	**30.6**	**18.8**	**31.6**	**48.2**	**20.2**	**38.4**	**43.4**	**18.2**
Sex: Male	39.6	32.3	28.1	40.9	33.0	26.1	22.7	51.2	26.1	31.8	41.5	26.8
Female	59.8	25.4	14.8	59.9	28.2	11.9	39.7	45.4	14.9	43.1	44.8	12.1
Age: Under 25	44.6	31.0	24.4	64.4	26.6	9.0	24.0	53.0	22.9	47.3	45.7	7.0
25-34	53.1	26.6	20.3	39.9	33.7	26.4	35.5	46.5	18.0	39.8	43.7	16.5
35-49	62.2	24.4	13.4	40.8	34.0	25.2	39.0	41.1	19.7	33.9	41.3	24.8
50-64	63.7	23.6	12.7	37.6	32.8	30.6	44.9	40.6	14.5	23.8	42.1	34.2
Germany												
Total	**45.1**	**27.6**	**27.3**	**52.8**	**36.1**	**11.2**	**26.0**	**50.0**	**24.0**	**51.7**	**42.9**	**5.4**
Sex: Male	20.8	30.8	48.5	36.0	41.3	22.7	15.5	42.3	42.3	45.2	38.1	16.7
Female	62.2	25.4	12.4	59.3	34.0	6.7	33.7	55.6	10.7	54.3	44.8	1.0
Age: Under 25	37.9	33.2	28.9	80.8	19.2	0.0	17.9	57.2	24.9	76.6	23.4	0.0
25-34	34.0	25.5	40.4	33.3	58.3	8.3	23.1	38.5	38.5	29.0	67.7	3.2
35-49	73.7	10.5	15.8	35.0	48.8	16.3	50.0	35.3	14.7	46.0	54.1	0.0
50-64	–	–	–	42.9	26.2	31.0	–	–	–	43.8	34.4	21.9
Italy												
Total	**47.7**	**27.5**	**24.9**	**52.8**	**26.6**	**20.6**	**22.9**	**57.2**	**19.9**	**44.5**	**40.5**	**15.0**
Sex: Male	38.1	30.7	31.2	46.7	24.9	28.4	17.3	56.8	25.2	42.0	36.1	21.9
Female	57.4	24.2	18.4	57.9	27.9	14.2	28.7	57.6	13.7	46.2	43.6	10.2
Age: Under 25	45.6	30.2	24.2	64.0	23.6	12.4	14.3	67.8	18.0	45.3	46.4	8.3
25-34	43.4	26.6	30.0	42.1	29.8	28.1	27.8	45.7	26.5	35.7	41.6	22.7
35-49	56.8	21.8	21.4	43.5	29.0	27.5	43.3	35.5	21.2	51.2	31.5	17.3
50-64	64.0	16.5	19.6	48.5	26.3	25.2	58.9	25.2	15.9	47.1	38.6	14.3

Table 3.10. **Five-year earnings mobility of low-paid workers who were employed full-time both in 1986 and in 1991** *(cont.)*

Percentages

	Low-paid defined as bottom quintile						Low-paid defined as below 0.65 median earnings					
	1991 earnings status of 1986 low-paid workers			1986 earnings status of 1991 low-paid workers			1991 earnings status of 1986 low-paid workers			1986 earnings status of 1991 low-paid workers		
	Still in bottom quintile	Moved to second quintile	Moved to quintiles 3-5	In bottom quintile	In second quintile	In quintiles 3-5	Still below 0.65 median	0.65 to 0.95 median	Above 0.95 median	Below 0.65 median	0.65 to 0.95 median	Above 0.95 median
Sweden												
Total	**49.1**	**25.5**	**25.5**	**57.5**	**23.4**	**19.2**	–	–	–	–	–	–
Sex: Male	26.3	29.0	44.7	31.3	28.1	40.6	–	–	–	–	–	–
Female	61.1	23.6	15.3	71.0	21.0	8.1	–	–	–	–	–	–
Age: Under 25	53.3	23.3	23.3	–	–	–	–	–	–	–	–	–
25-34	–	–	–	–	–	–	–	–	–	–	–	–
35-49	47.4	26.3	26.3	58.7	23.9	17.4	–	–	–	–	–	–
50-64	–	–	–	–	–	–	–	–	–	–	–	–
United Kingdom												
Total	**41.1**	**31.9**	**27.1**	**64.0**	**21.3**	**14.7**	**39.0**	**39.8**	**21.1**	**61.2**	**27.2**	**11.6**
Sex: Male	32.0	28.6	39.4	45.8	27.3	26.9	29.2	38.7	32.1	42.8	35.3	21.9
Female	47.4	34.1	18.5	78.6	16.5	4.9	45.6	40.7	13.7	75.3	21.1	3.7
Age: Under 25	28.2	34.8	37.1	82.1	12.6	5.4	26.0	44.8	29.2	79.0	16.6	4.4
25-34	42.9	33.2	23.9	55.0	25.4	19.6	42.4	39.6	18.0	52.1	32.2	15.7
35-49	58.0	28.4	13.6	58.2	24.3	17.5	57.3	33.8	8.9	55.3	31.3	13.4
50-64	73.8	20.9	5.3	55.3	25.5	19.3	71.9	24.3	3.8	53.2	31.6	15.2
United States												
Total	**52.2**	**28.5**	**19.3**	**57.1**	**20.0**	**23.0**	**55.8**	**28.2**	**16.0**	**65.1**	**16.0**	**18.9**
Sex: Male	43.6	25.8	30.6	42.9	22.6	34.5	45.4	31.9	22.6	49.3	20.4	30.4
Female	57.7	30.2	12.1	67.9	17.9	14.2	62.5	25.8	11.7	76.7	12.8	10.5
Age: Under 25	42.0	30.7	27.3	84.3	10.2	5.5	49.7	30.7	19.6	89.2	7.1	3.7
25-34	45.5	30.5	24.0	68.2	24.8	7.0	45.0	32.5	22.5	72.1	20.2	7.8
35-49	58.9	28.8	12.3	47.2	19.6	33.2	65.2	24.5	10.3	57.5	14.7	27.9
50-64	73.0	17.3	9.8	48.5	21.1	30.4	69.6	22.4	8.0	56.3	20.3	23.4

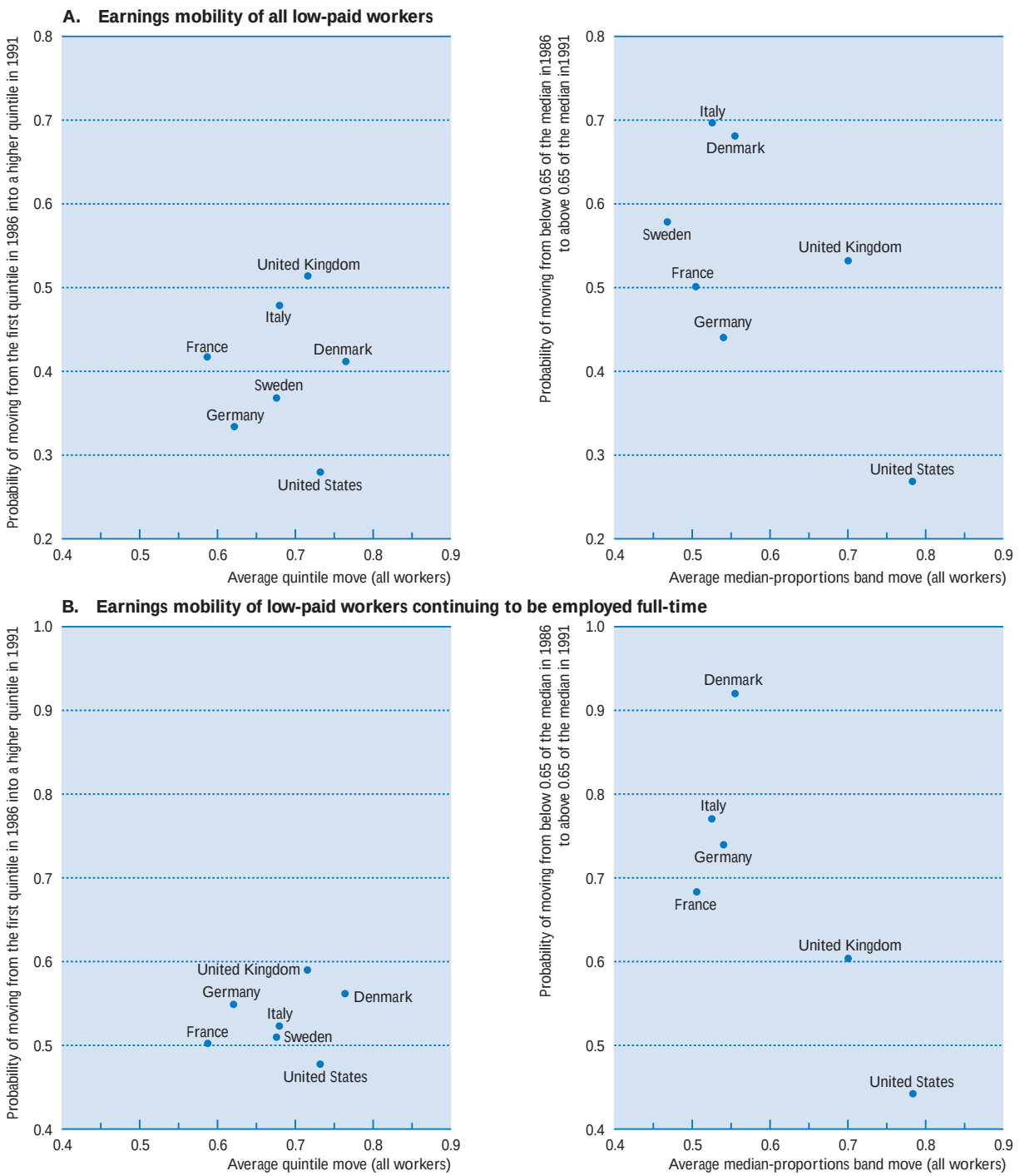
– Value not reported because the data refer to fewer than 30 observations.

a) Five-year earnings mobility is calculated for the years 1985-1990 and for all wage and salary workers.

Sources: See Table 3.4.

Chart 3.8.

Overall earnings mobility and the upward mobility of full-time, low-paid workers, 1986-1991



Sources: See Table 3.4.

Notes

1. In this chapter, the earnings data for Germany refer to western Germany only.
2. While the dispersion of weekly earnings for all full-time workers showed a small rise between 1984 to 1994, there was no rise in the dispersion of hourly earnings for all workers. A careful and detailed analysis of the distribution of earnings in New Zealand between 1984 to 1994 is provided by Dixon (1996).
3. The impact of the business cycle on the *overall* dispersion of earnings is uncertain. While lay-offs during a recession may result in some compression in the lower half of the earnings distribution for those remaining in work, this may be partly offset by the greater weight given to the dispersion of earnings in the top half of the distribution.
4. To test somewhat more rigorously whether earnings inequality does have a cyclical element, a number of simple regressions were carried out separately for men and women for each of the countries shown in Chart 3.2 (except for Sweden). The D5/D1 ratio was separately regressed against two measures of the business cycle – the unemployment rate and the ratio of actual to trend GDP (as captured by the Hoderick-Prescott filter) – and a time trend. For Australia, France and the United Kingdom (output gap measure only), there is some evidence that cyclical fluctuations do have a small positive, rather than negative, impact on earnings inequality for men, but no evidence of a similar effect for women.
5. Europe (low earnings inequality, rising unemployment) and the United States (growing earnings inequality, stable unemployment) are often compared in terms of such a trade-off. But this is a complex issue, and recent research has not confirmed the existence of a consistent relationship or trade-off between relative wages and employment by skill level [Card *et al.* (1996)]. The relationship between the earnings dispersion and income distribution is also complex. For example, it is possible that an increase in earnings inequality could be associated with an increase in employment, especially of unskilled workers and, thus, with greater equality in the income distribution.
6. In some countries, the incidence of low-paid employment is measured with respect to year-round, full-time workers rather than all full-time workers *per se* (see Annex 3.B).
7. There has been considerable discussion about the factors behind the earnings gap between men and women. Gender differences in average job tenure and experience as well as in the composition of employment by industry and occupation partly account for women receiving lower earnings, on average, than men. Nevertheless, a substantial part of the gap usually remains unexplained even after controlling for these and many other factors [Blau and Kahn (1995)].
8. If part-time employment were included in the analysis, the proportion of women in low-paid jobs could well be even higher, given their predominant share of part-time work in most OECD countries.
9. In Table 3.2, the age groups for Italy (under 31, 31 to 50, 51 and over) are not the same as for the other countries which may explain the relatively low proportion of all low-paid workers in the prime-age group.
10. Equivalently, the concentration measure can also be obtained by dividing the low-paid employment share of each sub-group of workers by its overall employment share.
11. Blau and Kahn (1996) find that it is greater wage inequality (*i.e.* larger returns to skill) in the United States, and not a different distribution of skills, which explains the larger earnings dispersion in the United States than in several other industrialised countries.
12. It could well be that, in terms of similar aptitudes, workers in France with a "Bac" or an equivalent qualification should be compared with workers in the United States who have received some college education. However, even in this case, the incidence of low pay for these workers is still 8 percentage points higher in the United States than in France.
13. The minimum wage in the United States in 1994 was $4.25 per hour which, if multiplied by 40 hours per week and by 52 weeks in the year, corresponds to 34 per cent of median annual earnings of full-year, full-time workers (estimated as being around $26 000).
14. The countries included in the study of Blau and Kahn (1996) are: Australia, Austria, Great Britain, Hungary, Italy, Norway, Sweden, Switzerland, the United States and western Germany. However, only Australia, Austria, Great Britain, Norway, the United States and western Germany are included in their comparison of employment/population ratios by skill.
15. The secretariat is grateful to the following consultants who provided the longitudinal earnings data underlying this section: Niels Westergård-Nielsen and Paul Bingley (Centre for Labour Market and Social Research, Aarhus Business School, Danish data); Tor Eriksson and Lajos Parkatti (Centre for Labour Market and Social Research, Aarhus Business School, Finnish data); Yves Guillotin and Alain Bigard (Groupe d'Analyse des Itinéraires et Niveaux Salariaux, Université de Maine, French data); Viktor Steiner (Zentrum für Europäische Wirtschaftsforschung, German data); Claudio Malpede, Lia Pacelli and Riccardo Revelli (Ricerche e Progetti, Italian data); Anders Klevmarken and Sten Hansen

(University of Uppsala, Swedish data); Peter Elias (Warwick University, United Kingdom data); and David Fasenfest (Purdue University, United States data).

16. Cross-sectional data for two successive years might indicate that 15 per cent of the work force earned less than two-thirds of the median weekly wage in both years. In the absence of further information, it is impossible to know if the same individuals held low-paid jobs in both years or, if different, equally-sized groups of workers temporarily received low pay. A panel data set that follows the same workers over the two years is required to measure the extent of mobility into and out of low-wage employment.

17. Social security contributions are not included in the French and Italian earnings data.

18. Perfect mobility prevails if a worker's position in the distribution in one year has no influence over his or her position in subsequent years. For example, a worker beginning in the first quintile has a 20 per cent probability of being in each of the five quintiles in a subsequent year, the same as a worker beginning in any of the other four quintiles.

19. Pearson correlation coefficients can be quite sensitive to extreme observations. Spearman rank correlation coefficients are more robust and, hence, provide a test of the extent to which measurement error biases the Pearson correlation coefficient. The two sets of values turn out to be quite similar, except that the very low Pearson correlations for American women in Table 3.6 correspond to Spearman correlations that are much higher and consistent with those obtained for the other countries.

20. All of the results presented for earnings quintiles are qualitatively similar to the results that were obtained for decile-level transition matrices. Erling Barth (Institute for Social Research, Oslo) provided the Secretariat with decile transition data for Norway which – while not strictly comparable – indicate a similar level of mobility. Fifty-two per cent of Norwegian workers moved one or more quintiles in the earnings distribution between 1989 and 1993.

21. Earnings bands, expressed in proportions of the median, such as workers earning between 0.65 and 0.95 median earnings, are not strictly of equal width across countries because median wages differ. However, ranges defined in terms of multiples or proportions of the median do provide useful indications of absolute differences in the levels of earnings.

22. The lower age limit was slightly higher in several of the countries. The entrance and exit rates discussed in the next two sentences of the text only consider the five countries with data on the entire working-age cohort, regardless of their employment status.

23. Econometric techniques have been developed for imputing potential earnings, but they require strong assumptions whose validity can not easily be verified. Additional assumptions would be required to characterise unobserved changes in potential earnings. For these reasons, imputations were not made for this study.

24. The figures in Table 3.6 assess men and women in terms of the overall distribution of earnings. It is also possible to examine gender mobility in terms of quintiles defined for that gender alone. Table 3.8 presents such data. Comparisons of mobility levels for men and women are not affected.

25. Consistent with the analysis in Section C, the incidence of working at a job paying less than 0.65 median earnings differs significantly across countries, ranging from a low of 5 per cent for Sweden to a high of 28 per cent for the United States. Youth and women more often hold such jobs than do other workers.

26. Although the numbers differ somewhat, qualitatively similar patterns hold for the other countries.

ANNEX 3.A

Definitions and sources of earnings data for Table 3.1, Charts 3.1, 3.2 and 3.3.

For some countries, information is also provided on recent trends in earnings inequality using alternative sources of earnings data.

Australia

Definition: Gross weekly earnings of all full-time employees in their main job.

Source: Weekly Earnings of Employees (Distribution), Australia, ABS Catalogue No. 6310.0, various editions (now incorporated as an annual supplement to *The Labour Force, Australia*, ABS Catalogue No. 6203.0). The data are obtained as an annual supplement (usually in August) to the monthly labour force survey and refer to the most recent pay period prior to the interview. The published data on the distribution of employees by earnings class have been interpolated by the OECD Secretariat to obtain the decile earnings limits.

Alternative data: In Chapter 5 of the 1993 *Employment Outlook*, the data on earnings inequality was obtained from a sample survey of employers, carried out in May of each year (see *Distribution and Composition of Employee Earnings and Hours, Australia*, ABS Catalogue No. 6306.0). The data referred to gross weekly earnings of full-time employees, excluding managerial workers as well as other workers not covered by the survey (*e.g.* the armed forces, workers in agriculture, forestry and fishing, domestic servants, embassy employees, etc.). However, while the earnings estimates from the May employer survey are probably more precise than those from the August household survey, they suffer from a number of drawbacks for examining trends over a long period of time. Firstly, no survey was carried out in either 1982 or 1984 and, secondly, the results of the survey for 1983 onwards are not strictly comparable with those for earlier years because of a change in the sampling frame. Data updating Table 5.2 of the 1993 *Employment Outlook* according to the May survey (for full-time, non-managerial employees) are as follows:

May data, excluding managerial workers		1989	1990	1991	1992	1993	1994	1995
Males	D9/D5	1.54	1.56	1.59	1.57	1.56	1.58	1.61
	D5/D1	1.45	1.44	1.44	1.41	1.45	1.45	1.48
Females	D9/D5	1.48	1.47	1.49	1.52	1.52	1.51	1.51
	D5/D1	1.34	1.34	1.33	1.34	1.34	1.35	1.36

Austria

Definition: Gross daily earnings, standardized to a monthly basis, taking into account the recorded number of days of insurance contributions, referring to wage earners and salaried employees but excluding most civil servants and all apprentices. The figures include special payments such as holiday and Christmas remunerations. Earnings above the ceiling for social insurance contributions are recorded at the level of that ceiling, precluding the calculation of D9 for certain years.

Source: The data and decile calculations were supplied by the Austrian Central Statistical Office based on social security data.

Alternative data: The Austrian Statistical Yearbook (*Statistisches Jahrbuche*) provides the following data for 1989 onwards based on the same source as above but including civil servants:

Including civil servants		1989	1990	1991	1992	1993	1994
Males	D9/D5	..	..	..	..	..	..
	D8/D5	1.43	1.43	1.42	1.43	1.43	1.44
	D5/D1	1.59	1.61	1.62	1.62	1.61	1.61
Females	D9/D5	1.81	1.81	1.83	1.84	1.85	1.86
	D8/D5	1.47	1.47	1.48	1.48	1.48	1.49
	D5/D1	1.96	1.97	2.00	2.01	2.03	2.03
Total	D9/D5	1.79	1.77	1.75	1.76	1.77	1.80
	D8/D5	1.46	1.47	1.46	1.47	1.46	1.47
	D5/D1	1.92	1.92	1.96	1.96	1.96	1.97

The Austrian Central Statistical Office has also provided the following data on the distribution of *net* monthly earnings – standardised to a 40 hour working-week – based on the *Mikrozensus* (household survey):

Mikrozensus		1981	1983	1985	1987	1989	1991	1993
Males	D9/D5	1.59	1.54	1.61	1.61	1.66	1.66	1.75
	D5/D1	1.44	1.41	1.47	1.43	1.53	1.49	1.52
Females	D9/D5	1.58	1.55	1.59	1.56	1.60	1.65	1.71
	D5/D1	1.52	1.49	1.63	1.51	1.61	1.53	1.59
Total	D9/D5	1.61	1.57	1.62	1.61	1.66	1.66	1.75
	D5/D1	1.56	1.51	1.60	1.50	1.62	1.56	1.60

Belgium

Definition: Gross daily earnings over a three-month period (between 1983 and 1988) or over a year (1989 onwards) of full-time workers. Earnings above the ceiling for social insurance contributions are recorded at the level of that ceiling, precluding the calculation of D9 for certain years.

Source: The decile earnings limits are Secretariat calculations based on social security data provided by the Belgium Institut national d'assurance maladie-invalidité (INAMI) on the distribution of employees by earnings class.

Canada

Definition: Gross annual earnings of full-time, year-round workers.

Source: The data were supplied by the Analytical Studies Branch, Statistics Canada, based on the *Survey of Consumer Finances* after making special adjustments to improve coverage and comparability between the years shown.

Czech Republic

Definition: Earnings (including self-employed income), gross of employee taxes but net of employer taxes, of full-time workers.

Source: As published in Večerník (1995) based on data from the Microcensuses of 1989 and 1993.

Denmark

Definition: Hourly gross earnings data. Persons with wage rates lower than 80 per cent of the minimum wage are excluded.

Source: The data are derived from annual wage-income (including all types of taxable wage-income) recorded in tax registers, divided by actual hours worked, as recorded in a supplementary pension scheme register, and were supplied by Professor Niels Westergård-Nielsen, Centre for Labour Economics, Aarhus Business School, as used in the NAUT project (The Nordic Labour Market in the 1990s).

Finland

Definition: Gross annual earnings of full-year, full-time workers.

Source: The data and decile calculations were provided by Statistics Finland based on the *Income Distribution Survey*.

France

Definition: Gross annual earnings of full-time workers, adjusted for annual hours worked to represent full-year equivalent earnings. Agricultural and general government workers are excluded.

Source: The data are based on salary records of enterprises as reported in *Déclarations Annuelles des Données Sociales* (DADS) and were supplied by the Institut national de la statistique et des études économiques (INSEE), Paris.

Germany (western Germany only)

Definition: Gross monthly earnings of full-time, full-year workers including 1/12 of supplementary payments comprising 13th month pay, 14th month pay, holiday allowances and Christmas allowances.

Source: The data and decile calculations were provided by Victor Steiner, Zentrum für Europäische Wirtschaftsforschung, Mannheim, based on the *German Socio-Economic Panel.*

Italy

Definition: Monthly net earnings (obtained by dividing annual earnings by the number of months worked) of wage and salary earners in their main job.

Source: The data and decile calculations were provided by Andrea Brandolini and Paolo Sestito of the Bank of Italy based on the Bank of Italy's *Survey of Household Income and Wealth.* See Brandolini and Sestito (1996) for a detailed description of this data and trends in earnings dispersion in Italy over the period 1977 to 1993.

Alternative data: For 1986 onwards, the following data on the distribution of net monthly earnings of full-time workers, *i.e.* excluding part-time workers, are also available based on the same source:

Full-time workers		1986	1987	1989	1991	1993
Males	D9/D5	1.52	1.56	1.56	1.56	1.65
	D5/D1	1.45	1.42	1.39	1.43	1.53
Females	D9/D5	1.33	1.36	1.38	1.39	1.40
	D5/D1	1.55	1.46	1.33	1.50	1.67
Total	D9/D5	1.43	1.60	1.44	1.51	1.57
	D5/D1	1.56	1.44	1.50	1.50	1.61

Japan

Definition: Monthly scheduled earnings of regular workers (excluding part-time workers), aged 18 and over, as reported by enterprises in the *Basic Survey on Wage Structure*. The data exclude the general government sector, public enterprises, agriculture, forestry and fisheries, private household services, employees of foreign governments and all establishments with less than 10 regular workers.

Source: The decile earnings limits are Secretariat calculations based on data published in the *Yearbook of Labour Statistics* on the distribution of employees by earnings class. However, they correspond exactly to the decile limits reported in the *Yearbook* (*i.e.* in both cases, a simple linear interpolation of the grouped data has been carried out).

Alternative data: The *Basic Survey* also covers public enterprises and establishments with 5 to 9 regular workers, but this is not reported in the *Yearbook*. Inclusion of these groups would only change the decile earnings slightly, as is shown below for all persons, based on calculations from the report on the *Basic Survey* for 1994:

	D9/D5	D5/D1
Treatment of public enterprises and small establishments:		
Excluded	1.85	1.63
Included	1.84	1.64

Netherlands

Definition: Annual earnings of full-year equivalent, full-time workers, including occasional payments (overtime, holiday, etc.).

Source: The decile earnings limits are Secretariat calculations based on *Survey of Earnings* data on the distribution of employees by earnings class as published in *Sociaal-Economische Maandstatistiek*, Netherlands Central Bureau of Statistics, various issues.

New Zealand

Definition: Usual gross weekly earnings of full-time employees.

Source: Estimates provided by the New Zealand Department of Labour based on data collected in the *Household Economic Survey* administered by Statistics New Zealand.

Norway

Definition: Hourly wages, estimated as hourly/weekly or monthly wages divided by the corresponding number of working hours. Observations of less than 25 kroner per hour and greater than 1 000 kroner per hour (both in 1991 kroner) are excluded. Age limits are 19 to 55 years.

Source: The data and decile calculations were provided by Erling Barth and Halvor Mehlum, Institute for Social Research, Oslo, based on the Norwegian *Level of Living Surveys*, 1980, 1983, 1987 and 1991.

Alternative data: The following, roughly, comparable data for 1989 and 1993 from the *Norwegian Survey of Organisations and Employees* (NSOE) (excluding firms with less than 2 employees) were provided by Erling Barth and Marius Kongsgården, Institute for Social Research, Oslo:

NSOE		1989	1993
Males	D9/D5	1.49	1.51
	D5/D1	1.34	1.37
Females	D9/D5	1.38	1.35
	D5/D1	1.28	1.29
Total	D9/D5	1.50	1.49
	D5/D1	1.34	1.34

Portugal

Definition: Weekly earnings for full-time workers, excluding the agricultural sector and public administration.

Source: Provisional estimates provided by the Departamento de Estudos e Planeamento, Ministério para a Qualificação e Emprego, based on a sample of the *Quadros de Pessoal*, personnel records of employers with at least one employee.

Sweden

Definition: Gross annual earnings of full-year, full-time workers aged 23 and over.

Source: The data and decile calculations were provided by Statistics Sweden based on the *Income Distribution Survey*.

Switzerland

Definition: Gross annual earnings of full-year equivalent, full-time workers as reported in the annual Swiss labour force survey, *Enquête Suisse de la Population Active* (EPSA).

Source: The data and decile calculations were provided by the Swiss Office fédéral de la statistique.

United Kingdom (Great Britain only)

Definition: Gross weekly earnings of full-time employees paid at adult rates, whose pay for the survey week was not affected by absence. Data prior to 1983 refer to men aged 21 and over and to women aged 18 and over, rather than to all persons on adult rates, but have been adjusted to take into account this change in coverage.

Source: Establishment data as reported in the (former) UK Department of Employment, *New Earnings Survey.*

Alternative data: In Table 5.2 of the 1993 *Employment Outlook,* the decile measures were based on gross *hourly* earnings of persons paid on adult rates, whose pay for the survey week was not affected by absence. An update of

these series, also reported in the *New Earnings Survey,* is given below:

Hourly earnings		1991	1992	1993	1994	1995
Males	D9/D5	1.99	2.01	2.01	2.02	2.05
	D5/D1	1.69	1.69	1.72	1.71	1.76
Females	D9/D5	1.93	1.96	1.93	1.93	1.97
	D5/D1	1.61	1.62	1.65	1.64	1.69
Total	D9/D5	1.98	2.01	2.01	2.01	2.03
	D5/D1	1.69	1.69	1.71	1.70	1.75

United States

Definition: Gross weekly earnings of full-time workers aged 25 and over.

Source: All data provided by the US Bureau of Labor Statistics based on the results of the *Current Population Survey.*

Alternative data: In Table 5.2 of the 1993 *Employment Outlook,* the decile measures were based on *hourly* earnings derived from information on annual earnings and annual hours worked in the March supplement to the *Current Population Survey.* An update of these series is given below:

Hourly earnings		1989	1990	1991	1992
Males	D9/D5	2.14	2.18	2.17	2.17
	D5/D1	2.63	2.56	2.58	2.56
Females	D9/D5	2.15	2.14	2.16	2.18
	D5/D1	2.28	2.29	2.22	2.23
Total	D9/D5	2.22	2.23	2.22	2.25
	D5/D1	2.50	2.39	2.42	2.40

These data were supplied by Dr. Lynn A. Karoly, of the Rand Corporation, as a supplement to Table B.2 of her article, ''The Trend in Inequality Among Families, Individuals and Workers in the United States: A Twenty-Five Year Perspective'', in Danziger, S. and Gottschalk, P. (eds.), *Uneven Tides: Rising Inequality in America,* Russell Sage Foundation, New York, 1993, pp. 19-97.

ANNEX 3.B

Earnings definitions and sources of low-pay data for Tables 3.2 and 3.3 and Chart 3.4.

For some countries, a comparison is also made with alternative sources. For all countries, the reference year and the value (in local currency) of median earnings, used to define the cut-off for low pay, are given. Low pay is defined as less than two-thirds of median earnings for all full-time employees. Low-paid employment refers to full-time employees on low pay.

Australia

Definition: Gross weekly earnings of full-time employees in their main job.

Source: The Labour Force, Australia, ABS Catalogue No. 6203.0, December 1995 (data for earlier years were published in *Weekly Earnings of Employees (Distribution), Australia*, ABS Catalogue No. 6310.0) and unpublished tabulations provided by the Australian Bureau of Statistics. The data are obtained as an annual supplement (usually in August) to the monthly labour force survey and refer to the most recent pay period prior to the interview. The data on the distribution of employees by earnings class have been interpolated by the OECD Secretariat to obtain the number of low-paid employees.

Year and value of median earnings: August 1995; $A 556 per week.

Alternative data: A sample survey of employers is carried out for May of each year from which data on low-paid employment can be derived (see *Distribution and Composition of Employee Earnings and Hours, Australia*, ABS Catalogue No. 6306). When calculated using this source, the incidence of low-paid employment in 1995 was around 9 per cent for all full-time employees on *adult* rates, *i.e.* almost 5 percentage points lower than the household (August) survey estimate in Table 3.2. A rough adjustment to include full-time employees on junior rates raises the incidence of low-paid employment by just over 2 percentage points. The exclusion of some groups of employees from the May survey, such as agricultural and domestic staff, may partly explain the remaining 2.5 percentage point difference between the two sources. It is also possible that there may be some under-reporting of low-paid jobs in the May survey. Part of the difference may also be due to reporting errors which are likely to be more substantial in the August survey than in the May survey.

Austria

Definition: Net monthly earnings – standardised to a 40-hour working-week – for all employees

Source: Results of the Austrian *Mikrozensus* of households for 1993. All data were supplied by the Austrian Central Statistical Office.

Year and value of median earnings: June 1993; Sch 13 600 per month (net). *Gross* median earnings according to social security data (see Annex 3.A) were Sch 22 390 per month in 1994.

Belgium

Definition: Annual average of gross average daily earnings of full-time employees.

Source: Secretariat calculations based on social security data provided by the Belgium Institut national d'assurance maladie-invalidité (INAMI) on the distribution of employees by earnings class.

Year and value of median earnings: 1993; BF 2 624 per day.

Canada

Definition: Gross annual earnings of full-time, year-round workers.

Source: Data supplied by the Analytical Studies Branch, Statistics Canada, based on the *Survey of Consumer Finances*.

Year and value of median earnings: 1994; C$ 32 690 per year.

Finland

Definition: Gross annual earnings of full-year, full-time employees.

Source: For all tables and charts, the data were supplied by Statistics Finland based on the preliminary 1994 results of the *Income Distribution Survey*.

Year and value of median earnings: 1994; Mk 119 200 per year.

France

Definition: Net earnings of full-time employees in month prior to the survey, adjusted to include annual bonuses.

Source: Data supplied by the Institut national de la statistique et des études économiques (INSEE) based on the March 1995 results of the labour force survey, *Enquête sur l'emploi.*

Year and value of median earnings: March 1995; FF 8 000 per month (net). *Gross* median earnings according to DADS data (see Annex 3.A) were FF 10 530 per month in 1994.

Alternative data: The incidence of low-paid employment can also be obtained from the DADS (enterprise/establishment data) source (see Annex 3.A). An interpolation of published tabulations of employment by earnings class (*Les Salaires dans l'industrie, le commerce et les services en 1992*, INSEE-Résultats, Emploi-Revenus, No. 97, November 1995) yields an estimate for the incidence of low-paid employment in 1992 of just under 15 per cent, *i.e.* somewhat higher than the *Enquête sur l'emploi* estimate of 13.3 per cent for 1995. A rough adjustment to the DADS data to include general government employees (based on earnings distribution data in ''Les salaires des agents de l'État en 1994'', *INSEE Première*, No. 409, November 1995) raises the incidence of low-paid employment by about one-half of a percentage point. Some of the difference between the two data sources may be due to differences in the population covered. In the *Enquête sur l'emploi*, earnings data is collected only for those persons who are counted as employed at the time of the survey, whereas the DADS data source potentially covers earnings of all persons who were employed at some point during the year. Part of the difference may also simply be due to reporting errors which are likely to be more substantial in the *Enquête sur l'emploi* than in the DADS source.

Germany (western Germany only)

Definition: Gross monthly earnings (not including annual bonuses) of full-time workers (including apprentices).

Source: Data provided by Victor Steiner, Zentrum für Europäische Wirtschaftsforschung, Mannheim, based on the *German Socio-Economic Panel.*

Year and value of median earnings: 1994; DM 4 000 per month.

Italy

Definition: Monthly net earnings (obtained by dividing annual earnings by the number of months worked) of full-time wage and salary earners in their main job.

Source: Data provided by Andrea Brandolini and Paolo Sestito of the Bank of Italy based on the Bank of Italy's *Survey of Household Income and Wealth.* See Brandolini and Sestito (1996) for a detailed description of this data and trends in the incidence of low-pay in Italy over the period 1977 to 1993.

Year and value of median earnings: 1993; L 1 808 000 per month (net).

Japan

Definition: Monthly scheduled earnings of regular employees (excluding part-time employees) aged 18 and over. The survey excludes establishments with less than 5 regular employees. Agriculture, forestry and fisheries, private household services, employees of foreign governments and the general government sector are also excluded from the scope of the survey.

Source: Basic Survey on Wage Structure 1994, Policy Planning and Research Department, Ministry of Labour, Japan. The published (establishment) data on the distribution of employees by earnings class have been interpolated by the Secretariat to obtain the number of low-paid employees.

Year and value of median earnings: June 1994; scheduled monthly earnings: ¥ 253 800 per month (or an estimated ¥ 353 200 including overtime earnings and one-twelfth of annual ''special'' earnings).

Netherlands

Definition: Annual gross earnings, including occasional payments (overtime, holiday, etc.), of full-year equivalent, full-time employees.

Source: Survey of Earnings, Netherlands Central Bureau of Statistics, as reported in *Sociaal-Economische Maandstatistiek*, Netherlands Central Bureau of Statistics, December 1995. The published (establishment) data on the distribution of employees by earnings class have been interpolated by the Secretariat to obtain the number of low-paid employees.

Year and value of median earnings: 1994; Gld 51 500 per year.

New Zealand

Definition: Gross annual earnings of full-time employees.

Source: Data provided by Statistics New Zealand based on the *Household Economic Survey.*

Year and value of median earnings: 1994/95; NZ$ 26 700 per year.

Sweden

Definition: Gross annual earnings of full-year, full-time employees aged 18 and over.

Source: Data supplied by Statistics Sweden based on the 1993 results of the *Income Distribution Survey.*

Year and value of median earnings: 1993; SKr 185 300 per year.

Switzerland

Definition: Gross annual earnings of full-time, full-year equivalent employees.

Source: Data provided by the Swiss Office fédéral de la statistique based on the results for the second quarter of 1995 of the annual Swiss labour force survey, *Enquête Suisse de la Population Active* (EPSA).

Year and value of median earnings: 1995; SF 66 150 per year.

United Kingdom *(Great Britain only)*

Definition: Gross weekly earnings of full-time employees paid at adult rates, whose pay for the survey week was not affected by absence.

Source: Data provided by the UK Central Statistical Office based on the April 1995 results of the *New Earnings Survey.*

Year and value of median earnings: April 1995; £290 per week.

United States

Definition: Gross annual earnings of full-year, full-time employees.

Source: Data provided by US Bureau of the Census based on the *Current Population Survey.*

Year and value of median earnings: 1994; US$26 000 per year.

Bibliography

AABERGE, R., BJÖRKLUND, A., JÄNTTI, M., PALME, M., PEDERSEN, P., SMITH, N. and WENNEMO, T. (1996), "Income Inequality and Income Mobility in the Scandinavian Countries Compared to the United States", Discussion Paper No. 168, Statistics Norway, Research Department, March.

ALARCÓN GONZÁLEZ, D. and McKINLEY, T. (1995), "The Paradox of Narrowing Wage Differentials and Widening Wage Inequality in Mexico", mimeo.

APSLUND, R., BINGLEY, P. and WESTERGÅRD-NIELSEN, N. (1996), "Wage Mobility in Denmark and Finland: A Comparative Study for the Years 1980-1994", mimeo.

ATKINSON, A.B. (1983), *The Economics of Inequality*, Clarendon Press, Oxford.

ATKINSON, A.B., BOURGUIGNON, F. and MORRISON, C. (1992), *Empirical Studies of Earnings Mobility*, Harwood Academic Publishers, Chur, UK.

BANK OF ITALY (1995), *Abridged Report for the Year 1994*, Ordinary General Meeting of Shareholders, Rome, 31 May.

BAUDELOT, B. (1983), "L'évolution individuelle des salaires (1970-1975)", INSEE, M102-103, Paris.

BIGARD, A., GUILLOTIN, Y., LUCIFORA, C. and RAPPELLI, I. (1996), "An International Comparison of Earnings Mobility: The Case of Italy and France," mimeo.

BLAU, F.D. and KAHN, L.M. (1995), "The Gender Earnings Gap: Some International Evidence", in Freeman, R. and Katz, L.M. (eds.), *Differences and Changes in Wage Structures*, University of Chicago Press, Chicago.

BLAU, F.D. and KAHN, L.M. (1996), "International Differences in Male Wage Inequality: Institutions versus Market Forces", *Journal of Political Economy* (forthcoming).

BOUND, J., BROWN, C., DUNCAN G.J. and RODGERS, W.L. (1994), "Evidence on the Validity of Cross-Sectional and Longitudinal Labor Market Data", *Journal of Labor Economics*, Vol. 12, No. 3, pp. 345-368.

BRANDOLINI, A. and SESTITO, P. (1996), "Earnings Dispersion in Italy, 1977-1995", Bank of Italy, Research Department, mimeo.

BURKHAUSER, R.V. and HOLTZ-EAKIN, D. (1994), "Changes in the Distribution of Wage Earnings in the United States and Germany in the 1980s", in Burkhauser, R.V. and Wagner, G.G. (eds.), *Proceedings of the 1993 International Conference of German Socio-Economic Panel Study Users*, Vierteljahrshefte zur wirtschafsforschung, heft 1/2, Deutches Institute für Wirtschaftforschung, Duncker & Humblot, Berlin, pp. 27-35.

BURKHAUSER, R. and POUPORE, J. (1996), "A Cross-National Comparison of Permanent Inequality in the United States and Germany", *Review of Income and Statistics* (forthcoming).

BURKHAUSER, R., HOLTZ-EAKIN, D. and RHODY, S. (1995*a*), "Labor Earnings Mobility and Inequality in the United States and Germany During the 1980s", April, mimeo.

BURKHAUSER, R., HOLTZ-EAKIN, D. and RHODY, S. (1995*b*), "Mobility and Inequality in the 1980s: A Cross-National Comparison of the United States and Germany", May, mimeo.

BURTLESS, G. (1990), "Earnings Inequality over the Business and Demographic Cycles", in Burtless, G. (ed.), *A Future of Lousy Jobs? The Changing Structure of US Wages*, The Brookings Institution, Washington, DC, pp. 77-122.

CARD, D., KRAMARZ, F. and LEMIEUX, T. (1996), "Changes in the Relative Structure of Wages and Employment: A Comparison of the United States, Canada and France", National Bureau of Economic Research Working Paper No. 5487.

CERC (1991), "Les bas salaires dans les pays de la Communauté économique européenne", Documents du CERC, No. 98, La Documentation Française, Paris.

DINARDO, J., FORTIN, N. and LEMIEUX, T. (1994), "Labor Market Institutions and the Distribution of Wages, 1973-1992: A Semi-parametric Approach", Université de Montreal, CRDE Cahier 0894.

DIXON, S. (1996), "The Distribution of Earnings in New Zealand, 1984-94", *Labour Market Bulletin*, (forthcoming).

FÖRSTER, M. (1994), "Measurement of Low Incomes and Poverty in a Perspective of International Comparisions", Labour Market and Social Policy Occasional Papers, No. 14, OECD, Paris.

FREEMAN, R. B. (1993), "How Much has De-Unionization Contributed to the Rise in Male Earnings Inequality?", in Danziger, S. and Gottschalk, P. (eds.), *Uneven Tides: Rising Inequality in America*, Russell Sage Foundation, New York, pp. 99-164.

FREEMAN, R. and KATZ L.M. (eds.) (1995), *Differences and Changes in Wage Structures*, University of Chicago Press, Chicago.

GARDNER, J.M. and HERZ, D.E. (1992), "Working and Poor in 1990", *Monthly Labor Review*, December, pp. 20-28.

GITTLEMAN, M. and JOYCE, M. (1995), "Earnings Mobility in the United States, 1967-91", *Monthly Labor Review*, September, pp. 3-13.

GITTLEMAN, M. and JOYCE, M. (1996), ''Earnings Mobility and Long-Run Inequality: An Analysis Using Matched CPS Data'', *Industrial Relations,* April, pp. 180-196.

GOTTSCHALK, P. and MOFFITT, R. (1994), ''The Growth of Earnings Instability in the US Labour Market'', Brookings Papers on Economic Activity, No. 2, pp. 217-272.

GOTTSCHALK, P. and SMEEDING, T.M. (1996), ''Cross National Comparisons of Levels and Trends in Inequality'', *Journal of Economic Literature* (forthcoming).

HILL, M. (1992), *The Panel Study of Income Dynamics: A User's Guide*, Sage Publications, Beverly Hills, CA.

JENKINS, S. (1991), ''The Measurement of Income Inequality'', in Osbergg, L. (ed.), *Economic Inequality and Poverty: International Perspectives*, M.E. Sharpe, Inc., London, pp. 3-38.

KATZ, L.M. and MURPHY, K.M. (1992), ''Changes in Relative Wages, 1963-87: Supply and Demand Factors'', *Quarterly Journal of Economics*, February, pp. 35-78.

MACHIN, S. and MANNING, A. (1994), ''Minimum Wages, Wage Dispersion and Employment: Evidence from the UK Wages Councils'', *Industrial and Labour Relations Review,* No. 47, pp. 319-329.

MISHEL, L. and BERNSTEIN, J. (1994), *The State of Working America, 1994-95,* M.E. Sharpe, Inc., New York.

MORISSETTE, R. (1996), ''Longitudinal Aspects of Earnings Inequality in Canada'', Research Paper, Analytical Studies Branch, Statistics Canada (forthcoming).

NETHERLANDS CENTRAL BUREAU OF STATISTICS (1994), ''Aantal minimumloners'', *Sociaal-economische maandstatistiek*, November, pp. 37-51.

OECD (1993), *Employment Outlook*, Paris, July.

OECD (1994), *The OECD Jobs Study: Facts, Analysis, Strategies,* Paris.

OECD (1995), *Income Distribution in OECD Countries,* Social Policy Studies, No. 18, Paris.

PODGURSKY, M. and SWAIM, P. (1987), ''Earnings Losses Following Displacement'', *Industrial and Labor Relations Review*, October, pp. 17-29.

ROSE S.J. (1993), ''Declining Family Incomes in the 1980s: New Evidence from Longitudinal Data'', *Challenge*, November-December, pp. 29-36.

ROSE, S.J. (1994), ''On Shaky Ground: Rising Fears About Incomes and Earnings'', National Commission for Employment Policy, Research Report No. 94-02, October.

ROSE, S.J. (1995), ''Broken Promises: The Decline of Employment Stability in the 1980s'', National Commission for Employment Policy, Research Report No. 95-02, April.

RUHM, C.J. (1991), ''Are Workers Permanently Scarred by Job Displacements?'', *American Economic Review*, March, pp. 319-324.

SALVERDA, W. (1994), ''Low Pay in the Dutch Economy: Full-time Low-wage Employment, 1972-1990'', *SOM Research Report 94508*, University of Groningen, Netherlands.

SCHILLER, B.R. (1994), ''Relative Earnings Redux: Youth Mobility in the 1980s'', *Review of Income and Wealth*, December, pp. 441-455.

US BUREAU OF THE CENSUS (1992), ''Workers with Low Earnings'', *Current Population Reports*, Series P-60, No. 178, US Government Printing Office, Washington, DC.

US DEPARTMENT OF LABOR (1995), *Report on the American Workforce*, US Government Printing Office, Washington, DC.

VAN DEN BOSCH, K., CALLAN, T., ESTIVILL, J., HAUSMAN, P., JEANDIDIER, B., MUFFELS, R. and YFANTOPOULOS. J. (1993), ''A Comparison of Poverty in Seven European Countries and Regions Using Subjective and Relative Measures'', *Journal of Population Economics*, August, pp. 235-259.

VEČERNÍK, J. (1995), ''Changing Earnings Distribution in the Czech Republic: Survey Evidence from 1988-1994'', *Economics of Transition*, Vol. 3 (3), pp. 355-371.

WESTERGÅRD-NIELSEN, N. (1989), ''The Use of Register Data in Economic Analysis'', *Zeitschrift fur Volkswirtschaft und Statistik*, Heft 3/1989.

WOOD, A. (1994), *North-South Trade, Employment and Inequality: Changing Fortunes in a Skill-driven World*, Oxford University Press, Oxford.

CHAPTER 4

Growing into work: youth and the labour market over the 1980s and 1990s[1]

A. INTRODUCTION AND MAIN FINDINGS

1. Introduction

The passage from adolescence to adulthood has historically signified several, sometimes distinct, sometimes simultaneous, steps. These include leaving ones' parents and setting-up ones' own home, forming a couple, more often than not marriage and a family, and settling into a more or less stable job, which is often an important catalyst for the other steps. The process implies the passage of time, rather than a once and for all crossing of a given threshold. Not only may "time" differ across countries, but it can also change with general social and economic trends.

The 1980s and 1990s have seen a number of changes with implications for when and how well the passage to adult life occurs. For instance, many OECD countries have introduced educational and training reforms to increase school enrolment rates; an additional objective has been to decrease the proportion of any cohort leaving the school system without a certificate. This period also witnessed, in countries such as France, the United Kingdom, Sweden and Norway, a proliferation of labour market programmes targeted on the young [Gendron (1996); Skedinger (1995); Mizen (1995)]. Changing patterns of employment and job opportunities and, in many countries, high unemployment, have led to different, often more prolonged, patterns of leaving home and new household/family formation. New entrants to the labour market did so under different circumstances compared with the 1960s or most of the 1970s.

The movement of young people from education, at whatever level, to the world of work differs among OECD countries. In some of them, young people begin work while in school – sometimes at odd jobs for pin money, sometimes to save to go on to university and sometimes to help the family, shop around the job market after leaving school and, at some point, settle into a relatively permanent position [Osterman (1980)]. This kind of job-shopping might best characterise the United States and Canada. In other countries, for the majority of young people the transition seems more structured and they take fewer jobs and less time to "settle in" [Buechtemann *et al.* (1993)]. Dual apprenticeship systems, which characterise Austria, Germany and Switzerland, seem to move young people into stable employment faster than is typically the case in the United States [Casey (1986)]. In Japan, firms tend to recruit from particular universities or colleges or from specific high schools with the anticipation that their recruits will remain with them for long periods of time [Dore and Sako (1989)]. In yet other countries, *e.g.* France, Italy and Spain, it appears that youth very rarely work while in the educational system and often are jobless for a long period after they exit the system.

These are caricatures of a complicated process. Nonetheless, they set the stage for this chapter which examines, in its broadest terms, the passage from education to the labour market. The following issues are examined: How well have young people in general fared in the labour market and what, if any, are the differences across countries (Section B)? What has happened to education attendance rates for successive cohorts and how do they vary across countries and with the state of the labour market (Section C)? To what extent, if any, do apparent differences in the mode of the movement from education to the labour market help young people move more or less successfully into jobs (Section C)? How have other dimensions of labour market change, *e.g.* the changing industry structure of employment, affected the settling in process (Section D)? To what extent, if at all, have the earnings of young people changed in ways that make the transition easier or more difficult (Section E)? What are some of the potential underlying causes of youth job market problems and their differences across countries (Section F)?

2. Main findings

Over the 1980s and into the mid-1990s, both participation rates and employment rates of youth, most particularly men, declined across a large number of countries. Their unemployment rates also showed little improvement. These trends have occurred in spite of declines in the relative size of the

youth population and shifts in the composition of employment toward traditional youth-intensive sectors. A higher proportion of unemployed youth is now in households where no one else is employed compared with the mid-1980s. This trend is worrying as such households are more likely to have less contact with the job market than households where another family member is employed, and this could impact negatively on future job prospects. In addition, the proportion of male youths neither in school nor in a job has tended to increase, as has the non-employment rate of out-of-school young men. Reflecting the strong secular increase in job market attachment, such trends are much less in evidence for young women.

On the positive side, in most countries, a rising proportion of successive cohorts is staying on longer in education, partly in response to rising rates of return to investments in additional education. But, part of this increase seems due to the more adverse aggregate labour market conditions facing new entrants in many countries.

The evidence presented shows that youth employment and unemployment rates are very sensitive to cyclical fluctuations, as proxied by aggregate unemployment rate movements. The damaging effects of overall labour market slack are particularly large for younger, out-of-school youth, a group likely to be the least educated. While this is important, it cannot be taken as *the* sole explanation of youth labour market problems across OECD countries because, in some, the overall rate of unemployment did improve over the period and the magnitude of the drops in youth employment rates and the patterns of changes in youth unemployment are rather dissimilar.

B. OVERVIEW OF YOUTH IN THE LABOUR MARKET

There are three commonly used statistics for assessing the state of youth in the labour market: participation, employment and unemployment rates. While the latter is often the most stressed, the former two statistics are at least as important. This is because much research has demonstrated that participation and employment rates are influenced by very similar factors, often leading to much smaller or even contrary effects on unemployment [Freeman (1980)]. For example, Clark and Summers (1982) showed that teenage unemployment rates remain fairly high even when aggregate unemployment declines, partly because their participation rates rise a lot in upswings.

1. Youth participation and employment rates

Tables 4.1 and 4.2 show participation and employment rates for selected years between 1979 and 1994. Both tend to tell the same story. There are, first, very large cross-country differences in their levels for persons under the age of 25. For example, in 1994 the participation and employment rates of French and Belgian male teenagers were under 10 per cent, while in Denmark they were roughly 65 and 60 per cent, respectively. These dissimilarities are very much reduced among those aged 25-54. Indeed, knowing how countries rank on either indicator for adults essentially tells one nothing about what the ranking is for either teenagers or those aged 20-24. A country with a relatively high (low) employment rate for adults does not necessarily have a relatively high (low) rate for young people.

Second, over the peak-to-peak period of 1979-1989 employment rates of teenage men and men aged 20-24 dropped in most countries. Particularly steep declines occurred in France, Ireland, Portugal and Spain. Trends among women are more mixed. While employment rates for teenage women more often than not fell, those for women aged 20-24 generally increased.

By 1994, however, reflecting partly recession and, in some countries, the continuation of a longer trend, employment and participation rates were below those of 1989 (and 1979) for almost all countries for each of the two youth groups and men and women. Finally, *relative* to adult men, the participation and employment rates of youth have fallen over time in most countries (Denmark is an exception among teenagers and Japan an exception among 20-24-year-olds).

In considering these trends, it is important to recall that, in a number of countries, the 1980s witnessed some new and significant labour market changes, *e.g.* new temporary contractual arrangements in a few countries and a wide variety of labour market programmes targeted on young people. These changes have impacted on youth labour market prospects. As documented in Chapter 1, in countries such as France and Spain, 8 out of 10 jobs held by teenagers are of a temporary nature. Many will, as they grow older, get more permanent contracts, but a not insignificant minority seem to move in and out of temporary jobs for a prolonged period [Chapter 1; Gendron (1996)].

The relation between youth employment patterns and labour market programmes is difficult to quantify because of problems of data availability in many countries and because it is often unclear how programme participants are classified in labour force surveys. However, a recent French longitudinal study found that 42 per cent of school leavers at the secondary level in June 1989 had participated in at least

Table 4.1. **Labour force participation rates by age and gender, selected years**

	1979			1983			1989			1994		
	15-19 years old	20-24 years old	25-54 years old	15-19 years old	20-24 years old	25-54 years old	15-19 years old	20-24 years old	25-54 years old	15-19 years old	20-24 years old	25-54 years old
Australia												
Men	61.4	90.2	94.5	58.2	89.6	94.0	59.5	89.2	92.7	53.3	86.5	91.4
Women	55.0	69.2	51.4	57.0	70.8	53.5	57.1	77.5	65.3	54.4	76.0	67.4
Belgium												
Men	..	..	..	19.8	72.8	94.4	10.0	64.4	92.4	9.4	61.9	92.1
Women	..	..	..	17.1	66.3	54.1	8.2	56.8	60.3	6.3	56.2	67.2
Canada												
Men	57.3	86.5	94.9	53.2	84.5	93.7	60.6	84.9	93.8	50.5	79.5	91.4
Women	51.1	72.3	58.5	50.5	74.9	65.6	56.7	77.6	74.7	48.1	72.2	75.7
Denmark												
Men	..	..	..	52.2	86.9	94.2	69.5	88.3	94.5	65.5	78.4	91.9
Women	..	..	..	44.0	82.1	84.0	61.4	80.2	86.6	56.5	74.6	82.6
Finland												
Men	45.9	81.5	92.3	39.7	81.9	93.5	41.9	82.0	93.0	28.1	71.8	90.9
Women	36.2	69.1	81.2	34.1	71.7	85.8	36.5	69.9	86.9	23.1	57.7	84.7
France												
Men	26.5	80.1	96.3	22.5	79.7	96.1	14.9	69.3	95.6	8.7	55.9	95.1
Women	20.0	68.9	63.0	15.1	67.0	67.0	9.4	59.9	72.1	4.7	47.9	76.7
Germany [a, b]												
Men	48.0	79.4	94.9	44.3	78.2	94.3	41.6	78.3	92.1	37.1	74.3	89.2
Women	44.3	71.8	55.4	38.8	71.4	58.3	36.6	73.5	62.6	32.8	72.0	71.0
Greece												
Men	..	..	..	31.8	76.7	95.1	22.7	72.0	94.4	17.8	68.4	94.5
Women	..	..	..	24.4	49.7	43.8	17.9	53.9	51.6	15.0	51.1	53.9
Ireland [a]												
Men	50.2	91.2	95.0	43.1	89.4	95.6	31.6	80.7	91.8	26.4	75.2	90.8
Women	41.9	68.6	27.6	34.1	74.5	32.8	25.0	74.4	42.9	20.2	69.9	51.4
Italy [c]												
Men	33.0	71.7	93.3	30.6	73.8	92.5	26.4	71.5	90.8	23.3	59.1	87.0
Women	28.6	55.4	38.9	26.4	58.5	42.4	22.8	63.9	48.6	17.8	49.4	48.8
Japan												
Men	18.0	70.1	97.2	19.1	71.0	97.1	17.0	71.2	97.0	18.3	74.9	97.5
Women	18.6	69.9	56.2	18.7	72.1	59.5	17.3	74.3	63.2	17.0	74.2	65.3
Luxembourg												
Men	..	..	..	42.8	83.5	95.4	28.7	74.8	94.7	18.0	72.0	94.9
Women	..	..	..	43.9	71.1	40.8	24.3	71.4	48.8	20.0	65.0	55.7
Mexico [a]												
Men	..	..	..	..	..	..	..	..	..	64.3	85.2	96.3
Women	..	..	..	..	..	..	..	..	..	30.3	43.0	40.3
Netherlands												
Men	..	..	..	22.8	74.9	93.4	38.9	75.5	93.3	44.4	75.1	92.6
Women	..	..	..	26.0	71.0	43.1	38.2	74.6	55.7	39.0	75.3	65.0
New Zealand												
Men	..	..	..	..	..	..	58.6	88.7	94.0	53.8	85.0	92.3
Women	..	..	..	..	..	..	54.5	69.3	68.5	51.5	72.2	70.9
Norway												
Men	43.2	62.6	92.8	49.3	82.1	95.1	47.0	79.9	92.3	36.6	72.1	90.6
Women	40.7	61.0	66.0	44.4	66.7	73.2	46.0	70.3	79.0	38.3	62.9	79.4
Portugal												
Men	67.9	88.9	95.0	66.7	75.6	94.5	52.5	72.4	94.1	31.7	72.5	93.6
Women	56.2	71.0	54.8	54.7	75.2	64.3	39.5	68.8	66.3	26.3	58.2	73.4
Spain [d]												
Men	57.9	83.3	95.6	51.5	82.9	94.5	44.8	77.7	93.9	36.3	69.9	92.9
Women	43.4	55.6	30.2	35.6	56.0	33.3	32.7	62.2	44.9	24.5	58.7	54.3
Sweden [d]												
Men	56.4	83.7	95.3	45.4	84.0	95.0	48.5	84.3	94.3	25.5	66.8	89.8
Women	56.5	79.9	81.1	47.5	80.8	87.0	52.0	80.9	90.2	29.0	64.8	86.0
United Kingdom [d, e]												
Men	..	..	..	71.6	90.2	95.4	74.5	91.2	94.9	61.8	83.9	93.0
Women	..	..	..	66.0	71.6	66.7	70.8	75.9	71.9	57.9	69.9	74.0
United States [d]												
Men	61.5	86.4	94.4	56.2	84.8	93.8	57.9	85.3	93.7	54.1	83.1	91.7
Women	54.2	69.0	62.3	50.8	69.9	67.1	53.9	72.4	73.6	51.3	71.0	75.3
OECD unweighted average [f]												
Men	48.2	81.2	94.7	43.2	81.2	94.1	42.4	79.1	93.7	36.4	73.9	92.4
Women	42.1	67.8	55.9	38.4	69.5	59.1	38.0	70.4	65.7	31.6	63.9	67.6

.. Data not available.
a) Data refer to 1993 instead of 1994.
b) Data for 1993 refer to reunified Germany.
c) The age group 25-59 instead of 25-54.
d) The age group 16-19 instead of 15-19.
e) Data refer to 1984 instead of 1983.
f) Based only on countries with data in the specified year.
Sources: OECD, *Labour Force Statistics*, Part III, various issues. Data for Belgium, Denmark, Luxembourg, Greece and the Netherlands were provided by EUROSTAT. Data for Mexico were provided by the Ministry of Labour and Social Affairs.

Table 4.2. **Employment/population ratios by age and gender, selected years**

	1979			1983			1989			1994		
	15-19 years old	20-24 years old	25-54 years old	15-19 years old	20-24 years old	25-54 years old	15-19 years old	20-24 years old	25-54 years old	15-19 years old	20-24 years old	25-54 years old
Australia												
Men	52.5	82.6	91.7	44.9	74.1	87.1	51.9	82.1	89.0	43.1	73.2	84.5
Women	43.8	63.6	48.8	44.4	62.7	49.5	48.8	71.4	62.3	42.7	66.8	62.7
Belgium												
Men	..	..	..	14.3	60.5	88.5	8.4	57.6	88.1	6.3	50.2	86.2
Women	..	..	..	10.9	48.4	45.8	5.8	46.1	53.1	3.9	43.8	59.7
Canada												
Men	48.0	77.0	90.4	40.4	66.7	84.6	51.8	75.7	88.0	40.0	65.9	82.7
Women	43.1	64.9	54.2	40.3	63.7	59.1	50.2	70.6	69.1	40.0	63.0	68.9
Denmark												
Men	..	..	..	43.7	70.1	87.1	64.0	77.1	87.9	59.9	69.4	85.7
Women	..	..	..	32.5	68.9	76.8	55.6	68.7	79.7	53.6	64.3	75.2
Finland												
Men	38.3	75.0	87.3	33.9	75.1	89.2	38.7	77.6	90.2	19.8	48.7	75.1
Women	30.3	63.9	77.8	28.6	65.8	82.5	33.8	65.9	84.6	15.0	41.6	72.5
France												
Men	22.8	73.8	93.3	18.0	68.9	91.9	12.9	59.0	89.8	6.8	42.2	85.9
Women	13.5	59.0	59.5	8.7	52.4	61.9	7.0	45.5	64.0	3.1	32.8	66.6
Germany [a, b]												
Men	46.9	76.8	93.0	40.4	69.3	88.4	39.7	73.3	87.1	35.0	67.7	83.0
Women	42.2	67.7	53.3	34.6	62.7	53.7	34.3	68.3	57.7	30.6	65.7	63.7
Greece												
Men	..	..	..	26.4	63.5	90.5	19.5	58.9	91.3	14.1	55.0	90.0
Women	..	..	..	16.2	35.8	40.1	10.9	36.6	46.9	7.9	33.9	48.1
Ireland [a]												
Men	43.8	83.6	88.8	30.8	71.9	82.2	22.4	65.1	78.8	17.8	56.6	77.7
Women	36.8	65.2	26.3	25.7	65.4	30.3	18.2	63.5	36.6	13.3	56.2	44.2
Italy [c]												
Men	24.3	58.9	91.5	20.5	58.0	90.1	17.4	53.6	86.4	15.6	42.7	81.8
Women	17.2	41.9	36.2	13.9	40.9	38.8	11.6	40.3	42.3	10.3	32.3	43.1
Japan												
Men	17.0	67.9	95.7	17.8	68.2	95.2	15.6	68.5	95.5	16.8	71.1	95.5
Women	18.1	67.6	55.2	17.7	69.0	58.1	16.3	71.5	61.9	15.8	70.5	63.4
Luxembourg												
Men	..	..	..	39.3	79.9	93.7	27.8	73.4	93.9	16.0	66.3	92.6
Women	..	..	..	38.8	66.9	39.2	21.6	70.0	47.0	16.4	62.0	53.5
Mexico [a]												
Men	..	..	..	..	..	..	..	..	..	61.8	82.1	94.8
Women	..	..	..	..	..	..	..	..	..	28.6	40.7	39.4
Netherlands												
Men	..	..	..	15.6	59.6	85.1	33.0	67.0	87.8	37.3	65.8	87.4
Women	..	..	..	17.4	61.1	38.0	30.3	66.6	49.3	34.4	69.5	59.8
New Zealand												
Men	..	..	..	..	..	..	49.3	77.1	88.9	43.3	73.8	85.9
Women	..	..	..	..	..	..	45.9	62.7	64.9	41.7	64.1	66.6
Norway												
Men	39.4	60.1	92.2	44.0	77.6	92.8	40.2	73.0	89.8	32.0	64.4	86.3
Women	36.6	59.1	65.2	39.7	62.0	71.4	42.1	64.2	76.8	34.1	57.4	76.7
Portugal												
Men	58.9	81.9	92.8	57.4	66.3	92.0	48.1	66.3	91.9	28.1	63.5	89.1
Women	38.6	53.9	50.7	41.1	56.8	58.8	33.2	58.9	62.5	21.1	49.4	68.3
Spain [d]												
Men	44.2	71.9	90.1	28.6	59.8	83.6	33.7	58.9	84.5	21.8	44.4	77.6
Women	31.5	45.7	28.9	16.9	34.5	29.4	17.8	36.6	35.3	10.3	30.9	38.9
Sweden [d]												
Men	52.5	80.7	94.2	40.8	78.3	92.8	46.9	81.7	93.2	21.0	53.9	82.8
Women	52.0	76.9	79.8	42.3	75.2	84.9	50.2	78.5	89.1	24.5	55.7	81.0
United Kingdom [d, e]												
Men	..	..	..	54.9	72.8	86.4	65.8	81.6	89.2	48.9	68.6	83.9
Women	..	..	..	52.1	60.1	60.2	64.3	69.2	67.3	48.6	62.4	69.3
United States [d]												
Men	51.7	78.9	91.2	43.1	71.3	86.1	48.7	77.8	89.9	43.8	74.6	87.2
Women	45.3	62.4	59.0	40.0	60.9	62.0	46.4	66.4	70.4	43.0	64.5	71.5
OECD unweighted average [f]												
Men	41.6	74.5	91.7	34.5	69.0	88.8	36.8	70.3	89.1	30.0	61.9	85.5
Women	34.5	60.9	53.5	29.6	58.6	54.8	32.2	61.1	61.0	25.7	53.7	61.6

Sources and Notes: See Table 4.1.

one programme by December 1990 [Aucouturier and Gelot (1995); Verdier (1995)]. Evidence from the England and Wales youth cohort survey showed that about one-third of respondents in "cohort 4", who were 18-19 years old in 1991, had been on youth training (YT) at some time during the survey period [Park (1994)].

2. Youth unemployment

Table 4.3 shows unemployment rates for selected years. In all countries – except Germany from 1989 – youth unemployment rates are greater than those of adults. And, with few exceptions, teenage and young adult rates are double-digit. There are large cross-country differences in levels: in 1994, only Denmark, Germany and Japan had teenage rates under 10 per cent, while they were 30 per cent and over in Belgium, Finland, Ireland, Italy and Spain. Unlike the case with participation and employment rates, a country's ranking on adult unemployment is a good predictor of its ranking on youth unemployment. That is, if the rates of adults are relatively high (low), the same applies to young people.

Considered over the 1979-1989 period, different trends can be seen. Only in Australia, Canada, France (women only), Portugal, Sweden and the United States (women only) did teenage unemployment rates show any, usually modest, absolute improvement. Japan recorded a strong, secular increase in youth unemployment, abeit from a very low starting point. Between 1989-1994, unemployment rates increased almost everywhere (exceptions are Denmark, young women only; and the Netherlands).

Another dimension to unemployment is its duration. The incidence of long-term unemployment (a spell of one year or more) is shown in Table 4.4. Several patterns show-up. First, in all countries the incidence is lower for the young unemployed compared with adults. Second, there are huge cross-country differences. The incidence of long-term unemployment among youth is under 10 per cent in Canada, Sweden and the United States compared with over 30 per cent in Greece, Ireland, Italy, the Netherlands, Spain and the United Kingdom (young men only). Third, among young people there are few differences in the incidence between men and women. Fourth, during the 1983-1989 recovery period, the incidence declined by varying degrees in most countries. But, by 1994 it had again increased and, with few exceptions, exceeded 1989 levels.[2]

Another important dimension of the problem is the household situation of the young unemployed. Are many young people who are unemployed living in households where no one else is employed? The importance of this question is not solely a concern for the welfare of young people in the sense of living in a household where there is no other apparent source of earned income. There are also issues of family tensions and the nature of day-to-day contacts of people in jobless households with the labour market which may affect their future job prospects. For example, Payne (1987) found that, in Great Britain, if the head of household was unemployed it doubled the likelihood of a young person in the household also being unemployed. Research by Katz and Case (1991) on Boston neighbourhoods also showed the importance of one's immediate environment as one determinant of job market prospects and labour force status.

Chart 4.1 shows the proportion of unemployed youth in households with no other person employed. The most important point is that this percentage has increased in most countries since 1985 to reach 30 per cent or more in all but the three southern European countries shown in the chart. This increase is potentially worrisome when it is realised that many such households are likely to be located in the lower part of the income distribution, may be geographically located in areas of high unemployment and, perhaps, have had less of a chance in the educational system [Katz and Case (1991); Gregory (1995*a*)].

In analysing the unemployment and employment problems facing young people, it is also of interest to consider their attitudes towards work. Do they look upon work as a marginal or secondary kind of activity or not? There is a growing literature in economics on measures of "life satisfaction" or "well-being" [Oswald (1995); Clark and Oswald (1994); Gallie (1994)]. There have also been many analyses of the effects of being unemployed on family/household relations, mental distress and the nature of social contacts. For example, Warr *et al.* (1988), summarising evidence from the psychology literature, suggest that unemployment can lead to greater mental stress, while Clark *et al.* (1994), using the British Household Panel Survey, find that the unemployed show a decline in mental stress when they find a job, while those who become unemployed experience an increase in stress.

Data from the International Social Survey Programme (ISSP) can shed some light on work attitudes (see Annex 4.B). In the 1989 wave of the ISSP, respondents were asked: "Do you agree or disagree... work is a person's most important activity?"; and "Do you agree or disagree... I would enjoy having a paid job even if I did not need the money?" Responses were: strongly agree, agree, neither agree nor disagree, disagree and strongly disagree. Table 4.5 shows the probability of respondents (pooled across 18 countries) saying *they strongly agreed* with each statement, classified by their labour force status.

The results suggest that the young value work at least as highly as adults. And, the young unemployed

Table 4.3. **Unemployment rates by age and gender, selected years**

	1979			1983			1989			1994		
	15-19 years old	20-24 years old	25-54 years old	15-19 years old	20-24 years old	25-54 years old	15-19 years old	20-24 years old	25-54 years old	15-19 years old	20-24 years old	25-54 years old
Australia												
Men	14.6	8.4	2.9	22.9	17.3	7.3	12.9	8.0	4.0	19.2	15.4	7.5
Women	20.4	8.0	5.1	22.2	11.5	7.5	14.6	7.9	4.7	21.5	12.1	6.9
Belgium												
Men	..	..	..	28.0	16.9	6.2	16.3	10.7	4.6	32.5	18.9	6.4
Women	..	..	..	36.3	27.0	15.3	29.5	19.0	12.0	37.5	22.0	11.2
Canada												
Men	16.3	10.9	4.7	24.1	21.1	9.7	14.4	10.9	6.2	20.9	17.1	9.5
Women	15.8	10.3	7.3	20.0	15.0	9.8	11.5	9.0	7.5	16.8	12.8	9.0
Denmark												
Men	..	..	..	16.1	19.4	7.6	7.9	12.7	7.0	8.5	11.5	6.7
Women	..	..	..	26.1	16.0	8.5	9.5	14.4	8.0	5.1	13.8	9.0
Finland												
Men	16.7	8.0	5.4	14.7	8.2	4.6	7.7	5.3	3.1	29.8	32.1	17.4
Women	16.2	7.6	4.3	16.1	8.3	3.9	7.4	5.7	2.6	35.1	27.9	14.5
France												
Men	13.8	7.8	3.2	20.2	13.5	4.4	13.9	14.9	6.0	21.9	24.5	9.7
Women	32.6	14.4	5.5	42.1	21.8	7.7	25.2	24.0	11.2	34.5	31.4	13.1
Germany [a, b]												
Men	2.4	3.2	2.0	8.8	11.4	6.3	4.7	6.5	5.4	5.8	9.0	6.9
Women	4.7	5.6	3.8	11.0	12.1	8.0	6.2	7.1	7.9	6.8	8.7	10.3
Greece												
Men	..	..	..	17.0	17.2	4.8	14.0	18.1	3.3	20.6	19.5	4.8
Women	..	..	..	33.7	28.0	8.6	39.3	32.1	9.1	47.6	33.6	10.7
Ireland [a]												
Men	12.7	8.3	6.6	28.6	19.7	14.0	29.1	19.3	14.2	32.8	24.7	14.4
Women	12.3	5.0	4.5	24.7	12.2	7.8	27.2	14.6	14.8	34.0	19.6	14.1
Italy [c]												
Men	26.5	17.9	1.9	32.9	21.3	2.7	34.0	25.1	4.9	33.0	27.8	6.0
Women	39.7	24.3	7.1	47.3	30.1	8.3	48.9	36.9	13.0	42.4	34.6	11.7
Japan												
Men	5.4	3.2	1.6	7.1	3.8	2.0	8.0	3.8	1.5	8.3	5.0	2.0
Women	2.7	3.3	1.9	5.1	4.3	2.4	6.0	3.8	2.2	6.8	5.0	2.8
Luxembourg												
Men	..	..	..	8.1	4.3	1.7	3.0	1.9	0.9	11.4	7.9	2.5
Women	..	..	..	11.5	5.9	3.9	11.1	2.0	2.1	17.9	4.6	3.9
Mexico [a]												
Men	..	..	..	..	..	..	..	..	..	4.0	3.7	1.6
Women	..	..	..	..	..	..	..	..	..	5.7	5.4	2.3
Netherlands												
Men	..	..	..	31.8	20.4	8.9	15.0	11.2	5.9	16.0	12.4	5.6
Women	..	..	..	33.0	13.9	11.9	20.6	10.7	11.5	12.0	7.8	8.0
New Zealand												
Men	..	..	..	..	..	..	15.9	13.1	5.4	19.4	13.2	7.0
Women	..	..	..	..	..	..	15.8	9.5	5.2	18.9	11.2	6.1
Norway												
Men	8.8	3.9	0.6	10.6	5.5	2.4	14.5	8.6	3.8	12.7	10.7	4.7
Women	10.0	3.2	1.2	10.7	7.0	2.6	8.6	8.6	2.8	11.0	8.7	3.5
Portugal												
Men	13.3	7.8	2.4	13.9	12.3	2.6	8.3	8.5	2.3	11.3	12.4	4.8
Women	31.4	24.1	7.3	24.8	24.5	8.6	15.9	14.3	5.8	19.9	15.1	7.0
Spain [d]												
Men	23.6	13.7	5.7	44.5	27.9	11.5	24.8	24.2	10.0	39.8	36.4	16.4
Women	27.4	17.7	4.6	52.5	38.4	11.6	45.6	41.2	21.2	58.1	47.4	28.4
Sweden [d]												
Men	7.0	3.6	1.3	10.0	6.7	2.3	3.4	3.1	1.1	17.7	19.3	7.9
Women	7.9	3.8	1.6	10.8	6.9	2.4	3.5	3.0	1.1	15.4	13.9	5.8
United Kingdom [d, e]												
Men	..	..	..	23.3	19.3	9.4	11.7	10.4	6.0	20.8	18.3	9.8
Women	..	..	..	21.1	16.1	9.7	9.2	8.9	6.5	16.1	10.7	6.4
United States [d]												
Men	15.9	8.7	3.4	23.3	15.9	8.2	15.9	8.8	4.1	19.0	10.2	4.9
Women	16.4	9.6	5.2	21.3	12.9	7.7	14.0	8.3	4.4	16.2	9.2	5.0
OECD unweighted average [f]												
Men	13.6	8.1	3.2	20.3	14.8	6.1	13.8	11.3	5.0	19.3	16.7	7.5
Women	18.3	10.5	4.6	24.8	16.4	7.7	18.5	14.1	7.7	22.8	16.9	9.0

Sources and Notes: See Table 4.1.

Table 4.4. **Incidence of long-term unemployment by age and gender, selected years**

	Men			Women		
	15-19 years old	20-24 years old	25-54 years old	15-19 years old	20-24 years old	25-54 years old
Australia						
1979	12.3	15.7	23.3	14.8	21.0	15.4
1983	18.0	27.8	32.6	19.4	31.0	26.1
1989	14.4	24.6	30.6	15.0	19.5	16.3
1994	15.8	32.5	44.0	20.4	39.0	34.2
Belgium						
1983	33.6	51.0	64.3	32.9	59.6	79.4
1989	29.6	56.5	80.5	36.3	64.7	81.4
1994	37.1	39.3	57.0	16.1	44.5	68.7
Canada [a]						
1979	(2.3)		4.5	(2.3)		5.0
1983	(6.7)		10.9	(7.5)		13.0
1989	(1.9)		6.9	(2.2)		8.4
1994	(7.2)		16.2	(8.4)		18.4
Denmark						
1983	33.5	30.5	43.7	48.2	41.0	51.6
1989	14.0	11.1	20.1	11.4	12.5	28.0
1994	14.2	15.1	36.4	5.1	16.8	30.2
Finland [b]						
1983	13.2	13.8	23.9	5.4	3.8	25.1
1989	19.0	10.3	23.5	6.3	5.4	20.2
1994	9.0	19.6	37.9	10.0	17.3	26.1
France						
1983	26.6	29.6	39.3	31.0	40.4	46.4
1989	28.6	24.5	46.3	24.4	36.2	51.2
1994	16.8	21.5	40.8	17.7	24.2	41.9
Germany [c]						
1983	38.0	33.3	45.5	36.7	34.1	42.0
1989	28.5	29.5	53.3	32.4	33.5	46.4
1994	19.5	23.2	41.2	18.6	35.6	46.8
Greece						
1983	22.5	20.3	24.7	32.3	46.9	45.5
1989	37.3	35.7	43.1	37.4	61.2	60.2
1994	38.2	35.5	43.4	43.3	58.8	60.2
Ireland						
1983	25.2	37.4	47.2	19.1	27.5	27.4
1989	52.5	64.4	73.6	44.2	54.1	61.9
1994	46.4	54.6	67.2	37.7	47.2	56.4
OECD unweighted average [f]						
1979	8.8	9.4	11.9	10.1	13.2	12.8
1983	28.1	32.9	39.9	28.6	36.0	41.1
1989	27.2	32.9	44.3	27.0	35.6	43.0
1994	25.6	34.2	44.5	23.3	35.6	43.8

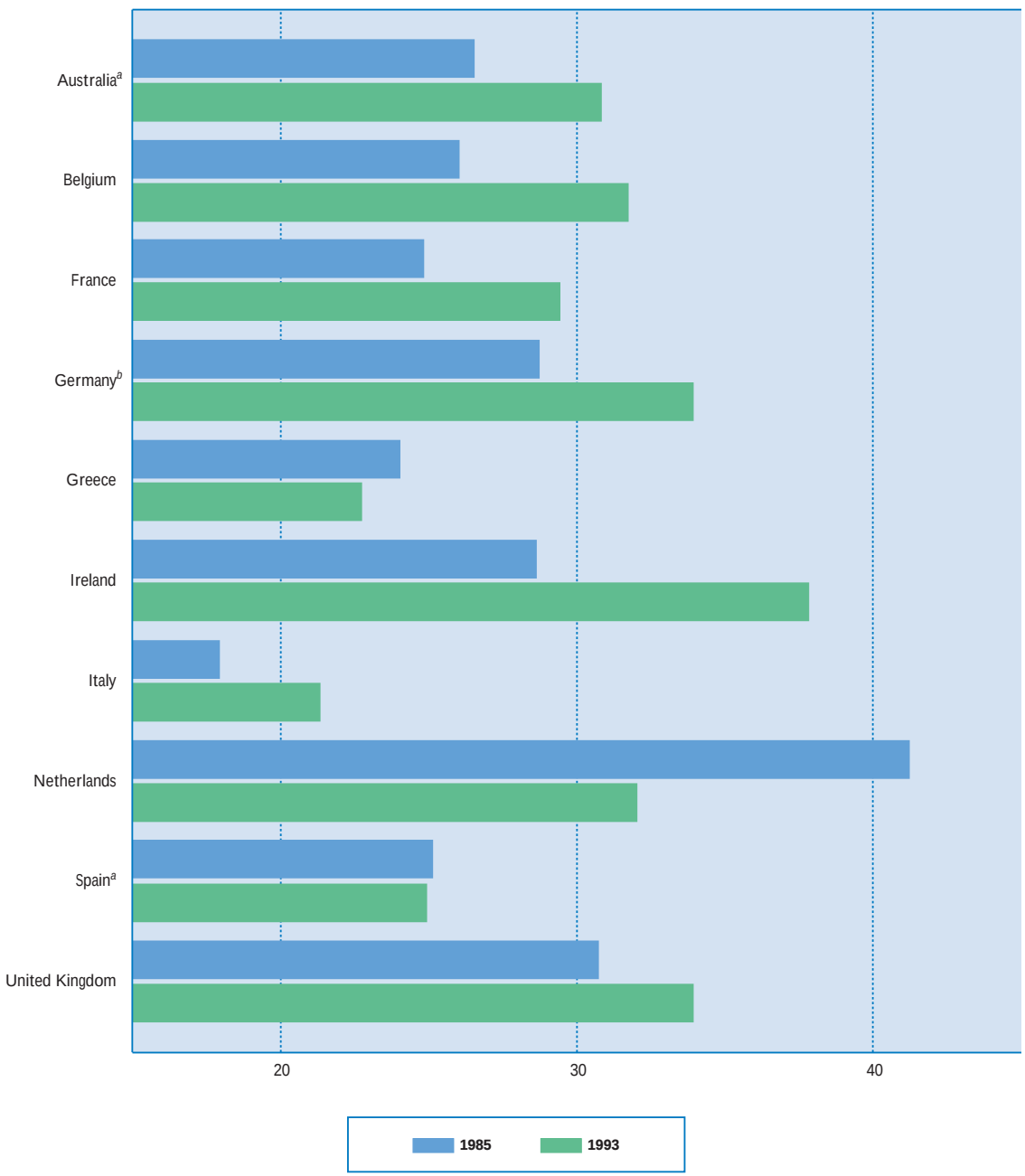
	Men			Women		
	15-19 years old	20-24 years old	25-54 years old	15-19 years old	20-24 years old	25-54 years old
Italy						
1983	52.0	58.9	53.8	51.5	65.5	61.0
1989	64.5	71.3	66.6	62.5	76.2	70.1
1994	53.6	62.6	59.7	52.9	65.8	64.1
Japan [d]						
1979	(5.3)		23.4	(6.7)		16.1
1983	(13.3)		13.3	(16.7)		4.3
1989	(10.5)		22.5	(5.3)		16.6
1994	(12.5)		24.1	(9.1)		12.0
Netherlands						
1983	34.1	40.6	52.1	36.9	44.9	55.9
1989	23.8	34.3	63.6	23.1	31.4	48.8
1994	32.3	46.6	51.4	29.4	39.5	50.9
Portugal						
1989	35.9	40.7	41.5	39.4	43.8	55.0
1994	33.1	44.1	46.3	28.7	41.8	48.0
Spain [e]						
1979	28.9	25.3	23.3	32.2	39.4	38.5
1983	49.4	49.1	49.7	52.6	61.6	58.5
1989	40.3	49.8	53.1	54.1	67.1	67.9
1994	35.4	46.9	51.3	43.9	59.1	67.4
Sweden [e]						
1979	1.1	2.4	6.6	2.1	2.4	5.8
1983	3.5	3.8	8.4	1.0	4.0	8.6
1989	1.0	3.9	6.6	0.0	2.8	4.4
1994	6.3	16.7	19.4	3.3	8.6	14.6
United Kingdom [e]						
1983	37.3	51.9	54.4	29.8	36.2	36.1
1989	17.5	33.2	51.7	17.5	24.0	28.3
1994	21.5	46.6	55.0	17.9	28.6	36.0
United States [e]						
1979	1.8	3.4	6.4	1.2	3.3	4.1
1983	6.1	12.4	19.5	3.0	7.5	11.9
1989	1.7	4.1	9.9	1.3	2.3	4.6
1994	5.3	8.3	16.8	4.3	7.1	12.0

a) Age groups are 15-24 and 25-44.
b) Data refer to 1983, 1987 and 1993.
c) Data for 1994 refer to reunified Germany.
d) Age group is 15-24.
e) Age group is 16-19.
f) Based only on countries with data for the selected years, excluding Canada and Japan.
Source: OECD unemployment duration database.

Chart 4.1.

Proportion of unemployed youth in households where no other person is employed, 1985 and 1993

Percentages



a) Data refer to 1986.
b) Data for 1985 refer to western Germany.
Sources: Data for European countries were supplied by EUROSTAT on the basis of each country's labour force survey. Data for Australia were supplied by the Australian Bureau of Statistics.

Table 4.5. **Youths' attitudes to work** [a]

	Probability that the group strongly agreed that:	
	Work is a person's most important activity	Would enjoy having a paid job even if I did not need the money
Unemployed		
Age 18-24	.23	.17
Age 35-44	.21	.15
Employed		
Age 18-24	.13	.16
Age 35-44	.16	.15

a) These results are based on an ordered probit model controlling for age, gender, marital status, country and includes an interaction term with the unemployed and the 18-24 age variable.
Source: Blanchflower (forthcoming).

in particular say they value work strongly. There is little in these survey responses to suggest that youth view jobs simply as a casual, marginal activity. The unemployed appear to value work as much as those with jobs.

This section has provided a very broad overview of trends in youth labour market activity. The remainder of this Chapter examines more explicitly the transition from education to work.

C. FROM EDUCATION TO WORK

1. Synthetic cohort analysis

A useful way to initially define the school-to-work transition is as the change in the major activities of young people from school-going to working/seeking work as they age. The transition period is the time interval during which a cohort of young people moves from near full enrolment in education to negligible enrolment and from negligible labour market activity to high levels of labour market activity. The length of the period depends on the patterns of elementary, secondary and higher education in a country, and on the expected rewards and availability of work compared with the alternatives. In most advanced countries, the period covers 10-15 years: from roughly ages 16-18 to ages 25-30. At age 16, the vast majority of the young are in school; by ages 25-30, enrolment rates drop to 5 per cent or less. At age 16, employment/population rates and labour force participation rates are low; by ages 25-30, they are relatively high for both men and women [Moncel and Rose (1995)].

Table 4.6 provides a capsule picture of the activity status of young persons aged 18 and 22 by gender in 1994 and a decade earlier (see Annex 4.A for sources and definitions). The table shows large variations across countries in transition patterns, *e.g.* the high proportion of young persons in vocational training/apprenticeships in Germany and the different proportions in school. They also show a general pattern of decline in participation and employment rates, and high and, in some cases, increased rates of unemployment. Among 18-year-olds, the unweighted average for the countries in Table 4.6 shows 35.4 per cent of men employed in 1994 compared with 43.6 per cent in 1984 – a drop of 8.2 percentage points; for women, 28.5 per cent were employed in 1994 compared with 35.7 per cent in 1984 – a drop of 7.2 percentage points. The comparable figures for 22-year-olds show a drop in employment rates for men of 8.3 percentage points compared with 3.7 percentage points for women.

Chart 4.2 shows the transition in terms of the percentage of youths in education, as measured by labour force surveys.[3] The horizontal axis reports the years gone by since age 16 for specified cohorts. The vertical axis gives the per cent of the youth cohort who are in school. Two age cohorts are shown: those aged 16 in 1984 and those aged 16 in 1988. For the United States and Canada, the data series are longer, allowing one to also record the experiences of the 1973 cohort for the United States and the 1976 cohort for Canada.

In all countries, the percentage in education falls with age. In many, the curve for the 1988 cohort lies above the curve for the 1984 cohort, implying that years spent in school are increasing, although this does not necessarily translate into a steady progression to higher levels of education. The upward shift in the cohort-schooling relation is particularly large in Portugal, Spain, France and Canada. In the United States, on the other hand, where post-secondary education increased earlier than elsewhere, the curves lie essentially on top of one another, implying a stable proportion of each cohort is in school as their major activity. Similarly, the curves for Germany, Belgium, and the United Kingdom are relatively stable.

Chart 4.3 examines the transition in terms of the endpoint state of employment. It shows the percentage of youths in a cohort who are employed regardless of whether they are in, or are out, of school. The pattern of cohort employment is a mirror image of the pattern for schooling. The percentage working rises in a sigmoidal curve. For men, the curves approach 85 to 90 per cent in most countries. But, there is variation over time and among countries. In countries with relatively high aggregate unemployment rates, the cohort employment curves are lower than in countries with lower aggregate unemployment rates. Cohorts who entered the job market in the late 1980s tend to have lower employment rates than cohorts who entered earlier, though there are some exceptions.

Table 4.6. **Labour market and schooling status of persons 18 and 22 years of age, 1984 and 1994**

Percentages

Men 18-year-olds	Labour force participation rate		Employment/ population rate		Unemployment rate		Proportion attending school		Proportion in some form of apprenticeship	
	1984	1994	1984	1994	1984	1994	1984	1994	1984	1994
Australia	83.2	70.0	66.0	53.7	20.7	23.3	26.4	41.6	18.1	11.9
Belgium	26.3	14.5	18.2	9.8	30.9	32.1	72.0	78.3	3.4	3.3
Canada	60.3	52.9	44.0	43.3	27.0	18.1	58.3	76.0	..	..
Denmark	74.3	69.5	66.3	63.7	10.7	8.3	39.4	64.2	30.6	20.0
France	42.5	16.9	27.2	11.1	36.0	33.9	47.4	79.9	8.0	9.2
Germany	66.7	57.8	61.8	53.6	7.4	7.2	36.0	45.0	41.5	39.1
Greece	40.5	27.1	33.4	21.2	17.6	21.8	56.0	69.1	0.9	0.5
Ireland	61.8	39.8	43.5	28.4	29.7	28.7	41.0	59.7	12.3	7.5
Italy	43.0	27.8	30.8	18.7	28.4	32.6	55.1	66.5	0.9	0.7
Luxembourg	54.1	27.5	50.5	22.5	6.6	18.3	43.7	67.5	22.1	3.8
Netherlands[a]	36.9	52.0	26.3	44.0	28.7	15.4	66.9	75.0	3.5	9.4
Portugal[b]	69.7	44.1	57.9	39.6	17.0	10.1	34.8	59.8	0.1	0.1
Spain[b]	49.6	36.7	25.8	20.9	48.0	43.2	49.3	64.3	0.3	0.2
United Kingdom	80.0	71.1	56.0	57.4	26.2	19.3	26.7	31.7	16.8	18.6
United States[c]	59.9	54.9	46.7	43.8	22.0	20.3	61.6	64.7	..	..
OECD unweighted average	56.6	44.2	43.6	35.4	23.8	22.2	48.8	63.7	11.7	9.4
Men 22-year-olds										
Australia	93.5	89.8	81.3	73.1	13.0	18.6	10.1	17.2	7.8	4.2
Belgium	66.5	61.7	52.8	46.8	22.1	22.6	35.4	34.3	2.5	0.6
Canada	80.8	75.0	63.4	60.2	21.5	19.7	23.2	33.1	..	..
Denmark	83.7	75.2	75.3	65.0	10.0	13.6	16.3	31.7	10.8	10.0
France	86.9	65.6	72.6	47.0	16.5	28.4	10.1	36.0	0.4	1.8
Germany	76.8	75.8	68.3	67.5	11.1	10.9	23.0	25.1	5.7	7.5
Greece	77.4	69.1	64.3	54.8	16.9	20.7	21.9	29.7	0.1	0.2
Ireland	89.4	76.8	70.4	56.0	22.0	27.1	11.3	20.7	4.4	6.3
Italy	76.0	64.5	63.6	45.1	22.7	30.1	23.2	27.5	0.6	0.4
Luxembourg	85.1	77.1	82.2	74.0	3.4	4.0	15.7	18.8	2.8	4.1
Netherlands[a]	74.2	72.7	58.2	64.4	21.5	11.4	33.2	43.3	0.0	9.1
Portugal[b]	82.8	71.3	70.9	60.7	14.3	14.9	19.6	31.5	0.0	0.7
Spain[b]	79.4	69.7	46.8	43.9	41.0	37.0	18.5	34.2	0.0	0.1
United Kingdom	91.2	83.7	76.0	65.5	16.6	21.7	11.3	12.8	3.7	7.6
United States[c]	81.8	79.2	69.6	67.3	14.9	15.0	19.7	23.5	..	..
OECD unweighted average	81.7	73.8	67.7	59.4	17.8	19.7	20.0	28.2	2.6	4.0

The fall in the cohort employment curves is greatest for France and Canada (both of whom experienced increases in the proportion in school as well) [Elbaum and Marchand (1993)]. For women, the curves also have an S-shape, but the increases in the percentage working taper off at noticeably different levels across countries. In many countries, the employment rates of women approach 75 per cent or so, but in some, such as Greece, Spain, and Italy, they stablize at much lower rates. At least three factors are likely to affect the patterns across countries and within countries over time: the state of the aggregate economy; labour market conditions distinct to youths, including the relative size of the youth population and the industrial mix of employment; and the institutions that govern the transition. These are considered below.

2. Number of jobs held since leaving school

While the cohort analysis tells one something about the transition – youths' employment probabilities increase considerably as they age – they say little about the process of settling into work. This can be a smooth process in which youths enter the job market

Table 4.6. **Labour market and schooling status of persons 18 and 22 years of age, 1984 and 1994** *(cont.)*

Percentages

Women 18-year-olds	Labour force participation rate		Employment/ population rate		Unemployment rate		Proportion attending school		Proportion in some form of apprenticeship	
	1984	1994	1984	1994	1984	1994	1984	1994	1984	1994
Australia	73.9	68.5	59.3	50.9	19.7	25.6	28.6	50.5	6.5	8.3
Belgium	22.4	8.0	12.8	4.8	42.9	39.7	73.9	82.1	2.2	1.2
Canada	55.0	52.9	42.0	45.0	23.7	15.0	57.4	73.5	..	..
Denmark	64.4	53.2	57.4	51.7	11.0	13.2	47.8	70.6	21.3	11.9
France	36.8	12.1	16.3	7.5	55.6	37.9	52.9	84.4	2.2	4.9
Germany	59.7	46.3	53.1	43.5	11.1	6.0	42.1	55.0	30.1	29.6
Greece	32.7	23.1	18.3	10.9	44.0	52.9	47.4	69.3	0.2	0.2
Ireland	55.7	31.6	37.1	18.6	33.3	41.0	50.1	69.1	6.5	3.2
Italy	37.0	18.3	20.5	11.3	44.7	38.5	52.5	69.3	0.6	0.4
Luxembourg	53.3	33.4	50.3	30.8	5.6	7.7	45.3	61.5	8.4	2.6
Netherlands[a]	38.2	50.0	27.4	42.9	31.9	14.1	62.5	80.6	2.4	4.0
Portugal[b]	53.5	37.8	38.9	30.7	27.1	18.6	39.5	63.9	0.5	0.5
Spain[b]	36.0	29.2	15.6	12.2	56.5	58.2	48.9	71.9	0.1	0.1
United Kingdom	71.3	64.6	56.4	54.6	20.8	15.6	27.3	38.1	6.6	8.7
United States[c]	55.4	53.1	45.4	44.1	18.1	17.0	55.7	59.2	..	..
OECD unweighted average	49.7	38.6	35.7	28.5	29.4	28.1	50.1	65.5	6.7	3.4
Women 22-year-olds										
Australia	74.9	79.6	67.2	67.9	10.2	14.8	10.8	20.2	3.4	4.1
Belgium	69.2	59.9	50.1	47.3	27.6	21.0	23.7	31.9	1.1	1.0
Canada	75.5	71.0	64.6	61.4	14.4	13.4	18.8	34.6	..	..
Denmark	84.4	67.4	73.4	55.2	13.1	18.1	11.6	35.0	18.5	12.4
France	75.1	58.7	59.1	41.4	21.4	29.4	10.9	40.4	0.2	0.5
Germany	70.6	71.9	63.3	65.0	10.3	9.6	18.4	21.8	3.8	7.6
Greece	47.4	51.7	35.3	34.6	25.6	33.0	13.6	30.6	0.2	0.3
Ireland	79.4	72.7	69.0	59.7	13.1	17.8	6.8	17.7	3.7	6.2
Italy	61.4	53.9	41.3	36.9	32.6	31.5	18.6	29.8	0.4	0.7
Luxembourg	79.2	63.9	78.6	58.4	0.7	8.7	7.8	25.0	2.2	2.8
Netherlands[a]	72.6	76.0	64.3	68.1	12.6	10.4	21.1	26.5	4.5	8.2
Portugal[b]	59.8	60.9	45.5	51.3	23.9	15.8	24.2	41.8	0.0	0.0
Spain[b]	54.1	59.5	28.3	31.8	47.7	46.4	24.9	41.3	0.0	0.1
United Kingdom	70.4	66.1	59.4	61.4	14.6	9.9	6.0	10.6	2.8	4.4
United States[c]	70.0	71.9	62.8	66.4	10.3	7.7	14.1	19.8	..	..
OECD unweighted average	69.6	65.8	57.5	53.8	18.5	18.8	15.6	28.9	3.1	3.7

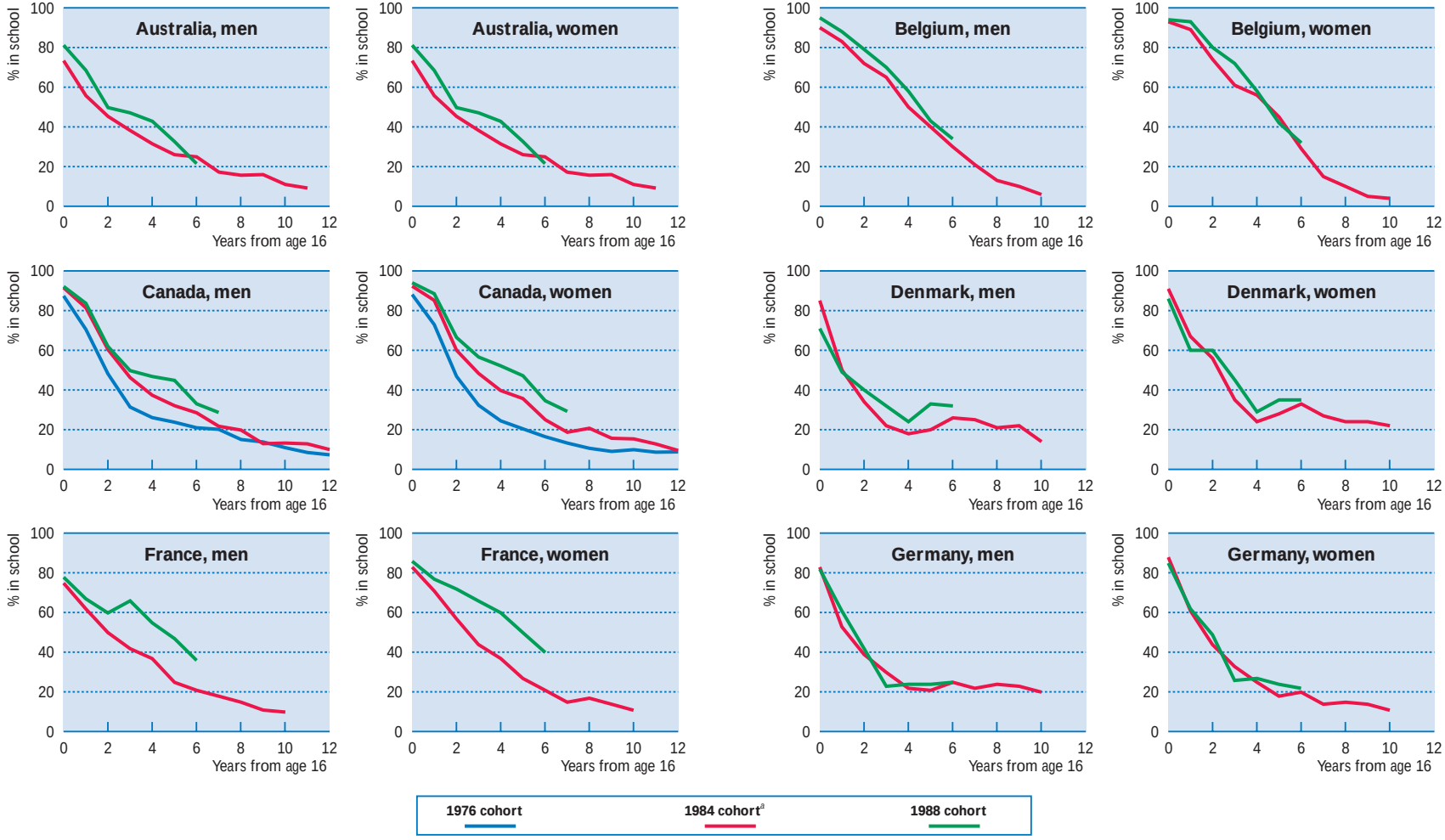
.. Data not available.
a) 1983.
b) 1986.
c) 1993.
Sources: See Annex 4.A.

and obtain relatively long-term jobs quickly, or it can be more of a job matching and shopping process, in which youths enter and engage in a lengthy period of search interspersed with many short-term jobs, or it can be a situation of searching for a long period of time before finding that "first" job. Which process is, in some sense, best depends on many factors. Youths who move from school to long-term jobs directly are likely to make greater firm- or sector-specific investments in human capital. Youths who go from school to many short jobs may pick-up a more diverse set of employment experiences [Lynch (1993); OECD (1993)].

Table 4.7 shows how the difference between these modes of entry into employment affects the number of jobs youths in various countries obtain

Chart 4.2.

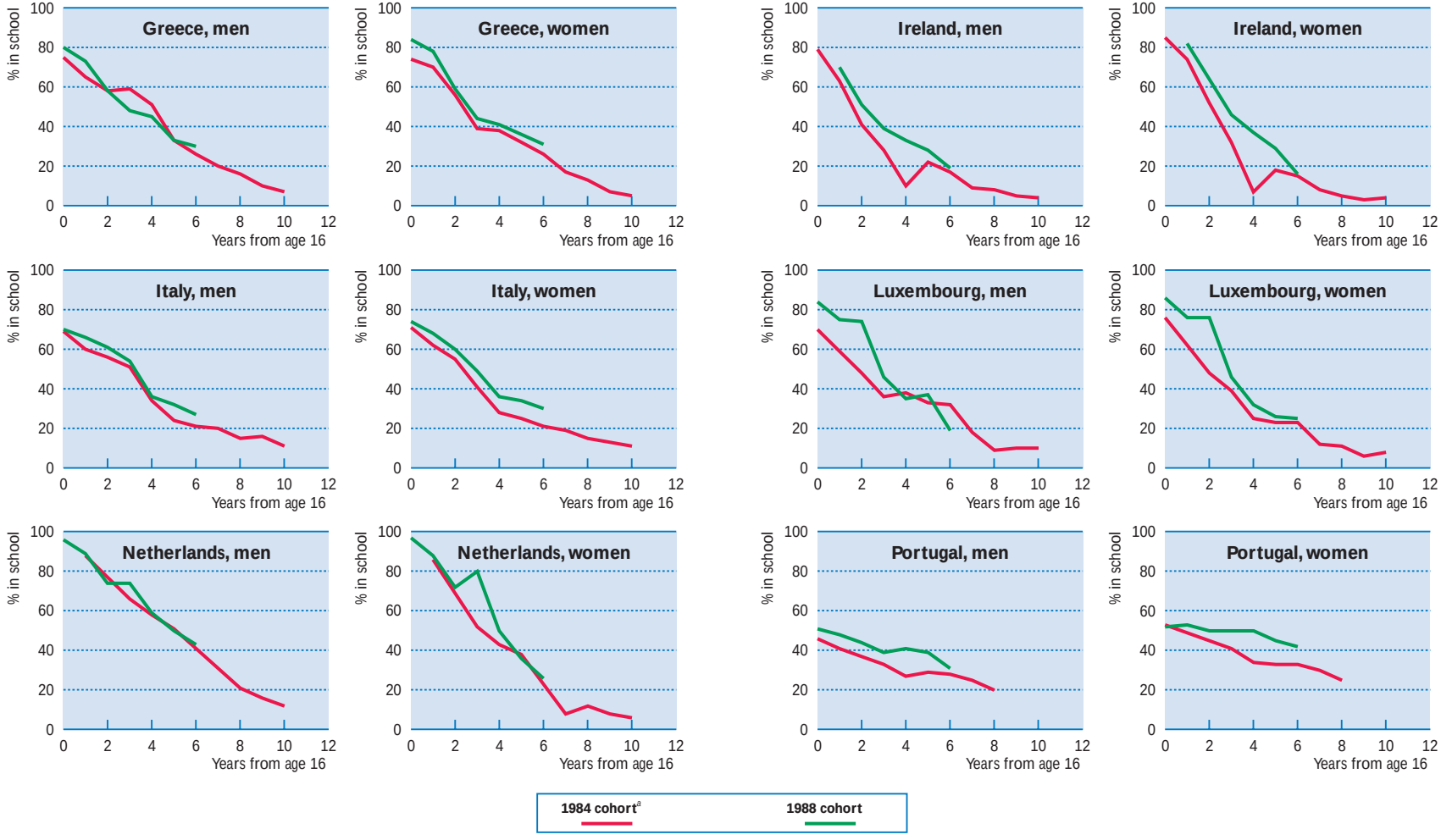
Proportion of youth attending school from age 16 onward, 1984 and 1988 cohorts



a) 1983 cohort for Australia, Canada and the United States; 1986 cohort for Portugal and Spain.
Sources: See Table 4.6.

Chart 4.2. *(cont.)*

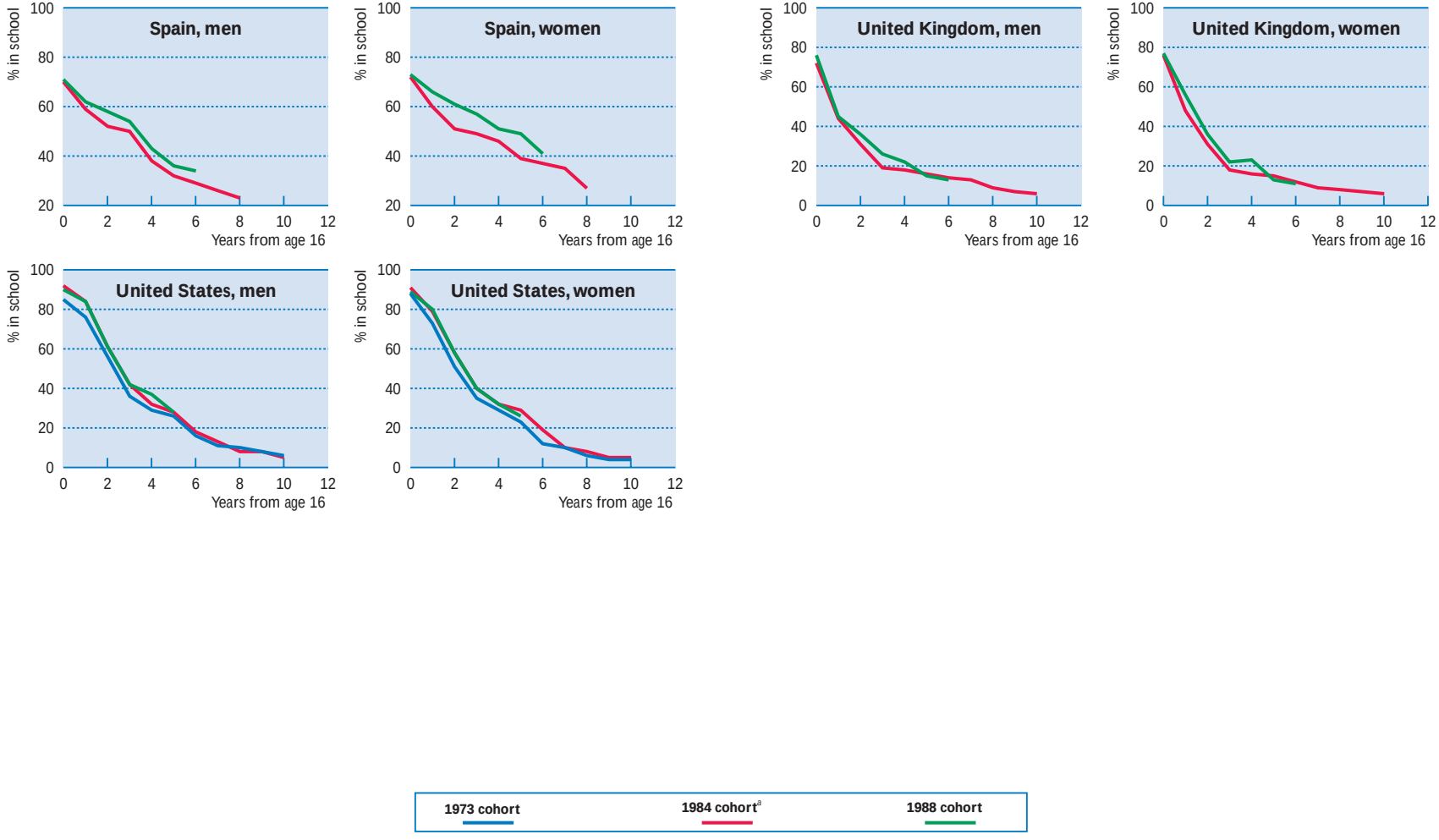
Proportion of youth attending school from age 16 onward, 1984 and 1988 cohorts



a) 1983 cohort for Australia, Canada and the United States; 1986 cohort for Portugal and Spain.
Sources: See Table 4.6.

Chart 4.2. *(cont.)*

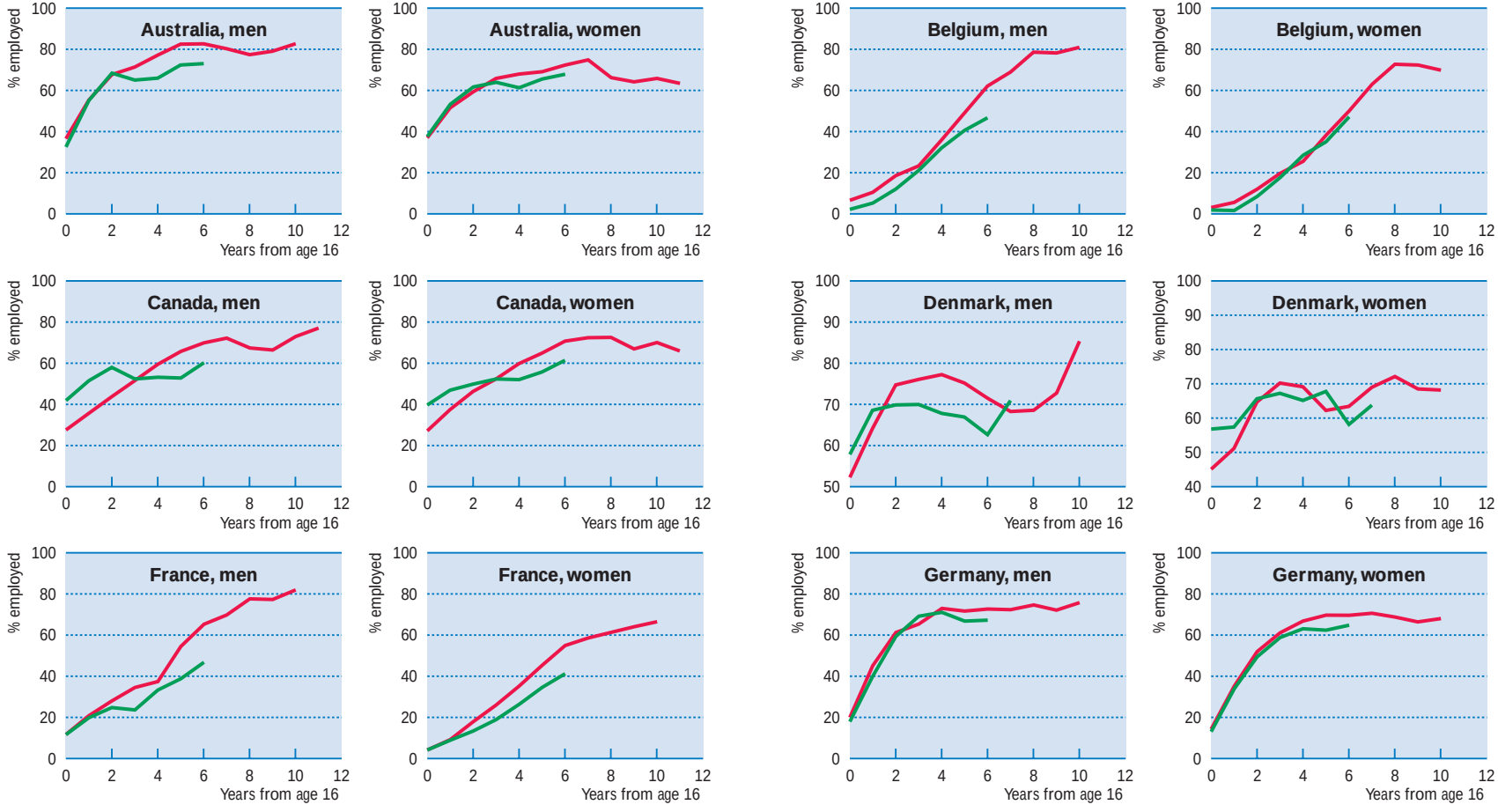
Proportion of youth attending school from age 16 onward, 1984 and 1988 cohorts



a) 1983 cohort for Australia, Canada and the United States; 1986 cohort for Portugal and Spain.
Sources: See Table 4.6.

Chart 4.3.

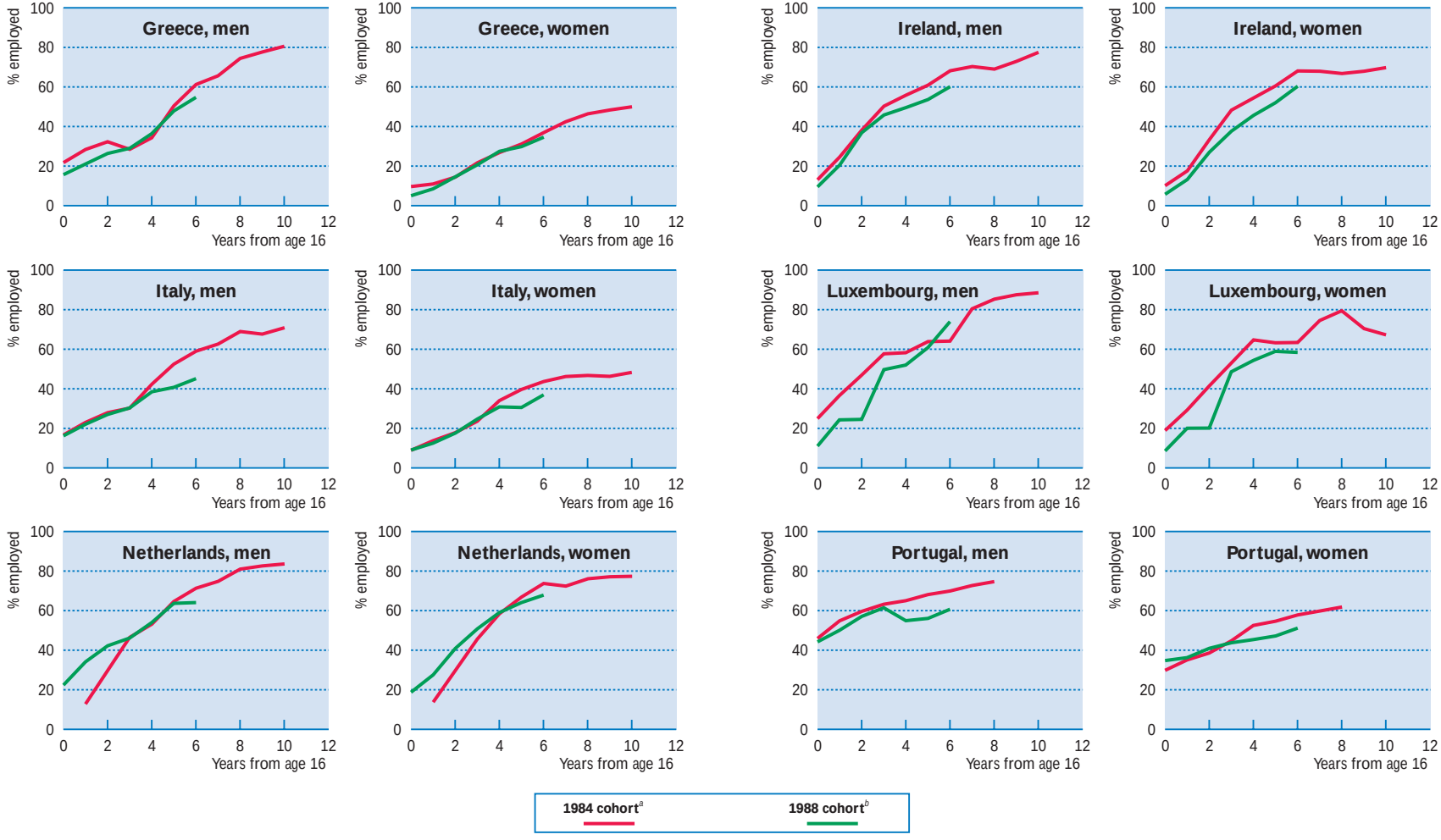
Proportion of youth with a job from age 16 onward, 1984 and 1988 cohorts



a) 1983 cohort for Australia, Canada and the United States; 1986 cohort for Portugal and Spain.
b) 1987 cohort for Denmark.
Sources: See Table 4.6.

Chart 4.3. *(cont.)*

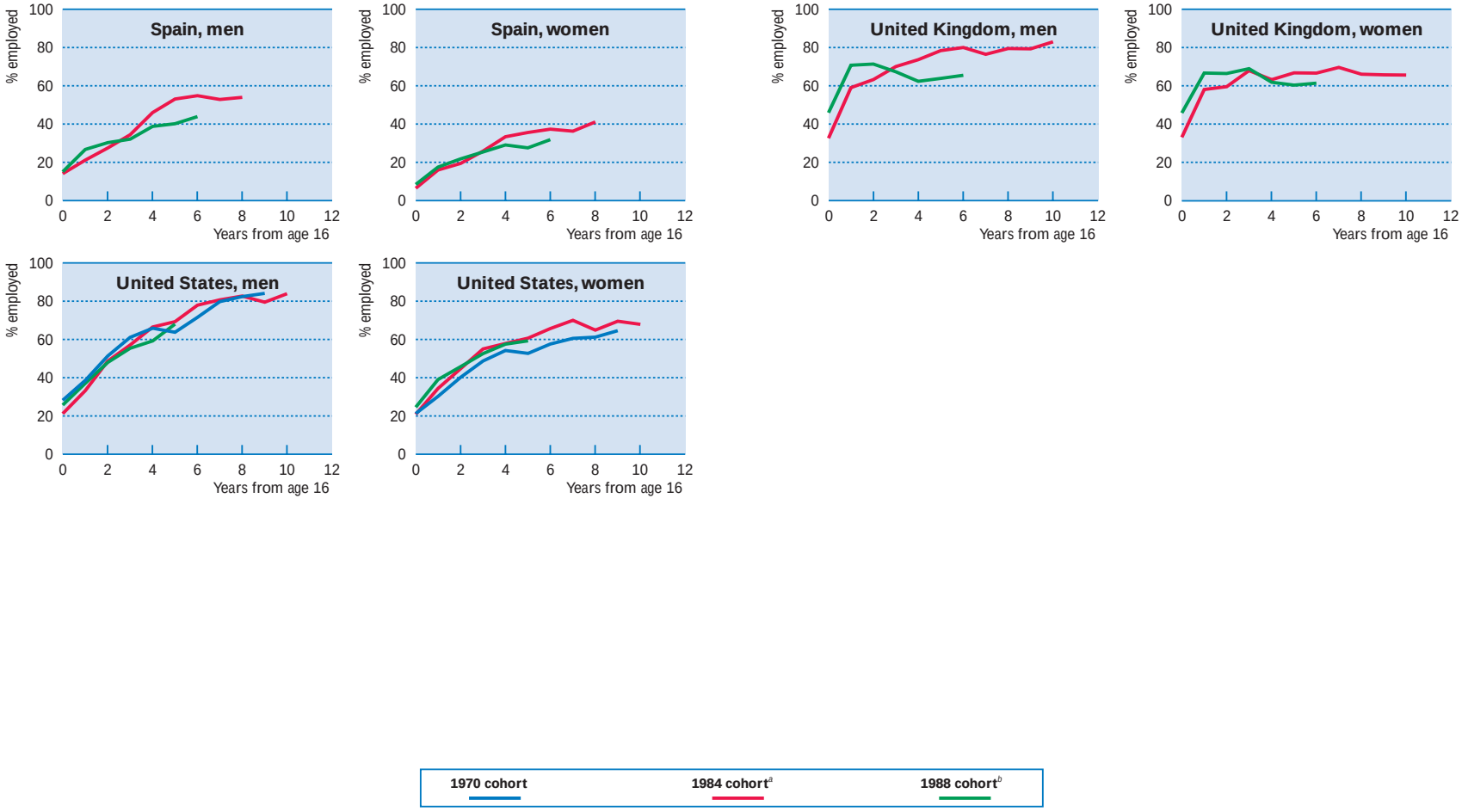
Proportion of youth with a job from age 16 onward, 1984 and 1988 cohorts



a) 1983 cohort for Australia, Canada and the United States; 1986 cohort for Portugal and Spain.
b) 1987 cohort for Denmark.
Sources: See Table 4.6.

Chart 4.3. *(cont.)*

Proportion of youth with a job from age 16 onward, 1984 and 1988 cohorts



a) 1983 cohort for Australia, Canada and the United States; 1986 cohort for Portugal and Spain.
b) 1987 cohort for Denmark.
Sources: See Table 4.6.

Table 4.7. **Average number of jobs held by young persons after leaving school**

Longitudinal and retrospective surveys

	Jobs held since age 16 over relevant period	Number of jobs per year
Germany[a]		
Men	2.6	0.29
Women	2.0	0.22
Japan[b]		
Men	1.6	0.17
Women	1.5	0.17
Norway[c]		
Men	1.7	0.57
Women	1.9	0.63
Great Britain		
Men[d]	2.3	0.26
Women[d]	3.1	0.34
Men[e]	3.4	0.48
Women[e]	3.3	0.47
United States[f]		
Men	7.7	0.86
Women	6.8	0.76

a) Refers to persons aged 25 in 1984 asked about all jobs held over the prior 10-year period.
b) Refers to persons under the age of 30 in 1985 asked about the number of times they had changed employers since leaving school.
c) Refers to persons under the age of 25 in 1989 who left school in 1988-1989. The count of jobs covers the period 1989-1992.
d) Refers to persons aged 16 in 1974 and aged 23 in 1981.
e) Refers to persons aged 22-25 in 1990.
f) Refers to persons aged 16 in 1979 and aged 25 in 1988.
Sources: See Annex 4.C.

from age 16 to 25 (from school leaving to less than age 30 for Japan; and from leaving school in 1988-1989 to 1992 for Norway), as given in longitudinal surveys or in surveys that ask about jobs retrospectively (see Annex 4.C). It records both the mean number of jobs obtained by youths over the relevant period and the number of jobs per year.

The single most striking difference in the table is between the number of jobs held by US youths compared with their counterparts in the other countries. The number held by the average American youth is an order of magnitude greater than that in Great Britain, Germany, or Japan, as well as being considerably above that for Norway. This reflects the relatively high degree of labour turnover in the United States, a fact that also shows up in large cross-country differences in average job tenures [OECD (1993)]. Although not shown here, the distribution of the number of jobs held by American youths as they age shows a remarkable spanning out. From the age of 16 in 1979 to the age of 26 (in 1989), almost no American youths had held just one job and nine out of ten had changed jobs more than three times. By contrast, just 4 per cent of Japanese men and 1 per cent of Japanese women had changed jobs more than three times; just 10 per cent of German men under the age of 30 and 4 per cent of German women under the age of 30 had done so; 10 per cent of young Norwegian men and 13 per cent of young Norwegian women had changed jobs more than three times; and only 30 per cent of British men and 35 per cent of British women had made that many job changes.

Taken at face value, these data could suggest that young Americans have considerably more difficulty in finding stable job matches compared with most of these other countries. Indeed, employment tenure statistics indicate that, even as late as the ages 37-40, almost 40 per cent of American men had, in 1991, less than five years with their current employer, a figure far higher than in Germany or Japan [OECD (1993)].

But the interpretation of such data is not straightforward. Such turbulence is often seen as a reflection of systemic failure, wasting the time and resources of many youths, and, for many, never leading to long-term job matches. A contrary view is that it is constructive, allowing young persons to acquire work experience of value in the market place. These are complex issues requiring detailed longitudinal analysis to settle them.[4]

3. Youth not in education and not employed

As part of the ageing process, young people start leaving the school system and begin to settle into jobs. But not all are successful and it is useful to examine a potentially important group of policy relevance: youth who are neither attending school nor working. They comprise the proportion of the population either looking for work (and not in school) or out of the measured labour force (and, again, not in school).

Table 4.8 shows these figures for 18- and 22-year-olds for 1984 and 1994.[5] Not surprisingly, a lower proportion of 18-year-olds fall into this category, but there are large cross-country differences. In 1994, very few Danish (especially men), German, Dutch or Portuguese 18-year-olds were neither in school nor working, whereas this figure stood at over 20 per cent in the United Kingdom. More disturbing, however, is that between 1984 and 1994, and notwithstanding generally rising school attendance rates, the proportion increased in Belgium, Germany, Italy and the United Kingdom.

Among 22-year-olds, the proportion falling into the category is, often, considerably higher. Moreover, among young men, the percentage has increased in most countries, with the exceptions of Canada, the Netherlands, Portugal and Spain. In seven countries,

Table 4.8. **Proportion of youth not attending school and not working by age and gender, 1984 and 1994**

	Men				Women			
	18-year-olds		22-year-olds		18-year-olds		22-year-olds	
	1984	1994	1984	1994	1984	1994	1984	1994
Australia	18.3	17.4	13.7	19.2	19.8	18.4	27.3	23.1
Belgium	11.2	13.0	15.4	20.8	13.7	13.5	27.5	22.2
Canada	18.0	10.2	22.3	20.4	20.4	14.0	26.3	21.1
Denmark	10.1	4.4	13.2	13.7	13.6	10.6	22.1	18.5
France	25.9	10.7	18.7	21.5	31.7	10.1	32.3	24.8
Germany	5.8	7.8	10.1	11.3	8.6	8.2	19.8	17.0
Greece	12.6	10.8	15.1	17.0	34.6	20.8	52.7	36.0
Ireland	18.1	16.8	21.8	22.7	15.4	11.9	25.8	26.9
Italy	14.7	15.2	19.5	28.8	27.5	19.7	40.9	34.6
Netherlands[a]	8.2	5.3	11.9	8.9	11.2	4.7	21.3	16.7
Portugal[b]	13.3	7.2	15.1	14.0	23.2	10.2	33.9	15.3
Spain[b]	25.4	17.2	35.0	24.8	35.5	18.1	47.1	30.7
United Kingdom	22.9	23.5	17.7	26.8	26.4	25.4	36.5	32.8
United States[c]	12.1	12.0	17.0	17.2	18.4	16.8	27.7	22.6

a) Refers to 1985.
b) Refers to 1986.
c) Refers to 1993.
Sources: See Annex 4.A.

more than one-fifth of young men aged 22 are neither in school nor working.

While a higher proportion of women aged 22, than men are neither in school nor in paid jobs, this reflects the historical pattern of women leaving schooling, on average, earlier and the historically different patterns of job-market attachment. However, reflecting changes in both patterns, unlike the case of men, the trend is just the opposite. In most countries, there has been a sharp decline in the proportion neither in school nor working.

Table 4.9 shows a different dimension, focusing on the non-employment rates of persons not participating in education. This is defined as the unemployed plus those out of the labour force divided by the relevant population. Consider men first. Aside from the obvious differences in levels across countries, the germane points are: *a)* non-employment rates for both 18- and 22-year-olds have increased in all countries except Denmark and Portugal (for those aged 22) and Spain; *b)* though non-employment rates of men 26 years old are smaller, reflecting the long

Table 4.9. **Non-employment rates of persons not attending school by age and gender, 1984 and 1994**

	Men						Women					
	18-year-olds		22-year-olds		26-year-olds		18-year-olds		22-year-olds		26-year-olds	
	1984	1994	1984	1994	1984	1994	1984	1994	1984	1994	1984	1994
Australia	25.0	29.9	15.2	23.0	13.3	16.5	27.7	37.8	30.6	29.1	47.0	33.5
Belgium	39.8	59.9	23.8	31.6	10.2	16.1	52.5	75.0	36.0	32.5	38.8	28.8
Canada	43.1	42.5	29.0	30.5	22.4	25.9	47.9	52.6	32.0	32.3	39.0	23.1
Denmark	16.7	12.4	15.7	20.1	17.4	8.1	26.0	36.0	25.0	28.4	24.9	24.6
France	49.2	53.1	20.8	33.6	10.6	15.2	67.4	65.1	36.2	41.7	33.9	31.5
Germany	9.1	14.2	13.1	15.5	9.3	11.5	14.9	18.2	24.2	21.7	34.1	26.4
Greece	28.6	35.0	19.3	24.2	12.8	15.0	65.9	67.6	61.0	51.9	58.7	48.1
Ireland	34.6	41.3	24.6	28.0	17.5	20.0	30.8	47.8	27.7	31.9	46.0	28.8
Italy	32.8	45.5	25.4	39.7	12.0	21.3	58.0	64.2	50.3	49.3	50.1	47.5
Netherlands[a]	35.0	21.0	18.1	15.7	14.9	11.6	36.9	24.2	27.9	22.8	43.8	21.3
Portugal[b]	20.4	17.9	18.8	20.4	11.4	11.3	38.2	28.3	44.8	26.4	40.6	28.8
Spain[b]	50.1	48.2	42.9	37.7	29.1	30.6	69.5	64.3	62.7	52.4	58.6	52.1
United Kingdom	31.3	34.4	19.9	30.8	18.0	15.7	36.4	41.0	38.9	36.7	47.4	34.0
United States[c]	31.5	33.4	21.2	22.5	14.4	13.5	41.5	41.2	32.2	28.2	36.5	29.7

Sources and Notes: See Annex 4.A.

process of settling down in the job market, they, nevertheless, have gone up in a number of countries; and *c)* the non-employment rates of 18- and 22-year-olds increased *relative* to those aged 26 in about half the countries.

The pattern for women is more mixed. For those 22 years old, in the majority of countries, the non-employment rate fell, sometimes substantially. On the other hand, as for 18-year-old men, these rates also generally increased for women (again, however, cross-country differences in levels are substantial).

The recorded increase in the proportion of youth neither in school nor in jobs is a worrying trend. However, further information on the characteristics of these youths, their household situation and past labour market experience, among others, is necessary before concrete policy recommendations can be developed.

D. YOUTH IN THE JOB MARKET

The supply of youths to the job market depends both on demographic factors and decisions about participation in full-time education and training. The relative supply of youths in the market depends also on the supply and characteristics of other workers in the economy. The demand for youth labour depends, among many other factors, on shifts in the industrial composition of output. Recent trends in these factors are discussed in turn in this section.

1. Demographic factors

Because of fluctuations in fertility, the size of youth cohorts varies considerably over time. In the 1970s, the baby-boom generation reached the labour market with significant consequences for youth unemployment and wages [OECD (1986); Bloom *et al.* (1987)]. The large influx of young workers depressed the opportunities for a typical entering worker. In the United States and some other countries, the result was a sharp twist in the age-earnings profile against young workers. In other countries, the result was a twist in employment rates against the young. Since 1980, the youth share of the population fell noticeably in most OECD countries as the baby boomers aged and were replaced by smaller cohorts. Chart 4.4 shows the ratio of the population aged 15-24 years relative to the population aged 25-54 years in 1980, 1990 and 1994. The marked drop in the youth population relative to 25-54-year-olds is substantial in all countries except Japan where it *grew* from 31 per cent in 1980 to over 35 per cent in 1994. Taking all the countries together, the (unweighted) ratio in 1980 was 44.2 per cent; in 1990, it averaged 38.6 per cent; and, in 1994, it averaged 35.4 per cent. The drops were particularly marked in Canada, the United States and Germany. All else the same, large declines in cohort size might be expected to raise their employment prospects, reduce their unemployment rate relative to that of adults and raise their earnings relative to adults. In many OECD countries in the 1980s, youth labour market problems were expected to diminish as the youth cohort declined in size. But, as shown in Sections B and C above, no such improvement occurred in most countries. Whatever improvement in the labour market prospects of youths brought about by the smaller size of youth cohorts was apparently outweighed by other factors.

2. Changing characteristics of the youth work force

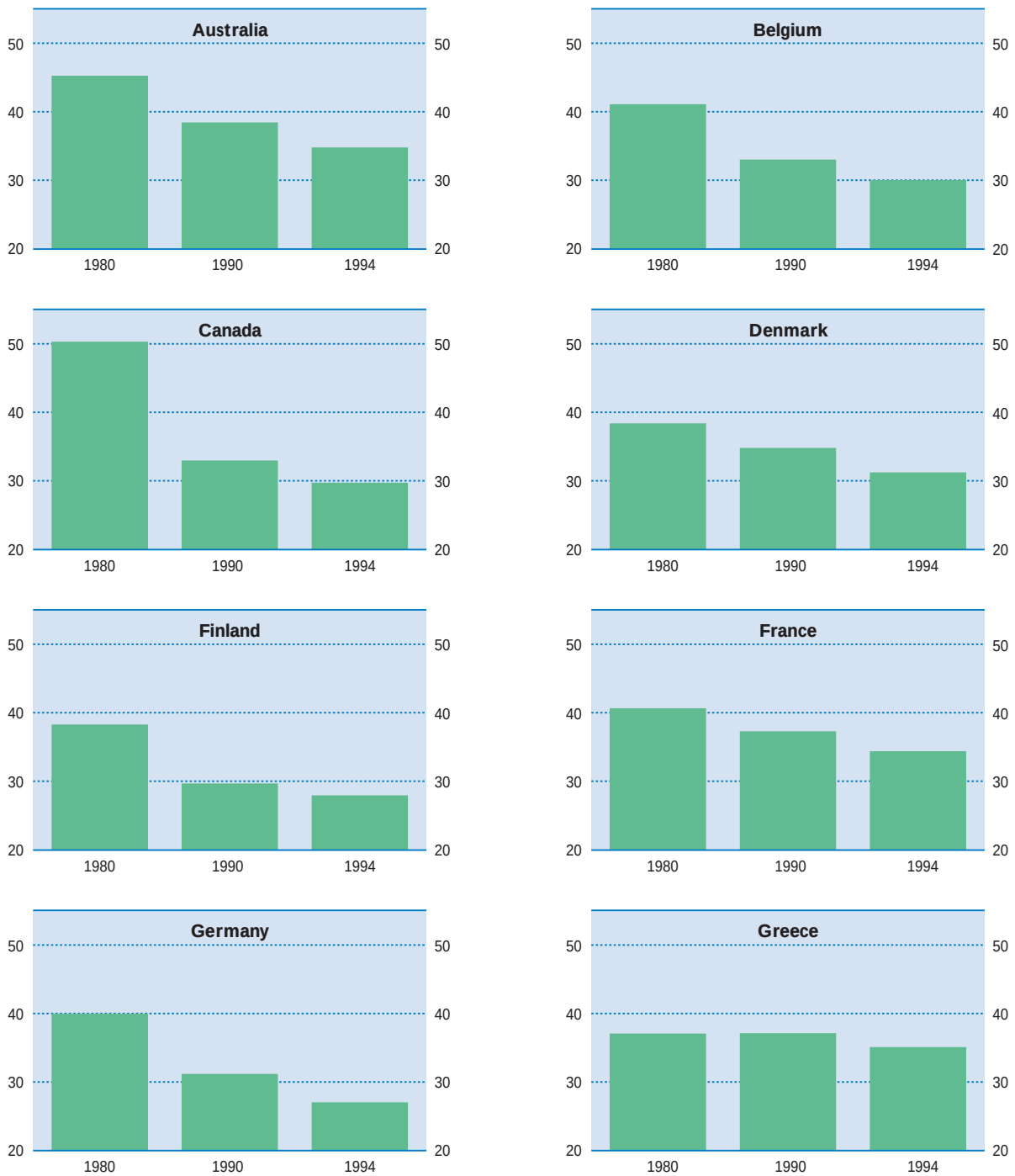
The characteristics of youths in the job market changed in a number of dimensions in the 1980s-1990s. As participation in education increased, more and more young people who are employed at specific ages are, at the same time, students in many countries.[6] This is shown in Table 4.10 for young persons aged 18, 22 and 26. Among 18-year-olds, the rise in the student proportion of youth employment is substantial in some countries. For instance, in Denmark the "in school" proportion of the employed rose from almost one-quarter in 1984 to one-half in 1994 among men and from 32.5 per cent in 1984 to 63.5 per cent in 1994 among women. The rise in the student share of the youth work force is noticeable even in countries where students have not traditionally worked, such as France. Among all OECD countries in the sample, the (unweighted) share of 18-year-old employed men who were students rose from 15.7 per cent in 1984 to 25.1 per cent in 1994. Similarly, the (unweighted) share of 18-year-old employed women who were students rose from 14.4 per cent in 1984 to 30.2 per cent in 1994. There are similar trends for 22- and 26-year-olds, though for these age groups the student proportion of young workers remains generally small.

The rising proportion of young workers participating in education is examined further in Table 4.11 using the cohort data described earlier. The table records regression coefficients on both a time trend and the aggregate unemployment rate for the proportion of the employed who are in school (see Annex 4.A for a description of the estimation method used for this and all other regressions in the chapter, and see Table 4.A.1 for the sample sizes). The trend coefficients are positive in all but two countries and are generally sizeable, indicating the widespread increase in the student proportion of the

Chart 4.4.

Youth aged 15-24 as a proportion of the population aged 25-54, selected years

Percentages

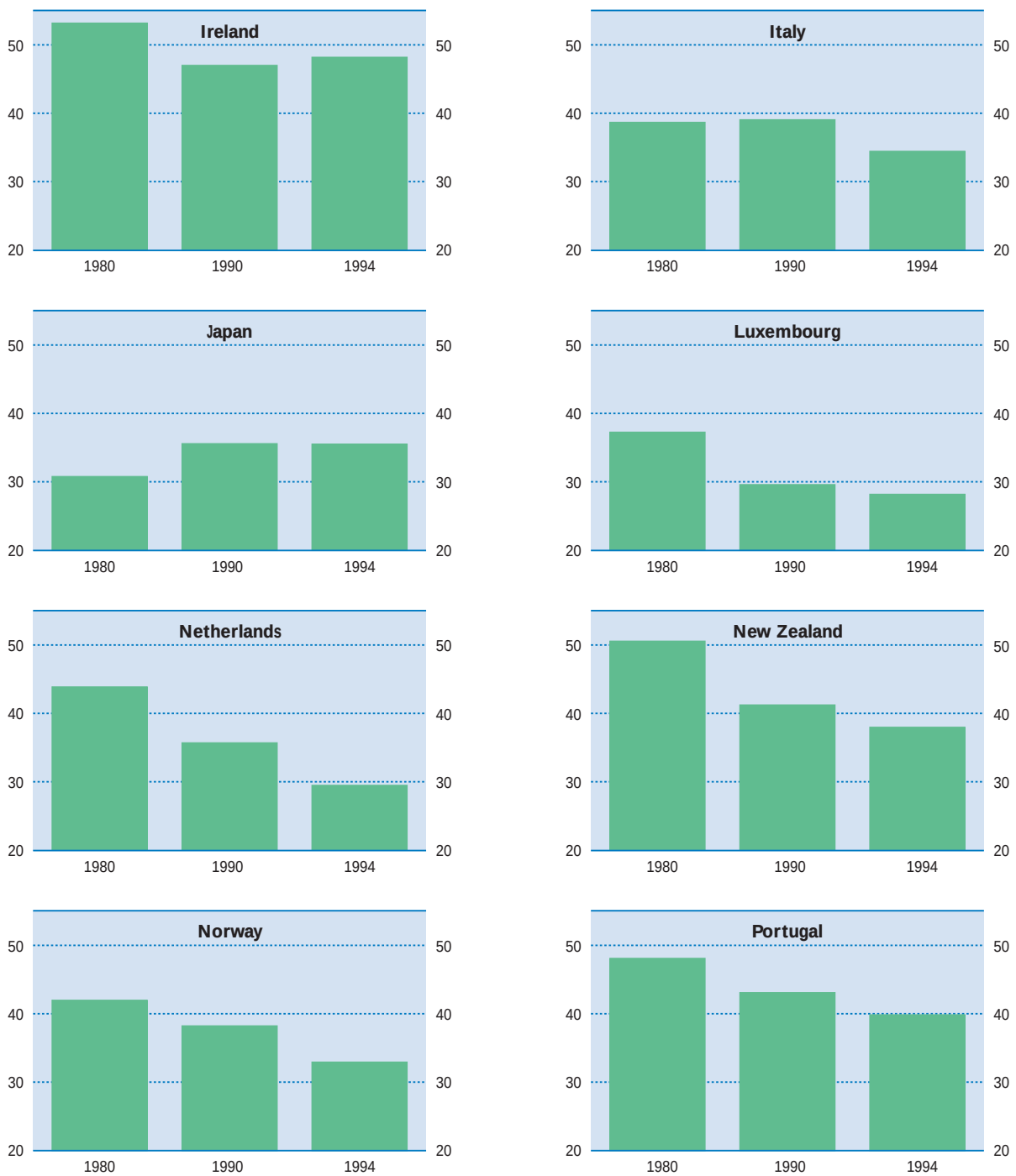


Source: United Nations population database.

Chart 4.4. *(cont.)*

Youth aged 15-24 as a proportion of the population aged 25-54, selected years

Percentages

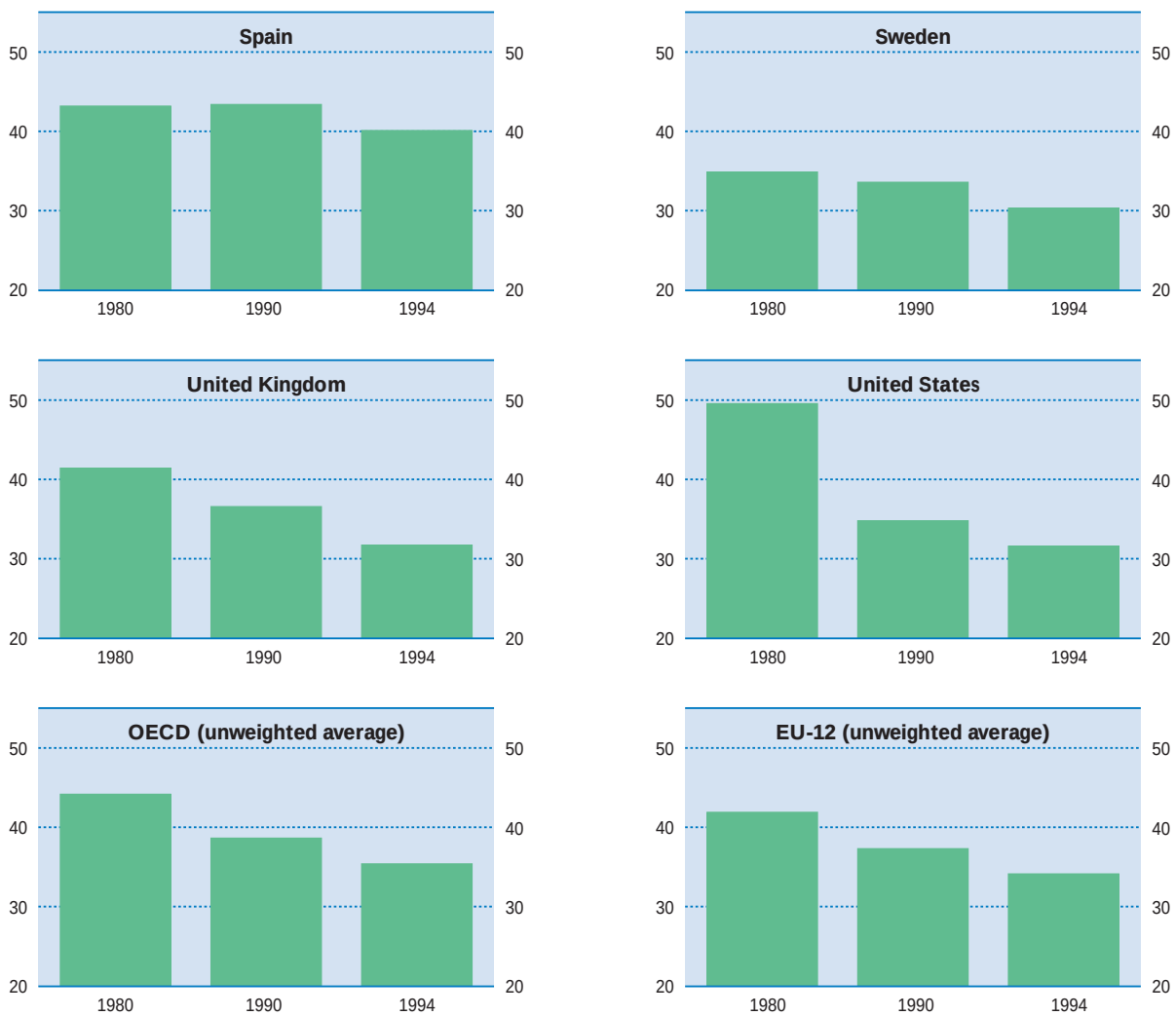


Source: United Nations population database.

Chart 4.4. *(cont.)*

Youth aged 15-24 as a proportion of the population aged 25-54, selected years

Percentages



Source: United Nations population database.

Table 4.10. **Percentage of the employed who are attending school, selected ages**

	Age 18		Age 22		Age 26	
	1984	1994	1984	1994	1984	1994
Men						
Australia	41.7	43.9	14.9	18.0	12.6	12.8
Belgium	7.1	11.5	4.9	3.8	6.9	3.0
Canada	46.1	68.1	14.0	22.8	7.0	12.2
Denmark	23.9	50.8	6.4	15.9	5.1	7.0
France	1.9	15.6	1.9	9.4	1.7	6.9
Germany	5.8	12.0	2.0	5.8	2.0	6.7
Greece	5.8	5.1	2.0	2.7	1.1	1.7
Ireland[a]	5.9	10.8	3.5	3.7	1.9	1.9
Italy	2.1	2.6	2.4	3.0	2.2	1.7
Luxembourg	0.9	5.6	1.6	1.4	1.0	0.9
Netherlands[b]	23.7	55.1	13.7	25.6	12.5	7.4
Portugal[c]	10.2	16.6	7.9	10.2	2.1	8.7
Spain[c]	2.0	11.3	0.6	6.6	0.2	6.5
United Kingdom	14.6	21.9	6.6	7.9	3.9	5.1
United States[a]	43.8	46.3	9.2	12.0	2.1	2.1
OECD unweighted average	15.7	25.1	6.1	9.9	4.2	5.6
Women						
Australia	21.8	51.8	12.8	22.1	10.4	12.9
Belgium	3.2	6.7	2.5	2.7	5.6	2.8
Canada	47.1	72.1	14.6	27.9	10.2	6.0
Denmark	32.5	63.5	9.6	15.6	5.1	13.8
France	5.7	27.6	3.8	16.2	1.6	8.1
Germany	7.3	15.4	2.3	5.9	1.2	4.0
Greece	2.1	8.5	4.4	3.6	1.5	1.6
Ireland[a]	6.9	23.3	2.3	3.7	3.1	1.7
Italy	2.5	2.3	2.1	3.5	2.5	3.4
Luxembourg	3.1	4.2	0.0	3.2	0.7	2.5
Netherlands[b]	18.8	65.7	10.3	16.5	9.3	5.1
Portugal[c]	4.0	15.8	8.0	16.4	6.2	9.0
Spain[c]	0.5	17.8	0.9	12.3	0.2	8.1
United Kingdom	18.1	33.0	3.2	7.8	2.6	5.8
United States[a]	42.9	45.6	7.3	13.2	1.8	1.5
OECD unweighted average	14.4	30.2	5.6	11.4	4.1	5.8

a) Data refer to 1984 and 1993.
b) Data refer to 1983 and 1994.
c) Data refer to 1986 and 1994.
Sources: See Annex 4.A.

youth work force. The coefficients on the trend terms in the single year of age regressions show that the rise in the student proportion of young workers is most pronounced in the younger age groups. Increasingly, teenage workers are also students. In that *specific* sense, working while also participating in education is becoming a more important part of the youth labour market today.

One additional change in the composition of the youth work force merits attention. This is the demographically-induced drop in the proportion of teenagers in the youth work force. As the teenage share of the population has fallen, an increasing proportion of young workers is in their twenties. This phenomenon is especially pronounced in France, Germany, Ireland, Spain and Italy (Chart 4.5).

3. Industry composition of youth employment

In many countries, youths work in different economic sectors than adults. They are more likely to be found in retail trade, and hotels and restaurants than in utilities, education or public administration. A disproportionate number of young men in many, but not all, countries are also employed in construction. Among young women, a disproportionate number is employed in personal services. Differences in the industrial distribution between younger and older workers imply a separation between the youth and adult labour markets. If youths are concentrated in declining sectors, they must switch industries to move into relatively permanent work. If, by contrast, youths are concentrated in growing sectors, they pro-

Table 4.11. **Econometric estimates of the effects of the aggregate unemployment rate and a time trend on the share of youth employment comprised of those also attending school**

Country[a]	Unemployment rate	Trend
Australia	.2379 (1.68)	.6688 (10.91)
Belgium	.1153 (0.83)	.4448 (10.25)
Canada	.1991 (1.59)	.6728 (18.28)
Denmark	.1091 (0.51)	.1195 (1.55)
France	.8950 (6.22)	.2949 (4.51)
Germany	.9091 (3.79)	.5210 (10.74)
Greece	.2411 (2.47)	–.0280 (1.51)
Ireland	.1659 (1.09)	.9927 (10.85)
Italy	–.2233 (4.59)	.1061 (8.56)
Luxembourg	.2750 (1.52)	.3456 (7.15)
Netherlands	.0763 (0.15)	–.2536 (0.58)
Portugal	–.0299 (0.24)	.6874 (12.43)
Spain	–.0807 (2.10)	.7120 (16.91)
United Kingdom	–.3195 (3.28)	.3559 (12.40)
United States	–.0214 (0.38)	.1600 (14.55)
Age[b]	Unemployment rate	Trend
16	.0881 (0.35)	.7449 (8.29)
17	.0112 (0.04)	1.0735 (11.67)
18	.6219 (2.66)	1.1647 (14.05)
19	.4498 (2.29)	.9311 (13.41)
20	.3960 (2.40)	.6861 (11.72)
21	.4517 (3.43)	.5789 (12.41)
22	.3941 (3.68)	.4715 (12.48)
23	.4335 (4.64)	.3177 (9.58)
24	.3298 (3.92)	.2335 (7.83)
25	.3136 (4.04)	.1731 (6.29)
26	.3419 (4.83)	.1207 (4.80)
27	.2851 (4.04)	.0990 (3.97)
28	.3066 (4.70)	.0544 (2.35)
29	.3002 (4.73)	.0593 (2.63)
30	.1802 (2.84)	.0546 (2.42)
31	.2393 (3.50)	.0331 (1.36)
32	.2285 (3.49)	.0559 (2.84)
33	.2002 (2.98)	.0448 (1.87)
34	.2635 (3.88)	.0243 (1.00)
35	.2237 (3.38)	.0498 (2.10)

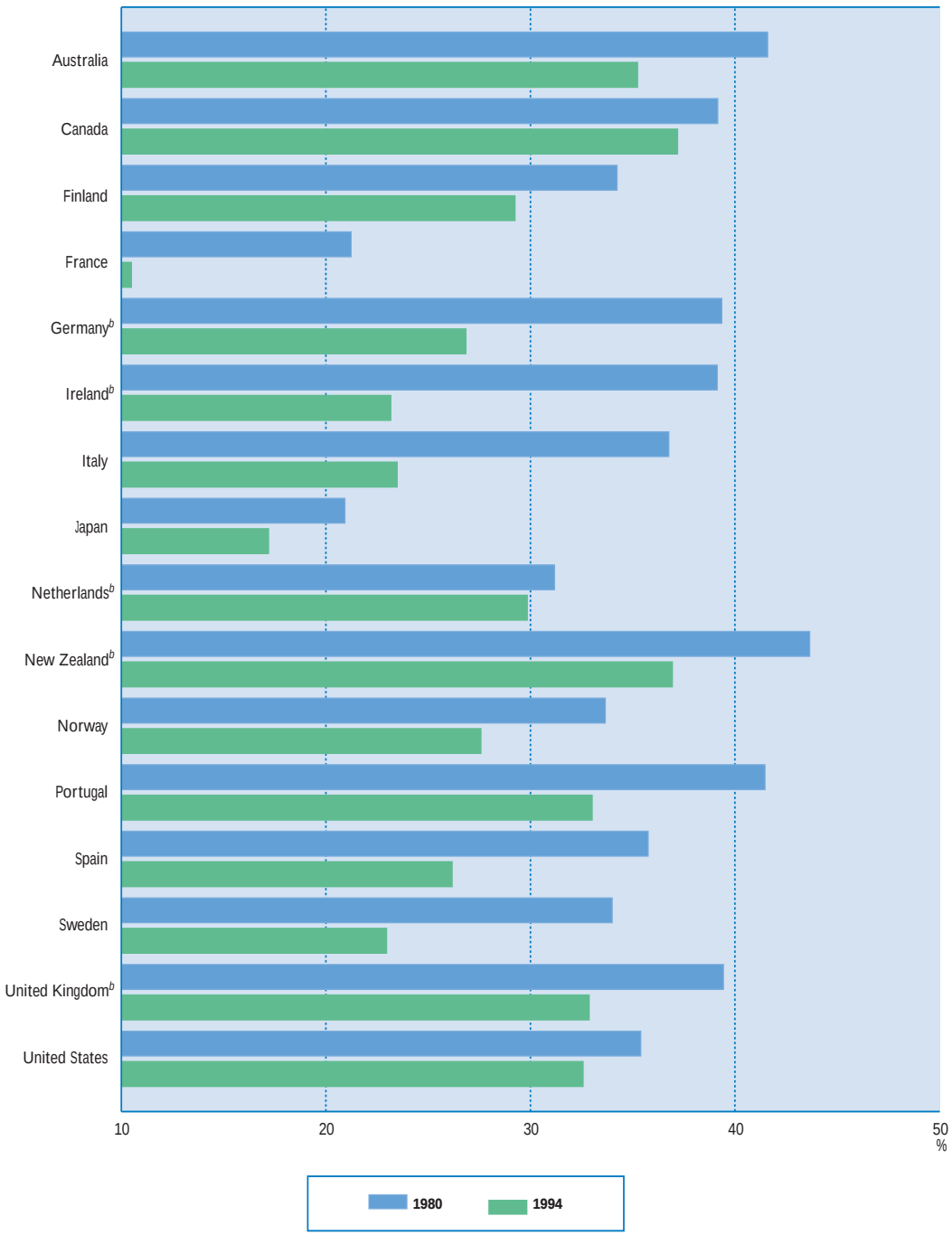
a) T-statistics are in parentheses. Equations also include 19 age dummies and a gender dummy.
b) Equations also include 14 country dummies and a gender dummy.
Sources: See Annex 4.A. The overall unemployment rates are from OECD, *Labour Force Statistics*, Part III, Paris, 1995.

vide the "investment margin" that shifts the employment composition of the work force to new areas.

One way to see which industries use youths disproportionately is to calculate youth "employment coefficients". These are defined as the ratio of the share of young workers' employment by industry to the share of workers aged 25 and over by industry (results by gender are based on calculations using the gender-specific denominator). When the ratio exceeds one, an industry employs disproportionately more young workers than it does older workers, making it a "youth-intensive" industry. When the ratio is below one, the industry employs relatively few younger workers. Table 4.12 records these ratios for young workers in selected industries where youths are highly concentrated in 1994. In every country, youths – both men and women – are disproportionately represented in hotels and restaurants, and wholesale, retail trade, and repairs. These sectors are huge employers of youths. In Canada, Germany, France and the United States (excluding hotels and restaurants), for instance, these few sectors employed 40 per cent or more of all young workers. When the youth work force is disaggregated by gender, two other industries are youth-intensive: construction, for men; and personal services, for women. The uniformity of these patterns across countries is striking and suggests that, differences in the school-to-work-transition notwithstanding, what happens to youth in the labour market depends partly on developments in a limited set of sectors.[7]

Chart 4.5.

Employed teenagers as a per cent of employed persons aged 15-24[a]



a) Teenagers refer to persons aged 15-19 except in Spain, Sweden, the United Kingdom and the United States where they refer to persons aged 16-19.
b) Data for Germany refer to 1980 and 1993; for Ireland, 1979 and 1993; for the Netherlands, 1987 and 1994; for New Zealand, 1986 and 1994; and for the United Kingdom, 1984 and 1994.

Source: OECD, *Labour Force Statistics*, Part III, 1995.

Table 4.12. **Ratio of shares of employment for those aged 15-24 relative to those aged 25 and over for selected youth-intensive industries, 1994**

	Both sexes		Men		Women	
	Hotels and restaurants	Wholesale and retail trade, repair	Hotels and restaurants	Construction	Hotels and restaurants	Personal services
Belgium	2.03	1.41	2.66	1.62	1.48	1.19
Canada[a]	3.92	1.96	4.43	0.77	3.46	1.99
Denmark	5.92	2.30	5.27	1.12	6.25	1.75
France	2.56	1.54	2.90	1.27	2.23	1.36
Germany	1.60	1.29	1.69	1.53	1.44	0.66
Greece	1.76	1.51	1.99	1.31	1.43	1.74
Ireland	2.01	1.66	2.39	0.87	1.52	1.16
Italy	1.63	1.06	1.89	1.36	1.29	1.29
Japan[b]	1.60[c]	1.27	2.73[c]	0.90	1.00[c]	0.78
Luxembourg	1.65	1.71	1.74	1.27	1.38	1.12
Netherlands	3.15	1.96	3.88	1.12	2.43	0.99
Portugal	1.44	1.22	1.46	1.81	1.43	0.88
Spain[d]	1.64	1.45	2.01	1.26	1.17	1.39
United Kingdom[d]	2.44	1.68	3.22	1.04	1.96	1.48
United States[d]	..	2.14	..	0.75	..	1.14

.. Data not available.
a) Repair services are not separately identified.
b) Data refer to 1992.
c) Refers to eating and drinking places only.
d) Age refers to 16-24-year-olds.
Sources: Data for European countries were supplied by EUROSTAT on the basis of each country's labour force survey. Data for Canada and the United States are based on each country's March labour force survey and were supplied by Statistics Canada and the Bureau of Labor Statistics, respectively. Data for Japan are from the 1992 *Employment Status Survey*, Statistics Bureau, Management and Coordination Agency.

The magnitude of the difference between the distribution of youths and adults across industries does, however, differ among countries. In some, the two are far apart, implying quite distinct youth labour markets or, as noted above, a rapidly shifting industrial pattern of employment fuelled by the allocation of youths. In other countries, the distributions are not that different. The magnitude of the divergence is reflected in an index of ''structural dissimilarity'' between the two distributions. This is defined as the sum of the absolute value of the difference between the distribution of youth employment by industry and the distribution of the employed aged 25 years and over by industry (the index is calculated separately for men and women). Heuristically, the distribution measures the extent of reallocation in youth employment across industries necessary for them to have the same distribution of employment by industry as adults. A value of zero, for example, indicates identical distributions of youths and adults.

Table 4.13 records indices of structural differences in industry distributions in 1984 and in 1994 for both sexes, and for young men and women. There are substantial country differences in the extent to which youths are employed in the same industries as adults.[8] In 1994, Japan and Germany had the lowest indices of industrial dissimilarity for men, whereas Canada and the United States had the highest indices. The first two countries, despite many differences, are also ones where enterprise tenure-age profiles are particularly steep and the probability that a young man recently hired stays on is especially high. Canada and the United States exhibit the opposite pattern of considerable job-hopping [OECD (1993)]. The table also reveals increases in the dissimilarity indices over time in many countries among both men and women. In some, the increase is particularly pronounced and reflects the increased concentration of the young in ''youth-intensive'' industries (Germany and Luxembourg are exceptions as the index fell for both men and women). Thus, the period since 1984 has seen the development of a more bifurcated labour market by age in many countries.

E. YOUTH EARNINGS

Given the changes in the supply of, and the demand for, youth labour described in the previous section, it is of interest to quantify the net effects of these shifts on youth earnings. This section examines the outcomes for the earnings of youths relative to adults.

Table 4.13. **Indices of structural differences in employment for 15-24-year-olds compared with those aged 25 and over**

	Both sexes			Men			Women		
	1984	1994	Change	1984	1994	Change	1984	1994	Change
Belgium	.27	.34	.07	.30	.42	.12	.24	.34	.10
Canada	.46	.66	.20	.50	.64	.14	.46	.70	.24
Denmark	.34	.58	.24	.35	.48	.13	.40	.77	.37
France	.26	.32	.06	.29	.38	.09	.29	.35	.06
Germany	.29	.19	–.10	.30	.24	–.06	.29	.19	–.10
Greece	.31	.37	.06	.32	.39	.07	.47	.43	–.04
Ireland	.41	.43	.02	.35	.46	.11	.44	.42	–.02
Japan[a]	.35	.30	–.05	.28	.33	.05	.53	.34	–.19
Luxembourg	.48	.37	–.11	.44	.39	–.05	.50	.37	–.13
Netherlands[b]	.32	.48	.16	.35	.51	.16	.36	.50	.14
Portugal[c]	.42	.52	.10	.43	.49	.06	.44	.58	.14
Spain[c, d]	.33	.36	.04	.41	.35	–.06	.36	.43	.07
United Kingdom[d]	.28	.36	.08	.32	.39	.07	.36	.37	.01
United States[d, e]	.46	.55	.11	.52	.57	.05	.45	.54	.09

– Data not available.
a) Data refer to 1982 and 1992.
b) Data refer to 1985 and 1994.
c) Data refer to 1986 and 1994.
d) Age refers to 16-24-year-olds.
e) Data refer to 1983 and 1994.
Sources: See Table 4.12. In addition, the Japanese data for 1982 are from the 1982 *Employment Status Survey*, Statistics Bureau, Prime Minister's Office.

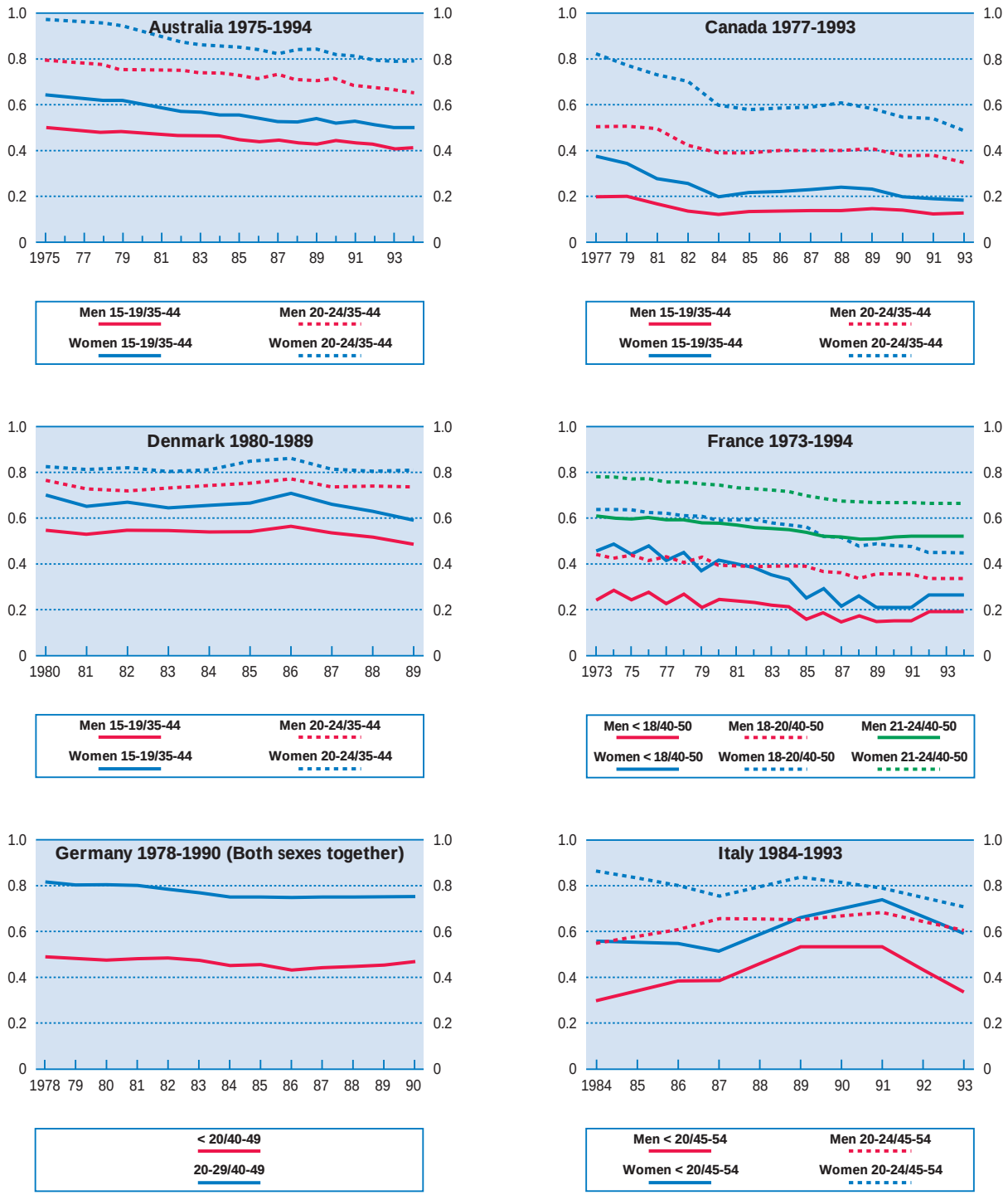
1. Youth earnings differentials

An important indicator in assessing the performance of youth in the labour market is the earnings they command. From the 1970s through the early 1980s, the average earnings of youths fell relative to adults in several countries [OECD (1986)]. One reason was the entry of the baby-boom generation to the job market. Given this pattern, some analysts and governments expected youth labour market problems to lessen considerably, all else the same, as the relative size of youth cohorts declined in the late 1980s and into the 1990s. Did this expectation show up as an improvement in the relative earnings of youths? Chart 4.6 provides a partial answer to this question. It records the ratios of the earnings of teenagers and 20-24-year-old workers, by gender, to the earnings of older workers in 11 OECD countries for which time-series data are available on earnings by age. The precise age group for older workers in the comparisons differs depending on the country. For most countries, the older groups are 35- to 44-year-olds or 40- to 49-year-olds, but the Swedish figures relate to 25- to 64-year-olds and the Japanese to 45- to 49-year-olds. There are other differences in the nature of the data that makes the comparisons of the ratios across countries imprecise, but which should be less likely to affect changes over time (see Annex 4.B).

Certain other difficulties in interpreting these data need to be noted. First, the summary measures and the time period covered by them are not the same. For example, the data sometimes refer to annual, sometimes to weekly, and sometimes to monthly earnings. For the most part, the data refer to full-time workers. This provides some "control" for hours worked, but the definitions of full-time work are not the same across countries and actual hours worked by even full-time workers can differ across age groups. Thus, any observed trends in pay relativities could reflect, in these data, differences in working time. Second, many youths in jobs will be missed in these data because they work part-time. Ideally, one would prefer data on wage rates, but such data are very difficult to obtain. Third, changes in the composition of each group can affect the "true" picture of relative earnings changes. For example, if the earnings of teenagers were being compared with that of adults and over the period the proportion of older teenagers in the group increased, as it did in some countries, then, all else the same, one would likely see a rise in relative earnings of teenagers from this compositional effect alone. Fourth, taking movements in these data as an indicator of changes in labour costs can be problematic if either productivity or non-wage labour costs of different groups change over time. Finally, the existence of wage subsidies for specific groups, *e.g.* youth, can also complicate analysis because they may lead to changes in earnings of the target group. These issues are almost impossible to deal with and this subsection assumes that there has not been any substantial changes in these factors. Considerable caution in drawing conclusions is, therefore, necessary.

Chart 4.6.

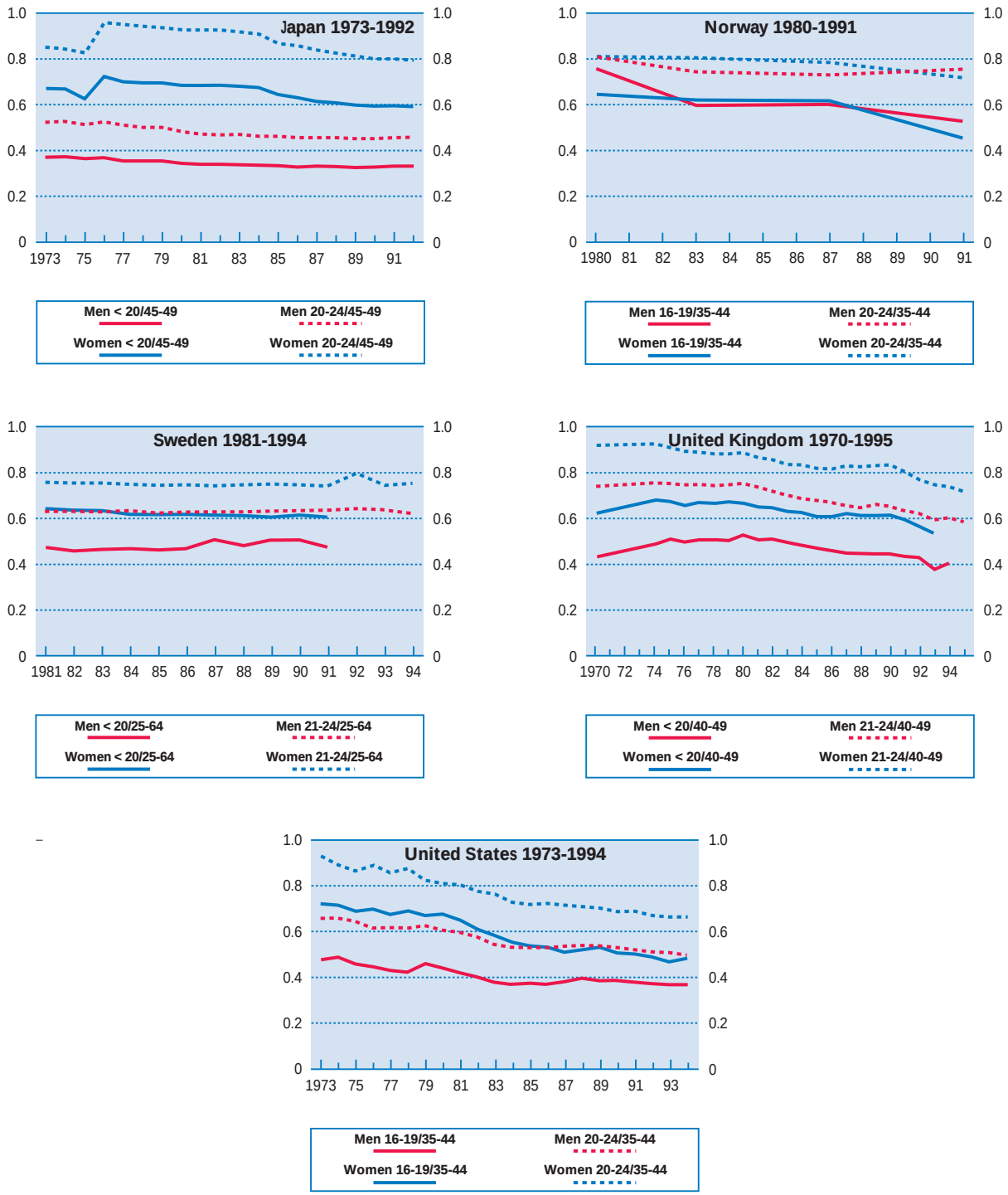
Earnings of youth relative to adults



Sources: See Annex 4.B.

Chart 4.6. *(cont.)*

Earnings of youth relative to adults



Sources: See Annex 4.B.

The relativities show, in all cases, that wages are lower for the youngest group. And, in most cases, earnings of young *relative* to older women are greater than the comparable relativities for men. This undoubtedly reflects differences in work experience patterns between men and women, as well as many other factors.

The data tell a fairly uniform story about changes over time. In virtually all countries, young workers experienced declines in earnings relative to older workers through the 1990s. However, there are country differences in both the magnitude and timing of this fall and there are also differences in the starting and ending point levels of relative earnings. For example, the United States and Canada had steep drops from the mid-1970s; the United Kingdom's decline was larger from the mid-1980s to the mid-1990s than in the earlier period; and Italian youth's earnings did not begin to fall relatively until the 1990s. It is the uniformity of the drop in relative pay that stands out, except in Sweden, despite the sharp fall in the relative size of youth cohorts and differences in the institutions of wage-setting. Given the caveats above, one possible implication is that the beneficial effect of the declining size of youth cohorts on youth earnings was overwhelmed by other forces in most countries. Wage-setting institutions may affect the magnitude of the youth/adult differential and possibly the magnitude of the response of that differential to market conditions, but they apparently do not rule out qualitatively similar adjustments.

Another approach to getting at the magnitude of the youth/adult pay differential is provided below. To estimate this differential, data from the International Social Survey Programme (ISSP), which provides a single source, based on nominally similar definitions for youth and adult earnings, are exploited (see Annex 4.B). Using the ISSP files for 1993, Table 4.14 shows the results of a simple regression of the "log" earnings of respondents on dummy variables for gender and age groups. For analysis of these data for earlier years see Blanchflower (forthcoming), and Blanchflower and Freeman (1992). The coefficients in this regression for persons aged 18-24 years relative to those of workers aged 35-44 years provide a rough illustration of the youth "discount" for a similarly defined group.[9] As can be seen in Table 4.14, there is apparently a wide range of youth "discounts" across countries that seems to roughly reflect differences in the distribution of earnings and wage-setting institutions (see also Chapter 3). The differentials tend to be largest for countries with higher levels of earnings inequality and more decentralised wage setting. The biggest adult/young differential is for the United States, followed by Canada and New Zealand.

Table 4.14. **Earnings of employed 18-24-year-olds compared with employed 35-44-year-olds, 1993**[a]

	Coefficient	Sample size
Canada	–1.2208	850
Germany	–0.3820	822
Ireland	–0.2282	365
Italy	–0.4830	482
Japan	–0.8500	685
Netherlands	–0.2095	698
New Zealand	–1.0837	724
Norway	–0.8106	772
Spain	–0.5367	317
United Kingdom	–0.8111	868
United States	–1.7148	895

a) Coefficient on age dummy for 18-24-year-olds compared with the excluded category of 35-44 years. All equations included five age dummies and a gender dummy.

Source: International Social Survey Programme micro-datafiles, 1993 (see Annex 4.B).

However, the results also suggest that the full story is complicated. It is, for example, not an easy matter to classify collective bargaining structures [OECD (1994)]. Moreover, Norway, characterised by fairly high union density and collective bargaining coverage rates, and Japan, sometimes considered, despite relative low unionisation, to have co-ordinated bargaining, both show sizeable differentials. Although the sample size of countries is small, simple correlations between this "discount" and union density rates show very little relation (–0.12). On the other hand, higher levels of collective bargaining coverage are correlated with smaller youth "discounts" (–0.80). While the low differential in Germany is associated with relatively low youth unemployment (presumably because of apprenticeships in the school-to-work transition), youth unemployment rates are high in some of the other countries with low youth "discounts", raising the question of whether there is a significant earnings and employment trade-off.

2. Youth employment and earnings

Whether, and the extent to which, there is a trade-off between employment and earnings is an extremely difficult issue, one that has been examined numerous times with many different model specifications, in time series, cross-section and cross-country format and with many different data sources, and this chapter cannot go into any depth on the subject. The problem with any simple approach is readily seen by comparing the employment rates in Table 4.2 with the estimated "discounts" in Table 4.14. The country with the lowest youth discount, Ireland, has neither the lowest teenage nor young adult male employment

rates. And the United States and Germany do not look greatly dissimilar with respect to employment (taking the 11 countries together yields a positive, but small, correlation between higher "discounts" and the employment rates of young men of 0.41). This question of trade-offs has been most extensively examined in the United States in terms of the potential job-creating effects of falling real and relative wages for persons in the lower deciles of the earnings distribution on the amount of time they work over the year, and in terms of the effects of mandated increases in the Federal minimum wage on employment.[10]

Because of the extensive literature, a brief overview is useful. The evidence suggests that the large reduction in the relative pay of lower-paid workers in the United States that has occurred since the mid-1970s has not been sufficient to improve their relative or absolute employment position. Perhaps reflecting a labour supply response, the amount of time worked by lower-paid workers has fallen rather than risen. Juhn *et al.* (1991) used March Current Population Survey data to examine the percentage of persons employed/not employed and the weeks worked for those employed at any time in the past year by their position in the earnings distribution. They found that the lower paid, whose pay fell in the 1980s, also had declines in employment and in weeks worked relative to the higher paid. Topel (1993) showed that from 1967-1968 to 1987-1989 the deciles that had the biggest drops in real wages also had the biggest increase in time spent jobless. Freeman (1995) found a similar pattern in annual hours worked using Census of Population data. A similar pattern of declining relative pay and employment has been found for Australia [Gregory (1995*b*)]. Yet another study compared Canada, France and the United States and found no evidence of a superior employment experience among groups whose relative pay declined [Card *et al.* (1994)]. Chapter 3 gives an additional perspective to these issues. It finds little evidence of a significant relationship, in a cross-country framework, between the availability of low-paid jobs and employment or unemployment rates.

All of these studies have examined the entire labour force, not the youths of concern here (also see Chapter 3). Table 4.15 examines the relation between pay and employment for workers aged 25-29 using the

Table 4.15. **Hours worked per year and hourly pay for 25-29-year-olds by wage decile, United States, 1970-1990**[a]

Men					
Wage decile	1970	1980	1990	Per cent change in hours 1970-1990	Per cent change in hourly wages 1970-1990
1	2 280.1	2 022.2	1 997.8	–12.39	–4.21
2	2 354.9	2 078.8	2 083.5	–11.52	–18.61
3	2 265.6	2 103.0	2 111.5	–6.80	–20.89
4	2 262.0	2 098.3	2 142.9	–5.27	–20.11
5	2 194.5	2 099.8	2 164.9	–1.35	–17.81
6	2 136.8	2 101.3	2 136.9	0.01	–16.72
7	2 129.7	2 101.8	2 150.9	1.00	–14.07
8	2 031.5	2 078.7	2 126.0	4.65	–10.43
9	2 011.1	2 053.5	2 087.0	3.78	–8.41
10	1 624.5	1 726.6	1 897.3	16.79	–0.71
Women					
Wage decile	1970	1980	1990	Per cent change in hours 1970-1990	Per cent change in hourly wages 1970-1990
1	1 345.6	1 478.9	1 534.4	14.02	42.34
2	1 569.3	1 565.6	1 695.5	8.05	4.87
3	1 601.4	1 684.6	1 836.9	14.71	–0.23
4	1 839.5	1 769.1	1 839.3	–0.01	–0.34
5	1 762.5	1 795.7	1 919.4	8.91	–1.40
6	1 737.7	1 855.7	1 932.9	11.24	–0.72
7	1 725.9	1 833.0	1 895.6	9.83	–0.45
8	1 709.1	1 784.2	1 926.9	12.74	–1.44
9	1 474.2	1 747.8	1 860.3	26.19	–4.55
10	933.9	1 347.7	1 620.6	73.54	–12.96

a) For men, the 1970 sample was 46 296; the 1980 sample was 52 340; and the 1990 sample was 51 555. For women, the 1970 sample was 24 303; the 1980 sample was 40 328; and the 1990 sample was 43 138.

Source: Tabulated from US Census of Population Public-Use datafiles for 1970, 1980 and 1990.

United States Census of Population for 1970, 1980 and 1990, separately by gender. Results are disaggregated by deciles of the constructed hourly wage distribution. For men, there was a considerable decline in hours worked at the bottom of the wage distribution and an increase at the higher end. Hourly wages (in 1987 dollars) fell between 1970 and 1990 across the wage spectrum, but with the smallest declines at the higher end of the distribution. Young men in the top decile experienced virtually no cuts in their real hourly wages and increased their annual earnings by working more hours.[11] Those in the bottom decile experienced cuts in both their real rate of pay per hour *and* the number of hours they worked. The labour market outcomes for women were more favourable.[12] Across the wage distribution there were increases in the number of hours worked and relatively small cuts in real hourly wages. Despite substantial reductions in pay, the amount of time worked by young men did not increase. For women, increases in hours worked do not appear to have been brought about by cuts in real earnings.

Both the data and overview of some research presented in this section indicate that attempts to use simple versions of economic theory to account for cross-country and over time differences in youth participation, employment and unemployment are difficult to maintain. Perhaps greater declines in youth earnings might have generated more jobs for them, but the declines that did occur, including the large drops in the United States, did not suffice to stabilize or raise their employment rates.

F. FACTORS AFFECTING YOUTH JOB MARKET PROBLEMS

What are the major causes of the observed declines in employment rates for young, especially out-of-school people? Has the declining size of youth cohorts ameliorated the adverse changes found in employment and wages? To what extent, if at all, can youth job market problems be attributed to troubles in youth-intensive industries? How important are aggregate labour market conditions in determining the performance of youths? These questions are addressed in turn.

1. The effect of demography

All else the same, the large drop in the size of youth cohorts in the 1980s and 1990s should have raised their employment/earnings prospects and, thus, provided some insight into the response of employment and earnings to falls in relative labour supply, just as the large increase in the size of youth cohorts in the 1970s provided insights into the labour market effects of an increase in relative labour supply. But the evidence to date suggests that all else was not the same in the 1980s and 1990s. Table 4.16 attempts to estimate the effects of demography on youth employment outcomes for 20 OECD countries. Here, data are used for young people in two age groups – 15-19 years (16-19 in some countries) and 20-24 years. Information is available separately by gender. Data are available from 1970-1994 for Australia, Canada, Finland, France, Germany, Italy, Japan, Sweden, the United Kingdom and the United States, although there are breaks in some of these series that need to be borne in mind [OECD (1995*a*)]. Data are also available from 1983-1994 for Belgium, Denmark, Greece and Luxembourg. In addition, there are data for Ireland (1972, 1975, 1977, 1979, 1981 and 1983-1992), the Netherlands (1972 forward), New Zealand (1986 forward), Norway (1978 forward), Portugal (1974 forward) and Spain (1972 forward).

The regressions in Table 4.16 link employment rates for teenagers and 20-24-year-olds separately by gender to the employment rates of 25-54-year-olds, the ratio of the number of young persons (15-19 or 20-24) to the number of 25-54-year-olds, a time trend, and dummy variables for countries (and gender in the regressions that pool the sexes). In addition, some of the regressions include the aggregate unemployment rate. For the pooled male and female samples, the estimated effect of the relative population is negative and significant only when the aggregate unemployment rate is excluded. The separate regressions by gender show, however, that this pattern is due to the effects of relative population on the employment rate of women: relative population has no statistically significant effect on teenage male employment rates and only a very small effect on young adult men's employment rates. Even for this latter group, the effect of declining relative cohort size was not sufficient to improve their employment rate. As can be seen in the table, adult male employment rates are strongly, positively, correlated with youth, especially male, employment rates. Relatively smaller cohorts of young people probably do ease their labour market difficulties, but not by enough to offset the other forces at work in the youth job market.

2. Effects of the changing industrial mix of employment

The fact that, in many countries, youths work in a very distinct set of industries raises the possibility that some of their labour market problems might be due to structural shifts in the composition of employment away from those industries. If the share of employment in hotels and restaurants, and wholesale and retail trade, where young workers were shown earlier to be found in disproportionate numbers, was

Table 4.16. **Econometric estimates of the effects of the aggregate unemployment rate, relative population and adults' employment/population ratio on the employment/population ratios of youth, 1970-1994**[a, b]

	Age 15-19[c]			Age 20-24		
	Employment/ population ratio of those aged 25-54	Relative population (15-19/25-54)	Unemployment rate	Employment/ population ratio of those aged 25-54	Relative population (20-24/25-54)	Unemployment rate
Both sexes (n = 778)	0.3431 (7.23)	–0.1038 (1.37)	–0.1626 (7.41)	0.3182 (15.62)	–0.0082 (0.32)	–0.0984 (10.98)
Both sexes	0.3971 (8.19)	–0.3110 (4.26)		0.3548 (16.40)	–0.0860 (3.17)	
Men (n = 389)	1.8487 (3.86)	0.0237 (0.26)	–0.0479 (1.40)	2.1013 (13.35)	0.0771 (2.65)	–0.0162 (1.52)
Men	2.3265 (6.95)	–0.0367 (0.46)		2.2585 (19.03)	0.0675 (2.37)	
Women (n = 389)	0.4678 (2.65)	–0.3416 (3.16)	–0.1933 (6.19)	0.4355 (6.28)	–0.0572 (1.28)	–0.0974 (8.01)
Women	0.8193 (4.67)	–0.5932 (5.64)		0.6107 (8.57)	–0.1809 (4.00)	

a) T-statistics are in parentheses. Equations also include a time trend, 19 country dummies, and a gender dummy in the equation combining men and women. The employment, unemployment and population variables are all in natural logarithms.
b) See the text for the countries included and the actual years of data availability for them.
c) For Spain, Sweden, the United Kingdom and the United States, the dependent variable refers to persons aged 16-19.
Sources: United Nations population database. OECD, *Labour Force Statistics*, Part III, various issues; and unpublished OECD labour force data.

falling, this would, all else the same, adversely affect youth job prospects. But, in nearly all countries, employment in these sectors *grew* relative to total employment. Thus, a standard shift-share analysis of the effect of changes in the overall industrial composition of employment offers little explanatory value.

Table 4.17 shows this result for 20-24-year-olds for the period 1985-1994 in selected OECD countries, using 2-digit NACE industries for the European countries, and 2-digit national classifications for Canada, Japan and the United States. Column 1 records the 20-24-year-olds' share of total employment in 1985. Given the general decline in the 20-24-year-olds' share of the population, the share of employment, as a result, should have fallen through 1994, and column 2 gives the 1994 *demographically-adjusted predicted share*. This is arrived at by multiplying the column 1 figures by the ratio of the 20-24 share of the population in 1994 to the share in 1985. Column 3 shows the actual 1994 share of employment accounted for by 20-24-year-olds. Column 4 gives the difference between the actual share and the share that would have resulted simply from the drop in the youth share of the population.

The final column gives the *predicted* effect of the change in industry mix. It is the sum of the change in the share of total employment in each industry multiplied by the 20-24-year-old share of employment in those industries scaled for the change in the group's share of the population.[13] In all the countries save Belgium, the predicted effect is positive. This implies, all else the same, that the youth proportion of employment should have risen, not fallen, as a mechanical result of the changing mix of employment by sector. Thus, on their own, structural shifts in the industry composition of jobs cannot account for the observed aggregate changes in young adult's employment prospects.[14]

3. The impact of aggregate unemployment on youth employment and unemployment

The concordance of a decline in the relative supply of young persons to the job market for demographic reasons and a modest increase in relative demand due to shifts in employment toward youth-intensive sectors should have, all else the same, improved the job market for youths. But, in general, no such overall improvement occurred. What explains this situation? One possibility is found in the disproportionately large response of youth employment and unemployment to changes in overall unemployment or other indicators of aggregate economic activity.

The effect of fluctuations in the aggregate economy on youths has long been an issue in analyses of the youth labour market [Clark and Summers (1982); Franz (1982); OECD (1986); OECD (1994)]. The standard generalisation is that youth employment and unemployment is quite sensitive to aggregate economic fluctuations. No such clear generalisation has emerged about the effect of the aggregate economy on youth enrolment in school. Betts and McFarland (1995) have shown that unemployment in the United States increases enrolments in junior/community colleges, but their results for completion of secondary school are more ambiguous, in part, perhaps, because of legal requirements on schooling for given age groups.

Table 4.17. **Changes in young adults' share of total employment due to demographic changes and changes in employment by 2-digit industry, 1985-1994**

	(1) Young adults' (20-24) share of total employment, 1985	(2) Share of employment expected in 1994 given the change in their share of the population	(3) Actual share of employment, 1994	(4) Actual minus expected share (column 3-column 2)	(5) Change in young adults' share of employment due to change in the industry mix of employment
Belgium	11.7	10.2	8.8	–1.4	–0.1
Canada	14.5	10.3	9.8	–0.5	0.1
Denmark	11.4	10.2	9.5	–0.7	0.1
France	11.0	10.3	7.9	–2.4	0.2
Germany	12.4	9.4	8.9	–0.5	3.6
Greece	7.5	7.8	7.8	0.0	0.2
Ireland	16.9	16.6	14.0	–2.6	0.5
Japan[a]	12.2	12.9	13.3	+0.4	0.7
Luxembourg	14.5	12.0	10.4	–1.6	0.5
Netherlands	14.4	12.8	11.8	–1.0	0.2
Portugal[b]	9.9	10.2	9.7	–0.5	0.2
Spain[b]	10.2	9.8	9.9	+0.1	0.4
United Kingdom	13.0	11.0	10.4	–0.6	0.1
United States[c]	13.4	10.5	10.2	–0.3	0.2

a) Refers to the age group 15-24. Years are 1982 and 1992.
b) Years are 1986 and 1994.
c) Years are 1983 and 1994.
Sources: See Table 4.12 and Table 4.13.

The remainder of this subsection considers the sensitivity of the education participation/employment status of youths to aggregate economic forces. The activities of youth fall into four disjoint states. The first is the starting point for the transition: youths in school but not working. The second is being in school and employed. The third is being out of school and not working. The fourth is being out of school and in employment. For ease of analysis, these states have been combined into three overlapping classifications: the per cent in education; the per cent employed; and the per cent of the labour force unemployed (also see Tables 4.A.2 and 4.A.3).

Estimates of the effect of aggregate labour market conditions on youths in these three states are computed by regressing the proportion of each age-gender group in the particular category on the rate of national unemployment in each year; a gender dummy; age dummies; and a time trend (see Annex 4.A). These estimates are done for each country separately using a linear probability model as well as for a pooled sample of countries, with the inclusion of country dummy variables.[15] Table 4.18 summarises the results in terms of the coefficients on the rate of aggregate unemployment, the variable of interest. The effect of unemployment on the proportion in education (column 1) reveals a disparate pattern across countries. In some cases, it is strongly positively related to unemployment (Germany, the Netherlands and Portugal); in other cases, it is negatively related to aggregate unemployment (Italy, Luxembourg, the United Kingdom and Belgium); while in yet others, there is little relation (the United States, Canada, Denmark, Spain, Ireland and Greece). Pooling all the countries together, schooling is positively related to unemployment, implying that increases in unemployment lead to increased enrolments, but the diverse country results gainsay any generalisation.

By contrast, there is little ambiguity as to the effect of aggregate unemployment on the proportion of a cohort working or unemployed (columns 2 and 3). The proportion employed falls with unemployment in most countries, with the absolute value of the coefficient often greater than 1. In the pooled sample, a one point increase in aggregate unemployment reduces the employment rate of youths by 1.1 percentage points. The proportion of the cohort unemployed is similarly positively related to aggregate unemployment with a coefficient greater than one almost everywhere.

Employment while in school and employment for out-of-school youths generally have different importance in the lives of youths. In many cases, employment during school is a secondary activity (though for some youths, it must be emphasized, it may be the only way they can afford to further their education) whereas for out-of-school youth, employ-

Table 4.18. **Econometric estimates of the effects of the aggregate unemployment rate on the proportion of youth attending school, employed and unemployed**[a]

	Percentage attending school	Percentage employed	Percentage of the labour force unemployed
Australia	.1642 (1.46)	–1.5841 (6.77)	1.3126 (19.76)
Belgium	–.3293 (2.80)	–.6059 (2.37)	1.6860 (11.45)
Canada	.0970 (1.01)	–1.3471 (7.48)	1.4105 (21.20)
Denmark	.2872 (1.38)	–1.3720 (8.98)	1.4387 (14.19)
France	.4588 (1.69)	–.9025 (2.29)	1.7659 (9.74)
Germany	1.3584 (4.51)	–1.7491 (3.03)	1.1043 (7.06)
Greece	–.2016 (0.76)	–.8348 (1.43)	1.0472 (3.61)
Ireland	–.3205 (0.99)	–.8461 (2.29)	1.0893 (10.45)
Italy	–1.0467 (7.79)	.3013 (0.86)	1.1343 (6.84)
Luxembourg	–.9221 (2.68)	–.3289 (0.41)	1.4779 (5.21)
Netherlands	1.8998 (3.38)	–1.6295 (3.01)	.8277 (3.81)
Portugal	.6442 (3.63)	–1.9387 (9.13)	1.7040 (15.29)
Spain	.0453 (0.77)	–1.0520 (6.97)	1.4933 (20.34)
United Kingdom	–.3442 (4.70)	–1.8338 (9.35)	1.3519 (18.13)
United States	–.0370 (0.72)	–.6547 (3.58)	1.3622 (31.20)
All (pooled)	.3890 (7.50)	–1.1267 (14.45)	1.3492 (33.71)

a) T-statistics are in parentheses. Equations also include 19 age dummies, a time trend, and a gender dummy, plus 14 country dummies in the overall pooled equation.
Sources: See Table 4.11.

ment is potentially the dominant allocation of time. As shown earlier with more aggregate figures, the non-employment rates of out-of-school youths, especially men, have tended to increase.

Accordingly, the sensitivity of the employment rate of young people conditional on their school status to aggregate economical conditions was also investigated. Table 4.19 records the results of linear probability estimates of the coefficients of aggregate unemployment and a time trend on the employment rates of in- and-out-of-school youths by country, for men and women separately. The results suggest that the employment rates of youths in school, although generally negatively related to overall unemployment, are less sensitive to aggregate unemployment than the employment rates of youths out of school. This is true for all countries taken together for men (a coefficient on unemployment for the in-school group of –0.83 vs. –1.40 for the out-of-school group) and for women (a coefficient on unemployment for the in-school group of –0.90 vs. –1.03 for the out-of-school group) and holds in 23 of 30 country-gender comparisons. Among the out-of-school group, moreover, the employment of men is more sensitive to aggregate unemployment than is the employment of women. The major difference by gender, however, concerns the estimated trends. The trend coefficients are positive for women in virtually every country compared with a general trend decline in employment rates for men. This is especially true for those not attending school. Because unemployment rates have risen in most countries since the 1980s, this does not mean that the proportion of young out-of-school employed women has risen, only that it has risen relative to the rising rate of unemployment. The gap between the proportion of young women employed and the proportion of young men employed is declining over time.

These results relate to all the age groups in the sample together. But the sensitivity of educational participation and employment rates to aggregate unemployment varies considerably by age, declining as youths get older. Table 4.20 documents this pattern using the pooled data set that includes all the countries in the sample. The table records coefficients on aggregate unemployment from regressions of the proportion of youths in school, employed, and unemployed by single year of age, with a dummy variable for gender, a time trend and individual country dummies. There is a noticeable decline in the size of the coefficients on aggregate unemployment with age for all three outcome measures. The percentage of persons enrolled in school is less sensitive to unemployment among those in their late 20s/early 30s. Similarly, as persons age the proportion employed or unemployed also becomes somewhat less sensitive to aggregate unemployment, although there is still an impact. The decline with age in the estimates of the aggregate unemployment effect supports the generalisation that youth employment and unemployment is exceptionally sensitive to the overall state of the labour market.

Table 4.21 examines the age pattern of the employment rate responsiveness to aggregate unemployment for the separate school/gender groups.

Table 4.19. **Econometric estimates of the effects of the aggregate unemployment rate and a time trend on the proportion of youths employed by schooling status and gender** [a]

	Men				Women			
	Employed/In school		Employed/Out of school		Employed/In school		Employed/Out of School	
	Unemployment rate	Trend	Unemployment rate	Trend	Unemployment rate	Trend	Unemployment rate	Trend
Australia	–1.1048 (4.99)	–0.8774 (9.16)	–1.8932 (15.76)	–0.2084 (4.01)	–1.3754 (5.41)	0.4250 (3.86)	–1.4457 (5.22)	0.6286 (5.25)
Belgium	1.1388 (1.74)	–0.1339 (0.37)	–1.4609 (5.84)	–1.0993 (7.96)	1.1944 (1.46)	–0.0659 (0.15)	–1.3627 (4.01)	–0.0452 (0.24)
Canada	–1.4660 (5.12)	–0.1337 (1.59)	–2.0752 (20.84)	–0.3294 (11.23)	–0.2700 (1.03)	0.2517 (3.27)	–1.0504 (5.13)	0.7591 (12.59)
Denmark	–1.4041 (1.89)	–0.2123 (0.65)	–1.4528 (7.16)	0.1127 (1.28)	–1.0644 (1.39)	–0.7137 (2.14)	–1.2616 (3.97)	0.3316 (2.40)
France	0.1327 (0.24)	0.3163 (1.69)	–1.6863 (8.12)	–0.0908 (1.30)	–0.0797 (0.11)	–0.3910 (1.60)	–1.1139 (5.35)	0.3643 (5.19)
Germany	–0.9212 (0.98)	2.1182 (7.72)	–0.3503 (0.99)	–0.0486 (0.47)	–0.4543 (0.48)	1.6508 (5.94)	–0.5836 (1.01)	0.7693 (4.53)
Greece	1.4227 (1.04)	–1.1520 (4.45)	–0.9029 (3.21)	–0.2869 (5.34)	0.0652 (0.05)	–0.8721 (3.14)	–1.6912 (5.69)	0.8090 (14.28)
Ireland	0.2443 (0.36)	–1.3307 (4.53)	–1.6437 (5.81)	–0.4309 (3.55)	–1.7319 (2.38)	–0.7332 (2.36)	–1.2158 (3.04)	0.7270 (4.25)
Italy	–2.4761 (3.86)	–0.4522 (2.77)	–0.4052 (1.90)	–0.7384 (13.62)	–0.9476 (1.47)	–0.1203 (0.73)	–0.1910 (0.81)	0.1486 (2.47)
Luxembourg	–0.5900 (0.31)	0.2724 (0.78)	–2.1767 (4.03)	–0.6542 (6.41)	–2.8387 (1.21)	–0.6038 (1.31)	–2.1578 (2.97)	0.0035 (0.03)
Netherlands	–4.3383 (6.01)	–3.4451 (5.79)	–0.4907 (0.90)	0.2297 (0.51)	–2.2364 (3.47)	–0.5257 (0.99)	0.6612 (1.29)	2.4205 (5.74)
Portugal	–1.0876 (2.17)	–0.2931 (1.21)	–1.7686 (10.06)	–0.3834 (4.51)	–1.7110 (2.92)	–0.1604 (0.57)	–2.0144 (9.82)	1.1501 (11.60)
Spain	–1.2379 (5.50)	1.6958 (6.58)	–1.7209 (19.65)	0.5046 (5.27)	–0.6303 (3.11)	0.3915 (1.66)	–1.0743 (14.36)	1.4230 (17.38)
United Kingdom	–1.6567 (4.38)	0.5584 (3.27)	–2.3621 (14.72)	–0.6422 (8.85)	–1.6592 (3.97)	1.0701 (5.66)	–1.6975 (9.33)	0.5733 (6.96)
United States	–0.7469 (2.43)	0.1134 (1.90)	–1.6006 (21.36)	–0.2784 (19.28)	–0.2764 (1.09)	0.3685 (7.46)	–0.0500 (0.33)	0.9290 (31.45)
All (pooled)	–0.8273 (5.39)	–0.1095 (1.93)	–1.3975 (21.98)	–0.3560 (15.30)	–0.8992 (5.60)	0.1620 (2.71)	–1.0295 (11.36)	0.7345 (22.14)

a) T-statistics are in parentheses. Equations also include 14 country dummies, plus 19 age dummies in the overall pooled equation.
Sources: See Table 4.11.

Table 4.20. **Econometric estimates of the effects of the aggregate unemployment rate on the proportion of youth across labour market states by age and gender**[a]

	Percentage in school	Percentage employed	Percentage of the labour force unemployed
All ages	.3890 (7.50)	–1.1267 (14.45)	1.3492 (33.71)
16	.4429 (1.66)	–1.2778 (7.24)	2.2670 (9.61)
17	.5273 (1.87)	–1.3276 (7.42)	2.2113 (11.69)
18	.4552 (1.68)	–1.2436 (7.37)	1.8698 (9.48)
19	.3542 (1.31)	–1.2073 (7.18)	1.8333 (10.85)
20	.4201 (1.79)	–1.2706 (7.93)	1.8478 (13.09)
21	.4441 (2.28)	–1.2756 (7.65)	1.7088 (12.67)
22	.4976 (3.10)	–1.2777 (7.28)	1.5694 (11.97)
23	.4954 (3.70)	–1.2808 (7.55)	1.4347 (11.34)
24	.4507 (4.10)	–1.2607 (7.55)	1.3236 (11.19)
25	.3955 (3.96)	–1.1911 (7.22)	1.2284 (11.55)
26	.4663 (5.28)	–1.1567 (6.86)	1.1263 (11.56)
27	.4291 (5.45)	–1.1159 (6.40)	1.0727 (11.45)
28	.3906 (5.27)	–1.2054 (6.53)	1.0876 (12.12)
29	.3547 (4.62)	–.9872 (5.20)	.9925 (11.67)
30	.2928 (4.36)	–.9702 (4.81)	1.0219 (12.21)
31	.2968 (4.01)	–.9772 (4.68)	.9466 (11.78)
32	.2885 (4.13)	–.9060 (4.18)	.9438 (11.85)
33	.2551 (3.36)	–.8848 (3.97)	.9048 (11.65)
34	.2817 (3.54)	–.8446 (3.79)	.8679 (11.63)
35	.2605 (3.30)	–.8101 (3.52)	.8048 (11.17)
Women	.3793 (5.34)	–.9654 (10.73)	1.2491 (22.26)
Men	.3996 (5.46)	–1.2868 (16.19)	1.4554 (34.05)

a) T-statistics are in parentheses. Equations also include 14 country dummies, a time trend, and 19 age dummies in the "all ages" equation.
Sources: See Table 4.11.

It presents estimated coefficients on aggregate unemployment and a time trend from regressions for single years of age in the pooled country data set. For those in school, there is no strong age pattern in the effect of unemployment on employment for either gender, except, perhaps, for those under the age of 19. By contrast, there is a drop in the effect of aggregate unemployment on employment for those out of school: older persons out of school are less affected by changes in overall unemployment. Nonetheless, the absolute value of the coefficient exceeds 1 for men even through the age of 28. And, as noted earlier, the calculations show a differential trend in employment for women than for men. Among women out of school, the coefficients on the time trend rise markedly with age. However, among men out of school the coefficients remain negative even for those aged 35. That is, their employment rates have trended downward over the 1980s and 1990s.

In sum, the employment and unemployment probabilities of youths are highly dependent on the overall rate of unemployment, particularly younger youths and, importantly, those out of school. The long-term upward secular trend of employment for women has, in part, offset the adverse effects of aggregate unemployment on the employment and unemployment rates of young women.

G. CONCLUSIONS

The economic state of the average youth in OECD countries falls short of what is desirable. On the positive side, more are enrolled in education for longer periods of time. This will have a potential payoff in the future if the additional education augments their competencies and if OECD economies grow enough to make use of an improved work force. However, part of this extension of schooling, in some countries, is a response to adverse labour market conditions. The other results presented show that youth employment and unemployment are very sensitive to aggregate labour market developments, in line with previous research. The effects of overall labour market slack are especially detrimental for out-of-school youths, particularly young men. Moreover, the proportion of young men neither in school nor working has tended to increase in many countries. Even "controlling" for the state of the aggregate labour market, the evidence indicates a statistically significant trend decline in most countries in the employment rates of male out-of-school youths, with the strongest effects for the younger ages. At the same time, again controlling for labour market slack, the employment rates of older, out-of-school women have tended to increase. Finally, there has been an

Table 4.21. **Econometric estimates of the effects of the aggregate unemployment rate and a time trend on the proportion of youth employed by schooling status and gender**[a]

	Men				Women			
	Employed/In school		Employed/Out of school		Employed/In school		Employed/Out of School	
	Unemployment rate	Trend	Unemployment rate	Trend	Unemployment rate	Trend	Unemployment rate	Trend
All ages	–.8273 (5.39)	–.1095 (1.93)	–1.3975 (21.98)	–.3560 (15.30)	–.8992 (5.60)	.1620 (2.71)	–1.0295 (11.36)	.7345 (22.14)
16	–1.2135 (6.57)	.1950 (2.94)	–2.2724 (5.18)	–.6466 (4.12)	–1.0626 (5.73)	.3991 (5.97)	–1.9615 (3.62)	–.1894 (0.98)
17	–1.1764 (5.39)	.1996 (2.48)	–1.8401 (4.81)	–.6874 (4.91)	–.8984 (4.33)	.4345 (5.70)	–1.1297 (2.76)	–.3382 (2.26)
18	–1.0151 (4.09)	.2188 (2.41)	–1.8722 (6.48)	–.5970 (5.63)	–.7814 (3.91)	.5921 (8.09)	–1.4028 (4.35)	–.3143 (2.66)
19	–.7492 (3.18)	.2712 (3.14)	–2.0161 (8.22)	–.4542 (5.05)	–.9369 (4.40)	.5191 (6.62)	–1.2103 (4.92)	–.0976 (1.08)
20	–.7396 (3.12)	.3163 (3.41)	–1.9956 (10.04)	–.3907 (5.36)	–.7302 (3.43)	.4155 (3.43)	–1.0484 (5.09)	.1008 (1.34)
21	–.5851 (2.40)	.2837 (3.18)	–2.0222 (11.73)	–.3062 (4.84)	–.5421 (2.41)	.5198 (6.28)	–.9018 (4.95)	.2564 (3.84)
22	–.6864 (2.63)	.2450 (2.57)	–1.6546 (11.09)	–.3247 (5.94)	–.5801 (2.10)	.3411 (3.35)	–1.0289 (6.16)	.4164 (6.80)
23	–.2335 (0.77)	.0642 (0.58)	–1.5331 (13.19)	–.2895 (6.80)	–.7115 (2.35)	.3266 (2.93)	–1.0875 (8.14)	.7096 (14.49)
24	–.3502 (1.06)	.1281 (1.05)	–1.5251 (13.64)	–.3206 (7.82)	–.5114 (1.21)	.2265 (1.46)	–.9398 (6.72)	.9292 (18.13)
25	–.2068 (0.56)	–.0186 (0.14)	–1.3153 (14.68)	–.2511 (7.65)	–.8113 (1.99)	.3880 (2.59)	–.9944 (6.99)	.9551 (18.32)
26	–.6646 (1.36)	–.1715 (0.95)	–1.2263 (11.90)	–.2763 (7.31)	–.6226 (1.33)	.1981 (1.15)	–.9164 (6.41)	1.1603 (22.14)
27	–.8057 (1.85)	–.0694 (0.43)	–1.2935 (16.71)	–.2951 (10.40)	–.7838 (1.33)	.1401 (0.64)	–.8159 (5.41)	1.2255 (22.15)
28	–1.0272 (1.84)	–.2648 (1.29)	–1.2624 (16.51)	–.2949 (10.53)	–.9200 (1.76)	.0047 (0.02)	–1.0213 (7.29)	1.2603 (24.54)
29	–.4233 (0.77)	–.2360 (1.15)	–.9656 (13.29)	–.2643 (9.93)	–1.1259 (1.73)	–.3138 (1.31)	–.9818 (5.89)	1.2680 (20.77)
30	–1.6739 (2.49)	.1109 (0.45)	–.9559 (13.48)	–.2888 (11.11)	–1.7955 (2.92)	–.2021 (0.86)	–.7937 (5.11)	1.2494 (21.94)
31	–1.6963 (2.34)	–.3685 (1.37)	–.9618 (12.17)	–.2970 (10.25)	–1.7072 (2.63)	–.1906 (0.78)	–.9096 (5.33)	1.1911 (19.05)
32	–.5339 (0.80)	–.3199 (1.28)	–.7927 (10.72)	–.2883 (10.64)	–.9426 (1.35)	.1244 (0.48)	–.9785 (5.89)	1.1749 (19.28)
33	–.3374 (0.47)	–.8315 (3.07)	–.8769 (12.39)	–.2887 (11.13)	–1.4784 (2.02)	–.3146 (1.06)	–.8723 (4.92)	1.2114 (19.64)
34	–.7821 (1.18)	–1.0477 (4.28)	–.8171 (10.96)	–.2669 (9.77)	–.0221 (0.03)	–.0852 (0.29)	–.8411 (5.44)	1.2509 (22.07)
35	–.8955 (1.23)	–.7850 (2.78)	–.8012 (11.72)	–.2900 (11.58)	–.5751 (0.68)	–.1198 (0.37)	–.7598 (5.20)	1.2468 (23.29)

a) T-statistics are in parentheses. Equations also include 14 country dummies, and 19 age dummies in the "all ages" equation.
Sources: See Table 4.11.

increase in the proportion of youth living in households where no other person is employed; this is a worrying trend for the future.

Despite a demographic decline in the relative number of youths, and employment shifts among industries toward youth-intensive sectors, the employment and earnings position of youths worsened, in some countries substantially. Differences in school-to-work transitions affect the outcomes along some dimensions, for instance in the number of jobs that youths hold during the transition, but seem generally more dominated by whatever forces have caused an overall decline in the economic position of youths in most OECD countries.

While a key finding is the sensitivity of youth prospects to aggregate conditions, it is also clear from the large cross-country differences in the levels of, and changes in, employment and unemployment rates, that other factors are at work. In addition to labour market slack, the employment (and earnings) of youths may have been adversely affected by the apparent shift in the composition of labour demand toward more skilled and experienced workers that is also sometimes associated with rising overall earnings inequality in some OECD countries (see Chapter 3). The rise in the education premium suggests larger disparities in employment outcomes among young workers across education categories (not examined in this chapter), while the rising premium to labour market experience would tend to disadvantage all youths. However, more comparative analysis is needed to verify this hypothesis.

A number of key issues remain unanswered: What, if any, are the long-term consequences of youth joblessness? Does it lead to further bouts of joblessness? What is the impact, if any, on lifetime earnings? And, are there particularly vulnerable groups who face many problems in getting a solid foothold in the labour market, how large are they and does their size and composition differ across countries? These issues will be addressed in future editions of the *Employment Outlook*.

Notes

1. This chapter is based largely on a report prepared for the OECD by Professors David G. Blanchflower and Richard B. Freeman of Dartmouth College and Harvard University, respectively. They are also associated with the National Bureau of Economic Research and the Centre for Economic Performance at the London School of Economics. It also draws upon work done for the OECD by Bénédicte Gendron (France), and Christian Brinch and Erik Hernaes (Norway).

2. Data showing cross-country or age group differences in the incidence of long-term unemployment should be used cautiously. It can be misleading to consider only continuous measured unemployment spells or to believe that shorter spells necessarily imply faster moves from unemployment to jobs [OECD (1984); OECD (1988)]. Research on youth labour markets conducted during the late 1970s and early 1980s found that unemployment tended to be concentrated within a relatively small ''minority'' of each cohort; these persons either remained unemployed for long consecutive periods of time or appeared in labour force surveys to move in and out of the labour force with, perhaps, periodic short stays in jobs [OECD (1984)]. OECD (1988) also showed the importance of distinguishing the destination of those exiting unemployment for a proper understanding of the measured incidence of long-term unemployment. That analysis found that young people who had been unemployed for less than one year at time *t* were less likely to be counted as unemployed one year later compared with prime-age workers. While this group was somewhat more likely to have a job by that time, they were also more likely than prime-age workers to break their spell of unemployment by dropping out of the measured labour force. The probability of being without a job was less different across the two groups compared with the probability of remaining unemployed.

3. This chapter focuses only on the dichotomy ''in education/not in education'' rather than analysing the various levels of education. A considerably higher proportion of those reported as enrolled in school are likely to be in upper secondary school in Europe than is the case in the United States. Part of this reflects a greater propensity in some European countries for students to repeat years, a practice less common in the United States. To illustrate the first point, according to Table PO4 of *Education at a Glance* [OECD (1995*b*)], the distribution of those aged 20 years who were enrolled in school full-time in various kinds of education was as follows:

	Upper secondary	Non-university tertiary	University
Australia	11.3	21.3	67.4
Belgium	21.6	40.1	38.3
Canada	29.4	20.2	50.4
Finland	45.2	16.8	38.0
France	25.8	25.5	48.7
Greece	18.0	35.7	46.3
Ireland	23.4	26.8	49.8
New Zealand	7.7	17.7	74.6
Norway	47.7	24.9	27.4
Spain	40.3	1.6	58.1
Sweden	16.3	47.6	36.1
United Kingdom	9.7	11.3	79.0
United States	4.9	21.9	73.2

4. For example, a number of important questions arise as to the impact, if any, of differing degrees of labour market churning on age-earnings profiles, wage gains or losses, and skill development. The links between turnover and company-based training have received particular attention. Lynch's (1991) examination of American data suggested that few young workers received formal training, that young workers who did receive training were less likely to leave and that most of the training that did occur only took place after being with the employer for over one year. On the other hand, a Japanese survey of enterprises found that almost two-thirds of all new hires from high school were given formal company training straightaway [OECD (1993)].

5. These two ages were chosen as they roughly correspond to leaving upper secondary and university education. The general trends are little affected by the choice of age group.

6. This does not mean that the employment/population rates of students increased, only that a higher proportion of all employed youth are also students [see OECD (1994) for a discussion of the former].

7. Disaggregating these data into teenagers and young adults shows that youth-intensive industries are the same for each. The main difference is the magnitude of the ratios. For example, the ''employment coefficients'' for hotels and restaurants, and wholesale/retail trade and repairs are generally higher for teenagers compared with young adults. This reflects the process of settling into the world of work. With age and experience, many youths are able to move into a broader range of industries.

8. Further disaggregating these data into teenagers and young adults does not change the cross-country patterns of differences or changes over time. In all countries, however, the indices are higher among teenagers. In Canada, Denmark, France, the United Kingdom and the United States, the values of the index

exceed 0.70, implying a very separated job market for teenagers.

9. The earnings variable in Table 4.14 has been transformed into the natural logarithm. The interpretation of the coefficients is defined as the incremental average earnings, in logs, as defined in each country data set, of workers aged 18-24 compared with workers aged 35-44. As expected, all the signs are negative as young workers' pay is less than that of adults. The results can be transformed into the ratio of youth-to-adult average earnings as follows: ln (average adult earnings) – the youth coefficient. The results from the simple equation in Table 4.14 show that youth earnings as a per cent of adults' are: Canada, 29 per cent; Germany, 68 per cent; Ireland, 79 per cent; Italy, 62 per cent; Japan, 43 per cent; the Netherlands, 81 per cent; New Zealand, 34 per cent; Norway, 44 per cent; Spain, 58 per cent; the United Kingdom, 44 per cent; and the United States, 18 per cent. These are illustrative only. A more detailed specification controlling for hours worked, education, marital status, union status and others would undoubtedly lower the age coefficient [see Blanchflower (forthcoming)].
10. There is a growing literature on the relation between youth employment and increases in the minimum wage in the United States and the United Kingdom (see, for example, Card and Krueger (1995) for the United States; Machin and Manning (1994, 1996) for the United Kingdom) which shows, at most, modest job losses in response to mandated increases in the minimum wage. However, others find more pronounced effects [Abowd *et al.* (1996); Neumark and Wascher (1994); Hashimoto (1982)]. An earlier United Kingdom study also found that relative pay for youth affected their relative employment [Wells (1983)].
11. Note that this type of analysis does not necessarily imply that those at the bottom of the wage decile at one point-in-time remain there. For a first attempt at analysing earnings mobility with longitudinal data, see Chapter 3.
12. The data for women at the upper and lower deciles for both hours and hourly earnings in 1970 give results that do not seem plausible. The high percentage change in hourly earnings for the 0-10 decile from 1970-1990 reflects an extraordinarily low rate of pay for women in 1970, which may be the result of measurement error. The percentage change in wages from 1980 to 1990 for the 0-10 decile was just 2.1 per cent. The high percentage change in hours worked for women in the top decile reflects the extraordinarily low hours reportedly worked by them in 1970.
13. Specifically, let a_{ij} be the 20 to 24-year-old share of employment in industry *j* in 1985, b_j be the share of industry *i* in total employment, and *r* be the ratio of the 20 to 24-year-old share of the population in 1994 to its share in 1985. The industry shift measure is then:

$$= \sum_{j=1}^{n} ra_{ij} \Delta b_j$$

where the change is measured from 1985 to 1994.

14. For some countries, slightly different results are obtained for teenagers whose relative population dropped more than that of young adults. The predicted effect of the change in industry mix on teenage employment is negative in Belgium, Greece, Portugal and the United Kingdom, but positive in all other countries in Table 4.17.
15. These regressions were also estimated using a logit transformation and the results were essentially unchanged. Hence, results using the linear probability model, which are easier to interpret, are presented.

ANNEX 4.A.

Definitions of school attendance for the cohort and regression analyses

1. Definitions

Data by single year of age from 16 to 35 years of age have been gathered on the labour force status of persons classified by their education attendance, as measured in the labour force surveys of 15 OECD countries. However, there are some important differences across countries in definitions and concepts, particularly with respect to what is considered an educational institution.

Students are generally defined as those who have been attending a course in an educational institution, either currently or in the four weeks preceding the one in which the survey was conducted. Persons attending an educational institution include, but are not always limited to, those enrolled in primary and secondary schools, colleges and universities. In some countries, such as Australia, those in technical and trade schools, which can range from secretarial to computer programming schools, are also considered to be students. In some others, they are not counted as students. Such definitional differences can affect cross-country comparisons of labour market activity among students and others.

The line of separation between education and work may be less clear-cut in some countries than in others. The importance of intermediate situations, such as dual apprenticeship systems, which combine on-the-job training with education, differs across countries. Unless explicitly noted in the chapter, young persons in such situations are, in principle, not counted as students in the data presented. Thus, when the analysis turns on the question of schooling and work combinations, it focuses on those areas where the work activity is not directly connected to the ''educational'' institution in question.

In addition, these data are obtained at a particular point-in-time each year. Among the European Union countries, the surveys generally take place in the spring and are often spread over several months. In Australia, Canada and the United States, the data are based on surveys conducted in May and March, respectively.

Country-specific information is presented below [for more detailed information see OECD (1988)].

Australia

The data come from the May Supplement to the regular monthly survey, called ''The Transition from Education to Work'' and cover the period 1983-1994. Persons attending an educational institution are those enrolled in schools, universities, colleges of advanced education, and public and private colleges. Also included under these categories are business, commercial and secretarial schools, religious and theological colleges, and those enrolled full-time in colleges of technical and further education (TAFE). Excluded are institutions whose primary role is not education, such as hospitals. Unless noted otherwise, persons attending TAFE on a part-time basis, which tends to mean attendance one day per week, are also excluded. They are counted as being in an apprenticeship.

Canada

The data are from the monthly Labour Force Survey and refer to March, and cover the period 1976-1995. Education attendance refers to persons reporting that they were attending any type of public or private educational establishment, including primary and high schools, universities, community colleges, vocational schools and other schools, such as secretarial schools. Furthermore, only persons taking ''credit courses'' which count towards a degree, diploma or certificate are included.

Belgium, Denmark, France, Germany, Greece, Ireland, Italy, Luxembourg, the Netherlands, Portugal, Spain and the United Kingdom

The data were supplied by EUROSTAT on the basis of each country's regular labour force survey and cover the period 1983-1994 (1985 and 1987-1994 for the Netherlands, and 1986-1994 for Portugal and Spain). The reference period refers to the four-week period prior to the actual conduct of the survey. The surveys are conducted over the following time periods: Belgium, generally conducted during the month of April; Denmark, generally conducted in a particular week during the April to May period; France, conducted in March; Germany, conducted during a week in April from 1986 and during a week in May prior to 1986; Greece, generally conducted during a week over the March to July period; Ireland, generally conducted in May; Italy, generally conducted in April; Luxembourg, generally conducted during the month of April; the Netherlands, generally conducted during a week over the period from March to May; Portugal and Spain, generally conducted during a week over the April to June period; and the United Kingdom, generally conducted during a week over the March to May period.

While the exact form of the question on education/training differs across these countries, and more detail on this can be found in OECD (1988), as a rule, from 1983-1991, attending school refers to those attending general education, those receiving training by attending a school providing specific subject matter or by attending a university, and those attending college part-time. Those not attending school include those receiving training in a business firm and nowhere else, those receiving training in the framework of an apprenticeship, those receiving training in other forms of dual-training systems and those not attend-

ing any education/training. Thus, unless otherwise noted, dual-system apprentices are excluded from the student population. The figures used for apprenticeship refer to apprenticeship and other forms of dual training systems.

From 1992 forward, attending school refers to those attending general education, those attending vocational school, those studying for third-level qualifications, studying for a university degree, studying for a post-graduate degree and studying for another qualification. Not attending school refers to those who received no education/training during the reference period, those who received specific vocational training in a working environment and those in any form of a dual-system apprenticeship training. The latter two responses are counted as apprenticeships.

Two other issues should be noted. First, from 1991 the data for Germany refer to reunified Germany. Second, a number of changes and additions were introduced to the European Labour Force Survey in 1992. These result in some problems of comparability for the time series used in this chapter. However, it is unlikely that they affect the analysis or conclusions greatly.

Table 4.A.1. **Details of data files used in regressions**

	Years	Number of observations	Means of the unemployment rate over the period
Australia	1983-1994	480	8.4
Belgium	1983-1994	480	9.6
Canada	1976-1994	760	9.3
Denmark	1983-1994	479	8.2
France	1983-1994	479	10.0
Germany	1983-1994	450	7.0
Greece	1983-1994	474	8.1
Ireland	1983-1994	480	15.8
Italy	1983-1994	480	11.0
Luxembourg	1983-1994	438	2.4
Netherlands	1985, 1987-1994	360	8.4
Portugal	1987-1994	320	5.7
Spain	1986-1994	360	19.4
United Kingdom	1983-1994	480	9.8
United States	1970-1993	922	7.0
All	1970-1994	7 442	

United States

The data are from the monthly Current Population Survey and refer to March, and cover the period 1970-1993. These data are based on the "main activity question" in the survey. Respondents are asked what they were doing most of last week: working, going to school or something else. Thus, there can be individuals who are actually enrolled in school, but who say that their main activity was something else. They will be counted as not attending school. Examination of responses to this main activity question compared with a question on school enrolment (which is now asked regularly in the survey, but prior to 1985 was only asked in October) suggests that the former understates the proportion attending school. However, this does not seem to be a severe problem, especially when a comparison of enrolment rates from administrative data by single years of age was made with the main activity responses by single year of age. The reported enrolment rate and the main activity "going to school" rate were almost identical. Moreover, the trends in the changes in schooling, employment and unemployment probabilities for the cohorts presented here are not much affected by this definitional difference.

2. Regression analysis: pooled cross-section and time series

As is clear from the preceding description, the data bases contain both a cross-section and time series component. This has been taken advantage of by, for each country and for all countries together, pooling the data to greatly expand the number of observations available (Table 4.A.1). For example, Australian data on labour force status and education participation are available by single year of age from 16 to 35 (20 ages), by gender (2 groups) and from 1983-1994 (12 years). Pooling all these data points together yields 480 observations ($20 \times 2 \times 12$). Doing the same procedure for each country in the sample and pooling all of them together yields over 7 000 observations. In addition, the country- and time-specific aggregate unemployment rates were added to the data set. Note that the fully pooled data set is an unbalanced panel as the length of the time series differs across countries.

The econometric method employed throughout this chapter is that of pooling both dimensions. The easiest way to see this is to consider the regression results shown in Table 4.20, in particular the one for 16-year-olds which combines all the countries in the sample. The regression includes the independent variable of interest (the country- and time-specific aggregate unemployment rate), a set of incidental dummy variables – country and gender – designed to "control" for omitted variables specific to each cross-section unit and a time trend. The estimated equation is:

$$Y_{it} = \alpha_i + \beta_1(Un_{it}) + \beta_2(Gender_{it}) + \beta_3(Country_{it}) + \beta_4 T_i + E_{it}$$

where:

Un_{it} = the unemployment rate of country i at time t;
$Gender_{it}$ = a (1,0) gender dummy;
$Country_{it}$ = a (1,0) country dummy;
T_i = time trend; and
E_{it} = stochastic error term.

The coefficients on the unemployment rate, the gender dummy and the trend are constrained to be the same in the regressions which pool all countries. The country dummies are allowed to vary. The "controls" for all equations presented are listed in the notes to the tables.

In addition to the aggregate unemployment rate, equations were also run using the adult employment rate and adult unemployment rate with qualitatively similar results.

All equations were estimated by OLS (ordinary least squares) using STATA software. Two issues which often arise with respect to pooled data are heteroskedasticity – non-constant variance of the error term, and serial correlation – the disturbance at time t may be correlated with that at another point-in-time. These have given rise to a large literature and debate as to how, and whether, to handle them econometrically. They remain the subject of on-going research, and are beyond the scope of the present study.

Table 4.A.2. **Econometric estimates of the effects of the aggregate unemployment rate on the proportion of youth across mutually exclusive statuses** [a]

	Percentage in school and not working	Percentage in school and working	Percentage not in school and not working	Percentage not in school and working
Australia	.3954 (5.04)	–.2311 (3.26)	1.1694 (5.57)	–1.3337 (5.46)
Belgium	–.4004 (3.53)	.0852 (3.25)	1.0309 (4.23)	–.7601 (2.95)
Canada	.3513 (5.73)	–.2543 (3.61)	.9958 (6.02)	–1.0928 (5.88)
Denmark	.3532 (2.66)	–.0788 (0.53)	1.0173 (7.98)	–1.3010 (7.06)
France	.2010 (0.76)	.2503 (5.98)	.6898 (2.35)	–1.1682 (4.48)
Germany	1.0375 (4.09)	.3212 (3.34)	.7121 (1.14)	–2.0347 (3.52)
Greece	–.2010 (0.74)	.0166 (0.53)	1.0537 (2.00)	–.8396 (1.39)
Ireland	–.3879 (1.29)	.0696 (0.91)	1.2333 (2.72)	–.8796 (2.39)
Italy	–.9559 (7.12)	–.0909 (5.82)	.6545 (1.61)	.3922 (0.95)
Luxembourg	–.5497 (1.37)	.0338 (0.46)	1.3796 (1.97)	–1.7295 (1.97)
Netherlands	2.3066 (5.63)	–.4067 (1.37)	–.6770 (1.16)	–1.2228 (2.09)
Portugal	.7432 (4.07)	–.0989 (1.69)	1.1955 (6.00)	–1.8397 (8.88)
Spain	.0884 (1.53)	–.0836 (6.24)	.9183 (5.34)	–.9215 (6.14)
United Kingdom	.1733 (3.51)	–.5175 (7.25)	1.6606 (8.00)	–1.3164 (6.66)
United States	.1078 (2.37)	–.1413 (4.29)	.5499 (3.13)	–.5639 (3.13)
All (pooled)	.4298 (7.58)	–.0136 (0.39)	.7336 (11.53)	–1.1538 (16.03)

a) T-statistics are in parentheses. Equations also include 19 age dummies, a time trend, and a gender dummy, plus 14 country dummies in the overall equation.
Sources: See Table 4.11.

Table 4.A.3. **Econometric estimates of the effects of the aggregate unemployment rate on the proportion of youth across mutually exclusive statuses by age and gender** [a]

Age	Percentage in school and not working	Percentage in school and working	Percentage not in school and not working	Percentage not in school and working
16	1.2941 (4.55)	–.8509 (6.86)	–.0134 (0.06)	–.4588 (3.75)
17	1.1736 (4.30)	–.5958 (4.52)	.2052 (0.96)	–.7741 (4.91)
18	.7916 (3.29)	–.3045 (2.43)	.4745 (2.36)	–.9511 (5.84)
19	.5940 (2.52)	–.1936 (1.91)	.6561 (3.48)	–1.0544 (6.29)
20	.5420 (2.72)	–.1026 (1.16)	.7336 (4.36)	–1.1711 (6.78)
21	.4797 (2.96)	–.0090 (0.12)	.8183 (5.19)	–1.2938 (7.31)
22	.4556 (3.40)	.0659 (1.02)	.8378 (5.53)	–1.3511 (7.31)
23	.3712 (3.61)	.1308 (2.16)	.9153 (5.95)	–1.4130 (7.82)
24	.3293 (4.15)	.1287 (2.24)	.9406 (5.63)	–1.3985 (8.01)
25	.2702 (4.03)	.1292 (2.25)	.9303 (5.71)	–1.3343 (7.67)
26	.3035 (5.37)	.1604 (3.04)	.8563 (4.82)	–1.3254 (7.52)
27	.2571 (5.31)	.1772 (3.46)	.8723 (4.85)	–1.3215 (7.24)
28	.2331 (5.62)	.1618 (3.15)	.9759 (5.14)	–1.3565 (7.23)
29	.1861 (3.91)	.1733 (3.47)	.8290 (4.32)	–1.1812 (6.01)
30	.2083 (5.59)	.0969 (2.02)	.7603 (3.69)	–1.0603 (5.26)
31	.1768 (4.29)	.1242 (2.45)	.8161 (3.80)	–1.1332 (5.35)
32	.1560 (4.07)	.1449 (3.02)	.7752 (3.50)	–1.0724 (4.91)
33	.1479 (3.35)	.1198 (2.23)	.7462 (3.28)	–1.0541 (4.85)
34	.1310 (2.81)	.1613 (3.11)	.7224 (3.18)	–1.0329 (4.67)
35	.1472 (2.96)	.1299 (2.65)	.6749 (2.86)	–.9382 (4.06)
All ages	.4298 (7.58)	–.0136 (0.39)	.7336 (11.53)	–1.1538 (16.03)
Women	.4154 (5.10)	–.0133 (0.26)	.5801 (8.99)	–.9781 (11.42)
Men	.4447 (5.74)	–.0139 (0.29)	.8853 (23.28)	–1.3142 (19.25)

a) T-statistics are in parentheses. Equations also include 14 country dummies, a time trend, and 19 age dummies in the "all ages" equation.
Sources: See Table 4.11.

ANNEX 4.B

Sources and definitions of earnings data

Australia

Data are from the *Weekly Earnings of Employees (Distribution), Australia*, Australian Bureau of Statistics, Catalogue No. 6310.0. Prior to 1988, the data refer to mean weekly earnings in all jobs of full-time workers. From 1988 forward, the data refer to mean gross weekly earnings of full-time workers in their main job.

Canada

Data are from the Survey of Consumer Finances, taken from the publication *Earnings of Men and Women*, Statistics Canada. Data refer to mean annual gross earnings, including self-employment income, of all earners. Additional, unpublished, data from the same survey were provided by Statistics Canada.

Denmark

Data were supplied by the Ministry of Economic Affairs and are based on a longitudinal sample of individuals taken from administrative records. Earnings refer to mean daily gross wages calculated as yearly wages divided by days worked per year. Data exclude those working less than 30 hours per week, those who received sickness benefits for more than 13 weeks during the year and all persons working less than 13 weeks.

France

Data were supplied by the Direction des Statistiques Démographiques et Sociales of INSEE and are based on the Déclarations Annuelles des Données Sociales. The data refer to net mean annual earnings for full-time workers in the private and semi-public sectors.

Germany

Data were supplied by Statistisches Bundesamt from social security information. Earnings refer to annual gross wages of full-time, full-year employees in western Germany.

Italy

Data were supplied by the Bank of Italy and are based on its Survey of Household Income and Wealth. Data refer to mean annual earnings of full-time workers.

Japan

Data are from the Basic Survey of Wage Structure and refer to regular employees in firms of 10 or more workers. Earnings refer to mean total monthly cash earnings.

Norway

Data are based on the Level of Living Survey and were supplied by the Central Bureau of Statistics. Earnings refer to mean hourly wages of employees, estimated as reported before-tax hourly, weekly, fortnightly or monthly wages divided by the corresponding usual hours worked in the main occupation.

Sweden

Data were supplied by Statistics Sweden and refer to mean gross monthly salaries of full-time workers in mining, quarrying and manufacturing only.

United Kingdom

Data are from the Department for Education and Employment, *New Earnings Survey*, various issues. Earnings refer to average gross weekly earnings of full-time workers whose pay for the survey period was not affected by absence.

United States

Data were supplied by the Bureau of Labor Statistics and are based on the Current Population Survey. Earnings refer to usual median gross weekly earnings of full-time workers. Prior to 1979 the data are based on the outgoing rotation groups of the May Survey. From 1979 forward, the data are based on the outgoing rotation groups for each

monthly survey and are then averaged over the 12-month period.

International Social Survey Programme, 1993

This chapter also uses information on earnings gathered from the ISSP. This is a continuing programme carried out by a group of national research institutes. Each institute conducts an annual survey of social attitudes and values, with the topics changing from year-to-year. As a condition of membership, each country undertakes to do a short, annual, self-completion survey with an agreed set of questions for a probability-based sample. For a description of the technical details of the surveys, see Jowell *et al.* (1989).

The earnings variables are defined as follows: Canada, annual income before taxes; Germany, net earnings per month after taxes and social insurance; Ireland, average annual earnings before taxes; Great Britain, annual earnings before income tax and national insurance; Italy, net monthly income after taxes; Japan, annual gross earnings; the Netherlands, annual earnings before taxes; New Zealand, annual income before taxes; Norway, gross annual income before taxes and allowances; Spain, annual earnings before taxes; and the United States, annual earnings before taxes.

ANNEX 4.C

Data sources for the jobs-held analysis

Germany

Data came from the German Socio-Economic Panel which is a representative longitudinal data set of persons, households and families in the Federal Republic of Germany. Questions have focused on changing household composition, employment, income, assets, job and regional mobility. In addition, the survey contains information on education, health, leisure, satisfaction and self-worth. In 1984, about 6 000 households were surveyed. Once a year all members of the households aged 16 or older are questioned. Respondents who move continue to take part in the study as long as the move is within the Federal Republic. For further details, see the *German Socio-economic Panel: User Handbook*, German Institute of Economic Research, Berlin.

In 1984, all respondents were asked a set of retrospective questions. One sought to count the number of jobs they had held over the prior 10 years. Responses to this question from those 25 years old in 1984 and not in school are used in this chapter. Examination of the 10-year history of those aged 26-30 in 1984 did not produce different results.

Japan

The data are derived from the 1985 *Survey on Employment Conditions of Youth*. This consisted of a sample of 21 000 persons under the age of 30, no longer in school and employed in establishments with more than 10 regular employees.

The number of jobs held is an estimate derived from Table 59 of the 1985 *Yearbook of Labour Statistics*. The table shows the proportion who had never changed jobs, the proportion who had changed once, twice and three or more times, and the proportion who had held a side-job or had been self-employed. For those who had changed jobs three or more times, they were assumed to have held five jobs in total. For those who also had held side jobs, it was assumed to be just one time.

Because the sample consisted of those employed at the time of the survey, the number of jobs may be underestimated because one misses those not employed, but who had worked at some point since leaving school. Given differences in participation rate patterns between Japanese men and women, the estimates for the latter are probably underestimated.

Norway

The Norwegian data have been constructed by linking a number of registers. A detailed description can be found in Hernaes and Strom (1995). The data calculations were done by Christian Brinch and Erik Hernaes. The registers which have been linked and which provide a variety of data from 1989 currently through to 1993 are: the register of employers and employees (EER), which is the main source for the jobs-held data; the register of wages, benefits and taxes; the unemployment register, giving data on spells of unemployment (including data on labour market programme participation); and the Norwegian educational register, which gives data on all types of educational activity, including time of leaving school, whether or not they subsequently returned, the type of education and whether or not it was completed. The data base contains information on all residents of Norway.

The population for this chapter consists of all persons under age 25 in 1989 who were registered in education on 1 October 1988 and who were not registered on 1 October 1989, a total of 69 075 persons (as compared to a cohort size of about 60 000). This is the total outflow, within this age group, from the educational system in that year, starting with the last grade of compulsory school and including doctoral awards (theoretically). Labour market and (further) educational careers are then tracked throughout 1989-1992. Among other variables are gender, age, place of residence, and parents' income and educational qualifications.

The number of jobs can be defined through a number of variables. The analysis here counts the number of jobs each person held from July 1989 through the end of 1992, using the individual register of employees (EER). This register is regularly updated with starting and termination dates of jobs with each employer.

Great Britain

The first data source is the National Child Development Study which is a longitudinal survey taking as its subjects all those living in Great Britain who were born between 3 and 9 March 1958. Since the original Perinatal Mortality Study was undertaken in 1958, the survey has monitored the social, economic, educational and health circumstances of the surviving subjects. To this end, major surveys were carried out in 1965 (NCDS1), 1969 (NCDS2), 1974 (NCDS3) and 1981 (NCDS4) and 1991 (NCDS5). For the purposes of the first 3 surveys, the birth cohort was augmented by including those new immigrants born in the relevant week. Information was obtained separately from parents, teachers and doctors as well as members of the

NCDS cohort. The 1981 survey which is used here – when the respondents were all aged 23 – differs in that no attempt was made to include new immigrants since 1974 and information was obtained from the respondent only. The 1981 survey contained a total of 12 537 interviews or approximately 76 per cent of the original target sample and 93 per cent of those traced and contacted by interviewers. The interview survey was carried out between August 1981 and March 1982. The count of the number of jobs covers the period between 1974-1981. For further details of the survey, see Elias and Blanchflower (1988).

The second data source is the British Household Panel Survey (BHPS). The BHPS started in 1991 and is conducted on an annual basis. It is managed by the ESRC Research Centre on Micro-social Change at Essex University. Wave 2 was a random sample of private addresses in Great Britain. Each subsequent wave follows respondents into their current households and any new members are also interviewed. The original sample size was 10 264.

Wave 2, which is used in this chapter, asked questions on respondents job history since leaving full-time education. Here, the sample consisted of all persons aged 24-28 in 1992. Tabulations are the number of jobs held from the age of leaving school up to 1990. There may be a small number of people who subsequently returned to education over the interval, but no attempt has been made here to correct for this. The unweighted sample size was 360 women and 281 men. For more information on the BHPS, see Buck *et al.* (1994).

United States

The data source is the National Longitudinal Survey Youth Cohort, sponsored by the Bureau of Labor Statistics and the Department of Labor. This is an annual survey of a group of people who were aged 14-21 in 1978. Since 1979, respondents have been interviewed annually about all aspects of their labour market activity. The sample was selected to be representative of all Americans born during a given period such that conclusions drawn about the group would be generaliseable. Sample selection procedures ensured that the labour market dilemmas of non-whites and the economically disadvantaged could also be examined. The response rate has been fairly high, at around 90 per cent. The original sample consisted of 12 686 persons. For the jobs-held analysis, these individuals were followed from 1979-1988.

Jobs are identified directly in the survey as each annual questionnaire asks respondents to identify their previous 12 months labour market activity.

The actual calculations were done several ways to check on the robustness of the results. The first approach was to take the 1992 wave and obtain each individuals' level of education at that time. The sample then consisted of those whose educational attainment in 1992 matched that for prior years. This is one way to ensure that one is not counting jobs held while attending school. Calculations were done for persons aged 14 to 22 in 1979. The second approach deleted from the sample in *each* year anyone who reported that their main activity was participation in education.

In the event, the results were virtually identical and the first approach is reported in the chapter. Although the chapter reports the results for those aged 16 in 1979, the number of jobs held by those aged 18 in 1979 over their first 10 years in the labour market was, again, almost the same.

Bibliography

ABOWD, J.M., KRAMARZ F., LEMIEUX, T. and MARGOLIS, D.N. (1996), "Minimum Wages and Youth Employment in France and the United States", mimeo, CREST, Paris.

AUCOUTURIER, A-L. and GELOT, D. (1995), "Les dispositifs pour l'emploi et les jeunes sortant de scolarité: une utilisation massive des trajectoires diversifiées", *Bilan Formation-Emploi 1993*, INSEE, pp. 175-193.

BETTS, J. and McFARLAND, L. (1995), "The Impact of Labour Market Conditions on Community College Enrollments", *Journal of Human Resources*, No. 4, pp. 741-765.

BLANCHFLOWER, D. (Forthcoming), "An Analysis of Youth Labor Markets in Twenty-Three Countries: Are the Young Different?", in Stern, D. (ed.), *School-to-Work Practices in Thirteen Countries*, Hampton Press, New York.

BLANCHFLOWER, D.G. and FREEMAN, R.B. (1992), "Going Different Ways: Unionism in the United States and Other OECD Countries", *Industrial Relations*, Winter, pp. 56-79.

BLOOM, D.E., FREEMAN, R.B. and KORENMAN, S.D. (1987), "The Labour Market Consequences of Generational Crowding", *European Journal of Population*, No. 3, pp. 131-176.

BUCK, N., GERSHUNY, J., ROSE, D. and SCOTT, J. (1994), *Changing Households: The British Household Panel Survey, 1990-1992*, ESRC Research Centre on Micro-social Change, University of Essex, Colchester, Essex, United Kingdom.

BUECHTEMANN, C., SCHUPP, J. and SOLOFF, D. (1993), "Roads to Work: School-to-Work Transition Patterns in Germany and the United States", *Industrial Relations Journal*, No. 2, pp. 97-111.

CARD, D. and KRUEGER, A. (1995), *Myth and Measurement: The New Economics of the Minimum Wage*, Princeton University Press, Princeton, NJ.

CARD, D., KRAMARZ, F. and LEMIEUX, T. (1994), "Changes in the Relative Structure of Wages and Employment: A Comparison of the United States, Canada and France", mimeo, Princeton University.

CASEY, B. (1986), "The Dual Apprenticeship System and the Recruitment and Retention of Young Persons in West Germany", *British Journal of Industrial Relations*, Vol. 24, pp. 63-82.

CLARK, A.E. and OSWALD, A.J. (1994), "Unhappiness and Unemployment", *The Economic Journal*, Vol. 104, pp. 648-659.

CLARK, A.E., DEX, S., PERREN, K., ROSE, D. and TAYLOR, M. (1994), "Changes in Economic Activity", in Buck, N. *et al.* (eds.), *Changing Households: The British Household Panel Survey, 1990-1992*, ESRC Research Centre on Micro-social Change, University of Essex, Colchester, Essex, United Kingdom, pp. 154-198.

CLARK, K. and SUMMERS, L. (1982), "The Dynamics of Youth Unemployment", in Freeman, R.B and Wise, D.A. (eds.), *The Youth Labor Market Problem: Its Nature, Causes and Consequences*, University of Chicago Press, Chicago, pp. 199-235.

DORE, R. and SAKO, M. (1989), *How the Japanese Learn to Work*, Routledge, London.

ELBAUM, M. and MARCHAND, O. (1993), "Emploi et chômage des jeunes dans les pays industrialisés: la spécificité française", *Premières Synthèses*, No. 34, Ministère du Travail, de l'Emploi et de la Formation Professionnelle, Paris, October, pp. 1-12.

ELIAS, P. and BLANCHFLOWER, D. (1988), "The Occupations, Earnings and Work Histories of Young Adults – Who Gets the Good Jobs?", Research Paper No. 68, UK Department of Employment.

FRANZ, W. (1982). *Youth Unemployment in the Federal Republic of Germany: Theory, Empirical Results, and Policy*, Mohr, Tübingen.

FREEMAN, R.B. (1980), "Why is there a Youth Labor Market Problem?", in Anderson, B.E. and Sawhill, I.V. (eds.), *Youth Unemployment and Public Policy*, Prentice-Hall, Englewood Cliffs, NJ, pp. 6-31.

FREEMAN, R.B. (1995). "The Limits of Wage Flexibility to Curing Unemployment", *Oxford Review of Economic Policy*, No. 1, pp. 63-72.

GALLIE, D. (1994), "Social Consequences of Long-Term Unemployment in Britain", in Benoît-Guilbot, O. and Gallier, D. (eds.), *Long-Term Unemployment*, Pinter Publishers, London, pp. 121-136.

GENDRON, B. (1996), *L'evolution de la transition de l'école vers la vie active en France*, report prepared for the OECD.

GREGORY, R. (1995*a*), "The Macro Economy and the Growth of Ghettos and Urban Poverty in Australia", Discussion Paper No. 325, Centre for Economic Policy Research, The Australian National University.

GREGORY, R. (1995*b*), "Wages and Job Creation in Australia and the United States", *Labour*, Special Issue, pp. S203-S222.

HASHIMOTO, M. (1982), "Minimum Wage Effects on Training on the Job", *American Economic Review*, Vol. 72, pp. 1070-1087.

HERNAES, E. and STROM, S. (1995), *Arbeidsledighet og Jobb, Rapport fra Stiftelsen for Samfunns-og Naeringslivsforskning*, No. 37.

JOWELL, R. and WITHERSPOON, S. (1989), *British Social Attitudes: International Comparisons,* Gower Press, London.

JUHN, C., MURPHY. K.M. and TOPEL, R.H. (1991), "Why Has the Natural Rate of Unemployment Increased over Time?", *Brookings Papers on Economic Activity*, No. 2, pp. 75-126.

KATZ, L.F. and CASE, A.C. (1991), "The Effects of Family and Neighborhood on Disadvantaged Youth", National Bureau of Economic Research, Working Paper No. 3075.

LYNCH, L. (1991), "The Impact of Private Sector Training on Race and Gender Wage Differentials and the Career Patterns of Young Workers", Final Report submitted to the US Department of Labor, Bureau of Labor Statistics.

LYNCH, L. (1993), "The Economics of Youth Training in the United States", *The Economic Journal*, September, pp. 1292-1302.

MACHIN, S. and MANNING, A. (1994), "The Effects of Minimum Wages on Wage Dispersion and Employment: Evidence from United Kingdom Wages Councils", *Industrial and Labor Relations Review*, Vol. 47, pp. 319-329.

MACHIN, S. and MANNING, A. (1996), "Employment and the Introduction of the Minimum Wage in Britain", *The Economic Journal*, July (forthcoming).

MIZEN, P. (1995), *The State, Young People and Youth Training*, Mansell Publishing, London.

MONCEL, N. and ROSE, J. (1995), "Spécificités et déterminants de l'emploi des jeunes de 18 à 25 ans et de 26 à 29 ans: vers la fin de la transition professionnelle?", *Économie et Statistique*, No. 3-4, pp. 53-66.

NEUMARK, D. and WASCHER, W. (1994), "Employment Effects of Minimum and Subminimum Wages: Reply to Card, Katz and Krueger", *Industrial and Labor Relations Review*, Vol. 48, pp. 497-512.

OECD (1984), *The Nature of Youth Unemployment: An Analysis for Policy-makers*, Paris.

OECD (1986), *Employment Outlook*, Paris, September.

OECD (1988), *Employment Outlook*, Paris, September.

OECD (1993), *Employment Outlook*, Paris, July.

OECD (1994), *Employment Outlook*, Paris, July.

OECD (1995*a*), *Employment Outlook*, Paris, July.

OECD (1995*b*), *Education at a Glance*, Paris.

OSTERMAN, P. (1980), *Getting Started: The Youth Labor Market*, MIT Press, Cambridge, MA.

OSWALD, A.J. (1995), "Happiness and Economic Performance", mimeo, Centre for Economic Performance, London School of Economics.

PARK, A. (1994), *England and Wales Youth Cohort Study: Cohort 4 – Young People 18-19 years old in 1991*, Youth Cohort Report No. 29, UK Department of Employment.

PAYNE, J. (1987), "Does Unemployment Run in Families? Some Findings from the General Household Survey", *Sociology*, No. 2, pp. 199-214.

SKEDINGER, P. (1995), "Employment Policies and Displacement in the Youth Labour Market", *Swedish Economic Policy Review*, Spring, pp. 135-172.

TOPEL, R. (1993), "What Have We Learned from Empirical Studies of Unemployment and Turnover*?", American Economic Review*, May, pp. 110-115.

VERDIER, E. (1995), "Politiques de formation des jeunes et marché du travail, la France des années 80", *Formation-Emploi*, No. 50, pp. 19-40.

WARR, P.B., BANKS, P.R. and JACKSON, M. (1988), "Unemployment and Mental Health: Some British Studies", *Journal of Social Issues*, Vol. 44, pp. 45-73.

WELLS, W. (1983), "The Relative Pay and Employment of Young People", Research Paper No. 42, UK Department of Employment.

CHAPTER 5

Employment adjustment, workers and unemployment

A. INTRODUCTION AND MAIN FINDINGS

1. Introduction

The adaptability of labour markets to economic change has been a preoccupation of policy-makers for well over a decade. Analysis of the process of job creation and destruction has increasingly been seen as crucial to furthering our understanding of the ways in which employment adjusts in response to shocks.

The early work on job turnover focused on explaining its levels over time and across countries, uncovering cyclical and structural tendencies, and on measuring establishment birth and survival rates [OECD (1994*a*)]. More recently, analysts have sought to establish links between the patterns of employment dynamics at the firm level, the levels and composition of unemployment across countries and some of the policies which link them, *e.g.* employment protection legislation (EPL) and unemployment insurance (UI). The key questions taken up here are:

- How good an indicator is job turnover of adjustment in employment?
- What flows of workers are generated by job turnover differences across OECD countries and what, if any, implications does this have for understanding unemployment?
- What are the effects of policies on job turnover and labour turnover, and with what implications, if any, for unemployment?

To examine these issues, data on job and labour turnover, unemployment inflows and outflows and indices of EPL have been collected from a variety of sources covering a number of time periods. It is important to bear in mind that many issues remain unresolved with respect to data comparability (see Annex 5.A). While analysis of the existing data does yield insights into the functioning of labour markets in allocating workers to jobs, strong conclusions must be tempered by the fact that much further work is needed on developing comparable data sets. Difficulties also arise because the theory of job creation and destruction is not fully developed, and extensions of the basic model greatly complicate the predicted impact of turnover.

Section B summarises evidence on job turnover and its usefulness as a measure of adjustment in employment. As job turnover generates flows of workers, Section C analyses how job turnover is related to labour turnover (see the Box for definitions of these terms) and considers the impact of both on unemployment. Section D considers the impact of EPL on job turnover and labour turnover and assesses the implications. A concluding section briefly outlines some policy issues and highlights areas where further data and research are needed.

2. Main findings

Although there are cross-country differences, relatively high job turnover is a common characteristic of many OECD countries. The rate of job turnover has remained relatively stable in most OECD countries since the late 1970s, with a few exceptions [Canada, particularly among small firms, Norway (manufacturing) and in one United States data set].

The magnitude of turnover rates shows that there is considerably more churning and employment adjustment in OECD countries than might be expected when only considering net employment growth.

Job turnover is not associated with cross-country differences in either net employment growth or the unemployment rate.

In line with simple models, job turnover (in continuing establishments) is positively related with unemployment inflows and outflows, and negatively related with the incidence of long-term unemployment. However, the correlations are weak and it is not plausible that cross-country differences in job turnover can explain much of the marked differences in the composition of unemployment.

The analysis linking job to labour turnover shows:

i) labour turnover is lower in Europe and Japan than in North America;

ii) the *difference* between annual rates of *new* job creation and a proxy measure of *all* new hires is much smaller in some European countries (France, Germany and Italy) compared with North America. This implies that individuals in Europe depend much more on new job creation to get into employment;

iii) consequently, the share of jobs in which individuals can be hired to replace one another (ongoing jobs) appears relatively low in these countries;

iv) by inference from the data presented, in France, Germany and Italy there is also high rotation of workers in ongoing jobs which do become vacant;

v) measured inflows into unemployment are lower in Europe than in North America and, in some countries, are lower than job destruction rates; and these factors imply that

vi) although there is almost no direct empirical work, an important feature of labour turnover in Europe is that many workers, when they lose or leave jobs, do not pass through a measured spell of unemployment. Perhaps they go "directly" to another job in another firm when their old job is destroyed.

Theory suggests that job turnover is partly determined by labour market policies such as EPL and UI. This chapter investigates the links between the former, proxied by measures of its strictness. More strict regulations on hiring temporary workers are associated with somewhat lower job turnover.

The fact that long-term unemployment is higher in Europe than in North America or Japan has often been cited as evidence of more inflexible labour markets and EPL has been suggested as one of the possible reasons for this. However, any association may reflect a different causal chain. Although there are many data problems and more exploration is necessary, the analysis suggests that the high incidence of long-term unemployment may stem less from a lack of adjustment in employment than from the way that adjustment takes place. Employment adjustment in some European countries seems to take place through a combination of internal adjustment within firms, resulting in relatively few vacancies in ongoing jobs and, when job losses take place, by worker flows apparently bypassing measured unemployment.

B. JOB TURNOVER AS A MEASURE OF EMPLOYMENT ADJUSTMENT

Job turnover is the sum of over-the-year changes in employment levels across all establishments and is one indicator of the extent of change in the external labour market (see the Box). It is a reasonably comprehensive measure of employment adjustment in that it incorporates both the reallocation of employment *across* industries as well as the reallocation of employment across productive units (be they firms or establishments) *within* industries. While job turnover only measures net changes in the level of employment in individual establishments or jobs filled, it is still an important tool for analyses because the attention of policymakers has often been focused on barriers to filling jobs (hiring), as well as the converse (firing).

Job turnover rates and its components are presented in Table 5.1. The data show relatively high job turnover rates in most countries, ranging from a high of 35 per cent in New Zealand to 15 per cent in Belgium, the Netherlands and the United Kingdom.

As measured by job turnover, the pace of employment adjustment has remained relatively stable. It does not show any pronounced upward trend in most countries since the late 1970s[1] with few exceptions (Chart 5.1): Canada, particularly among small firms, Norway (manufacturing) and in one United States data set.[2] It is sometimes thought that relatively constant job turnover rates at the aggregate level may hide increasingly unstable employment in small establishments which counterbalances increasing stability in large ones. A comparison of trends in job turnover for different size classes of establishments in Canada, Denmark, Norway and the United States (not shown here) does not support this hypothesis.

However, the pattern of job turnover may vary over the business cycle. In the United States, job turnover increases in cyclical downturns because of a relatively sharp rise in job losses. In other countries, especially Europe, job turnover rates appear to show little cyclical movement. There is still considerable debate over why these different patterns seem to exist. Reasons put forward range from the role of labour market regulations, which result in job losses taking place over a longer time period, to data incomparability [Boeri (1995*a*)]. However, during the most recent downturn, which began in the early 1990s, job turnover has risen in more countries (Finland, Norway and Sweden). If labour market institutions or policies are at the root of the apparent dissimilarities in cyclical movements, recent increases in job turnover in

Table 5.1. **Job gains and job losses** [a]

Average annual rates as a per cent of total employment

	Australia (manufacturing)	Austria [b]	Belgium [b]	Canada [b]	Denmark	Finland	France [b]	Germany	Ireland (manufacturing)	Italy [b]	Japan	Netherlands [b] (manufacturing)	New Zealand	Norway (manufacturing)	Sweden	United Kingdom [b,c]	United States [c]	United States (manufacturing)
	1984-85	1991-93	1983-85	1983-91	1983-89	1986-91	1984-91	1983-90	1984-85	1987-92	1985-92	1984-91	1987-92	1985-92	1985-92	1985-91	1984-91	1984-88
Gross job gains	**16.1**	**..**	**7.7**	**14.5**	**16.0**	**10.4**	**12.7**	**9.0**	**8.8**	**11.0**	**..**	**8.2**	**15.7**	**8.1**	**14.5**	**8.7**	**13.0**	**8.2**
Openings	9.0	..	..	3.2	6.1	3.9	6.1	2.5	2.7	3.8	..	..	7.4	2.1	6.5	2.7	8.4	1.4
Expansions	7.1	5.7	..	11.2	9.9	6.5	6.6	6.5	6.1	7.3	8.6	..	8.3	6.0	8.0	6.0	4.6	6.7
Gross job losses	**13.2**	**..**	**7.5**	**11.9**	**13.8**	**12.0**	**11.8**	**7.5**	**12.7**	**10.0**	**..**	**7.2**	**19.8**	**10.6**	**14.6**	**6.6**	**10.4**	**10.4**
Closures	8.7	..	..	3.1	5.0	3.4	5.5	1.9	4.6	3.8	..	..	8.5	3.1	5.0	3.9	7.3	2.7
Contractions	4.6	6.2	..	8.8	8.8	8.7	6.3	5.6	8.1	6.2	5.3	..	11.3	7.5	9.6	2.7	3.1	7.7
Net employment change	**2.9**	**..**	**0.2**	**2.6**	**2.2**	**–1.6**	**0.9**	**1.5**	**–3.9**	**1.0**	**..**	**1.0**	**–4.1**	**–2.5**	**–0.1**	**2.1**	**2.6**	**–2.2**
Job turnover	**29.3**	**..**	**15.2**	**26.3**	**29.8**	**22.4**	**24.4**	**16.5**	**21.4**	**21.0**	**..**	**15.4**	**35.5**	**18.7**	**29.1**	**15.3**	**23.4**	**18.6**
Continuing establishments only	11.7	11.9	..	20.0	18.7	15.2	12.9	12.1	14.1	13.5	13.9	..	19.7	13.5	17.6	8.7	7.7	14.4

.. Data not available.

a) Sampling months/periods vary across countries. Periods are as follows: Australia, June; Austria, annual average of monthly year-over-year changes; Belgium, annual averages; Canada, annual averages; Denmark, November; Finland, annual averages; France, annual averages; Germany, June; Ireland, September; Italy, December; Japan, January-June; Netherlands, September; New Zealand, February; Norway, annual averages; Sweden, November; United Kingdom, December; United States, private sector, December (biannual) (June in 1989 and 1991), manufacturing, March.

b) Data refer to firms.

c) These data are complied by the Dun and Bradstreet Corporation. Results based on them should be treated with considerable caution for reasons explained in OECD (1994*a*).

Sources: See Annex 5.A for data on: Denmark, Finland, Italy, Japan and the United States [manufacturing from the Longitudinal Research Database (LRD)]. See also the *Employment Outlook*, 1994, Annex 3.A for data on: Canada [Longitudinal Employment Analysis Program (LEAP)], Germany, New Zealand, Sweden, the United Kingdom (Dun and Bradstreet) and the United States (Dun and Bradstreet). Data for Australia are from Borland and Home (1994). Data for Austria are from Hofer and Pichelmann (1995). Data for Belgium are from Leonard and Van Audenrode (1995). Data for France are from Nocke (1994). Data for Ireland are from Keating and Keane (1988/1989). Data for Japan are from Genda (1995). Data for the Netherlands are from Broersma and Gautier (1994). Data for Norway are from Salvanes (1996).

Chart 5.1.

Trends in job turnover rates[a]

Changes as a per cent of total employment

a) Sampling periods vary across countries. See note *a* to Table 5.1, except for France (December).
b) Data are from the Longitudinal Employment Analysis Program (LEAP).
c) Data refer to firms.
d) Manufacturing.
e) Data are from the Census for Manufactures.
f) Break in series between 1984 and 1985.
g) Data are from the Dun and Bradstreet Corporation.
h) Data are from the Longitudinal Research Database (LRD), US Bureau of the Census.
Sources: See Table 5.1.

Job turnover and labour turnover

A number of concepts are used in the analysis of job creation and job destruction. *Job turnover*, at the level of an individual establishment or firm, is simply the *net* change in employment between two points in time – the total number of jobs created less the number of jobs which have disappeared. It does not include job vacancies which remain unfilled and jobs that begin and end over the interval of observation, which is most often one year. The economy-wide job turnover rate is simply the absolute sum of net employment changes across all establishments or firms, expressed as a proportion of total employment.

Comparing employment levels at two points in time permits establishments or firms to be classified into four groups: *i)* "opening", *i.e.* those with no employment at the beginning and employment at the end; *ii)* "closing", *i.e.* those with employment recorded at the beginning and none at the end; *iii)* "expanding", *i.e.* those with employment in both periods, but at a higher level at the end; and *iv)* "contracting", *i.e.* those with employment in both periods, but at a lower level at the end. Summing net employment changes over opening and expanding establishments gives *job gains*, while the sum of employment declines from closing and contracting establishments gives *job losses*. The balance of job gains and job losses is then job turnover.

By contrast, *labour turnover* is concerned with movements of *individuals* into jobs (hirings) and out of jobs (separations) over a particular period. The difference between job and labour turnover can be illustrated as follows. Suppose a given establishment has 100 people employed at time *t* and 110 at *t+1*. During this period, 10 people have been hired to fill newly created posts. The job turnover rate, *i.e.* the net change in employment, is 10 per cent. But, suppose that, during the same period, 10 individuals left the establishment and 10 were hired to replace them. Labour turnover, which concerns the movement of workers into and out of jobs, is 30 per cent [the sum of all hirings (20) and separations (10) divided by initial employment (100)].

Labour turnover is the sum of job turnover, which relates to the expansion and contraction of establishments or firms, *and* the movement of workers into and out of *ongoing jobs* in establishments or firms. Workers leave firms and firms hire other workers to replace them, regardless of whether the firm itself is growing or declining. In the example above, job turnover of 10 per cent reflects the expansion of the establishment and is part of the overall labour turnover of 30 per cent; the remaining 20 per cent, or two-thirds of the labour turnover, represents changes in ongoing jobs.

these countries suggest that they may only be able to smooth the process of job destruction to a limited extent.

C. JOB TURNOVER, LABOUR TURNOVER AND UNEMPLOYMENT

1. Introduction

The theoretical framework used to analyse job turnover is based largely on a modelling of job creation and job destruction where it is assumed that the productivity levels of individual jobs vary. This dispersion in productivities, as well as shocks specific to individual firms, leads to high rates of job creation and loss in line with the observed patterns. Productivity is also assumed to vary over the cycle, leading to increases in job creation and decreases in job destruction in upswings as the output value of jobs rises and the reverse patterns in downturns when the output value of jobs declines. Fluctuations in job turnover translate directly to inflows to and outflows from unemployment [Mortensen and Pissarides (1994); Millard and Mortensen (1994)].

If the rate of job turnover is high in most OECD countries, why are there such sharp cross-country differences in unemployment? This question cannot be considered without also examining labour turnover (see the Box for definitions). It is only through the actual movement of workers that establishment employment levels change, or job turnover is recorded. Job turnover is only one facet of labour turnover: a worker can also change jobs by replacing someone in another establishment (worker flows among ongoing jobs). Unfortunately, labour turnover is not fully considered in existing models of job turnover [Burgess (1994)]. However, it is important to understand the role of labour turnover as information on the way ongoing jobs are filled may provide a more comprehensive picture of cross-country differences in the way labour markets accommodate change. The relation between labour turnover and unemployment has already spawned considerable debate and analysis [see Alogoskoufis *et al.* (1995)]. This section aims to shed some light on the relation.

2. Job turnover and labour turnover

Labour turnover measures changes in individuals among jobs, regardless of whether the jobs themselves are newly created, ongoing (and subsequently filled by others) or whether the jobs themselves disappear. It includes worker separations (either quits or layoffs) which are ultimately replaced, or movements of workers into and out of ongoing jobs. Labour turnover is clearly affected by job turnover. Job creation, being a net addition to employment in an establishment, necessarily implies that at least an equivalent number of additional workers have been hired. Similarly, job destruction implies at least an equivalent number of separations have occurred. Considerably greater labour turnover, compared with job turnover, may be generated through a chain of vacancies stemming from a newly-created job which is filled by an employed individual changing firms, leading to a succession of separations and hirings [Akerlof *et al.* (1988); Contini and Revelli (1990)].

Though good, comparable, data on labour turnover are not readily available, preliminary estimates (Table 5.2) indicate that there are differences across countries: labour turnover tends to be higher in North America than in Europe or Japan.[3] However, it is not negligible in some European countries. Thus, as measured by both job and labour turnover, labour markets which have traditionally been considered very different seem to show a considerable degree of adjustment.

It is worthwhile, therefore, considering aspects of labour turnover in more depth. Taking the share of job turnover in labour turnover provides an indication of the importance of the former in explaining the latter. Differences between them give an indication of labour turnover in ongoing jobs. As presented in

Table 5.2. **Job turnover and labour turnover** [a]

	Unit of observation for job turnover	Period for job turnover and labour turnover [b]	Annual rates as per cent of total employment				Share of job turnover in labour turnover Per cent (1)/(2)
			Job turnover [c] (1)	Labour turnover (2)	Hirings	Separations	
Canada	firms	1987-1988 [d]	22.1 [d]	92.6 (109.6) [d]	48.2	44.4	23.8 [d]
Denmark	manufacturing establishments	1984-1991	23.2 [e]	57.9 [e]	29.0	29.0	40.1 [e]
Finland	establishments	1986-1988 [f]	19.5 [f]	77.0 [f]	40.0	37.0	25.3 [f]
France	continuing establishments	1990-1991	7.2 [g]	58.0 [g]	..	..	12.4 [g]
Germany	establishments	1985-1990	16.0 [h]	62.0 [h]	31.6	30.4	25.9 [h]
Italy	firms	1985-1991 [i]	22.8 [i]	68.1 [i]	34.5	33.6	33.5 [i]
Japan	continuing establishments	1988-1992	8.2 [j]	39.1 [j]	20.2	18.9	21.0 [j]
Netherlands	continuing firms	1988-1990	7.0 [k]	22.0	11.9	10.1	31.8 [k]
United States	establishments	1979-1983	53.6 [l]	126.4 (174.4) [l]	64.6	61.8	42.5 [l]
Unweighted average (including the United States)			20.0	67.0	35.0	33.2	28.5
Unweighted average (excluding the United States)			15.8	59.6	30.8	29.1	26.7

.. Data not available.

a) Sampling months/periods vary across countries. Periods are as follows: Canada, annual averages; Denmark, November; Finland, annual averages; France, annual averages; Germany, June; Italy, December; Japan, January-June; Netherlands, all movements during the year; and the United States, quarterly.

b) Labour turnover is for a similar period except where noted in footnotes.

c) Job turnover in this table often differs from that reported in Table 5.1. As far as possible, the samples for job turnover in Table 5.2 match those for labour turnover. Consequently, the coverage of establishments varies (often limited to just continuing establishments), and so data are less comparable across countries than in Table 5.1.

d) Job turnover is an average of 1987-1988 and 1988-1989 and refers to the whole economy. Data on hirings, separations and employment refer to the whole economy for 1988 and are from Lemaitre, Picot and Murray (1992). Labour turnover figure in brackets includes temporary hirings and separations.

e) Data which refer to manufacturing only for 1984-1985 to 1990-1991 and are from Albaek and Sørensen (1995).

f) Job turnover is for 1986-1988. Labour turnover for 1984 is from OECD (1986). Share based on job turnover 1986-1988 and labour turnover 1984.

g) Data which refer to 1990-1991 for continuing establishments with at least 50 employees are from Lagarde, Maurin and Torelli (1995).

h) Job turnover is for the period 1984-1990, while labour turnover refers to 1985-1990. Labour turnover is from Mavromaras and Rudolph (1995). Job and labour turnover both derived from Bundesanstalt für Arbeit (BA) data with the same coverage of all employees except civil servants.

i) Job turnover is an average of 1985-1991. Labour turnover for 1985-1991 is from Contini *et al.* (1995).

j) Job turnover is from Genda (1995). Data are for continuing establishments only for 1988-1992.

k) Data for 1990 are from Hamermesh, Hassink, and Van Ours (1994).

l) Data for 1979-1983 are from Anderson and Meyer (1994). They are all based on quarterly estimates which have been roughly annualised by multiplying by 4. Quarterly estimation of job turnover leads to a significantly higher rate, as the shorter the time period, the more job turnover approaches labour turnover. Labour turnover in brackets includes temporary hirings and separations.

Sources and notes: For data on job turnover, see Annex 5.A for Finland. The *Employment Outlook*, 1994, Annex 3A contains information on job turnover for Canada and Germany. Additional sources are listed in the notes above.

Table 5.2, which brings together many detailed studies, job turnover accounts, on average, for almost 30 per cent of labour turnover [Anderson and Meyer (1994); Burgess *et al.* (1994); Schettkat (1994); Revelli (1996); Hamermesh *et al.* (1994)]. The case of France is unusual in that job turnover explains only 12-15 per cent of measured labour turnover; however, the share is understated by considering continuing establishments only [Lagarde *et al.* (1995); Chambin and Mihoubi (1995)]. Much labour turnover, therefore, takes place in ongoing jobs.

Labour turnover is the sum of the number of positions in which there is a hiring or a separation, *and* the number of hirings and separations in each of these positions over the period of, usually, a year. There is a direct relationship between the share of positions in which there has been at least one hiring and annual labour turnover. One measure of the share of positions in which there has been hiring is provided by data on the tenure of workers. The share of workers in an establishment/firm with less than one year of tenure represents the proportion of positions in which at least one new hire has been made during the past year. Consistent with differences in labour turnover rates, as shown in Table 5.3, Canada and the United States had a higher proportion (23.5 and 28.8 per cent, respectively) of workers having tenure of less than one year compared, for example, with France (16.8 per cent), Germany (12.8 per cent) and Japan (9.8 per cent for continuing firms only).

Assuming no measurement error, the share of all employees with tenure of less than one year is made up of three components: jobs which have been newly created and filled over the past year; ongoing jobs in which one worker replaces another on a temporary basis, with workers frequently moving in and out of them; and ongoing jobs which have been vacated and for which new hires will ultimately become long-term employees. These latter two components cannot be separated in available data. Annual data on new job creation rates are used here as a proxy for the first component.

The *difference* between the share of short-tenure workers in total employment and annual new job creation rates represents a very rough estimate of the proportion of ongoing jobs in which there has been labour turnover.[4] The last two columns of Table 5.3 suggest that the differences among countries are quite marked. This is a consequence of greater variation in the proportion of short-tenure workers across countries than in the rate of job creation.[5] Austria, France, Germany, Japan and Norway, for example, have a relatively small proportion of ongoing jobs available to be filled by individuals, while in the United States, Canada, Denmark and the Netherlands, the share is 10 per cent or more. These differences are apparent in Chart 5.2, which indicates that there is only a slight positive correlation between job turnover and the proportion of workers with less than one year of tenure. The considerable variability observed across countries reflects differences in labour turnover in ongoing positions.

The data in Table 5.2 and Table 5.3, taken together, show that labour turnover can be rather high without a high proportion of ongoing positions necessarily becoming vacant. Relatively high hiring and separation rates compared with the share of workers with tenure less than one year implies the rotation of some individuals in and out of jobs for very short periods. For example, in both France and Germany, the share of workers with tenure less than one year is relatively low, while labour turnover is estimated at roughly 60 per cent annually. Japan is different in that both measures are comparatively low. Canada and the United States are relatively high on both. Concerning France and Germany, the data suggest that a relatively small proportion of the labour force is moving in and out of jobs of very short spells, while most of the employed are in long employment spells, a fact consistent with estimates of enterprise tenure and retention rates [OECD (1993)]. In Japan, it also seems that job matches are quickly established and durable for a large majority of workers. In Canada and the United States, a sizeable fraction continually move in and out of jobs. Therefore, to gain work experience or to find the right job, individuals in some European countries depend more on job turnover or on short work spells in comparatively fewer ongoing jobs. This may reflect the operation of internal labour markets in these countries with lower inter-firm mobility of workers and limited ports of entry into the firm.

Some of the potential implications for understanding labour markets are as follows. Often, European labour markets have been considered less flexible because flows into and out of unemployment, as measured by labour force surveys, are relatively low by comparison with North America [OECD (1995)]. However, both job turnover and labour turnover rates seem to indicate considerable employment adjustment. In spite of this, an issue is why movements into and out of unemployment seem relatively low in many European countries and what is the relationship, if any, between job and labour turnover and unemployment?

3. Job and labour turnover and unemployment

The expected relationship between job and labour turnover and unemployment is not at all clear, and becomes especially blurred if job search by the employed is modelled [Burgess (1994)]. Job turnover

Table 5.3. **Job turnover and enterprise tenure**

	Unit of observation for job turnover	Job creation [a]		Job destruction		Enterprise tenure [b] < 1 year		Estimates of ongoing positions open to labour turnover (Enterprise tenure < 1 year – Job creation)	
		Annual rates as a per cent of total employment				Per cent of total employment		Per cent of total employment	
		1985	1991	1985	1991	1985	1991	1985	1991
Australia	manufacturing establishments	16.1 [c]	..	13.2	..	20.2 [c]	16.0 [c]	4.1 [c]	..
Austria	continuing firms	..	7.6 [d]	..	5.1	..	13.8 [d]	..	< 6.2 [d]
Canada	firms	11.6 [e]	11.6	8.0	13.1	26.7 [e]	23.5	15.1	11.9
Denmark	establishments	16.3 [f]	13.9	13.7	14.6	26.8 [f]	..	10.5 [f]	..
Finland	establishments	10.2 [g]	8.2	9.3	17.1	18.1 [g]	11.9	7.9	3.7
France	firms	13.0 [h]	12.3	10.8	13.3	13.4	16.8	0.4	4.5
Germany	establishments	7.9 [i]	9.6	8.2	6.5	8.5 [i]	12.8 [i]	0.6	3.2
Italy	firms	12.8 [j]	9.6	10.0	10.5	..	15.6 [j]	..	6.0
Japan	continuing establishments	4.2 [k]	4.7	3.7	3.8	9.4 [k]	9.8	1.2 [k]	1.8
Netherlands	based on labour flows	10.5 [l]	14.0	8.8	10.7	11.7	24.0 [l]	1.2	10.0
Norway	manufacturing establishments	8.4 [m]	..	7.0	..	10.0 [m]	..	1.6 [m]	..
United Kingdom	firms	9.2 [n]	8.0	8.3	6.4	15.4 [n]	18.6	6.2	10.6
United States	establishments	10.4 [o]	12.0	9.3	11.3	28.9 [o]	28.8	18.5	16.8
Unweighted average		10.9	10.1	9.2	10.2	17.2	17.4	6.1	7.5

.. Data not available.

a) Sampling months/periods vary across countries and are adjusted to correspond to the period for tenure and so do not always correspond to estimates for 1985 or 1991. Periods are as as follows: Australia, June; Austria, annual average of monthly year-over-year changes; Canada, annual averages; Denmark, November; Finland, annual averages; France, annual averages; Germany, June; Italy, December; Japan, January-June; Netherlands, annual average; Norway, annual averages; the United Kingdom, December (biannual); the United States, December (biannual) (June in 1989 and 1991).

b) OECD (1993).

c) For manufacturing only. Job turnover for 1984-1985 is from Borland and Home (1994).

d) Job turnover for 1988-1989 is from Hofer and Pichelmann (1995) for continuing firms only. Tenure refers to 1988. The share of continuing positions open to new hires is a ceiling as only job creation in continuing firms is subtracted from the share of employment with tenure of less than one year.

e) Job turnover refers to the private and public sectors and is an average of 1984-1985 and 1985-1986; 1989-1990 and 1990-1991. Tenure also refers to the private and public sectors for 1986.

f) Job turnover is an average of 1985-1986 and 1986-1987; and 1989-1990. Tenure data for 1987 are from Leth-Sørensen (1993).

g) Job turnover refers to 1986-1988. Tenure refers to 1986. Both cover the private sector only.

h) Job turnover for the private sector is an average of 1984-1985 and 1985-1986; 1989-1990 and 1990-1991 from Nocke (1994). Tenure refers to 1986 for the private sector.

i) Job turnover is a weighted average of [0.5(1982-1983) + 1983-1984 + 0.5(1984-1985)]; and [0.5(1988-1989) + (1989-1990)]. Tenure refers to 1984 and 1990. Job turnover refers only to the private sector, while tenure refers to the both the private and public sectors.

j) Job turnover is an average of 1990-1991 and 1991-1992. Enterprise tenure for 1992 is from unpublished tabulations provided by Eurostat on the basis of the European Labour Force Survey. Both refer only to the private sector. Note that job turnover for 1985 includes extraordinary changes, while these are excluded in 1991. See Annex 5.A for details.

k) Job turnover in an average of 1984-1985 and 1989-1990 from Genda (1995). Tenure refers to 1985 and 1990. Both refer only to the private sector. To calculate column (7) for continuing establishments only, the share of short-tenure workers (9.4%) is adjusted to reflect continuing establishments only, by excluding employment in new establishments 1985-1986 (4.3%) from the 1986 Establishment Census of Japan annualised to take account of the census date. The adjustment is [(9.4 – 4.3) / (100 – 4.3)]. A similar adjustment is made using employment in new establishments (3.5% in 1990-1991) from the 1991 Establishment Census.

l) Job turnover for 1990 was constructed from labour market flows by Broersma and Den Butter (1995). Tenure refers to 1990. Both refer to both the public and private sectors.

m) Job turnover is an average of 1984-1985 and 1985-1986, for manufacturing only. Tenure < 21 months in manufacturing refers to 1986.

n) Job turnover for 1985-1987 and 1989-1991 for the private sector are from Gallagher, Daly and Thomason (1991) and Brace, Robson and Gallagher (1993), respectively. Tenure for the public and private sectors refers to 1983.

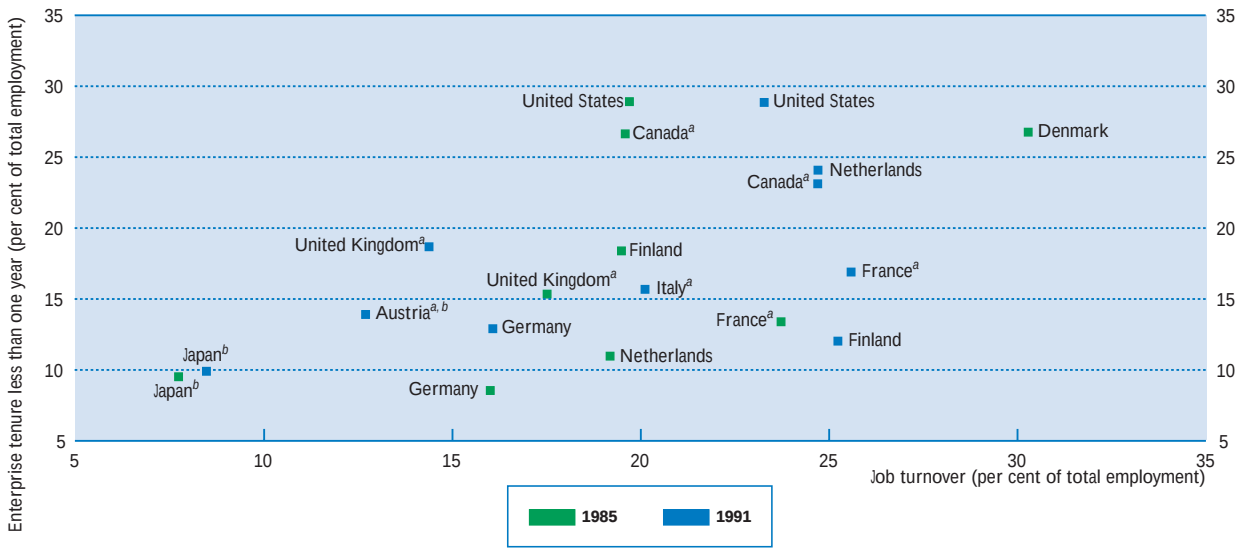
o) Data on job turnover for the private sector is from the Dun and Bradsteet Corporation for an average of 1980-1982 and 1982-1984; and 1989-1991. Tenure for the public and private sectors refers to 1983.

Sources and notes: For data on job turnover, see Annex 5.A for Denmark, Finland and Italy. The *Employment Outlook*, 1994, Annex 3A, contains information on job turnover for Canada, Germany, Norway, and for both the United Kingdom and the United States using data from the Dun and Bradstreet Corporation. Additional sources are listed in the notes above.

is a component of labour turnover, measured from the perspective of the type of employment change that led to a hiring or separation. Flows into unemployment from employment and the converse are also components of labour turnover. However, new job creation, or the filling of a job vacancy, need not lead to one-to-one changes in either the stock of unemployed persons or to an increase in outflows from unemployment. This is due to at least three factors. First, new jobs may be taken by those already in work who change jobs. Second, some new jobs may be taken by people who had been outside the measured

Chart 5.2.

Job turnover and enterprise tenure



a) Data refer to firms.
b) Continuing firms (Austria) and establishments (Japan) only.
Sources: See sources and notes to Table 5.3.

labour force. Finally, individuals can leave unemployment, not by finding jobs, but by dropping out of the labour force [OECD (1995)]. Similar caveats apply to the relationship between job loss rates and unemployment. Nonetheless, exploring the relationships is useful.

While the sample sizes are small and there may be outliers, Table 5.4 shows that the rank correlation between *job turnover* and the unemployment rate is essentially zero.[6] This is consistent with the lack of correlation between job turnover and net employment growth also shown in the table. Higher job turnover implies both increased job losses and job gains, such that, while there are vacancies which could be taken by the stock of unemployed persons, there is also a larger outflow of workers from jobs, many of whom are also seeking work.

There is a positive, though rarely statistically significant, correlation across countries between job turnover (as well as job creation and job loss rates considered independently) and inflows to, or outflows from, unemployment, in line with the theory outlined earlier. When considering only continuing establishments, there is a statistically significant positive correlation between job turnover rates and inflows into unemployment. Note that for continuing establishments, there is a positive correlation of around 0.5 for outflows, as well. However, it is not clear why including job losses, for example, from closing establishments results in no significant relation. While job turnover does influence inflows and outflows from unemployment, its impact is just not very important relative to other factors. Time-series analyses for the United States, using quarterly data, tend to show a positive correlation between job creation and outflows from unemployment as well as between job losses and inflows to unemployment [Davis and Haltiwanger (1995); Davis *et al.* (1995)]. However, examination of annual time-series data for Canada and Denmark (not shown here) did not give very strong results.

The incidence of long-term unemployment has tended to rise and is much higher in a number of European countries compared with North America, Japan and, until very recently, Scandinavia. Moreover, these differences are not satisfactorily explained by dissimilarities in rates of unemployment. As shown in Table 5.4, higher job turnover rates are associated

Table 5.4. **Correlations between job turnover and unemployment** [a]

	Job turnover (private sector)		Job creation (private sector)		Job losses (private sector)	
	All establishments	Continuing establishments	All establishments	Continuing establishments	All establishments	Continuing establishments
Unemployment rate	–0.32	0.00	–0.29	0.05	–0.31	–0.06
Inflows into unemployment	0.22	0.61*	0.23	0.53	0.19	0.61*
Outflows from unemployment	0.30	0.47	0.31	0.38	0.26	0.50
Incidence of long-term unemployment (per cent of unemployed)	–0.62*	–0.56	–0.64*	–0.51	–0.54	–0.53
Net employment change [b]	–0.40	–	–0.06	–	–0.63*	–
Sample size (number of countries) [c]	11	11	11	11	11	11

– Not applicable.
* indicates significance at the 5 per cent level using a two-tailed *t* test.
** indicates significance at the 1 per cent level using a two-tailed *t* test.
a) Countries included in the correlations are Belgium, Canada, Denmark, Finland, France, Germany. Italy, Japan (continuing establishments only), the Netherlands (''All establishments'' only), New Zealand, Sweden, the United Kingdom (continuing establishments only), the United States (''All establishments'' only). Sampling months/periods vary across countries: see note *a* to Table 5.1.
b) Similar results were obtained using official estimates of net employment change from OECD sources.
c) There is some variation in the countries, according to the variables being correlated.
Sources: For data on job turnover for Denmark, Finland, France, Italy and Japan, see Annex 5.A. The *Employment Outlook*, 1994, Annex 3.A contains information on job turnover for the following countries: Canada (LEAP), Germany, New Zealand, Sweden and the United States (Dun and Bradstreet).
Additional sources are: Belgium (continuing firms only) [Mulkay and Van Audenrode (1993)], (all firms) [Leonard and Van Audenroe (1995)]; France [Nocke (1994)]; Japan [Genda (1995)]; the Netherlands (all firms) [Broersma and Den Butter (1995)]; the United Kingdom [Blanchflower and Burgess(1994)]; and the United States [Anderson and Meyer (1994)]. Data on various measures of unemployment are from OECD sources.

with a lower incidence of long-term unemployment. However, differences in job turnover only explain part of its increase.[7]

Further exploration of the relationship between job and labour turnover and unemployment flows is desirable. As was outlined earlier in this section, the share of short-tenure workers is the most important aspect of labour turnover. An issue is whether this component of labour turnover is related to unemployment. While the correlations between the share of workers with tenure less than one year and unemployment flows have the expected, positive, signs, they are generally not significant at conventional levels (Table 5.5). The share of short-tenure workers is negatively related to the incidence of long-term unemployment, but not significantly so (Table 5.5). These relatively weak results are not unexpected. It is unlikely that correlations of labour turnover with unemployment would be stronger than those with job turnover. Labour turnover is higher than job turnover perhaps because of job-to-job flows (the vacancy

Table 5.5. **Correlations between enterprise tenure and unemployment** [a]

	Enterprise tenure (per cent of workers with tenure of less than one year)	
	Tenure (1985)	Tenure (1991)
Unemployment rate (1985 or 1991)	0.08	0.50
Inflows into unemployment (1985 or 1991)	0.71*	0.62
Outflows from unemployment (1985 or 1991)	0.52	0.21
Incidence of long-term unemployment (per cent of unemployed) (1985 or 1991)	–0.49	–0.24
Sample size (number of countries) [b]	11	10

* indicates significance at the 5 per cent level using a two-tailed *t* test.
** indicates significance at the 1 per cent level using a two-tailed *t* test.
a) Countries included in the correlations are Australia (1985, 1991), Canada (1985, 1991), Denmark (1987), Finland (1985), France (1985, 1991), Germany (1985, 1991), Italy (1992), Japan (1985, 1991), Netherlands (1985, 1991), Norway (1991), Spain (1985, 1991), the United Kingdom (1985) and the United States (1985, 1991).
b) The observation for Finland for 1991 is excluded because of a pronounced decline in short-tenure employment.
Sources: Data on employer tenure are from OECD (1993) and various measures of unemployment are from OECD sources.

chain), which imply that the unemployed are competing with those already working and are easily excluded from firms' selection processes.

The inference to draw is that, while low unemployment flows and a high incidence of long-term unemployment in Europe reflect somewhat lower job turnover and a lower share of positions in which there is labour turnover, neither of the relations is very strong. This suggests that either other factors influence the availability of job opportunities and/or differences across countries in the competition for jobs influences unemployment flows and duration.

It may be the case that relatively high job turnover does not truly reflect available job opportunities, at least in so far as the unemployed are concerned. External worker flows which ''bypass'' measured unemployment may play an important role [Boeri (1995*b*)]. Some, though limited, evidence indicates that such flows are important. In Germany, 32 per cent of separations resulted in re-employment within one week based on estimates for 1976-1981 [Schettkat (1992)]. In Italy, 25 per cent of separations over 1985-1991 resulted in re-employment within one month [Contini *et al.* (1995)]. In the United Kingdom, hiring from other jobs accounted for 48 per cent of all hiring in 1988 [Smith (1988)]. By comparison, in Canada, 53 per cent of workers permanently laid off from full-time jobs in 1988, found another job in no more than three weeks [Picot and Pyper (1993)]. This means that, at any given rate of net job growth, in spite of relatively high labour and job turnover, worker flows which bypass unemployment can limit available job opportunities for those in the pool of unemployed.

D. LABOUR MARKET POLICIES, JOB AND LABOUR TURNOVER

1. Introduction

This section considers the possible effects of employment protection legislation (EPL) and Unemployment Insurance (UI), on job turnover, labour turnover and unemployment. The reasons for the focus on EPL and UI are: *i)* the links between EPL, job turnover and unemployment have received much attention in the literature, as has the impact of UI on employment; and *ii)* various proxy measures of EPL and the generosity of UI benefits are available for a large number of countries.

EPL includes legislation and rules governing unfair dismissal, the individual and collective layoff of regular workers for economic reasons, severance payments, notice periods, administrative authorisation for dismissal and prior discussion with union representatives. Regulations governing temporary work contracts, such as their maximum duration or number of renewals, can also be included [(OECD (1994*b*)]. As such legislation can affect both firms' decisions to hire and fire workers in response to changing economic circumstances, as well as workers' decisions to leave jobs, it may also influence job and labour turnover.

2. Theoretical arguments

Theorising about the impact of EPL on employment prior to the advent of models of job turnover led to a line of argument that, by increasing the costs of laying off workers, EPL encouraged firms to adjust their employment more slowly in downturns and to hire less during upswings, with ambiguous effects on average employment and unemployment levels over the cycle [for a summary see Buechtemann (1993)]. Bertola (1990) has also emphasised the importance of firms' expectations in the presence of EPL. If they are pessimistic about future demand, they may be more wary of hiring, the greater the costs of firing workers.

A similar logic applies when EPL is considered in theoretical models of job creation and destruction by Mortensen and Pissarides (1994) and Millard and Mortensen (1994). As employment protection may affect the costs of hiring and firing workers, it adds to the costs of job creation and destruction which are, consequently, expected to both be lower. EPL could also affect the cyclical sensitivity of job turnover. Job creation may be smoother than job losses because matching workers to new positions is costly and time-consuming [Mortensen and Pissarides (1994)]. Job losses might tend to increase less dramatically during cyclical downturns in countries where EPL is more strict [Garibaldi (1995)].

There have been few empirical tests of the impact of EPL on job turnover. A simulation for the United Kingdom, by Millard (1995), found that when the strictness of EPL was reduced, consistent with the preduction of increased job creation and job destruction, the incidence of unemployment increased, but the average duration of unemployment declined more, so that the unemployment rate was lower than otherwise. Although not shown here, the correlation of job turnover with net employment change suggests that, in countries where employment protection is less strict (Canada, New Zealand, the United Kingdom and the United States), job turnover is more cyclical, while countries with stricter provisions (France, Germany, Italy and Sweden) tend to show no cyclical pattern [Garibaldi (1995)].[8] On the other hand, there is little evidence that the responsiveness of job turnover to GDP growth varies significantly across countries grouped according to strictness of EPL [Boeri (1995*a*)].

The impact of UI on employment has received considerable attention, and theories have recently been developed and tested in the context of job turnover models [Garibaldi *et al.* (1995); Millard and Mortensen (1994); Millard (1995)]. By lowering the cost of unemployment, more generous UI benefits are assumed to lead to higher reservation wages. In the theoretical framework developed by Mortensen and Pissarides (1994), increases in the generosity of UI benefits will lead to an increase in job destruction, as the threshold level of productivity for a job to continue is increased, while it will also reduce the creation of jobs whose productivity now lies below the higher threshold level. A cross-country empirical test revealed that the relation between job turnover and the level of benefit was positive while the duration of benefits was negatively correlated [Garibaldi *et al.* (1995)]. In another test, changes in the incidence and duration of unemployment were consistent with the prediction of increased job destruction and reduced job creation stemming from an increase in UI benefits [Millard and Mortensen (1994); Millard (1995)].

In sum, there is some expectation on the basis of theory that job turnover should be lower and that it should fluctuate less, the more strict is EPL, and that job destruction should be higher and job creation lower the higher are UI benefits.

3. Empirical evidence

Table 5.6 presents cross-country correlations between various indices of country rankings on EPL and job turnover.[9] Lack of data comparability must again be stressed, as well as difficulties in developing an accurate and up-to-date index to reflect strictness of employment protection.[10] The indicators of "strictness" of EPL include those covering regular and contract employees.[11] For regular employees, there are also country rankings based on the maximum weeks

Table 5.6. **Correlations between various cross-country rankings of measures of employment protection legislation and job turnover** [a]

Indices of employment protection legislation	Job turnover (private sector)					Job turnover (manufacturing)	
	All establishments	Continuing establishments	Establishments, size ≥ 100	Continuing establishments, size ≥ 100	Establishments < 100 / Establishments ≥ 100	All establishments	Continuing establishments
1. Regulations governing regular employees only	–0.44	–0.34	–0.67	–0.83**	0.62	–0.23	–0.47
2. Regulations governing temporary employees only	–0.79*	–0.63*	–0.77*	–0.68	0.63	–0.41	–0.64**
3. Maximum pay and notice period for dismissal of regular employees	–0.54	–0.34	–0.85**	–0.98*	0.73*	–0.38	–0.30
4. International Organisation of Employers (IOE)	–0.65	–0.33	–0.60	–0.66	0.63	–0.52	–0.54*
5. Ranking by Bertola (1990)	–0.58	–0.48	–0.79*	–0.90**	0.74*	–0.26	–0.52*
Sample size (number of countries)	11	11-12	8	8	8	12-13	15-17

* indicates significance at the 5 per cent level using a two-tailed *t* test.
** indicates significance at the 1 per cent level using a two-tailed *t* test.
a) Sampling months/periods also vary across countries: see note to Table 5.1.
Sources: For data on job turnover for Denmark, Finland, France, Italy and Japan, see Annex 5.A. The *Employment Outlook*, 1994, Annex 3.A contains information on job turnover for the following countries: Canada (LEAP), Germany, New Zealand, Norway, Sweden, the United Kingdom (Dun and Bradstreet) and the United States (Dun and Bradstreet). Additional sources are as follows: Australia [Borland and Home (1994)]; Austria [Hofer and Pichelmann (1995)]; Belgium, continuing firms only [Mulkay and Van Audenrode (1993)]; continuing manufacturing [Leonard and Van Audenrode (1993)]; all firms [Leonard and Van Audenrode (1995)]; Canada, manufacturing [Baldwin, Dunne and Haltiwanger (1994)]; France [Nocke (1994)]; Ireland [Keating and Keane (1988/1989) and Barry, Strobl and Walsh (1996)]; Japan [Genda (1995)]; the Netherlands, manufacturing [Broersma and Gautier (1994)]; all firms [Broersma and Den Butter (1995)]; Norway [Salvanes (1996)]; the United Kingdom, continuing establishments only [Blanchflower and Burgess (1994)]; and the United States [Anderson and Meyer (1994)].
1. and 2. *Source:* Grubb and Wells (1993) updated in OECD (1994*b*, Tables 6.5 and 6.6).
3. *Source:* OECD (1993) updated in OECD (1994*b*, Table 6.7).
4. *Source:* IOE (1985) in Emerson (1988) updated in OECD (1994*b*, Table 6.7).
5. *Source:* Bertola (1990) updated in OECD (1994*b*, Table 6.7).

of notice and severance payments for workers with 20 years of tenure.

The indicators used here are based on a simple ranking of countries from least to most "protective", and they generally refer to the situation as of the late 1980s or early 1990s. This does not always match well with the turnover data, which further complicates the analysis. Moreover, the actual application of EPL usually varies greatly by type of worker, by tenure and, often, by size of establishment. Ideally, it would be desirable to measure the actual *costs* that EPL imposes on firms, rather than using qualitative indices, but these data are not available and one must settle for proxies.

The first result from Table 5.6 is that there is invariably a negative correlation between the various indices of EPL and job turnover, in line with theory. The correlations are, however, often insignificant at conventional test levels. It is noticeable that when the indices of EPL governing permanent and temporary workers are considered separately, the former correlations are not statistically significant while the latter are larger in an absolute sense and are often statistically significant. Results for other indices of EPL are mixed, though the signs are as expected. Charts 5.3*a* and 5.3*b* plot observations of job turnover in continuing establishments/firms in manufacturing (where the sample of countries is the largest) against the indices of EPL for permanent and temporary workers.[12]

Why should EPL appear to have a stronger negative effect on job turnover for temporary workers compared with permanent workers? In principle, EPL governing permanent workers smoothes job losses directly by making them more time-consuming. Further, if it is the case that EPL affects firms' hiring, job gains would be reduced. However, the lack of a statistically significant correlation for permanent workers suggests that firms are able to reduce their employment and that new job creation for permanent employees is not necessarily constrained by the legislation.

There are several reasons for the statistically significant negative relationship between job turnover and the regulation of temporary contracts. The need for a temporary worker to meet short-term needs is likely to be more pressing than a longer-term decision to hire an additional permanent worker. Restrictions on temporary contracts relate more to the hiring decisions of firms, rather than their firing decisions as the firm knows that the contract will ultimately end and the worker will be laid off. Regulations governing regular employees affect the firing decision more directly than the hiring decision. This is consistent with the argument that the costs of firing regular workers are heavily discounted because they are expected to occur a long time in the future [Bentolila and Bertola (1990)]. Labour turnover may also reduce the need to fire regular workers. This makes EPL for permanent workers less burdensome, a situation which does not apply to temporary contracts. These two reasons may explain the significant correlation between EPL governing temporary workers and job turnover, but the lack of one with regulations governing permanent workers.

One argument which has been raised is that job turnover may still be high in all countries because less strict rules governing temporary contracts relative to permanent workers leads to a substitution of temporary for permanent jobs. Such substitution could occur though attrition of permanent workers. Some part of such conversion of positions would be recorded as job turnover in that the attrition of permanent employees who are not replaced in their posts would show up as job losses, while the subsequent hiring of temporary workers to replace them would appear as job creation. The empirical evidence in support of this is rather weak. For a substitution of temporary for permanent jobs to have accounted for a significant share of job turnover, which is often in the range of 20 per cent annually, there would have to have been a substantial rise in the share of temporary workers in total employment, and that has generally not been observed. It would seem that only in Spain has the "conversion" of permanent to temporary jobs been sufficient to potentially have an important influence on job turnover rates [OECD (1993)].[13]

Job turnover in continuing or large establishments should be more influenced by EPL than turnover in small establishments as there are often minimum size thresholds for restrictions governing dismissal. Size thresholds vary across countries, but generally, firms with at least 20 employees are subject to the legislation. Unfortunately, data limitations do not allow this size threshold to be applied across all countries in the sample and, instead, a size cut-off of greater than 100 employees is used. As openings and closings occur largely among small firms, this is another reason to expect employment protection legislation to have a greater effect on job turnover in large establishments [Garibaldi *et al.* (1995)]. In the event, the correlations between the various measures of EPL are essentially unchanged for large establishments compared with those for all establishments.

There may also be a displacement effect where EPL is associated with a "transfer" of job turnover to smaller firms. In other words, in countries where employment protection legislation is more strict, small firms may absorb relatively more of any employment shocks. If that is the case, one should expect to observe a positive correlation between EPL and job turnover rates in small establishments relative to large establishments. The positive, sometimes statistically significant, correlation between employment protection legislation and job turnover in small

Chart 5.3*a*.

Employment protection legislation governing permanent workers and job turnover

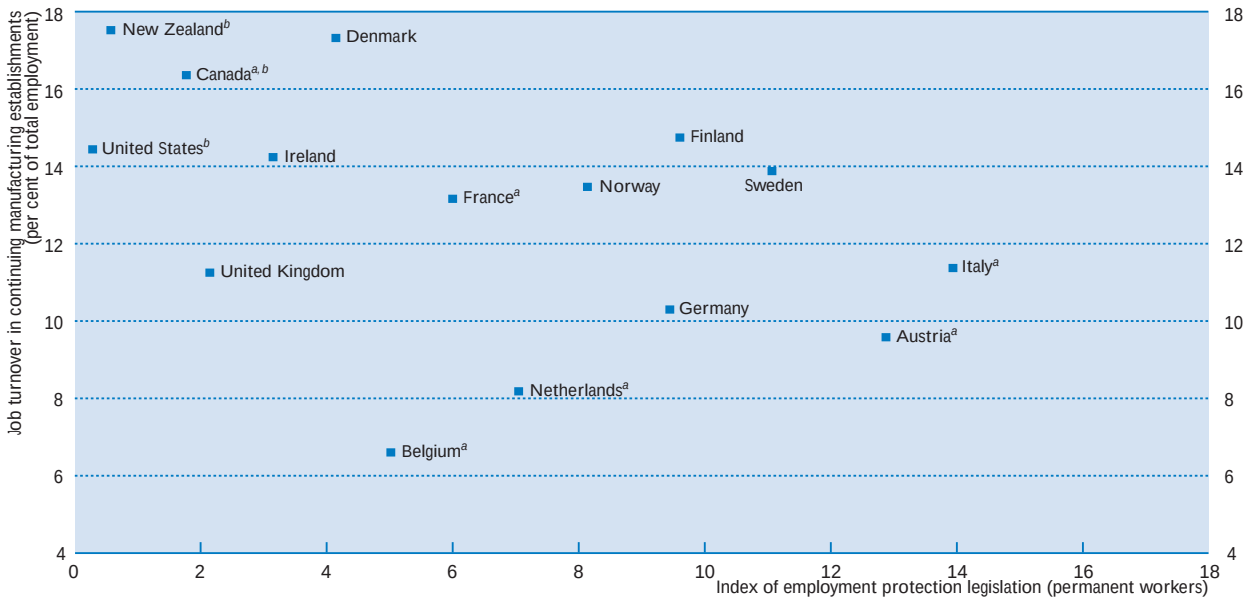
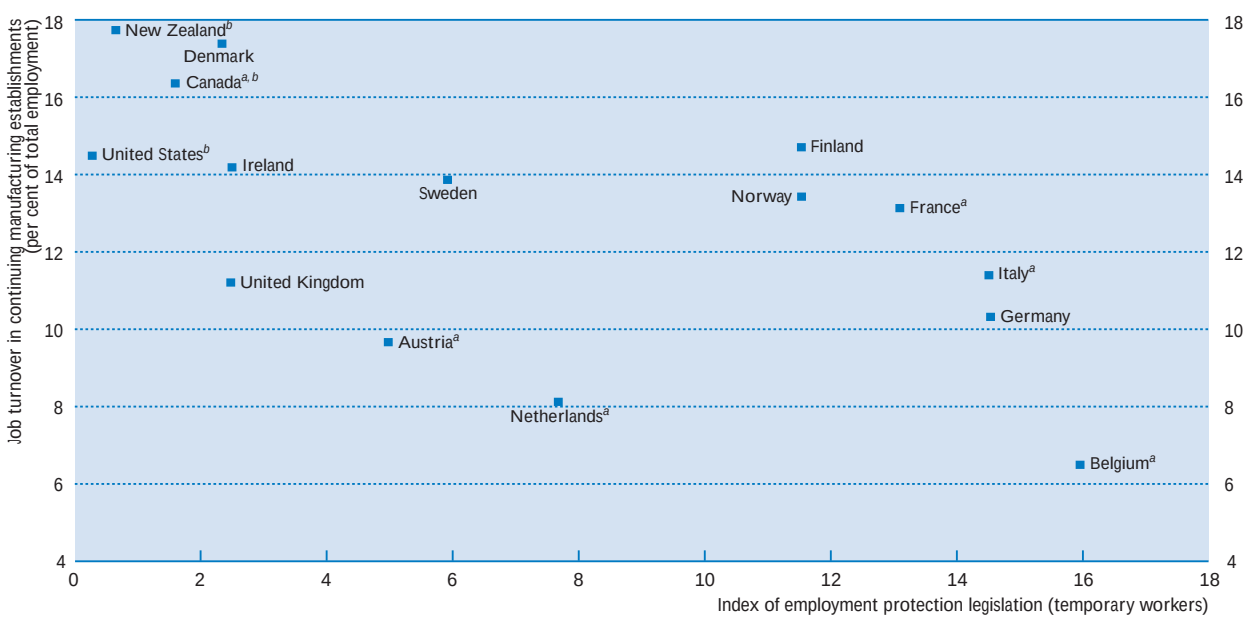


Chart 5.3*b*.

Employment protection legislation governing temporary workers and job turnover



a) Turnover refers to firms.
b) Values for combined index of employment protection legislation for both permanent and temporary workers imputed in OECD (1994*b*).
Sources: For information on job turnover and on the index of employment protection, see sources to Table 5.6.

relative to large establishments (column 5 of Table 5.6), as well as the statistically significant negative correlation for job turnover in large establishments (column 3), provide a bit of support in favour of this displacement hypothesis.

One should also expect changes in EPL to be associated with changes in the level of job turnover over time within countries. In France, turnover in continuing establishments appears to have been unaffected when legislative changes in 1986 liberalised regulations governing fixed-term contracts and abolished prior administrative authorisation for collective dismissals [see OECD (1994*b*) and Chart 5.1 for job turnover]. Further, a strengthening of legislation on collective dismissals in 1989 was not associated with a decline in job turnover, nor does a limitation on fixed-term contracts introduced in 1990 appear to have had much impact. Liberalisation of regulations governing fixed-term contracts in Germany in 1985 was also not associated with an increase in job turnover. While hardly conclusive, these episodes do not provide strong support for the idea that changes in EPL influence job turnover.[14]

EPL may exert a stronger influence on labour turnover. Table 5.7 indicates that the index of strictness of EPL governing temporary workers is negatively and significantly correlated with the share of short-tenure workers in employment.[15] Again, the results for other indices are mixed. This means that the share of positions in which labour turnover occurs is lower, though not necessarily the amount of rotation in these positions. This may be a result of a lower creation and destruction of temporary jobs or less rotation in ongoing positions because employers may not be able to "free" such positions because of restrictions on firing. There is currently little evidence one way or the other.

More strict EPL has been associated with a higher incidence of long-term unemployment [OECD (1993)]. The results of this chapter indicate that this is apparently only in small part a result of more "frozen" labour markets, whether measured through job turnover or labour turnover. The fact that these measures of the availability of jobs are only weakly associated with the incidence of long-term unemployment suggests that other factors, at least associated with stricter EPL, influence the availability of jobs as far as the unemployed are concerned.

Labour turnover differs across countries in ways that might influence unemployment. In countries where there is more strict EPL, there appear to be fewer ongoing jobs open to new hires. Measured inflows into unemployment are also lower in these countries. In a number of them, unemployment inflows are not sufficient to match measured job loss rates [Boeri (1995*b*)]. Taken together, these suggest the following hypothesis: Employment adjustment in some European countries seems to take place more through a combination of internal adjustment within firms or, when job losses invariably occur, worker flows bypassing unemployment. Those who do become unemployed apparently have difficulty reintegrating in jobs and become at risk of drifting into long-term unemployment. However, much more

Table 5.7. **Correlations between various cross-country rankings of measures of employment protection legislation and employer tenure**[a]

Indices of employment protection legislation	Enterprise tenure (per cent of workers with tenure of less than one year)		
	Tenure 1985	Tenure 1991	Tenure in European countries (1992)
1. Regulations governing regular employees only	–0.66	–0.45	0.17
2. Regulations governing temporary employees only	–0.82**	–0.63*	–0.69*
3. Maximum pay and notice period for dismissal of regular employees	–0.21	–0.20	0.38
4. International Organisation of Employers (IOE)	–0.68*	–0.26	–0.33
5. Ranking by Bertola (1990)	–0.69*	–0.53	–0.05
Sample size (number of countries)[b]	9-11	11-13	11

* indicates significance at the 5 per cent level using a two-tailed *t* test.
** indicates significance at the 1 per cent level using a two-tailed *t* test.
a) Countries included in the correlations are: Australia (1985, 1991), Austria (1991), Belgium (1992), Canada (1985, 1991), Denmark (1987, 1992), Finland (1985), France (1985, 1991, 1992), Germany (1985, 1991, 1992), Greece (1992), Ireland (1992), Italy (1992), Japan (1985, 1991), Netherlands (1985, 1991, 1992), Norway (1991), Portugal (1992), Spain (1985, 1991, 1992), Switzerland (1991), the United Kingdom (1985, 1991, 1992) and the United States (1985, 1991). The observation for 1992 for Italy is also used for 1991.
b) The observation for Finland for 1991 is excluded because of a pronounced decline in short-tenure employment.
Sources: See Table 5.6 for sources of indices 1. to 5. Tenure data come from OECD (1993) and unpublished data for 1992, provided by Eurostat on the basis of the European Labour Force Survey.

empirical work is necessary to confirm or refute this hypothesis.

E. CONCLUSIONS

This chapter set out to consider whether certain indicators of labour market adjustment – job and labour turnover – vary across OECD countries. While both do differ across countries, the amount of employment adjustment suggested by these measures is considerable everywhere. However, job turnover is not associated with either cross-country differences in net employment growth or the unemployment rate. This raises a number of policy-relevant questions. In particular, is weak net employment growth in some countries really a result of a lack of structural change? And what can be anticipated by policies which try to encourage more turnover?

In line with theory, job turnover is positively correlated with unemployment inflows and outflows and negatively correlated with the incidence of long-term unemployment. However, the correlations are not very strong, and differences in job turnover do not explain much of the marked differences in unemployment flows or duration.

From a policy perspective, the high incidence of long-term unemployment in a number of OECD countries presents a major challenge. Should governments try to raise job turnover or should they work to increase rotation in existing jobs (labour turnover) or both? Policies of deregulation and encouraging business start-ups could increase job turnover. Relaxing EPL may also increase job turnover, as well as open up more ongoing jobs to hiring. The merits of these policies depends on the importance that is placed on having greater rotation in the pool of unemployment. They might tend to reduce long-term unemployment, but raise the inflow into unemployment, without necessarily changing the overall unemployment rate greatly. Liberalising labour legislation has also to be weighed against the possible negative effects on firms' and workers' incentives to invest in human capital and, when job loss is inevitable, the role that certain minimum standards might play in giving workers time to find a new job and, perhaps, minimise earnings losses.

Moreover, it is not obvious that increasing vacancies will necessarily improve the situation for the long-term unemployed because of weak net employment growth. As there is already considerable labour turnover in ongoing jobs, the long-term unemployed are less likely to find or keep a job than other job seekers. Policies which increase job turnover would provide additional opportunities through new job creation. However, as the number of these new jobs is close to the number of individuals displaced through job destruction, it is not clear that the opportunities to reintegrate the long-term unemployed are expanded, at least not without additional and more focused labour market policies.

In sum, the results of ongoing research on the process of job creation and job destruction point to a pressing need to understand and measure the impact of institutional differences among countries on the way labour markets adjust.

The development of more comparable data sources on job creation and destruction, together with longer time-series is crucial. Without this, there will continue to be considerable disagreement over the appropriate policy course to follow. This applies not only to data on job creation and destruction alone, where the emphasis needs to be placed primarily on developing comparable criteria for defining an establishment and for measuring establishment openings and closings. But, understanding how adjustment takes place and the implications for unemployment requires the development of compatible data on labour turnover, in particular, accurate measures of flows into and out of unemployment, and flows from one job to another.

Notes

1. This conclusion is based on applying the procedure developed by Hodrick and Prescott (1980) to fit a smooth curve through a data series, in this case job turnover. A sensitivity analysis was conducted using different values of an exogenous parameter which smoothes the estimated trend line.
2. This is data for the entire private sector, compiled by the Dun and Bradstreet Corporation. Results based on it should be treated with considerable caution for reasons explained in OECD (1994*a*).
3. The estimate for the United States is not fully comparable as it is based on quarterly data which has been annualised and refers to only several States. An analysis of various estimates suggests that labour turnover may be in the range of 130 per cent annually in the United States [Davis and Haltiwanger (1995)].
4. There are several difficulties with this comparison. First, employer tenure and job turnover data come from entirely different sources and estimates of employment can consequently be quite different. This is partly mitigated by comparing percentages, as it is differences in the distribution which are more important than differences in levels. Second, job creation is often measured at the establishment level, while tenure is measured at the firm. To be consistent with enterprise tenure, inter-establishment shifts in multi-establishment firms should be excluded. The relatively few estimates comparing enterprise and establishment mobility reveal that the share of employed individuals with tenure in a particular establishment of less than one year would be between 3.5 (Australia), 3.7 (France) and 5 percentage points (Denmark) higher than that using enterprise data. However, enterprise and establishment tenure can be quite different in that legal changes affecting enterprise tenure may leave establishment ten ure unchanged. Third, time periods differ in that job turnover includes the entire year while the comparable category in tenure data is less than one year.
5. The coefficient of variation for job creation, taken across all countries for which there are data for the whole private sector, is 24.2 per cent, while for short-tenure workers, it was 44.9 per cent in 1985 and 34.9 per cent in 1991.
6. Estimates for job turnover used in the correlations in Table 5.4 and Table 5.6 differ slightly from those in Table 5.1 in that, where possible, current year averages were used. This involved changes in the estimates from base year averages for Canada, Denmark, Finland, Germany, Ireland [manufacturing from Keating and Keene (1988-1989)], Italy, New Zealand, Sweden, the United Kingdom (Dun and Bradstreet) and the United States (Dun and Bradstreet). See Davis *et al.* (1995).
7. These results are broadly consistent with those obtained from a simple regression analysis which makes use of all observations across countries and over time (not shown here). The incidence of long-term unemployment was regressed on job turnover as well as dummy variables which control for differences across countries and over time. The coefficients for job turnover were statistically significant. It is possible to derive an estimate of the variance in the incidence of long-term unemployment which is explained by the variance in job turnover. The results of this test (not shown here) show that the variance in job turnover explains only a small share of the variance in the incidence of long-term unemployment. The results were even weaker when the relation between job turnover and unemployment inflows and outflows was examined. These are consistent with the results observed in the simple correlation analysis.
8. Employment protection legislation governing notice and compensation relating to the dismissal of regular employees is based on that presented in OECD (1993).
9. Countries included in the correlations are: Australia (manufacturing only), Austria (continuing firms only), Belgium (in manufacturing, continuing ones only), Canada, Denmark, Finland, France, Germany, Ireland (manufacturing only), Italy, Japan (continuing establishments only), the Netherlands (''all establishments'' only, manufacturing), New Zealand, Norway (manufacturing only), Sweden, the United Kingdom (continuing establishments only) and the United States (''all establishments'' only, manufacturing). For establishments where size $\geq$ 100, the countries included are: Austria (continuing ones only), Canada, Denmark, Finland, Italy, New Zealand, Sweden, the United Kingdom and the United States (''all establishments'' only).
10. Firm-based job turnover data would be preferable to the mostly establishment data used here in analysing the effect of EPL as transfers of jobs among establishments owned by the same firm, which are counted as job turnover at the establishment level, should not be affected by employment protection.
11. The index used is based on that developed by Grubb and Wells (1993), updated to include Austria, Finland, Norway, Sweden and Switzerland, Canada, the United States, Japan, Australia and New Zealand [OECD (1994*b*)]. Indices of employment protection for temporary and permanent employees from OECD (1994*b*) are not available for Australia, Canada, Japan, New Zealand and the United States. Imputed values for the combined index were used as proxy values for the indices governing temporary and permanent workers in the cases of Canada, New Zealand and the United States. Missing values for Australia and Japan explain why the

sample size varies for a particular category of job turnover.

12. Results for the correlations between indices which provide varying measures of the generosity of UI and job turnover were largely positive, never statistically significant and are not reported. Indices of the generosity of unemployment benefits reflecting varying family situations, varying durations of unemployment and different combinations of types of benefits were tested. The procedure described in note 7 was applied to pooled time-series data across countries and it was found that the variation in the index of UI generosity explained very little of the variance in job turnover. One reason may be that these indices compare gross benefits before taxes with pre-tax wages, while reservation wages of workers may be more influenced by the net replacement rate of unemployment benefits after taxes. Unfortunately, data on net replacement rates are not available for a time period which corresponds with that of the job turnover data.

13. Though the share of temporary workers in employment has risen significantly in Australia and France, this could have only accounted for a small share of total job turnover (see Chapter 1 for data on temporary employment). If the entire increase of the share of temporary workers in France was a result of substitution, and if there was a delay of at least one year between all substitutions, this would have generated job turnover of 16 per cent over the ten-year period, or 1.6 per cent annually. However, this would only account for 8 per cent of annual job turnover of 20 per cent.

14. In both France and Germany, job turnover was regressed on a time trend and dummy variables meant to identify years in which there were changes in EPL. Legislative changes did not have any statistically significant impact on job turnover.

15. Variation in the sample size for a particular year reflects missing values for the indices of EPL governing temporary and permanent workers for Australia and Japan, as described in note 11.

ANNEX 5.A

Sources, definitions and methods of data collection on job gains and job losses

The data used in this chapter are drawn from national, primarily administrative, sources that differ not only in their methods of collection, but also in their employment coverage and sectoral classification. The analysis involves cross-section comparisons of employment stocks which are longitudinally linked at the level of establishment/firm. It is important to note that most administrative sources do not distinguish between job slots and the individuals filling those slots.

Because coverage differs across data sources, an attempt was made to "standardize" as much as possible. Thus, the analysis is limited to dependent employees in the private sector, excluding public administration and establishments providing non-market services. Self-employed individuals and domestic workers are also excluded. In addition, the primary sector, except for mining and quarrying, was excluded. The exclusion of non-market services presented difficulties. Public sector institutions in ISIC (International Standard Industrial Classification) 931 (education services), ISIC 333 (medical, dental and other health and veterinary services) and ISIC 934 (welfare institutions) were not included in Denmark, France, Italy, Japan, the United Kingdom (Dun and Bradstreet) and the United States (Dun and Bradstreet). Equivalents of these entire industry groups were excluded in Canada [Longitudinal Employment Analysis Program (LEAP)], Finland, Germany, New Zealand and Sweden because a distinction could not be made between public and private establishments. In data taken from published sources, the public sector can be excluded in the cases of France [Nocke (1994)] and the United Kingdom [Blanchflower and Burgess (1994)]. Data taken from some published sources include some public sector workers: Austria [Hofer and Pichelmann (1995)], Belgium [Leonard and Van Audenrode (1995)], the Netherlands [Broersma and Den Butter (1995)] and the United States [Anderson and Meyer (1994)]. There are minimum establishment or firm size cut-offs in a number of countries: France (data described in this annex), ≥ 20; Ireland, manufacturing, [Keating and Keane (1988/1989)], ≥ 3; Japan [data described in this annex and Genda (1995)], ≥ 5; the Netherlands, manufacturing, [Boersma and Gautier (1994)], ≥ 10; the United Kingdom [Blanchflower and Burgess (1994)], ≥ 25; and the United States, manufacturing, [Longitudinal Research Database (LRD)], ≥ 5.

Comparisons of the status of each establishment between years t and $t + 1$ result in the classification of each establishment and associated employment changes according to openings, closures and – among continuing establishments – expanding, contracting and those with unchanged employment. An opening is recorded when the first dependent employee is hired, while a closing establishment is one that has laid off all its dependent employees. Transitions to and from self-employment are counted as openings and closings, respectively. Movements to and from industries included in the sample are also counted as openings and closures. Privatisations are counted as openings. For continuing establishments, gains and losses by establishment size group are distributed according to establishment size at time t. There are many other subtleties which influence opening and closing rates described in the country-specific definitions, below. Countries described in this annex are: Canada (Census of Manufactures), Denmark, Finland, France, Italy, Japan and the United States [Longitudinal Research Database (LRD)]. Data are also published in OECD (1994*a*), and readers should refer to Annex 3.A for descriptions of data used for the following countries: Canada (LEAP), France (Chart 5.1), Germany, New Zealand, Norway [see also Salvanes (1996)], Sweden, the United Kingdom (Dun and Bradstreet) and the United States (Dun and Bradstreet).

Canada

Data are from the annual Census of Manufactures (CMA) of Statistics Canada and cover the period 1985-1992.

Method: The CMA contains linked data on both enterprises and establishments An establishment is usually equivalent to a factory, plant or mill. As such it excludes head offices or similar activities if they are located separately from the establishment or if they serve more than one establishment. An enterprise is defined as all establishments in the manufacturing sector under common control and is distinct from the legal entity, or ownership unit. Each establishment is identified by a Record Serial Number (RSN) and each enterprise by a unique code (ENT). Matching establishments through the RSN over time allows both establishment and job dynamics to be examined.

Openings/closures: For establishments, they are based on receipt of a new or changed RSN. Apart from new or closed establishments, RSN codes for continuing establishments are reassigned if ownership, name and location all change. Tests adding the requirements that, when a new RSN is given, employment or shipments must also be positive (entry) or zero (exit) in the year prior to or equal to that when the RSN disappeared did not have much effect on the results.

Denmark

Data are from the *Integreret Database for Arbejdsmarkedsforskning* (IDA) (Integrated Database for Labour Market Research) of Danmarks Statistik, based on various administrative sources. The core sources are the Salary Information Register, established by the tax authorities, and the Business Register of Danmarks Statistik. Additional sources include other tax registers, the Central Population Register, the Register for Unemployed Persons and the register-based workplace statistics. The information covers the period 1985-1990 and refers to the last week of the month of November. For this study, all public sector establishments are excluded and data by industry are only available at the one-digit ISIC (Rev. 2) level.

Method: This is a true longitudinal dataset for both individuals and establishments. Data on individuals are linked to establishments each November to determine their employment situation, using the Salary Information Register. Comparison is then made between each November to calculate the categories of job turnover analysed in this chapter. Some adjustments were made in the standard tabulations for Denmark to ensure greater consistency with other countries. This involved distributing all changes included in the category, "Other" (openings and closures within firms), among openings, closures, expansions and contractions and unchanged employment.

Openings/closures: Four criteria are used: ownership, workforce, industry and location. For an establishment to be considered the same from year to year, one of three conditions must be met: *i)* same owner and same industry; *ii)* same owner and same workforce; or *iii)* same workforce and location or industry. "Same workforce" is defined as a situation where at least 30 per cent of the employees are common to the establishment from year to year. This ensures that either workforce or ownership and one additional criterion must change for an establishment to be counted as new.

Finland

The data come from the Business Register of *Tilastokeskus* (Statistics Finland), based on various administrative files from the registers of the tax authorities for enterprise data, supplemented by annual establishment surveys. Industries are classified according to the Finnish system, which is based on ISIC (Rev. 3).

Method: Tax registers contain enterprise data, but not information on establishments. Establishment data are based largely on enterprise surveys which collect information on employment, branch of economic activity, location and information on take-overs. Verification of information included in the tax register is also obtained. Surveys are sent to all new and existing enterprises covering: all multi-establishment enterprises; all single-establishment enterprises employing more than 20 persons; and a portion (on a rotating basis) of remaining enterprises. To be included, firms must operate for at least six months and have a turnover of at least Fmk 45 000 (1991). Employment estimates are annual averages, though in enterprises which are not surveyed, establishment employment is estimated by dividing the wage bill by average industry wages. Among continuing establishments, there is not a separate category for those with unchanged employment.

Measurement of openings/closures: Openings and closures are based upon receipt and termination of, or changes in, an establishment identification number. Apart from newly formed establishments, this occurs if certain criteria are met. Where ownership changes, if either address or detailed industry group changes, this is counted as a new establishment.

France

Data come from an enterprise panel called the "Échantillon Marché et Stratégies d'Entreprises" (MSE). This is based on two sources: "Bénéfices Industriels et Commerciaux" (BIC) and "Système Unifié de Statistiques d'Entreprises" (SUSE), both produced by INSEE. Data in SUSE are based on a combination of two sources: tax declarations from the Direction Générale des Impôts and data from the Enquête Annuelle d'Entreprises (EAE) for firms with more than 20 persons. Combining these sources is possible through use of the Système Informatique pour le Répertoire des Entreprises et des Établissements (SIRENE), developed by INSEE. This is the official register of enterprises and establishments. Data are merged with information on employment taken from the Enquête sur la Structure des Emplois (ESE). Data cover the period 1984-1991. Only establishments with at least 20 employees are included. The data cover most private and semi-public sectors, excluding agriculture and the public service. Public sector institutions in education services, health and medical services and social welfare services are excluded. Industries are classified using the *Nomenclature d'activités et de produits* (NAP) classification system converted into ISIC (one-digit groups).

Method: A sample is drawn from the BIC file in 1986 and data from the combination of BIC and SUSE provide the information on the demography of SIREN units (firms). In 1992, there were approximately 13 000 enterprises in the MSE sample. The ESE provides detailed annual information about employment and its characteristics [annual earnings, occupation (six broad groups) and gender in SIRET units (establishments) with 10 or more individuals which are aggregated to the SIREN (firm) level, though a SIREN code attached to each SIRET unit]. Employment includes part-time workers converted to full-time equivalents based on relative salary costs. Employment estimates are annual averages.

Openings/closures: The data available do not directly provide information on openings and closings. This information is reconstructed based on information on the existence of enterprises in the BIC data. Recording of SIREN units is based on commencement and cessation of activity in the underlying business register. Registration is required for social charges purposes, and data are thought to be fairly accurate. They are divided into "création pure", or new, enterprises and "création reprise" – changes in ownership, merger, incorporation and restructuring, including change in location of head office. In the first, a SIREN unit receives its first registration when its first establishment is opened. Many closures (those that are voluntary) are not always reported, though this is more the case if the firm has

no employees. Officially recorded closures may take two forms: cessation of operation, with the possibility of recommencement; and legal closure (faillite). However, the latter may lead to partial take-over after liquidation or continued operations under judicial control. Administrative data do not permit different types of closure to be distinguished. There are some time lags in recording commencements and cessations of activity.

Italy

The data are from records of the *Istituto Nazionale Previdenza Sociale* (INPS) (National Institute for Social Security), which collects social security contributions from both firms and workers, and administers retirement benefits, various wage supplements and unemployment benefits. The information covers the period 1985-1991. All public sector firms are excluded. Industry data are based on the national classification system at the two-digit level and were converted to ISIC (Rev. 2) for this chapter.

Method: A standard comparison between consecutive annual employment observations on each firm is made to calculate job turnover. Firms temporarily operating without dependent workers are retained in the data file and counted as having no employees. This leads to a more accurate reflection of enterprise turnover than in some other countries.

Openings/closures: New registration of businesses with the INPS are counted as openings. However, legal changes resulting in the formation of new firms, hence the receipt of a new identification number, are also counted. It is not possible, therefore, to differentiate changes in ownership from the opening of a new business. A screening method can be applied in which extraordinary changes in employment, likely associated with purely legal transformations, can be excluded from estimates of job turnover. Such data were used in this chapter, unlike Chapter 3 in the 1994 *Employment Outlook.* Delays in data processing affect the count of business terminations, especially among small firms. To compensate for this, the INPS applies estimated closure probabilities to periods when reported data are absent.

Japan

Data are from the Survey of Employment Trends, conducted by the Ministry of Labour. This survey of 14 000 private sector establishments is based on the Establishment Census of Japan and is conducted twice annually. Only establishments with five or more dependent regular workers are included. Industry data are available using the Standard Industrial Classification of Japan for 44 one- and two-digit groups, though coverage is not complete, with domestic services and education being excluded.

Method: The Survey of Employment Trends is conducted twice annually, in January and June, based on the same sample, which permits the calculation of job turnover through matching individual establishments in consecutive surveys. On the other hand, establishment openings and closures cannot be determined from this statistical source because the permanent nature of the sample – spanning three years for establishments with a dependent workforce of 30 or more – restricts coverage to surviving establishments only. Supplementary data on establishment openings and closures can be obtained from the Establishment Census.

United States

The Longitudinal Research Database (LRD) is a longitudinal one for establishments and enterprises, but not for workers, based on a combination of census and survey data. It is based on data from the quinquennial Census of Manufactures (CM) and the Annual Survey of Manufactures (ASM) of the US Department of Commerce, Bureau of the Census. This sample of the LRD covers the period 1984-1988. It covers only the manufacturing sector and only establishments with at least five employees. Only data on manufacturing establishments are available – data on head offices are excluded. Data are available using the US Standard Industrial Classification (SIC) at the two-digit level.

Method: Data on job creation and loss in the LRD is based on the ASM. This is a probability sample of one-seventh to one-fifth of establishments and approximately 75 per cent of employment from the CM, followed for five years. In census years, it is possible to identify the sample of establishments that would have been in the ASM were it conducted, which provides a continuous series from the ASM. Establishments are added to the ASM annually from the Company Organization Survey (multi-unit companies) and openings (single-unit companies) identified through Employer Identification numbers of the Social Security Administration. There have been two significant changes to the ASM affecting the definition of the sampling unit and sample weights. Establishment level longitudinal data can be generated as each establishment is given a permanent plant number (PPN) which it maintains during its life. Employment levels in each establishment can then be compared across consecutive surveys. Several adjustments are made to the raw data involving: a redefinition of annual employment; imputation of missing data; and adjustment for processing errors. Data are validated using administrative records. Rotation of establishments in the ASM leads to the need to impute employment in the year preceding entry into the sample as well as to distinguish the effects of rotation from actual employment changes. Aggregate data from the LRD do not correspond exactly to the official aggregate ASM/CM published data.

Openings/closures: A series of steps are followed to identify openings and closures. First, establishment identification numbers (PPN) are matched. These remain unchanged through the life of the establishment even if ownership changes. Employment levels in consecutive years are compared which provides preliminary estimates of openings and closures. Coverage Codes (CC) are then compared. The CC variable provides information on why an establishment did or did not appear in a year, *i.e.* whether and how establishment operations have changed. Total employment in previous periods is also compared. This may have an effect somewhat similar to screening establishment changes using continuity of the workforce.

Bibliography

ALOGOSKOUFIS, G., BEAN, C., BERTOLA, G., COHEN, D., DOLADO, J. and SAINT-PAUL, G. (1995*), Unemployment: Choices for Europe*, Monitoring European Integration, No. 5, Centre for Economic Policy Research, London.

AKERLOF, G., ROSE, A. and YELLEN, J. (1988), ''Job Switching and Job Satisfaction in the US Labor Market'', *Brookings Papers on Economic Activity* No. 2, pp. 495-582.

ALBÆK, K. and SØRENSEN, B.E. (1995), ''Worker Flows and Job Flows in Danish Manufacturing, 1980-91'', paper presented at a Conference on the Demand for Labour, Sønderborg, Denmark, June 21-23.

ANDERSON, P.M. and MEYER, B.D. (1994), ''The Extent and Consequences of Job Turnover'', *Brookings Papers on Economic Activity: Microeconomics*, pp. 177-248.

BALDWIN, J. R., DUNNE, T. and HALTIWANGER, J. (1994), ''A Comparison of Job Creation and Destruction in Canada and the United States'', National Bureau of Economic Research, Working Paper No. 4726, May.

BARRY, F., STROBL, E.A. and WALSH, P. (1996), ''Job Creation and Job Destruction in Irish Manufacturing: Some Facts'', paper presented at the meeting of the Irish Economic Association.

BENTOLILA, S. and BERTOLA, G. (1990), ''Firing Costs and Labour Demand; How Bad is Eurosclerosis'', *Review of Economic Studies*, July, pp 381-402.

BERTOLA, G. (1990), ''Job Security, Employment and Wages'', *European Economic Review*, June, pp. 851-886.

BLANCHFLOWER, D. (1996), ''Job Creation and Job Loss: Research Questions Arising from the Use of Establishment Data'', *Job Creation and Loss – Analysis Policy and Data Development,* OECD, Paris.

BLANCHFLOWER, D. and BURGESS, S. (1994), ''Job Creation and Job Destruction in Britain: 1980-1990'', Centre for Economic Policy Research, Discussion Paper No. 912, February, *Industrial and Labor Relations Review* (forthcoming*).*

BOERI, T. (1995*a*), ''Is Job Turnover Countercyclical?'', European University Institute, Working Paper ECO No. 95/12, April.

BOERI, T. (1995*b*), ''On the Job Search and Unemployment Duration'', European University Institute, Working Paper ECO No. 95/38, November.

BORLAND, J. and HOME, R. (1994), ''Establishment-level Employment in Manufacturing: Is Small Really Beautiful?'', *Australian Bulletin of Labour,* No. 2, pp. 110-128.

BRACE, E., ROBSON, G. and GALLAGHER, C. (1993), ''A Preliminary Report on the Growth of UK Companies 1989-1991 and their Contribution to Job Generation'', mimeo prepared for the Department of Trade and Industry.

BROERSMA, L. and DEN BUTTER, F.A.G. (1995), ''A Consistent Set of Time Series Data on Labour Market Flows for the Netherlands'', Vrije Universitat, Research Memorandum 1994-43, Amsterdam, November.

BROERSMA, L. and GAUTIER, P. (1994), ''Job Creation and Job Destruction in the Netherlands'', Tinbergen Institute Discussion Paper TI 95-16.

BUECHTEMANN, C.F. (1993), ''Introduction: Employment Security and Labor Markets'', in Buechtemann, C.F. (ed.), *Employment Security and Labor Market Behaviour*, ILR Press, Ithaca, NY, pp. 3-68.

BURDA, M. and WYPLOSZ, C. (1994), ''Gross Worker and Job Flows in Europe'', *European Economic Review*, No. 6, June, pp 1287-1315.

BURGESS, S.M. (1993), ''A Model of Competition between Employed and Unemployed Job Searchers: An Application to the Unemployment Outflow Rate in Britain'', *Economic Journal,* September, pp. 1190-1204.

BURGESS, S.M. (1994), ''Matching Models and Labour Market Flows'', *European Economic Review*, April, pp. 809-816.

BURGESS, S., LANE, J. and STEVENS, D. (1994), ''Job Flows, Worker Flows and Churning'', Centre for Economic Policy Research, Discussion Paper No. 1125, February.

CHAMBIN, M. and MIHOUBI, F. (1995), ''Le processus de création et de suppression d'emplois dans les établissements de plus de 50 salariés (1985-1994)'', *Premières Synthèses,* No. 117, Novembre, Ministère du Travail, du Dialogue Social et de la Participation, Direction de l'Animation de la Recherche, des Études et des Statistiques.

CONTINI, B. and REVELLI (1990), ''Job Creation and Labor Mobility: the Vacancy Chain Model and Some Empirical Evidence'', in Padoa Schioppa, F. (ed.), *Squilibri e rigidita 'nel mercato del lavoro italiano: rilevanza quantitativa et proposte correttive*, Franco Angeli, Milano.

CONTINI, B., PACELLI, L. and RAPITI, F. (1995), ''La mobilità del lavoro in Italia nella seconda metà degli anni ottanta'', mimeo, Ricerche e Progretti, Torino.

DALY, M., CAMPBELL, M., ROBSON, G. and GALLAGHER, C. (1992), ''Job Creation 1987-89: Preliminary Analysis by Sector'', *Employment Gazette*, August, pp. 387-392.

DAVIS, S.J. and HALTIWANGER, J. (1995), ''Measuring Gross Worker and Job Flows'', National Bureau of Economic Research, Working Paper No. 5133, May.

DAVIS, S.J., HALTIWANGER, J. and SHUH, S. (1995), *Job Creation and Destruction*, Massachusetts Institute of Technology Press, Cambridge, MA.

EMERSON, M. (1988), "Regulation or Deregulation of the Labour Market: Policy Regimes for the Recruitment and Dismissal of Employees in the Industrialised Countries", *European Economic Review*, April, pp. 775-817.

GALLAGHER, C.C., DALY, M.C. and THOMASON, J.C. (1991), "The Growth of UK Companies 1985-87 and their Contribution to Job Generation", *Small Business Economics*, December, pp. 269-286.

GARIBALDI, P. (1995), "Job Flow Dynamics and Firing Restrictions", Centre for Economic Performance, London School of Economics and Political Science, Discussion Paper No. 256, August.

GARIBALDI, P., KONINGS, J. and PISSARIDES, C. (1995), "Gross Job Reallocation and Labour Market Policy: Some Facts", mimeo, Centre for Economic Performance, London School of Economics and Political Science, in Snower, D.J. (ed.*), Unemployment Policy: How Government Should Respond to Unemployment?*, Cambridge University Press, Cambridge.

GENDA, Y. (1995), "Gross Job Creation and Destruction and Labor Mobility in Japan", mimeo, originally presented at the Reports by Special Small Committee for the Conference of Welfare Improvement of Labor in Medium and Small-sized Firms, November, 1994.

GRUBB, D. and WELLS, W. (1993), "Employment Regulation and Patterns of Work in EC Countries", *OECD Economic Studies*, Winter, pp 7-58.

HAMERMESH, D.S., HASSINK, W. and VAN OURS, J.C. (1994), "New Facts about Factor-Demand Dynamics: Employment, Jobs and Workers", National Bureau of Economic Research, Working Paper No. 4625, January.

HODRICK, R. and PRESCOTT, E. (1980), "Post-war US Business Cycles: An Empirical Investigation", Carnegie Mellon University, Discussion Paper No. 451.

HOFER, H. and PICHELMANN, K. (1995), "Verarbeitungsmechanismen von Reallokationsschocks, Arbeitsplatz-Turnover und Arbeitskräftefluktuation in Österreich zu Beginn der neunziger Jahre", Institute for Advanced Studies, Vienna, August.

KEATING, W. and KEANE, T. (1988/89), "Irish Industrial Structure, 1979-1985: A Longitudinal Analysis", *Journal of the Statistical and Social Inquiry Society of Ireland*, Vol 26, Part I, Central Statistics Office.

LAGARDE, S., MAURIN, E. and TORELLI, C. (1994), "Créations et suppressions d'emplois en France. Une étude de la période 1984-1992", *Économie et Prévision*, No. 113-114, pp. 67-88.

LAGARDE, S., MAURIN, E. and TORELLI, C. (1995), "Flows of Workers, Internal Promotions and the Business Cycle: Some Evidence from French Plant Data 1987-1992", INSEE Working Paper F9511, Paris, November.

LEMAITRE, G., PICOT, G. and MURRAY, S. (1992), "Workers on the Move: An Overview of Labour Turnover", *Perspectives on Labour and Income,* Summer, pp. 39-48.

LEONARD, J.S. and VAN AUDENRODE, M. (1993), "Corporatism Run Amok: Job Stability and Industrial Policy in Belgium and the United States", *Economic Policy: A European Forum*, October, pp. 356-400.

LEONARD, J.S. and VAN AUDENRODE, M. (1995), "A Difference of Degree: Unemployment Despite Turnover in the Belgian Labour Market", Université Laval, Département d'Économique, Cahier de recherche No. 9523.

LETH-SØRENSEN, S. (1993), "Jobmobilitet belyst ved hjælp af IDA-datbasen", *Dansk Sociologi*, July, pp. 62-80.

MAVROMARAS, K.G. and RUDOLPH, H. (1995), "Recalls' – Re-employment in the Same Firm", Mitteilungen aus der Arbeitsmarkt- und Berufsforschung, No. 2.

MILLARD, S.P. (1995), "The Cyclical Effects of Labour Market Policy", mimeo, Bank of England, December.

MILLARD, S.P. and MORTENSEN, D.T. (1994), "The Unemployment and Welfare Effects of Labour Market Policy: A Comparison of the US and the UK", Northwestern University, presented at the Centre for Economic Policy Research Conference, "Unemployment Policy: How Should Governments Respond for Unemployment?", Vigo, Spain, September 24-27.

MORTENSEN, D. and PISSARIDES, C. (1994), "Job Creation and Job Destruction in the Theory of Unemployment", *Review of Economic Studies*, July, pp. 397-416.

MULKAY, B. and VAN AUDENRODE, M. (1993), "Création, destruction d'emplois et chômage: le cas de la Belgique", *Économie et Prévision*, No. 108, pp. 19-31.

NOCKE, V. (1994), "Gross Job Creation and Gross Job Destruction: An Empirical Study with French Data", mimeo, Rheinische Friedrich-Wilhelms-Universität, Bonn.

OECD (1984), *Employment Outlook*, Paris, September.

OECD (1986), *Flexibility in the Labour Market: the Current Debate*, Paris.

OECD (1991), *Employment Outlook*, Paris, July.

OECD (1993), *Employment Outlook*, Paris, July.

OECD (1994*a*), *Employment Outlook*, Paris, July.

OECD (1994*b*), *The OECD Jobs Study: Evidence and Explanations, Part II: The Adjustment Potential of the Labour Market*, Paris, December.

OECD (1995), *Employment Outlook*, Paris, July.

PICOT, G. and PYPER, W. (1993), "Permanent Layoffs and Displaced Workers: Cylical Sensitivity, Concentration, and Experience Following the Layoff", Statistics Canada, Analytic Studies Branch, Research Paper, No. 55.

REVELLI, R. (1996), "Statistics on Job Creation: Issues in the Use of Administrative Data", *Job Creation and Loss – Analysis Policy and Data Development,* OECD, Paris.

SALVANES, K.G. (1996), *Job Creation and Job Destruction in Norway 1976-1992*, Norwegian Ministries of Finance, Local Government and Labour, and Industry and Energy, Oslo.

SCHETTKAT, R. (1992), *The Labor Market Dynamics of Economic Restructuring: The United States and Germany in Transition*, Praeger Publishers, New York.

SCHETTKAT, R. (1994), ''Labour Market Dynamics in Germany'', paper presented at the Conference on the Flow Analysis of Labour Markets, Wissenschaftszentrum Berlin für Sozialforschung, Berlin, December 1-3.

SMITH, E. (1988), ''Vacancies and Recruitment in Great Britain'', *Employment Gazette*, April, pp. 211-213.

Statistical Annex

Sources and definitions

An important source for the statistics in these tables is Part II of OECD, *Labour Force Statistics, 1974-1994*. Changes between 1994 and 1995 have been estimated from several other sources: OECD, *Quarterly Labour Force Statistics*, No. 2, 1996; projections published in OECD *Economic Outlook*, No. 59; and data specially supplied by national authorities (see sources and notes of the tables).

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

Note on statistical treatment of Germany

In this publication, data up to end-1990 are for western Germany only; unless otherwise indicated, they are for the whole of Germany from 1991 onwards. In tables showing percentage changes from the previous year, data refer to the whole of Germany from 1992 onwards.

Table A. **Employment/population ratios** [a] **by sex**

Percentages

	Total						
	1973	1979	1983	1990	1993	1994	1995
Australia	68.5	65.2	62.5	69.3	65.8	67.0	69.0
Austria	64.4	63.6	62.9	65.5	66.3	69.1	68.7
Belgium	60.7	58.1	54.6	57.1	55.8	55.0	55.7
Canada	63.1	68.0	66.4	73.7	66.7	67.5	67.7
Czech Republic	..	..	..	..	72.4	72.6	72.3
Denmark	75.2	75.1	71.7	77.1	73.8	72.8	73.4
Finland	70.0	71.1	73.2	74.1	60.8	60.1	61.3
France	65.9	64.4	60.8	60.6	59.0	59.0	59.5
Germany	68.7	66.2	62.2	64.8	66.0	65.5	65.1
Greece	55.9	54.4	55.2	55.0	53.2	53.9	54.2
Iceland	71.0	72.8	76.5	76.8	80.6	80.6	81.0
Ireland	59.9	57.9	53.9	52.4	52.6	53.9	55.0
Italy	55.1	55.6	54.5	55.7	52.6	52.3	52.1
Japan	70.8	70.3	71.1	72.6	74.2	74.2	74.1
Luxembourg	64.8	64.0	62.3	60.6	61.4	60.8	59.0
Mexico	..	..	..	..	62.2	62.9	62.4
Netherlands	56.3	53.4	52.1	61.7	63.4	63.7	64.3
New Zealand	64.4	65.1	61.6	67.5	66.3	68.4	70.5
Norway	67.7	74.2	73.9	73.9	71.9	72.7	74.0
Portugal	62.4	67.6	65.8	72.0	67.2	66.5	65.7
Spain	61.0	52.8	47.1	49.9	45.7	45.0	45.9
Sweden	73.6	78.8	78.5	80.9	71.2	70.2	71.1
Switzerland	77.7	73.6	73.8	77.6	80.2	79.6	79.2
Turkey	69.2	65.2	59.9	55.6	53.3	53.2	54.1
United Kingdom	71.4	70.8	64.3	71.8	67.1	67.4	67.8
United States	65.1	68.0	66.3	73.0	71.6	73.2	73.5
North America [b]	64.9	68.0	66.3	73.0	69.2	70.5	70.6
European Union	64.4	62.7	59.3	62.3	60.2	60.0	60.2
OECD Europe [b]	65.1	63.3	59.7	61.8	60.0	59.8	60.1
Total OECD [b]	66.0	65.9	63.7	67.3	65.5	66.0	66.2

	Men							Women						
	1973	1979	1983	1990	1993	1994	1995	1973	1979	1983	1990	1993	1994	1995
Australia	89.9	83.5	77.5	80.3	75.3	76.5	78.2	46.4	46.5	47.0	58.0	56.1	57.3	59.6
Austria	82.4	80.4	79.4	77.7	76.3	78.4	..	47.7	47.6	47.1	53.5	56.0	59.6	..
Belgium	81.6	75.8	69.2	68.4	65.3	64.2	64.8	39.9	40.4	39.8	45.7	46.2	45.7	46.4
Canada	81.9	83.5	77.8	82.3	72.7	73.7	73.9	44.1	52.4	55.0	65.1	60.5	61.1	61.4
Czech Republic	..	..	..	..	78.1	78.2	78.1	..	..	..	..	66.7	67.0	66.5
Denmark	89.0	85.9	78.3	82.7	77.9	78.2	..	61.2	64.1	65.0	71.4	69.6	67.2	..
Finland	78.1	77.0	77.4	77.4	62.5	62.0	64.1	62.3	65.2	69.0	70.8	59.0	58.2	58.5
France	83.8	79.2	73.4	70.3	67.1	67.0	67.7	47.9	49.5	48.3	50.9	50.9	50.9	51.6
Germany	88.8	82.8	76.6	76.1	75.8	75.0	74.6	49.7	49.9	47.8	53.2	55.9	55.6	55.3
Greece	81.8	78.0	75.3	71.7	69.3	69.8	69.3	31.2	31.7	35.6	38.5	37.1	38.0	38.7
Ireland	86.5	82.2	73.8	69.5	66.3	66.7	..	32.8	33.0	33.6	35.0	38.8	39.9	..
Italy	81.6	78.6	75.7	73.7	68.6	68.6	..	29.9	33.6	34.2	37.9	36.7	36.2	..
Japan	88.8	87.3	86.7	86.1	88.1	88.0	87.9	53.4	53.6	55.7	59.1	60.2	60.3	60.2
Luxembourg	93.1	88.5	84.0	76.8	76.6	74.9	74.4	35.9	39.4	40.9	43.9	45.0	45.5	42.5
Mexico	..	..	..	..	88.8	89.1	87.9	..	..	..	..	37.3	38.2	38.4
Netherlands	83.5	75.2	69.1	75.5	74.7	74.3	74.5	28.6	31.2	34.7	47.4	51.7	52.7	53.4
New Zealand	89.1	85.7	80.3	76.7	75.0	76.8	79.3	39.1	44.0	42.8	58.3	57.6	59.9	61.7
Norway	85.6	87.8	84.4	79.8	76.6	77.4	78.7	49.3	60.2	63.0	67.8	67.1	67.9	69.1
Portugal	99.2	86.6	82.8	86.1	77.0	76.1	74.9	30.5	49.9	49.8	58.8	57.9	57.2	56.8
Spain	90.5	76.6	67.9	68.4	60.8	59.6	60.4	32.5	29.5	26.5	31.4	30.6	30.4	31.4
Sweden	86.2	86.3	83.0	83.0	71.7	71.0	72.4	60.8	71.1	73.9	78.8	70.8	69.4	69.8
Switzerland	100.0	94.4	92.7	95.7	95.9	94.4	95.0	54.1	52.8	54.7	59.3	64.4	64.5	64.3
United Kingdom	90.3	85.6	75.9	80.3	72.4	72.5	73.0	52.7	56.1	52.6	63.4	61.8	62.2	62.6
United States	82.8	81.4	76.5	81.2	78.8	80.1	80.3	48.0	54.9	56.2	64.9	64.5	66.3	66.7
North America [b]	82.7	81.6	76.7	81.3	80.4	81.5	81.4	47.7	54.7	56.1	64.9	58.3	59.8	60.0
European Union	86.5	80.7	74.7	74.8	70.4	70.1	..	43.0	45.0	44.0	49.7	49.8	49.7	..
OECD Europe [b]	86.7	81.1	75.2	75.4	71.6	71.3	..	43.2	45.3	44.4	48.1	48.3	48.2	..
Total OECD [b]	85.8	82.4	77.6	79.1	77.2	77.5	..	46.4	49.9	50.3	55.6	53.9	54.4	..

a) Defined as total employment divided by the working age population (15-64).
b) Above countries only.
Sources: OECD, *Labour Force Statistics, 1974-1994,* Part II, forthcoming; and *Quarterly Labour Force Statistics.*

Table B. **Unemployment, labour force participation rates and employment/population ratios by age and sex**
Both sexes

Percentages

		1979			1983			1990			1994			1995		
		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	12.2	3.7	2.9	17.9	7.3	3.5	13.2	5.1	5.6	16.2	7.2	8.8	14.4	6.4	8.9
	Labour force participation rates	68.7	73.2	44.3	69.1	74.0	40.9	70.4	79.9	44.1	68.4	79.4	43.7	69.7	80.4	44.9
	Employment/population ratios	60.3	70.5	43.0	56.7	68.5	39.5	61.1	75.8	41.7	57.3	73.6	39.9	59.7	75.3	40.8
Austria	Unemployment rates	..	..	..	..	..	..	..	..	..	5.0	3.5	3.7	5.9	4.1	3.9
	Labour force participation rates	..	..	..	..	..	..	..	..	..	59.5	79.5	28.4	61.7	83.3	30.2
	Employment/population ratios	..	..	..	..	..	..	..	..	..	56.5	76.7	27.4	58.1	79.9	29.0
Belgium	Unemployment rates	..	..	..	23.9	9.5	5.4	14.5	6.5	3.5	21.8	8.4	4.9	21.5	8.3	4.0
	Labour force participation rates	..	..	..	43.9	74.4	30.6	35.5	76.7	22.2	35.2	79.9	23.5	33.9	80.4	24.2
	Employment/population ratios	..	..	..	33.4	67.3	29.0	30.4	71.7	21.4	27.5	73.1	22.4	26.6	73.8	23.3
Canada	Unemployment rates	12.8	5.7	4.6	19.7	9.8	8.1	12.7	7.3	6.0	16.5	9.3	9.0	15.6	8.4	8.2
	Labour force participation rates	66.7	76.8	54.2	66.7	79.7	52.1	69.2	84.5	50.0	62.9	83.6	48.7	62.2	83.4	47.4
	Employment/population ratios	58.2	72.5	51.7	53.6	71.9	47.9	60.4	78.4	47.0	52.5	75.8	44.3	52.5	76.4	43.6
Czech Republic	Unemployment rates	..	..	..	..	..	..	..	..	..	7.7	3.0	3.0	6.8	3.0	2.8
	Labour force participation rates	..	..	..	..	..	..	..	..	..	54.0	91.8	33.1	51.8	91.4	35.5
	Employment/population ratios	..	..	..	..	..	..	..	..	..	49.9	89.1	32.1	48.3	88.7	34.5
Denmark	Unemployment rates	..	..	..	18.9	8.0	6.2	11.5	7.9	6.1	10.2	7.8	6.5	9.9	6.2	8.0
	Labour force participation rates	..	..	..	65.3	89.2	54.0	73.5	91.2	57.1	69.1	87.2	53.7	73.2	87.1	53.6
	Employment/population ratios	..	..	..	52.9	82.0	50.6	65.0	84.0	53.6	62.1	80.5	50.2	65.9	81.7	49.3
Finland	Unemployment rates	10.8	4.9	4.5	10.5	4.3	6.1	6.4	2.9	3.3	30.9	16.0	23.3	27.2	14.9	24.1
	Labour force participation rates	58.5	86.8	47.7	57.1	89.7	50.4	58.1	89.5	42.4	44.6	87.8	42.9	44.9	88.2	44.4
	Employment/population ratios	52.1	82.6	45.6	51.1	85.9	47.3	54.4	86.9	41.0	30.9	73.8	32.9	32.7	75.1	33.7
France	Unemployment rates	13.5	4.1	4.5	19.7	5.7	6.3	19.1	8.0	6.7	27.5	11.2	7.0	25.9	10.5	7.2
	Labour force participation rates	48.4	79.7	53.7	45.7	81.6	42.6	36.4	84.1	38.1	30.7	85.9	35.9	29.8	86.0	36.1
	Employment/population ratios	41.8	76.5	51.3	36.7	76.9	39.9	29.5	77.4	35.6	22.3	76.2	33.4	22.0	77.0	33.5
Germany	Unemployment rates	4.0	2.7	5.7	11.0	6.9	8.9	5.6	5.7	11.6	8.3	8.0	11.6	8.5	7.7	11.6
	Labour force participation rates	60.0	75.4	44.0	58.0	76.7	41.8	59.8	78.0	41.6	56.3	83.4	40.7	52.5	83.3	42.8
	Employment/population ratios	57.6	73.4	41.5	51.6	71.4	38.1	56.4	73.6	36.8	51.6	76.7	35.9	48.0	76.9	37.8
Greece	Unemployment rates	..	..	..	23.1	6.1	2.6	23.3	5.1	1.6	27.7	7.0	3.1	27.9	7.3	3.4
	Labour force participation rates	..	..	..	42.7	68.7	47.5	39.4	72.2	41.5	36.9	73.7	40.7	36.7	74.2	41.9
	Employment/population ratios	..	..	..	32.9	64.5	46.3	30.3	68.5	40.8	26.7	68.6	39.5	26.5	68.8	40.5
Iceland	Unemployment rates	..	..	..	..	..	..	..	..	..	..	..	..	12.2	4.1	3.1
	Labour force participation rates	..	..	..	..	..	..	..	..	..	..	..	..	70.3	91.5	88.0
	Employment/population ratios	..	..	..	..	..	..	..	..	..	..	..	..	61.8	87.8	85.2
Ireland	Unemployment rates	9.2	6.1	6.1	20.1	12.5	10.2	17.6	12.4	8.4	23.0	13.2	8.4	..	..	..
	Labour force participation rates	61.7	61.9	48.6	58.6	64.7	48.4	50.4	68.7	42.2	46.4	72.4	43.0	..	..	..
	Employment/population ratios	56.0	58.1	45.6	46.9	56.6	43.5	41.5	60.2	38.6	35.7	62.8	39.4	..	..	..
Italy	Unemployment rates	25.6	3.5	3.3	30.5	4.5	2.9	31.5	7.3	1.8	32.4	8.1	2.2	32.8	8.9	4.3
	Labour force participation rates	44.3	65.5	23.3	44.6	67.0	22.9	43.5	70.0	22.3	38.5	67.8	19.2	38.8	71.6	28.3
	Employment/population ratios	33.0	63.2	22.6	31.0	64.0	22.3	29.8	64.9	21.9	26.0	62.3	18.8	26.1	65.2	27.0
Japan	Unemployment rates	3.4	1.7	3.1	4.5	2.2	3.9	4.3	1.6	2.7	5.5	2.4	3.5	6.1	2.6	3.7
	Labour force participation rates	44.1	76.7	62.9	44.2	78.3	63.7	44.1	80.9	64.7	47.6	81.4	66.1	47.6	81.4	66.2
	Employment/population ratios	42.6	75.4	61.0	42.2	76.6	61.3	42.2	79.6	62.9	45.0	79.5	63.7	44.7	79.3	63.7
Luxembourg	Unemployment rates	..	..	..	6.8	2.4	1.1	3.7	1.4	0.8	7.9	3.0	0.7	7.2	2.5	0.3
	Labour force participation rates	..	..	..	60.2	68.8	25.4	44.7	72.8	28.4	46.5	75.8	23.3	41.2	73.8	24.0
	Employment/population ratios	..	..	..	56.1	67.2	25.1	43.1	71.8	28.2	42.8	73.5	23.2	38.2	71.9	24.0
Mexico	Unemployment rates	..	..	..	..	..	..	..	..	..	7.1	3.3	2.0	9.3	4.4	3.3
	Labour force participation rates	..	..	..	..	..	..	..	..	..	54.1	67.2	53.5	54.1	67.8	52.9
	Employment/population ratios	..	..	..	..	..	..	..	..	..	50.3	65.0	52.4	49.1	64.8	51.2
Netherlands	Unemployment rates	8.1	2.9	3.2	24.9	10.6	13.4	11.1	6.7	3.7	10.2	6.3	3.5	12.8	6.1	3.0
	Labour force participation rates	47.8	64.1	38.6	51.5	67.9	33.3	61.4	76.3	30.8	61.7	78.7	30.0	64.5	79.9	30.3
	Employment/population ratios	43.9	62.3	37.4	38.7	60.7	28.9	54.5	71.2	29.7	55.4	73.7	29.0	56.3	75.0	29.4
New Zealand	Unemployment rates	..	..	..	..	..	..	14.1	6.1	4.6	15.0	6.6	4.8	11.9	5.1	3.3
	Labour force participation rates	..	..	..	..	..	..	67.8	81.2	43.8	66.0	81.5	49.8	67.4	81.7	52.1
	Employment/population ratios	..	..	..	..	..	..	58.3	76.2	41.8	56.1	76.1	47.4	59.4	77.5	50.4
Norway	Unemployment rates	5.6	0.8	0.6	7.7	2.5	1.4	9.5	4.0	2.1	7.4	4.4	2.7	9.4	3.7	2.7
	Labour force participation rates	53.0	79.7	65.1	61.8	84.4	66.4	60.5	85.9	63.1	55.4	85.1	63.3	55.9	85.9	64.8
	Employment/population ratios	50.0	79.0	64.7	57.1	82.3	65.5	54.7	82.5	61.8	51.3	81.4	61.6	50.6	82.8	63.0
Portugal	Unemployment rates	17.8	4.4	0.4	18.3	5.1	2.0	10.2	3.7	2.0	14.1	5.8	3.9	16.0	6.1	4.0
	Labour force participation rates	71.0	73.0	52.7	67.5	78.7	50.2	57.0	80.4	48.5	46.1	83.0	47.8	43.1	83.4	47.4
	Employment/population ratios	58.3	69.8	52.4	55.1	74.7	49.2	51.2	77.4	47.6	39.6	78.2	45.9	36.2	78.3	45.5
Spain	Unemployment rates	19.4	5.5	4.1	37.6	11.5	7.4	32.3	13.1	8.1	42.8	20.9	12.3	42.5	20.0	20.0
	Labour force participation rates	60.5	62.2	48.1	57.6	63.4	44.6	51.2	70.2	40.0	49.1	73.5	36.8	45.1	73.9	73.9
	Employment/population ratios	48.8	58.8	46.2	35.9	56.1	41.3	34.7	61.0	36.8	28.1	58.1	32.3	25.9	59.1	59.1
Sweden	Unemployment rates	5.0	1.4	2.0	8.0	2.4	3.9	3.7	1.2	1.5	16.7	6.9	6.5	15.4	6.6	7.4
	Labour force participation rates	70.8	88.4	66.6	65.4	91.0	68.2	68.5	92.8	70.5	49.7	88.0	66.2	50.0	88.4	66.9
	Employment/population ratios	67.2	87.1	65.3	60.2	88.9	65.5	66.0	91.6	69.4	41.4	81.9	61.9	42.3	82.6	61.9
Switzerland	Unemployment rates	..	..	..	..	..	..	..	..	..	5.6	3.5	4.2	5.5	3.0	3.2
	Labour force participation rates	..	..	..	..	..	..	..	..	..	63.7	86.0	72.0	63.4	86.4	72.3
	Employment/population ratios	..	..	..	..	..	..	..	..	..	60.1	83.0	69.0	59.9	83.8	70.0
Turkey	Unemployment rates	..	..	..	..	..	..	16.0	5.4	3.1	15.7	6.0	2.2	14.9	5.3	2.0
	Labour force participation rates	..	..	..	..	..	..	54.7	65.1	44.1	49.4	63.6	41.6	46.6	64.0	44.2
	Employment/population ratios	..	..	..	..	..	..	45.9	61.6	42.7	41.7	59.8	40.6	39.6	60.6	43.3
United Kingdom	Unemployment rates	..	..	..	..	..	..	10.1	5.8	7.2	16.2	8.3	9.1	15.5	7.4	7.6
	Labour force participation rates	..	..	..	..	..	..	78.0	83.9	53.0	70.2	83.5	52.1	63.7	83.4	51.5
	Employment/population ratios	..	..	..	..	..	..	70.1	79.0	49.2	58.9	76.6	47.4	53.9	77.2	47.6
United States	Unemployment rates	11.8	4.2	2.9	17.2	8.0	5.7	11.2	4.6	3.3	12.5	5.0	4.1	12.1	4.5	3.6
	Labour force participation rates	68.6	77.9	56.3	67.1	80.1	54.5	67.3	83.5	55.9	66.4	83.4	56.8	66.3	83.5	57.2
	Employment/population ratios	60.6	74.6	54.6	55.6	73.7	51.4	59.8	79.7	54.0	58.1	79.2	54.4	58.3	79.7	55.1

Source: OECD, *Labour Force Statistics, 1974-1994*, Part III, forthcoming.

Table B. **Unemployment, labour force participation rates and employment/population ratios by age and sex** *(cont.)*
Men

Percentages

		1979			1983			1990			1994			1995		
		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	11.0	2.9	3.1	19.5	7.3	3.8	13.9	4.9	6.5	16.7	7.5	10.5	14.8	6.9	11.2
	Labour force participation rates	75.3	94.5	69.5	74.1	94.0	62.0	73.0	93.1	63.2	70.7	91.4	60.7	71.8	91.6	60.9
	Employment/population ratios	67.0	91.7	67.4	59.7	87.1	59.6	62.8	88.5	59.1	58.9	84.5	54.4	61.1	85.4	54.1
Austria	Unemployment rates	..	..	..	..	..	..	..	..	..	4.7	3.1	4.1	5.7	3.6	4.4
	Labour force participation rates	..	..	..	..	..	..	..	..	..	62.6	89.6	39.7	64.6	93.2	42.6
	Employment/population ratios	..	..	..	..	..	..	..	..	..	59.7	86.8	38.0	60.9	89.8	40.8
Belgium	Unemployment rates	..	..	..	19.3	6.2	5.8	10.1	4.0	3.1	20.5	6.4	4.5	19.7	6.2	3.8
	Labour force participation rates	..	..	..	46.0	94.4	50.6	37.0	92.2	35.4	37.3	92.1	34.5	36.0	92.3	35.9
	Employment/population ratios	..	..	..	37.1	88.5	47.7	33.3	88.5	34.3	29.7	86.2	33.0	28.9	86.5	34.5
Canada	Unemployment rates	13.1	4.7	4.5	22.2	9.7	8.2	13.9	7.1	6.2	18.5	9.5	9.5	17.0	8.6	8.3
	Labour force participation rates	71.7	94.9	76.3	69.8	93.7	72.4	71.4	93.3	64.9	65.2	91.4	60.3	63.9	91.0	58.9
	Employment/population ratios	62.3	90.4	72.9	54.3	84.6	66.4	61.5	86.6	60.9	53.2	82.7	54.6	53.1	83.2	54.0
Czech Republic	Unemployment rates	..	..	..	..	..	..	..	..	..	7.8	2.3	2.8	6.9	2.4	2.4
	Labour force participation rates	..	..	..	..	..	..	..	..	..	56.3	95.2	48.5	54.4	95.2	51.9
	Employment/population ratios	..	..	..	..	..	..	..	..	..	51.9	93.1	47.2	50.7	92.9	50.6
Denmark	Unemployment rates	..	..	..	18.1	7.6	6.2	11.4	7.5	5.2	10.2	6.7	6.3	7.8	5.0	6.9
	Labour force participation rates	..	..	..	68.3	94.2	67.2	76.5	94.5	69.2	72.1	91.9	63.8	77.0	91.8	67.9
	Employment/population ratios	..	..	..	55.9	87.1	63.1	67.8	87.4	65.6	64.8	85.7	59.8	71.0	87.3	63.2
Finland	Unemployment rates	11.1	5.4	3.6	10.3	4.6	5.1	7.3	3.4	2.8	31.4	17.4	24.3	26.5	15.1	25.4
	Labour force participation rates	63.9	92.3	56.3	61.0	93.5	54.1	61.9	92.8	45.4	49.2	90.9	45.3	50.3	91.1	46.0
	Employment/population ratios	56.8	87.3	54.3	54.7	89.2	51.4	57.4	89.7	44.2	33.7	75.1	34.3	37.0	77.3	34.3
France	Unemployment rates	9.3	3.2	4.1	15.0	4.4	6.0	15.3	5.9	6.0	24.2	9.7	7.3	21.0	8.8	7.7
	Labour force participation rates	52.5	96.3	69.9	50.3	96.1	53.6	39.6	95.4	45.8	33.5	95.1	42.1	32.8	94.9	41.5
	Employment/population ratios	47.6	93.3	67.0	42.8	91.9	50.4	33.6	89.8	43.0	25.4	85.9	39.1	25.9	86.6	38.4
Germany	Unemployment rates	2.9	2.0	5.5	10.4	6.3	9.0	5.3	4.7	9.9	8.3	6.6	10.7	8.7	6.3	10.4
	Labour force participation rates	62.7	94.9	66.9	61.0	94.3	63.1	62.0	91.2	57.7	59.0	93.3	53.3	54.6	93.1	54.5
	Employment/population ratios	60.9	93.0	63.2	54.6	88.4	57.4	58.7	86.9	52.0	54.1	87.1	47.6	49.8	87.3	48.8
Greece	Unemployment rates	..	..	..	17.1	4.8	2.9	15.1	3.2	1.8	19.8	4.8	3.3	19.4	5.1	3.6
	Labour force participation rates	..	..	..	50.4	95.1	70.8	44.1	94.3	59.5	41.8	94.5	60.1	41.3	94.5	61.1
	Employment/population ratios	..	..	..	41.8	90.5	68.8	37.4	91.3	58.4	33.5	90.0	58.1	33.3	89.7	58.9
Iceland	Unemployment rates	..	..	..	..	..	..	..	..	..	..	..	..	14.1	3.9	3.9
	Labour force participation rates	..	..	..	..	..	..	..	..	..	..	..	..	72.1	96.3	93.2
	Employment/population ratios	..	..	..	..	..	..	..	..	..	..	..	..	61.9	92.5	89.6
Ireland	Unemployment rates	10.0	6.6	6.5	22.9	14.0	11.2	18.9	11.8	8.5	25.1	13.3	8.5	..	..	..
	Labour force participation rates	68.9	95.0	77.9	64.2	95.6	78.0	53.4	91.9	65.1	49.3	91.5	65.2	..	..	..
	Employment/population ratios	62.0	88.8	72.8	49.5	82.2	69.2	43.3	81.1	59.6	36.9	79.4	59.6	..	..	..
Italy	Unemployment rates	21.3	1.9	2.0	25.5	2.7	1.9	26.2	4.5	1.6	29.1	6.0	2.2	29.0	6.7	4.1
	Labour force participation rates	48.7	93.3	37.6	48.9	92.5	36.8	46.1	90.9	36.0	42.3	87.0	31.4	43.8	89.5	44.1
	Employment/population ratios	38.3	91.5	36.8	36.4	90.1	36.1	34.0	86.8	35.4	30.0	81.8	30.7	31.1	83.5	42.3
Japan	Unemployment rates	3.6	1.6	4.4	4.6	2.0	5.0	4.5	1.4	3.4	5.6	2.0	4.5	6.1	2.2	4.7
	Labour force participation rates	43.9	97.2	85.2	43.9	97.1	84.7	43.4	97.5	83.3	48.0	97.5	85.0	48.0	97.5	84.8
	Employment/population ratios	42.3	95.7	81.5	41.9	95.2	80.5	41.4	96.2	80.4	45.4	95.5	81.2	45.1	95.3	80.8
Luxembourg	Unemployment rates	..	..	..	5.6	1.7	0.0	2.7	1.1	1.1	8.5	2.5	0.4	6.7	1.7	0.0
	Labour force participation rates	..	..	..	62.7	95.4	37.8	45.7	95.1	43.2	47.9	94.9	33.6	42.4	93.9	35.1
	Employment/population ratios	..	..	..	59.2	93.7	37.8	44.5	94.0	42.7	43.8	92.6	33.5	39.6	92.2	35.1
Mexico	Unemployment rates	..	..	..	..	..	..	..	..	..	6.5	3.2	2.1	8.6	4.6	3.5
	Labour force participation rates	..	..	..	..	..	..	..	..	..	72.6	96.1	82.4	72.5	96.2	80.7
	Employment/population ratios	..	..	..	..	..	..	..	..	..	67.9	93.0	80.7	66.3	91.8	77.9
Netherlands	Unemployment rates	7.3	2.9	3.3	26.6	11.6	14.9	10.0	8.5	3.2	10.9	5.2	2.7	12.0	5.0	2.6
	Labour force participation rates	49.2	93.0	65.3	52.3	92.2	54.2	61.8	93.4	45.7	62.6	92.3	41.8	65.5	92.8	42.3
	Employment/population ratios	45.6	90.3	63.2	38.4	81.5	46.1	55.6	85.5	44.2	55.8	87.5	40.7	57.7	88.2	41.1
New Zealand	Unemployment rates	..	..	..	..	..	..	14.9	6.6	4.9	15.6	7.0	5.5	12.0	5.1	3.6
	Labour force participation rates	..	..	..	..	..	..	71.4	93.4	56.8	69.8	92.3	62.9	71.4	92.1	65.4
	Employment/population ratios	..	..	..	..	..	..	60.8	87.3	54.0	58.9	85.9	59.5	62.8	87.4	63.0
Norway	Unemployment rates	5.7	.6	1.0	7.2	2.4	1.7	10.4	4.2	3.0	11.2	4.7	3.4	9.2	4.0	3.2
	Labour force participation rates	53.9	92.8	82.0	66.9	95.1	80.3	63.9	92.3	72.8	57.8	90.6	71.5	58.0	91.2	72.3
	Employment/population ratios	50.8	92.2	81.1	62.1	92.8	78.9	57.3	88.4	70.7	51.3	86.3	69.1	52.6	87.6	70.0
Portugal	Unemployment rates	10.2	2.4	0.3	13.2	2.6	1.9	7.8	2.1	2.2	12.1	4.8	4.9	15.1	5.3	4.9
	Labour force participation rates	78.3	95.0	75.6	70.7	94.5	70.4	61.1	94.0	66.9	50.8	93.6	63.5	47.2	93.6	61.9
	Employment/population ratios	70.3	92.8	75.4	61.4	92.0	69.0	56.4	92.0	65.4	44.7	89.1	60.5	40.1	88.6	58.9
Spain	Unemployment rates	17.7	5.7	5.0	33.7	11.5	8.8	26.2	9.3	8.4	37.4	16.4	13.3	37.0	15.3	12.6
	Labour force participation rates	70.8	95.6	77.6	68.3	94.5	71.5	54.6	94.1	62.4	54.7	92.9	56.1	47.7	92.5	54.9
	Employment/population ratios	58.3	90.1	73.8	45.2	83.6	65.2	40.3	85.4	57.2	34.3	77.6	48.6	30.1	78.3	48.0
Sweden	Unemployment rates	4.7	1.3	1.8	7.8	2.3	4.0	3.8	1.3	1.3	19.0	7.8	7.8	16.7	7.2	8.5
	Labour force participation rates	71.8	95.3	79.2	65.7	95.0	77.0	68.7	94.7	75.3	49.4	89.8	69.9	50.1	90.6	70.4
	Employment/population ratios	68.4	94.2	77.8	60.6	92.8	73.9	66.1	93.5	74.4	40.0	82.8	64.5	41.8	84.0	64.4
Switzerland	Unemployment rates	..	..	..	..	..	..	..	..	..	5.4	3.0	4.7	5.7	2.2	3.9
	Labour force participation rates	..	..	..	..	..	..	..	..	..	62.7	97.6	82.1	64.7	97.6	82.3
	Employment/population ratios	..	..	..	..	..	..	..	..	..	59.3	94.7	78.2	61.0	95.4	79.1
Turkey	Unemployment rates	..	..	..	..	..	..	16.6	5.2	4.0	17.3	6.2	2.9	17.7	5.6	2.8
	Labour force participation rates	..	..	..	..	..	..	71.8	94.2	61.3	64.8	93.4	58.3	60.3	93.2	61.4
	Employment/population ratios	..	..	..	..	..	..	59.9	89.3	58.8	53.5	87.6	56.6	49.6	88.0	59.7
United Kingdom	Unemployment rates	..	..	..	22.4	9.3	10.1	11.1	5.6	8.4	19.1	9.8	11.6	17.9	8.5	10.1
	Labour force participation rates	..	..	..	69.9	95.2	71.5	83.5	94.8	68.1	75.1	93.0	64.1	67.9	92.7	62.5
	Employment/population ratios	..	..	..	54.2	86.3	64.3	74.2	89.5	62.4	60.8	83.9	56.6	55.8	84.8	56.1
United States	Unemployment rates	11.4	3.4	2.7	18.4	8.2	6.1	11.6	4.6	3.8	13.2	4.9	4.4	12.5	4.4	3.6
	Labour force participation rates	75.0	94.4	72.8	72.5	93.8	69.4	71.8	93.4	67.8	70.3	91.7	65.5	70.2	91.6	66.0
	Employment/population ratios	66.5	91.2	70.8	59.2	86.1	65.2	63.5	89.1	65.2	61.0	87.2	62.6	61.5	87.6	63.6

Source: OECD, *Labour Force Statistics, 1974-1994*, Part III, forthcoming.

Table B. **Unemployment, labour force participation rates and employment/population ratios by age and sex** *(cont.)*
Women

Percentages

		1979			1983			1990			1994			1995		
		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	13.6	5.1	2.3	16.1	7.5	2.9	12.4	5.5	3.1	15.7	6.9	4.9	14.0	5.7	4.1
	Labour force participation rates	61.9	51.4	20.3	64.1	53.5	20.5	67.7	66.6	24.9	65.9	67.4	26.5	67.6	69.2	28.6
	Employment/population ratios	53.5	48.8	19.8	53.8	49.5	19.9	59.3	63.0	24.1	55.6	62.7	25.2	58.2	65.2	27.5
Austria	Unemployment rates	..	..	..	..	..	..	..	..	..	5.4	4.0	2.8	6.2	4.8	2.9
	Labour force participation rates	..	..	..	..	..	..	..	..	..	56.2	68.9	18.0	58.9	73.3	18.8
	Employment/population ratios	..	..	..	..	..	..	..	..	..	53.2	66.2	17.5	55.2	69.8	18.3
Belgium	Unemployment rates	..	..	..	28.9	15.3	4.1	19.2	10.3	4.9	23.4	11.2	5.9	23.7	11.1	4.4
	Labour force participation rates	..	..	..	41.8	54.1	12.3	34.1	60.8	9.9	33.0	67.2	13.2	31.7	68.2	13.3
	Employment/population ratios	..	..	..	29.7	45.8	11.8	27.5	54.5	9.4	25.3	59.7	12.4	24.2	60.6	12.7
Canada	Unemployment rates	12.6	7.3	4.9	16.8	9.8	7.8	11.3	7.5	5.6	14.3	9.0	8.4	14.0	8.3	8.0
	Labour force participation rates	61.7	58.5	33.9	63.6	65.6	33.6	67.0	75.7	35.6	60.6	75.7	37.4	60.4	75.9	36.3
	Employment/population ratios	54.0	54.2	32.3	52.9	59.1	30.9	59.4	70.0	33.6	51.9	68.9	34.3	51.9	69.6	33.4
Czech Republic	Unemployment rates	..	..	..	..	..	..	..	..	..	7.6	3.8	3.4	6.6	3.6	3.5
	Labour force participation rates	..	..	..	..	..	..	..	..	..	51.7	88.4	19.7	49.0	87.7	21.2
	Employment/population ratios	..	..	..	..	..	..	..	..	..	47.8	85.0	19.1	45.8	84.5	20.5
Denmark	Unemployment rates	..	..	..	19.7	8.5	6.3	11.6	8.4	7.5	10.2	9.0	6.7	12.3	7.6	9.8
	Labour force participation rates	..	..	..	62.2	84.0	41.7	70.4	87.7	45.8	65.9	82.7	43.1	69.4	82.1	40.1
	Employment/population ratios	..	..	..	49.9	76.8	39.1	62.2	80.3	42.4	59.1	75.2	40.2	60.9	75.9	36.1
Finland	Unemployment rates	10.5	4.3	5.5	10.8	3.9	7.0	5.2	2.3	3.8	30.1	14.5	22.2	28.1	14.6	22.8
	Labour force participation rates	52.8	81.2	41.3	53.0	85.8	47.4	54.1	86.0	39.7	39.8	84.7	40.8	39.3	85.1	42.9
	Employment/population ratios	47.2	77.8	39.0	47.3	82.5	44.1	51.3	84.0	38.2	27.8	72.5	31.7	28.2	72.7	33.1
France	Unemployment rates	18.6	5.5	5.1	25.5	7.7	6.9	23.9	10.7	7.6	31.6	13.1	6.7	32.2	12.6	6.6
	Labour force participation rates	44.2	63.0	39.0	41.0	67.0	32.7	33.1	72.9	31.1	27.8	76.7	30.1	26.7	77.3	30.9
	Employment/population ratios	36.0	59.5	37.0	30.5	61.9	30.4	25.2	65.1	28.8	19.0	66.6	28.1	18.1	67.5	28.9
Germany	Unemployment rates	5.2	3.8	5.9	11.7	8.0	8.6	6.0	7.1	15.2	8.2	10.0	13.4	8.2	9.4	13.7
	Labour force participation rates	57.2	55.4	28.4	54.8	58.3	26.3	57.4	64.1	26.4	53.3	73.1	28.4	50.3	73.2	31.3
	Employment/population ratios	54.2	53.3	26.8	48.4	53.7	24.0	54.0	59.6	22.4	48.9	65.8	24.5	46.2	66.3	27.0
Greece	Unemployment rates	..	..	..	30.1	8.6	1.7	32.6	8.6	1.2	36.9	10.7	2.6	37.7	10.9	2.9
	Labour force participation rates	..	..	..	36.2	43.8	25.7	35.3	51.5	24.3	32.6	53.9	23.0	32.5	55.0	24.5
	Employment/population ratios	..	..	..	25.3	40.1	25.2	23.8	47.1	24.0	20.6	48.1	22.4	20.3	49.0	23.8
Iceland	Unemployment rates	..	..	..	..	..	..	..	..	..	..	..	..	10.0	4.3	2.3
	Labour force participation rates	..	..	..	..	..	..	..	..	..	..	..	..	68.5	86.7	82.9
	Employment/population ratios	..	..	..	..	..	..	..	..	..	..	..	..	61.6	83.0	81.0
Ireland	Unemployment rates	8.1	4.5	4.4	16.6	7.8	6.4	16.1	13.5	8.3	20.5	13.2	8.1	..	..	..
	Labour force participation rates	54.2	27.6	20.1	52.8	32.8	20.2	47.3	45.5	19.9	43.3	53.5	20.9	..	..	..
	Employment/population ratios	49.8	26.3	19.3	44.1	30.3	18.9	39.6	39.3	18.2	34.4	46.4	19.2	..	..	..
Italy	Unemployment rates	30.7	7.1	7.4	36.5	8.3	6.0	37.8	12.2	2.3	36.5	11.7	2.1	37.6	12.6	4.9
	Labour force participation rates	39.9	38.9	10.5	40.3	42.4	10.5	40.8	49.5	10.1	34.6	48.8	8.3	33.8	53.7	13.8
	Employment/population ratios	27.7	36.2	9.7	25.6	38.8	9.9	25.4	43.5	9.9	21.9	43.1	8.2	21.1	47.0	13.1
Japan	Unemployment rates	3.2	1.9	1.2	4.5	2.4	2.1	4.1	2.1	1.4	5.3	2.8	1.9	6.1	3.1	2.1
	Labour force participation rates	44.3	56.2	45.4	44.4	59.5	46.1	44.8	64.2	47.2	47.1	65.3	48.1	47.2	65.2	48.5
	Employment/population ratios	42.9	55.2	44.8	42.5	58.1	45.1	43.0	62.9	46.5	44.6	63.4	47.2	44.4	63.2	47.5
Luxembourg	Unemployment rates	..	..	..	8.0	3.9	3.6	4.7	2.2	0.0	7.2	3.9	1.2	7.8	3.9	1.0
	Labour force participation rates	..	..	..	57.7	40.8	14.7	44.0	49.7	13.8	45.0	55.7	13.4	40.0	52.7	13.3
	Employment/population ratios	..	..	..	53.0	39.2	14.1	42.0	48.6	13.8	41.8	53.5	13.2	36.8	50.6	13.2
Mexico	Unemployment rates	..	..	..	..	..	..	..	..	..	8.3	3.5	1.7	10.8	4.1	2.6
	Labour force participation rates	..	..	..	..	..	..	..	..	..	35.8	41.3	25.8	36.0	42.3	26.9
	Employment/population ratios	..	..	..	..	..	..	..	..	..	32.8	39.8	25.4	32.1	40.6	26.2
Netherlands	Unemployment rates	8.9	2.8	2.7	23.1	8.2	8.2	12.3	20.0	5.0	9.4	7.8	5.2	13.7	7.7	3.7
	Labour force participation rates	46.3	34.0	14.4	50.6	42.4	14.4	60.9	58.5	16.7	60.7	64.5	18.5	63.5	66.4	18.6
	Employment/population ratios	42.2	33.0	14.0	38.9	39.0	13.2	53.4	46.8	15.9	55.0	59.4	17.5	54.8	61.3	17.9
New Zealand	Unemployment rates	..	..	..	..	..	..	13.2	5.4	4.0	14.4	6.1	3.5	11.8	5.1	2.7
	Labour force participation rates	..	..	..	..	..	..	64.3	69.3	30.8	62.2	70.9	36.7	63.4	71.6	38.9
	Employment/population ratios	..	..	..	..	..	..	55.8	65.5	29.5	53.2	66.6	35.4	55.9	68.0	37.9
Norway	Unemployment rates	5.6	1.2	0.0	8.3	2.6	0.8	8.5	3.8	1.0	9.4	3.5	1.9	10.4	2.5	1.3
	Labour force participation rates	52.0	66.0	49.2	56.5	73.2	53.1	56.9	79.2	53.9	53.0	79.4	55.4	53.7	80.4	57.4
	Employment/population ratios	49.1	65.2	49.2	51.8	71.4	52.6	52.1	76.2	53.4	48.0	76.7	54.3	48.1	78.4	56.7
Portugal	Unemployment rates	27.3	7.3	0.7	24.6	8.6	2.2	13.1	5.5	1.8	16.8	7.0	2.3	17.1	7.0	2.6
	Labour force participation rates	63.7	54.8	32.4	63.9	64.3	33.7	52.7	68.0	32.5	41.3	73.4	34.2	38.9	74.1	34.5
	Employment/population ratios	46.3	50.7	32.2	48.2	58.8	33.0	45.8	64.3	32.0	34.4	68.3	33.4	32.3	68.9	33.6
Spain	Unemployment rates	22.0	4.6	1.1	43.7	11.6	2.9	39.7	20.6	7.2	50.1	28.4	9.8	49.1	27.5	11.4
	Labour force participation rates	49.4	30.2	21.9	46.1	33.3	20.3	47.5	46.9	19.5	43.1	54.3	19.3	42.4	55.5	19.9
	Employment/population ratios	38.5	28.9	21.6	25.9	29.4	19.7	28.7	37.2	18.1	21.5	38.9	17.4	21.6	40.2	17.6
Sweden	Unemployment rates	5.3	1.6	2.2	8.3	2.4	3.8	3.7	1.2	1.6	14.3	5.8	5.0	14.0	5.9	6.3
	Labour force participation rates	69.7	81.1	54.5	65.1	87.0	59.7	67.3	90.4	65.3	49.9	86.0	62.5	49.9	86.2	63.4
	Employment/population ratios	66.0	79.8	53.3	59.7	84.9	57.4	64.8	89.4	64.2	42.8	81.0	59.4	42.9	81.1	59.5
Switzerland	Unemployment rates	..	..	..	..	..	..	..	..	..	5.8	4.1	3.3	5.3	4.0	1.9
	Labour force participation rates	..	..	..	..	..	..	..	..	..	64.7	74.3	58.8	62.1	75.0	59.0
	Employment/population ratios	..	..	..	..	..	..	..	..	..	61.0	71.2	56.9	58.8	72.1	57.9
Turkey	Unemployment rates	..	..	..	..	..	..	15.0	5.9	1.0	13.1	5.7	0.4	10.8	4.5	.2
	Labour force participation rates	..	..	..	..	..	..	39.4	36.0	26.6	35.7	33.5	24.3	34.7	34.1	26.7
	Employment/population ratios	..	..	..	..	..	..	33.5	33.9	26.4	31.0	31.6	24.2	30.9	32.5	26.7
United Kingdom	Unemployment rates	..	..	..	..	..	..	9.0	5.9	5.0	12.6	6.4	5.4	12.5	6.1	3.9
	Labour force participation rates	..	..	..	..	..	..	72.4	72.9	38.7	65.1	74.0	40.7	59.3	74.0	40.9
	Employment/population ratios	..	..	..	..	..	..	65.9	68.6	36.7	56.9	69.3	38.5	51.8	69.5	39.3
United States	Unemployment rates	12.2	5.2	3.2	15.8	7.7	5.0	10.7	4.6	2.8	11.6	5.0	3.9	11.6	4.5	3.6
	Labour force participation rates	62.5	62.3	41.7	61.9	67.1	41.5	62.9	74.0	45.2	62.5	75.3	48.9	62.3	75.6	49.2
	Employment/population ratios	54.8	59.0	40.4	52.2	62.0	39.4	56.1	70.6	44.0	55.3	71.5	47.0	55.1	72.2	47.5

Source: OECD, *Labour Force Statistics, 1974-1994*, Part III, forthcoming.

Table C. **Average annual hours actually worked per person in employment**[a]

	1973	1975	1979	1983	1990	1992	1993	1994	1995
Total employment									
Australia	..	..	1 904	1 852	1 869	1 850	1 874	1 879	1 876
Canada	1 867	1 839	1 802	1 731	1 738	1 714	1 718	1 735	1 737
Finland[b]	..	..	..	1 809	1 764	1 768	1 744	1 780	1 775
Finland[c]	1 915	1 899	1 868	1 821	1 764	1 742	1 754	1 771	..
France	1 904	1 865	1 813	1 711	1 668	1 654	1 639	1 635	1 631
Germany	1 868	1 801	1 764	1 733	1 616	1 610	1 582	1 575	1 559
Italy	1 885	1 841	1 788	1 764	..	..	..	..	..
Japan	2 201	2 112	2 126	2 095	2 031	1 965	1 905	1 898	..
Mexico	..	..	..	..	..	..	1 804	..	1 834
New Zealand	..	..	..	..	1 820	1 812	1 844	1 851	1 843
Norway	1 712	1 671	1 516	1 487	1 432	1 437	1 435	1 434	1 424
Portugal	..	..	..	..	..	2 004	2 000	2 009	..
Spain	..	..	1 988	1 911	1 829	1 815	1 806	1 807	1 807
Sweden	1 557	1 516	1 451	1 453	1 480	1 485	1 501	1 532	1 544
Switzerland	..	..	..	..	..	1 637	1 633	1 639	..
United Kingdom	1 929	1 886	1 821	1 719	1 773	1 720	1 715	1 728	1 735
United States	1 924	1 890	1 905	1 882	1 943	1 919	1 946	1 945	1 952
Dependent employment									
Finland[b]	..	..	..	..	1 668	1 672	1 634	1 674	1 673
France	1 771	1 720	1 667	1 558	1 539	1 536	1 521	1 520	1 520
Germany	1 804	1 736	1 699	1 668	1 566	1 557	1 528	1 518	1 499
Italy	1 842	1 799	1 748	1 724	1 694	1 691	1 687	1 682	..
Japan[d]	2 184	2 064	2 114	2 098	2 052	1 972	1 913	1 904	1 909
Japan[e]	..	..	..	..	2 064	1 982	1 920	1 910	1 910
Mexico	..	..	..	..	..	..	1 921	..	1 933
Netherlands	1 724	1 628	1 591	1 530	1 433	1 413	1 404	1 395	1 397
Spain	..	..	1 895	1 821	1 762	1 746	1 734	1 733	1 737
United States	1 896	1 863	1 884	1 866	1 936	1 914	1 939	1 947	1 953

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; total employment figure for 1994 is preliminary.
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: Working estimates compiled by the Australian Bureau of Statistics solely for the purpose of measuring growth rates of hours worked in the context of the National Accounts. Derived from Labour Force Survey data referring to four weeks in the year which are unaffected by major school holidays, with adjustments for the presence of public holidays in those weeks. The estimates therefore exclude the effects of both public holidays and school holidays, and are considered to be (consistently) biased upwards. Data revised.

Canada: New 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.

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: Data supplied by Institut National de la Statistique et des Études Économiques, produced within the framework of the National Accounts. Data for 1992 to 1994 have been revised slightly.

Germany: 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 for education. Data refer to western Germany; some revised slighthy.

Italy: Data for total employment provided by ISTAT, based on a special establishment survey discontinued in the mid 1980s. For dependent employment, data for 1983 to 1994 supplied by Eurostat and from 1960 to 1982 trend in data is taken from the total employment series.

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.

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. For 1988 to 1995 data revised due to major revision of National Accounts; for earlier years, trend in data taken from old series.

Portugal: Data derived from the quarterly Labour Force Survey, whose continuous sample design avoids the need for adjustments for public holidays and other days lost, supplied by Ministério do Emprego e da Segurança Social.

Spain: New series supplied by Instituto Nacional de Estadistica and derived from the quarterly Labour Force Survey. Series break at 1986/87 due to changes in the survey.

Sweden: Series supplied by Statistics Sweden derived from National Accounts data, based on both the Labour Force Survey and establishment surveys. Figures for 1993 to 1994 revised slightly.

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: Figures refer to Great Britain. 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: Data supplied by the Bureau of Labor Statistics, on hours paid for non-farm business employees from the Current Employment Statistics program converted to hours actually worked by means of the annual Hours at Work Survey, and extended to the whole economy by means of the Current Population Survey. Series breaks at 1975/76 and 1989/90 due to changes in population controls and at 1993/94 due to redesigned CPS questionnaire. These data, for average hours per person, differ considerably from those published in previous editions of the *Employment Outlook*, which were based on average hours per job.

Table D. **Civilian employment by sector**

As a per cent of total employment

	Agriculture							Industry						
	1973	1979	1983	1990	1993	1994	1995	1973	1979	1983	1990	1993	1994	1995
Australia	7	7	7	6	5	5	5	36	31	28	25	24	24	23
Austria	16	11	10	8	7	7	..	41	40	39	37	35	33	..
Belgium	4	3	3	3	..	..	..	41	35	31	28	..	..	..
Canada	7	6	5	4	4	4	4	31	29	26	25	22	23	23
Denmark	10	7	7	6	5	5	..	34	33	28	28	26	27	..
Finland	17	14	13	8	9	8	8	36	35	33	31	27	27	28
France	11	9	8	6	5	5	5	40	36	34	30	28	27	27
Germany	7	5	5	4	4	3	3	47	44	41	40	39	38	38
Greece	37	31	30	24	21	21	..	28	30	29	28	24	24	..
Iceland	16	13	12	10	9	9	..	35	35	34	30	25	26	..
Ireland	24	20	17	15	13	..	..	32	32	30	29	28	..	..
Italy	18	15	12	9	7	7	..	39	38	36	32	33	33	..
Japan	13	11	9	7	6	6	6	37	35	35	34	34	34	34
Luxembourg	8	6	5	3	..	..	..	44	38	35	30	..	..	..
Mexico	..	..	..	23	26	26	..	..	..	..	28	22	22	..
Netherlands	6	5	5	5	..	4	..	37	33	28	26	..	23	..
New Zealand	11	11	11	11	11	10	..	36	34	32	25	23	25	..
Norway	11	9	8	6	6	5	5	34	30	27	25	23	23	23
Portugal	27	31	23	18	11	12	11	34	35	35	35	33	33	32
Spain	24	20	19	12	10	10	9	37	37	33	33	31	30	30
Sweden	7	6	5	3	3	3	3	37	33	30	29	25	25	26
Switzerland	8	7	6	6	4	4	4	45	40	36	35	29	29	29
Turkey	60	54	51	48	44	45	..	18	20	21	21	22	22	..
United Kingdom	3	3	3	2	2	2	2	42	39	33	29	26	26	26
United States	4	4	4	3	3	3	3	33	31	28	26	24	24	24
North America[a]	4	4	4	6	7	7	..	33	31	28	26	24	24	..
European Union[a]	12	10	9	6	6	5	..	41	38	35	32	32	31	..
OECD Europe[a]	16	14	13	11	11	10	..	39	36	33	31	28	29	..
Total OECD[a]	12	10	9	8	8	8	..	37	34	32	29	27	28	..

	Services							Total (thousands)						
	1973	1979	1983	1990	1993	1994	1995	1973	1979	1983	1990	1993	1994	1995
Australia	57	62	65	69	71	71	72	5 783	6 079	6 240	7 840	7 645	7 886	8 217
Austria	43	49	51	55	58	60	..	3 010	3 051	3 159	3 412	3 576	3 737	..
Belgium	55	61	65	69	..	..	..	3 656	3 660	3 502	3 725	..	..	..
Canada	63	66	69	71	74	73	73	8 761	10 760	11 107	13 165	13 014	13 291	13 505
Denmark	57	60	64	67	68	68	..	2 385	2 440	2 390	2 638	2 550	2 506	..
Finland	47	52	54	61	64	65	64	2 153	2 246	2 379	2 457	2 030	2 016	2 060
France	49	55	58	64	67	68	69	20 863	21 305	21 167	22 099	21 783	21 770	22 023
Germany	45	50	54	57	58	59	59	26 649	26 120	25 810	27 988	36 026	35 894	35 830
Greece	36	39	41	48	54	56	..	3 191	3 311	3 539	3 720	3 721	3 790	..
Iceland	49	51	54	60	66	65	..	90	103	115	126	137	138	..
Ireland	44	48	53	56	60	..	..	1 057	1 129	1 109	1 115	1 169	..	..
Italy	42	47	51	59	60	60	..	19 006	20 057	20 350	21 215	20 153	19 801	..
Japan	49	54	56	59	60	60	61	52 570	54 810	57 320	62 480	64 480	64 520	64 556
Luxembourg	48	56	60	66	..	..	..	151	156	157	189	..	..	..
Mexico	..	..	..	50	52	52	..	..	..	..	23 403	31 344	32 439	..
Netherlands	58	62	67	69	..	73	..	4 670	4 821	4 950	6 267	..	6 631	..
New Zealand	53	55	57	65	66	65	..	1 143	1 263	1 266	1 481	1 497	1 559	..
Norway	54	61	65	69	71	71	71	1 646	1 862	1 910	1 994	1 971	2 001	2 049
Portugal	39	34	41	48	56	56	56	3 303	3 854	4 128	4 656	4 396	4 371	4 349
Spain	39	43	48	55	59	60	61	12 851	11 902	11 047	12 580	11 826	11 762	12 071
Sweden	56	62	65	68	71	72	71	3 877	4 180	4 225	4 447	3 964	3 927	3 990
Switzerland	48	53	58	60	67	67	67	3 277	3 100	3 257	3 543	3 784	3 772	3 779
Turkey	21	26	28	32	34	33	..	13 908	15 507	16 169	18 363	19 001	19 664	..
United Kingdom	55	59	64	69	72	72	72	24 716	25 078	23 305	26 640	25 043	25 202	25 512
United States	63	65	68	71	73	73	73	85 062	98 821	100 831	117 914	119 305	123 060	124 900
North America[a]	63	65	69	68	69	69	..	93 823	109 581	111 938	154 482	163 663	168 790	..
European Union[a]	47	52	56	61	63	64	..	131 538	133 310	131 217	143 148	136 237	141 407	..
OECD Europe[a]	45	50	53	58	61	61	..	150 459	153 882	152 668	167 174	161 130	166 982	..
Total OECD[a]	52	56	59	62	65	64	..	303 778	325 615	329 432	393 457	398 415	409 737	..

a) Above countries only.

Sources: OECD, *Labour Force Statistics 1974-1994,* Part II, forthcoming; and *Quarterly Labour Force Statistics.*

Table E. **Incidence and composition of part-time employment**

Percentages

	Part-time employment as a proportion of employment											
	Men						Women					
	1973	1979	1983	1993	1994	1995	1973	1979	1983	1993	1994	1995
Australia	3.7	5.2	6.2	10.3	10.9	11.1	28.2	35.2	36.4	42.3	42.6	42.7
Austria	1.4	1.5	1.5	1.7	3.0	4.0	15.6	18.0	20.0	22.8	25.2	26.9
Belgium	1.0	1.0	2.0	2.3	2.5	2.8	10.2	16.5	19.7	28.5	28.3	29.8
Canada	4.7	6.5	8.7	11.0	10.7	10.6	19.4	25.3	28.1	28.8	28.6	28.2
Czech Republic	..	..	..	3.0	3.6	3.1	..	..	..	10.8	10.9	10.8
Denmark	..	5.2	6.6	11.0	10.0	10.4	..	46.3	44.7	37.4	34.4	35.5
Finland	..	3.2	4.5	6.2	6.0	5.7	..	10.6	12.5	11.1	11.2	11.3
France	1.7	2.4	2.5	4.1	4.6	5.0	12.9	17.0	20.1	26.3	27.8	28.9
Germany	1.8	1.5	1.7	2.9	3.2	3.6	24.4	27.6	30.0	32.0	33.1	33.8
Greece	..	..	3.7	2.6	3.1	2.8	..	..	12.1	7.6	8.0	8.4
Iceland	..	..	..	9.9	..	12.4	..	..	..	47.5	..	51.4
Ireland	..	2.1	2.7	4.8	5.1	..	..	13.1	15.5	21.3	21.7	..
Italy	3.7	3.0	2.4	2.5	2.8	2.9	14.0	10.6	9.4	11.0	12.4	12.7
Japan	6.8	7.5	7.3	11.4	11.7	10.1	25.1	27.8	29.8	35.2	35.7	34.9
Luxembourg	1.0	1.0	1.2	1.0	1.3	1.1	18.4	17.1	18.0	18.3	19.5	20.3
Mexico	..	..	..	21.1	20.4	19.4	..	..	..	39.2	40.1	40.6
Netherlands[a]	..	5.5	6.9	15.3	16.1	16.8	..	44.0	50.3	64.5	66.0	67.2
New Zealand	4.6	4.9	5.0	9.7	9.7	9.3	24.6	29.1	31.4	35.7	36.6	36.1
Norway[b]	8.6	10.6	11.5	9.7	9.5	9.4	47.8	51.7	54.9	47.6	46.5	46.6
Portugal	..	2.5	..	4.5	4.7	4.2	..	16.5	..	11.1	12.1	11.6
Spain	..	..	..	2.4	2.6	2.8	..	..	..	14.8	15.2	16.4
Sweden[c]	..	5.4	6.3	9.1	9.7	9.4	..	46.0	45.9	41.4	41.0	40.3
Switzerland	..	..	..	8.6	8.8	8.6	..	..	..	54.1	55.3	54.7
Turkey	..	..	..	19.7	16.2	11.4	..	..	..	41.4	41.2	28.7
United Kingdom	2.3	1.9	3.3	6.6	7.1	7.7	39.1	39.0	42.4	43.9	44.4	44.3
United States[d]	8.6	9.0	10.8	11.0	11.5	11.0	26.8	26.7	28.1	25.5	27.7	27.4
	Part-time employment as a proportion of total employment						Women's share in part-time employment					
	1973	1979	1983	1993	1994	1995	1973	1979	1983	1993	1994	1995
Australia	11.9	15.9	17.5	23.9	24.4	24.8	79.4	78.7	78.0	75.3	74.2	74.4
Austria	6.4	7.6	8.4	10.1	12.1	13.9	85.8	87.8	88.4	89.7	85.3	83.8
Belgium	3.8	6.0	8.1	12.8	12.8	13.6	82.4	88.9	83.9	89.3	88.1	87.5
Canada	9.7	13.8	16.8	19.1	18.8	18.6	68.4	71.0	69.8	68.3	68.8	68.8
Czech Republic	..	..	..	6.4	6.8	6.5	..	..	..	74.0	70.0	73.3
Denmark	..	22.7	23.8	23.3	21.2	21.6	..	86.9	84.7	74.9	74.4	73.3
Finland	..	6.7	8.3	8.6	8.5	8.4	..	74.7	71.7	63.1	63.6	64.7
France	5.9	8.1	9.6	13.7	14.9	15.6	82.3	82.1	84.3	83.3	82.7	82.0
Germany	10.1	11.4	12.6	15.1	15.8	16.3	89.0	91.6	91.9	88.6	88.1	87.4
Greece	..	..	6.5	4.4	4.8	4.8	..	..	61.2	61.6	58.9	62.7
Iceland	..	..	..	27.3	..	30.7	..	..	..	80.4	..	78.6
Ireland	..	5.1	6.7	10.8	11.3	..	..	71.2	71.5	71.7	71.5	..
Italy	6.4	5.3	4.6	5.4	6.2	6.4	58.3	61.4	64.8	70.5	71.1	70.6
Japan	13.9	15.4	16.2	21.1	21.4	20.1	70.0	70.1	72.9	67.7	67.5	70.1
Luxembourg	5.8	5.8	6.7	7.3	8.0	7.9	87.5	87.5	87.6	91.2	89.5	91.0
Mexico	..	..	..	26.7	26.7	26.2	..	..	..	45.8	47.8	50.0
Netherlands[a]	..	16.6	21.2	35.0	36.4	37.4	..	76.4	78.4	73.7	73.8	73.6
New Zealand	11.2	13.9	15.3	21.2	21.6	21.2	72.3	77.7	79.8	74.2	74.9	75.7
Norway[b]	23.0	27.3	29.6	27.1	26.5	26.5	76.4	77.0	77.3	80.6	80.6	80.8
Portugal	..	7.8	..	7.4	8.0	7.5	..	80.4	..	66.3	67.1	69.1
Spain	..	..	..	6.6	6.9	7.5	..	..	..	75.6	74.9	75.7
Sweden[c]	..	23.6	24.8	24.9	24.9	24.3	..	87.5	86.6	81.3	80.1	80.1
Switzerland	..	..	..	28.1	28.8	28.3	..	..	..	82.5	82.7	82.7
Turkey	..	..	..	26.3	23.6	16.6	..	..	..	47.9	51.7	52.3
United Kingdom	16.0	16.4	19.4	23.4	23.8	24.1	90.9	92.8	89.8	84.5	83.6	82.3
United States[d]	15.6	16.4	18.4	17.6	18.9	18.6	66.0	68.0	66.8	66.0	67.3	68.0

a) Break in series after 1985.
b) Break in series after 1987.
c) Break in series after 1986 and after 1992.
d) Break in series after 1993.

Table E. **Incidence and composition of part-time employment, 1973-1995** *(cont.)*

Percentages

Notes: The definition of part-time work varies considerably across OECD countries. Essentially three main approaches can be distinguished: *i)* a classification based on the worker's perception of his/her employment situation; *ii)* a cut-off (generally 30 or 35 hours per week) based on usual working hours, with persons usually working less hours being considered part-timers; *iii)* a comparable cut-off based on actual hours worked during the reference week.

A criterion based on *actual* hours will generally yield a part-time rate higher than one based on usual hours, particularly if there are temporary reductions in working-time as a result of holidays, illness, short-timing, etc. On the other hand, it is not entirely clear whether a classification based on the worker's perception will necessarily yield estimates of part-time work that are higher or lower than one based on a fixed cut-off. In one country (France) which changed from 1981 to 1982 from a definition based on an *actual* hours cut-off (30 hours) to one based on the respondent's perception, the latter criterion appeared to produce slightly higher estimates.

Other factors as well affect the international comparability of the estimates. In some countries, the hours cut-off is based on hours for the main job, in others on total hours for all jobs. Certain countries do not consider unpaid family workers to be employed unless they work more than a minimum number of hours, so that such workers do not enter into counts for part-time workers. The following describes the sources and definitions used for OECD countries, as well as the adjustments made by the Secretariat to ensure historical comparability.

Sources and definitions: Estimates for Belgium, Denmark, Germany, Greece, Ireland, Italy, Luxembourg, Portugal, Spain and the United Kingdom are from the annual European Labour Force Survey and were obtained from *Labour Force Survey, Theme 3, Series C* (Eurostat) and from Commission sources. Due to changes in the new European labour Force Survey introduced by Eurostat in 1992 for European Union countries, data for 1992 and thereafter are not directly comparable with those for previous years. The part-time/full-time delineation is based on the respondent's own classification. Exceptions are *Greece* and *Italy.* For the former, a person is considered to be part-time if working fewer hours than stipulated in collective agreements applicable for the type of job at which the person is working. For *Italy,* a similar criterion is applied, *i.e.,* a person works part-time if, in agreement with the employer, fewer than normal hours are worked in his/her particular type of employment.

Australia: Estimates are from the Labour Force Survey for the month of August (*The Labour Force Australia,* Australian Bureau of Statistics, catalogue No. 6203.0). Part-time workers are those who usually work less than 35 hours a week and who did so during the survey week. Prior to 1969, school teachers who usually worked less than 35 hours per week but who worked the full week during the reference week were considered part-time. They are now assimilated to full-time workers. Estimates prior to 1986 do not include unpaid family workers working less than 15 hours per week. No adjustments have been carried out for these breaks.

Austria: Data are based on averages of quarterly estimates from the *Mikrozensus* (Central Statistical Office of Austria), based on a *usual* hours criterion with a 35 hours cut-off. They are salaried workers and persons in private households only. Up to 1993 persons working less than 11 hours per week are not considered employed in the *Mikrozensus*. From 1994 onwards the international definitions are applied.

Canada: Data are based on averages of monthly estimates from the Labour Force Survey published in *The Labour Force,* Statistics Canada, catalogue No. 71-001. Part-time is defined on the basis of total usual hours for the main job, less than 35 for the years prior to 1975, less than 30 thereafter. Estimates were available for both definitions for 1975, and estimates for years prior to then have been adjusted using a ratio of new-to-old estimates calculated for 1975.

Czech Republic: Data are averages of quarterly estimates from the Labour Force Sample Survey. Part-time work is based upon the respondent perception of his/her main job. Persons in employment but not working for 4 weeks or more are excluded.

Finland: Data are based on averages of monthly estimates from the Labour Force Survey. Part-timers are persons who usually work less than 30 hours at their main job. Persons who did not indicate their working time (approximately 1-2% of the employed sample) have been grouped with full-timers. Unpaid family workers who worked less than one-third of their normal working time are not considered employed.

France: Data are from the annual *Enquête sur l'emploi* conducted in March of each year. Prior to 1975, unpaid family workers working less than 15 hours per week were not considered employed. Up to and including 1981, persons working less than 30 hours during the reference week were classified as part-timers, with the exception of persons without *regular* employment and persons working short-time. From 1982 on, part-time work is defined on the basis of the respondent's perception. No adjustments have been made for these breaks. Full-time employment for *men* excludes conscripts.

Iceland: Data are annual estimates based on the Statistical Bureau's biannual Labour Market Surveys, and were provided by the National Economic Institute. The definition of part-time work differs from that used in the surveys and is based on the number of weekly working hours; full-time employed are persons working 35 or more hours per week.

Japan: Data are based on averages of monthly estimates from the Labour Force Survey and published in the *Annual Report on the Labour Force Survey,* Statistics Bureau. Part-timers are persons who were at work and who worked less than 35 hours during the reference week. Original data show a series break in 1966-1967 as a result of changes in the survey. Estimates prior to 1967 have been chain-linked to those for later years using estimates available for 1967 on both the old- and new-series basis.

Mexico: Data are estimates from the Encuesta Nacional de Empleo (ENE) conducted in 1991 and 1993 by the Secretaría del Trabajo y Previsión Social (STPS) in coordination with the Instituto Nacional de Estadística Geografía e Informática (INEGI). Part-time workers are persons who worked less than 35 *actual* hours during the reference week.

Netherlands: Data are from the annual Labour Force Survey (*Arbeitskrachtentelling,* conducted in odd-numbered years) up to 1985, replaced by the continuous Labour Force Survey (*Enquête Beroepsbevolking*) from 1987 on. Interviews up to 1985 were conducted by local civil servants, and thereafter by a permanent trained interviewing staff. Part-timers are persons in the working population (*i.e.* persons at work, including self-employed and unpaid family workers) with less than 35 usual hours in the main job. The proportion of part-timers recorded by the Labour Force Survey increased substantially in 1987 relative to the 1985 survey. Estimates from the new and old surveys are not considered comparable.

New Zealand: Up to 1985, estimates are from the Quarterly Employment Survey (of establishments) and refer to the month of April up to 1979 and May thereafter. Figures were obtained from the *Labour and Employment Gazette* and from national authorities. The survey covers business establishments employing two or more persons in all industries except agriculture, hunting, fishing, waterfront work, seagoing work, and domestic service in private households. Working proprietors of businesses are considered full-timers. Work schedules of less than 30 hours per week are considered to be part-time. Coverage of total employment is estimated to be about 75 per cent (1988). Estimates of the proportion of part-time workers from this source were approximately 3 per cent lower for men and 6 per cent lower for women in 1988 than estimates from the Labour Force Survey (for which data are available only from 1986 on). From 1986 on, data are based on annual averages of quarterly estimates from the New Zealand Labour Force Survey. Part-time workers are persons who *actually* worked less than 30 hours in the reference week, except for persons who *usually* work 30 hours or more but did not work during the reference week, who are classified as full-timers. From April 1990 on, full-time and part-time status is based on usual hours worked. Persons who *usually* work 30 hours or more in the survey reference week are classified as full-timers, those who *usually* work less than 30 hours in the survey reference week are classified as part-timers. The definition was changed in April 1990 to reduce the seasonality that was occurring whith usual hours worked. National authorities provided figures from 1986 onwards using the new definition. Estimates prior to 1986 have been chain-linked to those for later years using a ratio of new-to-old estimates calculated for 1986.

Norway: Figures are averages of quarterly estimates from the Labour Force Survey and were obtained from *Arbeidsmarked Statistikk,* Statistisk sentralbyrå, and from national authorities. Up to 1988, only data on actual hours were available, and part-time work was defined as work of less than 35 actual hours per week. From the second quarter 1988, data on usual hours are collected. On this basis, part-time work is defined as work of less than 37 usual hours, except for persons working 30 to 36 usual hours who state that their work is full-time. Data prior to 1987 exclude unpaid family workers working less than 10 hours per week. There is a break in series after 1987. Estimates prior to 1989 have been chain-linked to those for later years using a ratio of new-to-old estimates calculated for 1989.

Table E. **Incidence and composition of part-time employment, 1973-1995** *(cont.)*

Percentages

Sweden: Data are based on averages of monthly estimates from the Labour Force Survey and were obtained from *Arbetskrafts Undersökningen* (AKU), Central Bureau of Statistics. Part-timers are persons 16-64 who usually work less than 35 hours per week. Prior to 1975, persons usually working less than 35 hours for economic reasons were classified as full-time. The upper age limit for the survey's working-age population changed from 74 to 64 in 1986. Accordingly, to ensure historical comparability, part-timers in the 65-74 age group have been excluded from the data for years prior to 1986. Due to a revision in the Labour Force Survey in 1987, there is a break in series after 1986.

Switzerland: Data are estimates from the Enquête Suisse de Population Active (ESPA) conducted on the second quarter of each year, and were provided by the Swiss Federal Statistical Office. Part-time work is defined on the basis of the respondent's perception of his/her main job.

Turkey: Data are annual averages from the results of the Household Labour Force Surveys conducted in April and October and were provided by the State Institute of Statistics. Persons working *usually* less than 36 hours during the reference week are classified as part-timers.

United States: Data are based on averages of monthly estimates from the Current Population Survey and were obtained from *Labor Force Statistics Derived from the Current Population Survey, 1948-1987,* Bureau of Labor Statistics, 1988. Persons whose usual working hours for all jobs total less than 35 hours per week are classified as part-time workers. Unpaid family workers working less than 15 hours per week are not considered employed. Due to a major redesign of the Current Population Survey, data for 1994 are not directly comparable with data for previous years.

Table F. **Working-age population (15-64)**

Average annual growth rates in percentages

	1973-75	1975-79	1979-83	1983-93	1994	1995 [a]	1994 Working-age population (000s)
Australia	1.8	1.6	1.8	1.5 [b]	1.1	1.2	11 903
Austria	0.2	0.6	1.1	0.7	0.3	0.6	5 411
Belgium	0.8	0.7	0.5	0.2	0.5	0.2	6 736
Canada	2.6	2.0	1.4	1.5	1.0	1.2	19 813
Czech Republic	..	..	..	..	1.0	1.0	6 957
Denmark	0.2	0.4	0.6	0.4	0.3	0.0	3 511
Finland	0.7	0.4	0.6	0.3	0.2	0.2	3 404
France	0.7	0.7	1.3	0.6	0.3	0.3	37 885
Germany	0.1	0.4	1.3	0.4 [c]	0.4	0.3	55 473
Greece	0.7	1.3	1.3	0.9	0.6	0.6	7 036
Iceland	2.1	1.5	1.6	1.2	0.9	0.4	171
Ireland	1.9	1.7	1.3	0.7	1.0	0.8	2 261
Italy	0.6	0.7	0.9	0.1	–0.3	–0.2	38 529
Japan	0.9	0.8	0.9	0.8	0.0	0.2	87 000
Luxembourg	1.8	0.3	0.8	0.7	1.2	1.3	274
Mexico	..	..	..	..	2.3	2.8	51 546
Netherlands	1.4	1.4	1.3	0.8	0.1	0.5	10 499
New Zealand	2.6	0.9	1.4	1.0 [b]	1.1	1.6	2 295
Norway	0.6	0.6	0.7	0.6	0.4	0.4	2 798
Portugal	3.3 [d]	1.0	2.4	0.4	0.6	0.4	6 678
Spain	1.0	1.3	1.1	0.8	0.6	0.5	26 585
Sweden	–0.1	0.2	0.4	0.3 [c]	0.5	0.3	5 594
Switzerland	–0.4	0.2	1.2	0.7	0.6	0.6	4 745
Turkey	3.0	2.7	3.2	2.9	2.6	0.9	37 876
United Kingdom	0.1	0.5	0.6	0.3	0.1	0.2	37 755
United States	1.7	1.7	1.2	0.8	0.9	1.0	170 154
North America [e]	1.8	1.7	1.2	3.3	1.2	1.4	241 513
European Union	0.5	0.7	1.0	0.9	0.2	0.3	247 632
OECD Europe [e]	0.7	0.9	1.3	1.3	0.6	0.4	300 179
Total OECD [e]	1.1	1.1	1.2	1.9	0.7	0.7	642 890

a) Secretariat estimates based on &ital;OECD Economic Outlook,&norm; No. 59, June 1996.
b) Break in series between 1985 and 1986.
c) Break in series between 1986 and 1987.
d) Break in series between 1973 and 1974.
e) Above countries only.
Sources: OECD, &ital;Labour Force Statistics, 1974-1994,&norm; Part II, forthcoming; &ital;Quarterly Labour Force Statistics.&norm;

Table G. **Total labour force** [a]

Average annual growth rates in percentages

	1973-75	1975-79	1979-83	1983-93	1994	1995 [b]	1994 Labour force (000s)
Australia	1.9	1.3	1.8	2.0 [c]	1.7	2.8	8 829
Austria	–0.8	1.0	1.4	1.3	3.8	0.1	3 876
Belgium	1.1	0.8	0.5	0.3	1.9	0.8	4 349
Canada	3.7	3.9	2.0	1.5	1.1	0.6	14 905
Czech Republic	..	..	..	..	1.1	0.4	5 250
Denmark	0.8	1.8 [d]	0.9	0.6	–4.0	–0.5	2 777
Finland	1.3	0.4 [d]	1.3	–0.2	–0.2	0.8	2 502
France	0.7	1.0	0.5	0.6	1.1	0.4	25 481
Germany	–0.5	0.3	1.0	0.7 [e, f]	0.1	–0.4	39 646
Greece	0.3	0.8	3.3	0.7	1.8	1.3	4 193
Iceland	2.6	1.9	3.1	2.2	0.8	1.3	145
Ireland	1.1	1.6	1.5	0.7	1.9	1.3	1 423
Italy	0.8	1.2	0.9	–0.1	–1.7 [g]	0.2	22 858
Japan	0.0	1.3	1.3	1.2	0.5	0.3	66 450
Luxembourg	2.1	0.1	0.3	0.6	1.2	–2.1	171
Mexico	..	..	..	..	3.8	3.2	33 606
Netherlands	1.2	1.0	2.4 [i]	2.1 [e, g]	1.4	1.1	7 184
New Zealand	3.1	1.4	1.0	0.6 [c]	2.8	2.2	1 708
Norway	2.0	2.3	1.0	0.6	0.9	1.6	2 151
Portugal	1.5 [h]	1.5	0.4 [i]	0.4	1.0	–0.4	4 769
Spain	0.4	–0.1 [d]	0.7	1.2	0.9	0.9	15 701
Sweden	1.9	0.8	0.6	0.2 [e, g]	–1.3	1.3	4 266
Switzerland	–2.3	–0.2	1.4	1.8	–0.4	–0.3	3 917
Turkey	2.1	2.2	0.8	1.7	2.9	1.8	21 903
United Kingdom	0.5	0.7	0.0	0.6	–0.5	–0.4	28 026
United States	2.3	2.8	1.5	1.3	2.3 [j]	0.9	132 474
North America [k]	2.4	2.9	1.6	3.4	2.5	1.3	180 985
European Union	0.6	0.7	0.8	1.2	0.4	0.2	167 223
OECD Europe [k]	0.7	0.9	0.8	1.5	0.7	0.4	200 589
Total OECD [k]	1.2	1.6	1.2	2.2	1.4	0.8	458 561

a) These data are not necessarily the same as those in Table 1.2, some of which are derived from other sources.
b) Secretariat estimates based on *OECD Economic Outlook,* No. 59, June 1996.
c) Break in series between 1985 and 1986.
d) Break in series between 1975 and 1976.
e) Break in series between 1986 and 1987.
f) Break in series between 1990 and 1991.
g) Break in series between 1992 and 1993.
h) Break in series between 1973 and 1974.
i) Break in series between 1982 and 1983.
j) Break in series between 1993 and 1994.
k) Above countries only.
Sources: OECD, *Labour Force Statistics, 1974-1994,* Part II, forthcoming; *Quarterly Labour Force Statistics.*

Table H. **Total labour force – men**

Average annual growth rates in percentages

	1973-75	1975-79	1979-83	1983-93	1994	1995	1994 Labour force (000s)
Australia	0.8	1.0	1.3	1.3[a]	1.1	2.0	5 105
Austria	–0.7	0.9	1.5	0.7	2.2	..	2 215
Belgium	0.4	–0.1	–0.3	–0.4	1.9	0.5	2 484
Canada	2.6	2.8	1.1	0.9	1.2	0.2	8 239
Czech Republic	..	..	..	..	1.2	0.9	2 806
Denmark	0.3	0.1[b]	0.1	0.3	–2.8	..	1 499
Finland	0.6	0.0[b]	0.8	–0.2	–0.4	0.8	1 325
France	0.2	0.2	–0.1	0.0	1.0	0.1	14 192
Germany	–1.1	0.0	0.8	0.3[c, d]	0.1	–0.4	22 841
Greece	–0.4	0.6	1.8	0.2	1.5	0.2	2 623
Ireland	0.6	1.4	0.8	–0.4	1.1	..	894
Italy	0.4	0.2	0.4	–1.3[e]	0.9	–0.3	14 491
Japan	0.9	0.7	0.9	1.0	0.4	0.4	39 510
Luxembourg	1.1	–0.6	–0.5	0.0	0.0	–0.1	108
Mexico	..	..	..	..	3.3	2.5	23 004
Netherlands	0.0	0.1	0.7[g]	1.0[c, e]	0.8	0.5	4 232
New Zealand	2.1	0.6	0.6	0.0[e]	2.0	2.3	960
Norway	1.4	1.0	0.2	0.0	0.8	1.3	1 172
Portugal	1.5[f]	0.5	0.2[g]	–0.3	1.0	–0.7	2 644
Spain	0.8	–0.1[b]	0.3	0.1	–0.4	–0.1	9 836
Sweden	0.5	–0.1	–0.2	0.1[c, e]	–1.2	1.5	2 218
Switzerland	–2.5	–0.6	1.0	1.2	–1.0	0.6	2 323
Turkey	..	..	..	..	3.5	0.9	15 606
United Kingdom	–0.3	0.1	–0.2	–0.1	–1.1	–0.8	15 767
United States	1.3	1.8	0.9	0.9	1.6[h]	0.7	72 062
North America[i]	1.4	1.9	0.9	3.4	1.9	1.0	103 305
European Union	–0.1	0.0	0.3	0.5	0.2	..	97 367
OECD Europe[i]	–0.1	0.0	0.4	2.2	0.6	..	119 274
Total OECD[i]	0.6	0.8	0.7	2.4	1.1	..	268 154

a) Break in series between 1985 and 1986.
b) Break in series between 1975 and 1976.
c) Break in series between 1986 and 1987.
d) Break in series between 1990 and 1991.
e) Break in series between 1992 and 1993.
f) Break in series between 1973 and 1974.
g) Break in series between 1982 and 1983.
h) Break in series between 1993 and 1994.
i) Above countries only.

Sources: OECD, *Labour Force Statistics, 1974-1994,* Part II, forthcoming; *Quarterly Labour Force Statistics.*

Table I. **Total labour force – women**

Average annual growth rates in percentages

	1973-75	1975-79	1979-83	1983-93	1994	1995	1994 Labour force (000s)
Australia	4.0	2.0	2.6	3.1[a]	2.6	4.0	3 725
Austria	–0.9	1.2	1.3	2.1	6.0	..	1 661
Belgium	2.6	2.6	1.8	1.4	1.8	1.3	1 867
Canada	5.6	5.6	3.5	2.3	1.1	1.1	6 666
Czech Republic	..	..	..	..	1.0	–0.1	2 444
Denmark	1.6	4.1[b]	2.1	0.9	–5.4	..	1 278
Finland	2.0	0.8[b]	1.8	–0.2	–0.1	0.8	1 177
France	1.6	2.3	1.4	1.4	1.2	1.2	11 288
Germany	0.6	0.8	1.2	1.2[c, d]	0.2	–0.4	16 805
Greece	2.0	1.1	6.5	1.6	2.4	2.7	1 571
Ireland	2.6	2.2	3.2	2.8	4.3	..	535
Italy	1.9	3.4	1.9	–2.2[e]	–0.7	0.8	8 366
Japan	–1.5	2.1	1.8	1.4	0.5	0.2	26 940
Luxembourg	4.7	1.7	2.1	1.5	3.3	–5.2	64
Mexico	..	..	..	..	4.8	4.7	10 602
Netherlands	4.5	3.3	6.2[g]	4.1[c, e]	2.2	3.1	2 952
New Zealand	5.2	3.2	1.9	1.6[a]	3.7	3.0	748
Norway	3.2	4.3	2.1	1.3	1.1	2.0	979
Portugal	1.5[f]	3.0	0.8[g]	1.2	0.9	–0.1	2 125
Spain	–0.6	0.0[b]	1.5	3.4	3.0	2.7	5 864
Sweden	3.8	2.1	1.6	0.4[c, e]	–1.3	1.0	2 048
Switzerland	–1.8	0.6	2.1	2.7	0.4	–0.2	1 595
Turkey	..	..	..	..	1.6	3.2	6 297
United Kingdom	1.8	1.7	0.2	1.5	0.2	0.2	12 260
United States	3.8	4.3	2.4	1.9	3.2[h]	1.2	60 412
North America[i]	4.0	4.4	2.5	3.4	3.2	1.6	77 680
European Union	2.0	2.0	1.5	2.1	0.7	..	69 861
OECD Europe[i]	1.9	2.0	1.6	3.3	0.8	..	81 176
Total OECD[i]	2.1	2.9	2.0	3.0	1.8	..	190 269

a) Break in series between 1985 and 1986.
b) Break in series between 1975 and 1976.
c) Break in series between 1986 and 1987.
d) Break in series between 1990 and 1991.
e) Break in series between 1992 and 1993.
f) Break in series between 1973 and 1974.
g) Break in series between 1982 and 1983.
h) Break in series between 1993 and 1994.
i) Above countries only.

Sources: OECD, *Labour Force Statistics, 1974-1994,* Part II, forthcoming; *Quarterly Labour Force Statistics.*

Table J. **Labour force participation rates**[a]

Percentages

	1973	1979	1983	1993	1994	1995[b]
Australia	69.8	69.2	69.3	73.7	74.2	75.4
Austria	65.1	64.9	65.6	69.2	71.6	71.3
Belgium	62.2	62.8	62.8	63.7	64.6	65.0
Canada	66.7	73.4	75.3	75.1	75.2	74.8
Czech Republic	. .	. .	. .	75.3	75.5	75.0
Denmark	75.9	79.8	80.9	82.6	79.1	78.7
Finland	71.7	75.5	77.4	73.9	73.5	73.9
France	67.8	68.4	66.4	66.7	67.3	67.3
Germany	69.4	68.3	67.5	71.7	71.5	71.0
Greece	57.1	55.4	59.9	58.9	59.6	60.0
Iceland	71.3	73.1	77.3	85.1	85.1	85.8
Ireland	63.5	62.4	62.7	62.4	62.9	63.3
Italy	58.7	60.2	60.1	58.9	59.3	59.6
Japan	71.7	71.8	73.0	76.1	76.4	76.5
Luxembourg	64.8	64.4	63.3	62.5	62.5	60.4
Mexico	. .	. .	. .	64.2	65.2	65.4
Netherlands	57.6	56.5	59.0	67.5	68.4	68.8
New Zealand	64.5	66.3	65.3	73.2	74.4	74.9
Norway	68.7	75.6	76.5	76.5	76.9	77.8
Portugal	64.0	73.6	71.4	71.2	71.4	70.8
Spain	62.7	57.7	56.7	58.9	59.1	59.3
Sweden	75.5	80.5	81.3	77.6	76.3	77.0
Switzerland	77.7	73.8	74.5	83.4	82.6	81.9
Turkey	74.0	71.2	64.7	57.7	57.8	58.4
United Kingdom	73.0	74.3	72.4	74.7	74.2	73.8
United States	68.4	72.1	73.2	76.8	77.9	77.8
North America[c]	68.2	72.2	73.4	74.0	74.9	74.9
European Union	66.2	66.3	65.7	67.4	67.5	67.5
OECD Europe[c]	67.1	67.0	65.8	66.7	66.8	66.8
Total OECD[c]	68.2	69.5	69.5	70.9	71.3	71.4

a) Defined as the total labour force divided by the working-age population (15-64).

b) Secretariat estimates based on *OECD Economic Outlook,* No. 59, June 1996.

c) Above countries only.

Sources: OECD, *Labour Force Statistics, 1974-1994,* Part II, forthcoming; *Quarterly Labour Force Statistics.*

Table K. **Labour force participation rates by sex**

Percentages

	Men						Women					
	1973	1979	1983	1993	1994	1995[a]	1973	1979	1983	1993	1994	1995[a]
Australia	91.1	87.6	85.9	85.0	84.9	85.6	47.7	50.3	52.1	62.3	63.2	65.0
Austria	83.0	81.6	82.2	79.5	81.0	..	48.5	49.1	49.7	58.7	62.1	..
Belgium	83.2	79.3	76.8	72.2	72.9	73.1	41.3	46.3	48.7	55.2	56.1	56.8
Canada	86.1	89.4	88.5	82.4	82.6	81.8	47.2	57.4	62.2	67.7	67.8	67.6
Czech Republic	..	..	..	80.7	80.9	80.7	..	..	..	70.0	70.1	69.4
Denmark	89.6	89.6	87.6	86.9	84.2	..	61.9	69.9	74.2	78.3	73.8	..
Finland	80.0	82.2	82.0	77.6	77.1	77.5	63.6	68.9	72.7	70.0	69.9	70.2
France	85.2	82.6	78.4	74.5	75.0	74.8	50.1	54.2	54.3	59.0	59.5	60.0
Germany	89.6	84.9	82.6	81.2	80.8	80.3	50.3	52.2	52.5	61.8	61.8	61.3
Greece	83.2	79.0	80.0	74.0	74.6	74.3	32.1	32.8	40.4	43.8	44.6	45.6
Ireland	92.3	88.7	87.1	78.6	78.7	..	34.1	35.2	37.8	46.1	47.6	..
Italy	85.1	82.6	80.7	74.8	75.7	75.5	33.7	38.7	40.3	43.3	43.2	43.6
Japan	90.1	89.2	89.1	90.2	90.6	90.8	54.0	54.7	57.2	61.8	62.1	62.2
Luxembourg	93.1	88.9	85.1	78.0	77.2	75.9	35.9	39.8	41.7	46.3	47.3	44.3
Mexico	..	..	..	91.5	91.9	91.6	..	..	..	38.8	40.0	40.7
Netherlands	85.6	79.0	77.3	78.7	79.1	79.1	29.2	33.4	40.3	56.0	57.4	58.9
New Zealand	89.2	87.3	84.7	83.3	83.9	84.5	39.2	45.0	45.7	63.2	65.0	65.9
Norway	86.5	89.2	87.2	82.0	82.3	83.0	50.6	61.7	65.5	70.8	71.3	72.4
Portugal[b]	..	90.9	86.9	80.8	81.1	80.2	..	57.3	56.7	62.0	62.2	61.9
Spain	92.9	83.1	80.5	74.7	74.0	73.6	33.4	32.6	33.3	43.0	44.1	45.1
Sweden	88.1	87.9	85.9	79.4	78.1	79.0	62.6	72.8	76.6	75.8	74.4	74.9
Switzerland	100.0	94.6	93.5	99.0	97.5	97.6	54.1	53.0	55.2	67.6	67.5	67.0
Turkey	..	..	..	80.7	81.4	81.2	..	..	..	34.0	33.7	34.3
United Kingdom	93.0	90.5	87.5	84.0	83.0	82.1	53.2	58.0	57.2	65.3	65.4	65.4
United States	86.2	85.7	84.7	84.7	85.3	85.0	51.1	58.9	61.9	69.0	70.5	70.7
North America[c]	86.2	86.1	85.1	85.9	86.4	86.2	50.7	58.8	61.9	62.4	63.7	63.8
European Union[c]	88.5	84.5	82.0	78.3	78.2	..	44.5	48.4	49.5	56.5	56.7	..
OECD Europe[c]	88.7	84.8	82.3	79.0	79.0	..	44.7	48.6	49.8	54.3	54.5	..
Total OECD[c]	88.2	86.0	84.4	83.2	83.5	..	48.3	53.2	55.2	58.6	59.2	..

a) Secretariat estimates.
b) Labour force data include a significant number of persons aged less than 15 years.
c) Above countries only.
Sources: OECD, *Labour Force Statistics, 1974-1994,* Part II, forthcoming; *Quarterly Labour Force Statistics.*

Table L. **Standardised unemployment rates in 18 OECD countries**

Per cent of total labour force

	1983	1990	1991	1992	1993	1994	1995
North America	**9.7**	**5.8**	**7.2**	**7.9**	**7.3**	**6.5**	**5.9**
Canada	11.9	8.1	10.3	11.3	11.2	10.3	9.5
United States	9.5	5.6	6.8	7.5	6.9	6.0	5.5
Japan	**2.6**	**2.1**	**2.1**	**2.2**	**2.5**	**2.9**	**3.1**
Central and Western Europe	**9.8**	**6.9**	**7.4**	**8.1**	**9.5**	**9.7**	**9.2**
Belgium	12.1	7.2	7.2	7.7	8.6	9.6	9.4
France	8.3	8.9	9.4	10.3	11.7	12.3	11.6
Germany[a]	7.7	4.8	4.2	4.6	7.9	8.4	8.2
Ireland	14.0	13.3	14.7	15.5	15.6	14.3	12.9
Netherlands	12.0	7.5	7.0	5.6	6.2	6.8	6.5
Switzerland	. .	. .	1.8	2.8	3.7	3.8	3.3
United Kingdom	12.4	6.9	8.8	10.1	10.4	9.6	8.7
Southern Europe	**11.4**	**11.6**	**11.4**	**12.5**	**14.1**	**15.3**	**15.4**
Italy	8.8	10.3	9.9	10.5	10.2	11.1	12.2
Portugal	7.8	4.6	4.1	4.1	5.5	6.8	7.1
Spain	17.0	15.9	16.0	18.1	22.4	23.8	22.7
Nordic countries	**4.2**	**3.0**	**5.0**	**7.8**	**10.9**	**11.1**	**10.3**
Finland	5.4	3.4	7.5	13.0	17.7	18.2	17.1
Norway	3.4	5.2	5.5	5.9	6.0	5.4	4.9
Sweden	3.9	1.8	3.3	5.8	9.5	9.8	9.2
Oceania	**. .**	**7.0**	**9.6**	**10.6**	**10.6**	**9.4**	**8.1**
Australia	9.9	6.9	9.5	10.7	10.8	9.7	8.5
New Zealand	. .	7.7	10.3	10.2	9.4	8.1	6.3
Total of above countries	**8.6**	**6.1**	**6.8**	**7.5**	**8.0**	**7.9**	**7.6**

a) Up to and including 1992, western Germany; subsequent data concern the whole of Germany.

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, US 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.

Sources: OECD, *Quarterly Labour Force Statistics,* No. 1, 1996.

Table M. **Total unemployment**

Thousands

	1973	1975	1979	1983	1993	1994	1995[a]
Australia	106	279	378	687	939	850	770
Austria	33	53	65	135	159	139	142
Belgium	92	175	304	545	530	644	629
Canada	515	690	870	1 504	1 649	1 541	1 422
Czech Republic	..	..	..	..	204	201	189
Denmark	21	121	157	312	309	222	186
Finland	51	51	143	138	444	456	430
France	593	901	1 361	1 974	2 911	3 145	2 990
Germany	273	1 074	876	2 258	3 113	3 324	3 249
Greece	64	75	64	302	398	404	414
Iceland	0	1	0	1	8	8	8
Ireland	64	84	88	183	220	204	187
Italy	1 303	1 226	1 686	2 140	2 462	2 704	2 877
Japan	680	1 000	1 170	1 560	1 660	1 920	2 098
Luxembourg	0	0	1	3	2	5	4
Mexico	..	..	..	..	1 041	1 168	1 604
Netherlands	110	260	280	674	437	492	474
New Zealand	2	3	25	76	157	138	103
Norway	26	40	38	69	127	116	107
Portugal	90	178	344	355	262	331	345
Spain	363	625	1 129	2 351	3 483	3 741	3 586
Sweden	98	67	88	151	356	340	332
Switzerland	0	13	10	29	150	141	127
Turkey	987	1 148	1 463	1 343	1 601	1 739	1 633
United Kingdom	557	838	1 234	2 984	2 865	2 586	2 254
United States	4 365	7 929	6 137	10 717	8 734	7 996	7 404
North America[b]	4 880	8 619	7 007	12 221	11 424	10 705	10 431
European Union	3 712	5 728	7 820	14 505	17 952	18 737	18 099
OECD Europe[b]	4 725	6 930	9 332	15 947	20 042	20 941	20 163
Total OECD[b]	10 393	16 831	17 912	30 491	34 222	34 554	33 565

a) Secretariat estimates based on *OECD Economic Outlook,* No. 59, June 1996.
b) Above countries only.
Sources: OECD, *Labour Force Statistics, 1974-1994,* Part II, forthcoming; *Quarterly Labour Force Statistics.*

Table N. **Unemployed men**

Thousands

	1973	1975	1979	1983	1993	1994	1995[a]
Australia	51	139	198	430	574	505	454
Austria	13	26	28	70	88	72	..
Belgium	48	84	113	253	232	296	282
Canada	295	391	471	899	952	885	802
Czech Republic	..	..	..	..	91	92	89
Denmark	10	69	62	159	159	107	..
Finland	29	29	82	76	259	259	231
France	224	392	581	889	1 384	1 504	1 361
Germany	150	623	417	1 273	1 508	1 652	1 615
Greece	39	41	31	148	164	170	176
Ireland	53	66	66	140	138	137	..
Italy	603	556	724	938	1 188	1 354	1 399
Japan	440	660	740	950	950	1 120	1 230
Luxembourg	0	0	1	1	1	3	2
Mexico	..	..	..	..	641	685	973
Netherlands	88	197	178	403	217	254	248
New Zealand	1	2	15	46	93	81	61
Norway	11	21	18	37	77	70	61
Portugal	42	98	122	127	125	162	172
Spain	267	471	759	1 521	1 837	1 914	1 756
Sweden	52	32	44	79	219	202	190
Switzerland	0	10	5	18	74	75	63
Turkey	..	..	..	..	1 156	1 258	1 173
United Kingdom	476	698	888	2 145	2 209	1 989	1 729
United States	2 275	4 442	3 120	6 260	4 932	4 367	3 983
North America[b]	2 570	4 833	3 591	7 159	6 525	5 937	5 758
European Union	2 094	3 382	4 096	8 222	9 729	10 074	..
OECD Europe[b]	2 105	3 413	4 119	8 277	11 128	11 570	..
Total OECD[b]	5 167	9 047	8 663	16 862	19 270	19 213	..

a) Secretariat estimates based on *OECD Economic Outlook,* No. 59, June 1996.
b) Above countries only.
Sources: OECD, *Labour Force Statistics, 1974-1994,* Part II, forthcoming; *Quarterly Labour Force Statistics.*

Table O. **Unemployed women**

Thousands

	1973	1975	1979	1983	1993	1994	1995[a]
Australia	55	140	180	257	365	346	317
Austria	20	27	37	65	71	67	..
Belgium	43	91	191	292	297	347	346
Canada	220	299	399	605	697	656	621
Czech Republic	..	..	..	..	113	109	100
Denmark	11	52	95	153	150	115	..
Finland	22	22	61	62	185	196	198
France	369	509	780	1 085	1 527	1 641	1 604
Germany	124	452	459	985	1 605	1 672	1 634
Greece	25	34	33	154	234	234	242
Ireland	11	18	22	43	81	86	..
Italy	700	670	962	1 202	1 274	1 349	1 413
Japan	240	340	430	610	710	800	869
Luxembourg	0	0	1	1	1	2	2
Mexico	..	..	..	..	400	483	623
Netherlands	22	63	102	271	220	239	280
New Zealand	1	1	10	30	64	58	49
Norway	15	19	19	32	50	46	46
Portugal	48	80	222	228	138	169	173
Spain	96	154	370	830	1 646	1 827	1 831
Sweden	46	36	44	72	137	138	142
Switzerland	0	3	4	11	76	71	65
Turkey	..	..	..	..	445	482	392
United Kingdom	81	140	346	839	656	597	526
United States	2 089	3 486	3 018	4 457	3 801	3 629	3 421
North America[b]	2 309	3 785	3 417	5 062	4 898	4 768	4 665
European Union	1 618	2 348	3 725	6 282	8 223	8 680	..
OECD Europe[b]	1 633	2 370	3 748	6 325	8 907	9 387	..
Total OECD[b]	4 238	6 636	7 785	12 284	14 944	15 359	..

a) Secretariat estimates based on *OECD Economic Outlook,* No. 59, June 1996.
b) Above countries only.
Sources: OECD, *Labour Force Statistics, 1974-1994,* Part II, forthcoming; *Quarterly Labour Force Statistics.*

Table P. **Youth unemployment rates in selected OECD countries**

	1973	1975	1979	1983	1992	1993	1994	1995
Australia								
Age 15-24	3.3	9.0	12.2	17.9	19.5	18.6	16.2	14.4
Age 15-19	4.7	12.9	17.3	22.6	24.9	23.0	20.3	20.0
Age 20-24	2.3	5.9	8.2	14.7	16.1	16.1	13.9	11.1
Austria								
Age 15-24	..	..	..	..	..	..	5.0	5.9
Age 15-19	..	..	..	..	..	..	5.5	6.8
Age 20-24	..	..	..	..	..	..	4.8	5.5
Belgium								
Age 15-24	..	..	..	23.9	13.2	18.4	21.8	21.5
Age 15-19	..	..	..	31.8	21.5	30.9	34.5	33.3
Age 20-24	..	..	..	21.8	12.3	17.1	20.4	20.2
Canada								
Age 15-24	10.1	12.0	12.8	19.7	17.8	17.7	16.5	15.6
Age 15-19	12.5	14.9	16.0	22.2	19.8	20.0	18.9	18.5
Age 20-24	8.4	9.9	10.6	18.2	16.5	16.2	15.0	13.7
Czech Republic								
Age 15-24	..	..	..	..	..	7.4	7.7	6.8
Age 15-19	..	..	..	..	..	11.4	13.0	12.7
Age 20-24	..	..	..	..	..	5.3	5.1	4.6
Denmark								
Age 15-24	..	..	..	18.9	12.3	14.6	10.2	9.9
Age 15-19	..	..	..	20.6	8.6	9.4	7.0	8.8
Age 20-24	..	..	..	17.7	15.2	18.5	12.6	10.8
Finland								
Age 15-24	4.5	5.1	10.8	10.5	23.5	30.5	30.9	27.2
Age 15-19	6.0	7.0	16.5	15.3	25.8	32.6	32.1	27.0
Age 20-24	3.5	4.0	7.8	8.3	22.5	29.6	30.3	27.3
France								
Age 15-24	4.0	7.8	13.5	19.7	20.8	24.6	27.5	25.9
Age 15-19	5.8	12.1	21.7	28.8	22.8	26.5	26.2	24.4
Age 20-24	3.4	6.3	10.9	17.3	20.5	24.4	27.7	26.1
Germany								
Age 15-24	1.1	5.6	4.0	11.0	6.2	7.6	8.3	8.5
Age 15-19	1.1	5.3	3.5	9.8	5.0	5.5	6.0	7.6
Age 20-24	1.2	5.8	4.3	11.7	6.7	8.3	9.1	8.8
Greece								
Age 15-24	..	..	..	23.1	25.0	28.8	27.7	27.9
Age 15-19	..	..	..	24.5	29.7	35.4	33.4	34.2
Age 20-24	..	..	..	22.2	23.4	26.8	26.0	26.0
Iceland								
Age 15-24	..	..	..	..	..	..	..	12.2
Age 15-19	..	..	..	..	..	..	..	14.2
Age 20-24	..	..	..	..	..	..	..	11.0
Ireland								
Age 15-24	..	14.2	9.2	20.1	23.1	25.1	23.0	..
Age 15-19	..	19.9	12.5	26.9	29.7	33.3	32.0	..
Age 20-24	..	10.0	6.9	16.3	20.5	22.3	20.1	..
Italy								
Age 15-24	12.6	12.8	25.6	30.5	31.5	32.7	30.6	32.8
Age 15-19	15.8	16.8	32.5	39.5	39.0	40.8	36.4	36.2
Age 20-24	10.4	10.3	20.8	25.2	28.6	29.8	28.6	31.7
Japan								
Age 15-24	2.3	3.0	3.4	4.5	4.4	5.1	5.5	6.1
Age 15-19	2.8	3.6	4.1	6.2	6.7	7.1	7.6	8.2
Age 20-24	2.2	2.9	3.2	4.1	3.8	4.7	5.0	5.7
Luxembourg								
Age 15-24	..	..	..	6.8	3.5	4.4	7.9	7.2
Age 15-19	..	..	..	9.8	7.5	12.2	14.8	13.2
Age 20-24	..	..	..	5.1	2.5	2.7	6.4	5.9
Mexico								
Age 15-24	..	..	..	..	5.4	5.4	7.1	9.3
Age 15-19	..	..	..	..	5.7	5.5	7.4	9.9
Age 20-24	..	..	..	..	5.1	5.2	6.8	8.9
Netherlands								
Age 15-24	2.8	6.3	8.1	24.9	7.8	9.7	10.2	13.1
Age 15-19	..	..	..	..	9.7	11.8	12.2	17.6
Age 20-24	..	..	..	..	7.0	8.7	9.3	11.0
New Zealand								
Age 15-24	..	..	..	..	18.5	17.3	15.0	11.9
Age 15-19	..	..	..	..	22.2	21.4	19.3	16.1
Age 20-24	..	..	..	..	16.2	14.7	12.3	9.1
Norway								
Age 16-24	..	..	5.6	7.7	11.3	11.7	8.9	9.4
Age 16-19	..	..	9.3	10.7	11.8	15.7	11.8	10.9
Age 20-24	..	..	3.6	6.1	11.1	10.2	7.9	8.8
Portugal								
Age 15-24	..	9.8	17.8	18.3	9.4	12.0	14.1	16.0
Age 15-19	..	10.9	21.4	18.6	10.5	13.6	15.1	15.6
Age 20-24	..	8.9	15.1	18.1	8.8	11.2	13.6	16.1
Spain								
Age 16-24	4.8	9.0	19.4	37.6	34.4	43.2	42.8	42.5
Age 16-19	6.6	10.9	25.2	47.7	38.9	50.3	47.0	50.6
Age 20-24	3.4	7.5	15.2	31.9	32.7	40.5	41.2	39.8
Sweden								
Age 16-24	5.2	3.7	5.0	8.0	11.4	18.4	16.7	15.4
Age 16-19	6.8	5.5	7.4	10.4	11.2	19.3	16.5	14.1
Age 20-24	4.4	2.8	3.7	6.8	11.5	18.1	16.8	15.7
Switzerland								
Age 15-24	..	..	..	..	4.7	6.7	5.6	5.5
Age 15-19	..	..	..	..	..	..	..	..
Age 20-24	..	..	..	..	..	..	..	..
Turkey								
Age 15-24	..	..	..	..	16.2	15.6	15.7	14.9
Age 15-19	..	..	..	..	14.1	13.7	14.6	13.8
Age 20-24	..	..	..	..	18.5	17.7	16.9	16.1
United Kingdom								
Age 16-24	..	..	..	..	15.5	17.4	16.2	15.5
Age 16-19	..	..	..	..	16.3	19.1	18.6	17.3
Age 20-24	..	..	..	..	15.0	16.5	14.9	14.5
United States								
Age 16-24	10.5	16.1	11.8	17.2	14.2	13.4	12.5	12.1
Age 16-19	14.5	19.9	16.1	22.4	20.1	19.0	17.6	17.3
Age 20-24	7.8	13.6	9.1	14.5	11.4	10.5	9.7	9.1

Source: OECD, *Labour Force Statistic, 1974-1994,* Part III, forthcoming.

Table Q. **Incidence of long-term unemployment from survey-based data in selected OECD countries**[a, b, c, d, e]

As a per cent of total unemployment

	1983		1991		1992		1993		1994		1995	
	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	6 months and over	12 months and over
Australia	51.3	25.4	49.6	24.9	58.7	34.5	57.1	36.5	56.9	36.4	51.4	30.8
Austria	..	..	..	..	..	..	..	..	31.8	18.5	30.0	17.4
Belgium	81.9	64.2	76.7	62.0	74.7	59.0	70.4	53.0	75.2	58.3	77.7	62.4
Canada	28.0	9.5	23.3	7.2	28.1	11.0	30.8	13.8	30.2	14.8	27.1	13.8
Czech Republic	..	..	..	..	..	..	36.4	18.3	40.9	21.5	52.5	30.6
Denmark	65.8	43.4	53.4	31.4	49.7	26.8	45.1	25.1	54.0	32.1	46.6	27.9
Finland	30.0	19.2	32.6	9.2	..	..	52.8	30.6	..	..	47.4	32.3
France	66.9	42.2	58.0	37.2	58.1	36.1	58.2	34.2	61.7	38.3	68.9	45.6
Germany	65.8	41.6	54.1	31.5	54.9	33.2	59.6	40.0	63.3	43.9	65.4	48.3
Greece	58.2	33.1	71.5	47.6	69.9	49.4	70.7	50.6	72.7	50.4	71.9	50.9
Iceland	..	..	..	..	..	..	..	..	..	..	29.2	12.2
Ireland	62.8	36.0	76.3	60.5	75.9	57.8	75.9	57.8	78.4	62.5	..	..
Italy	80.9	57.1	84.2	68.0	69.1	57.7	75.9	57.3	78.6	60.8	79.4	62.9
Japan	32.8	13.3	37.5	19.1	36.0	15.4	34.0	15.1	34.9	16.9	38.2	18.1
Luxembourg[f]	(55.1)	(34.7)	(37.5)	(20.8)	(32.4)	(11.8)	(59.0)	(30.8)	(53.9)	(29.2)	(47.5)	(22.4)
Mexico	..	..	..	..	..	..	..	..	..	..	7.9	1.5
Netherlands	69.2	47.8	59.6	45.5	74.3	42.5	68.7	45.4	68.2	43.5	74.4	43.2
New Zealand	..	..	41.9	22.1	49.3	29.6	48.5	30.6	45.5	29.4	38.8	22.9
Norway	14.3	4.8	39.1	20.2	41.1	23.5	45.6	27.2	43.3	28.0	43.3	26.5
Portugal	..	..	58.4	38.6	36.2	29.9	36.7	35.2	55.2	41.8	62.3	48.7
Spain	72.8	52.4	68.4	51.1	66.1	47.4	69.6	50.1	73.4	56.1	72.2	56.5
Sweden	24.9	10.3	16.8	4.0	24.9	8.0	31.9	10.9	38.2	17.2	35.2	15.7
Switzerland	..	..	26.5	16.2	36.4	19.1	46.5	19.4	49.0	27.2	49.6	32.3
Turkey	..	..	63.9	39.9	65.4	42.8	66.3	44.3	66.5	44.0	63.7	39.3
United Kingdom	65.7	45.2	46.6	28.5	57.2	35.4	62.9	42.5	63.4	45.4	60.7	43.5
United States	23.9	13.3	12.9	6.3	20.3	11.1	20.1	11.5	20.3	12.2	17.3	9.7

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 Czech Republic, Norway, New Zealand 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; France, March; Germany, April; Greece, March-July; Iceland, April; Ireland, May; Italy, April; Japan, February; Luxembourg, April; Mexico, April; 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, Czech Republic, Denmark, France, Germany, Greece, Iceland, Ireland, Italy, Japan, Luxembourg, Mexico, Netherlands, New Zealand, Portugal, Switzerland and Turkey; and aged 16 and over in Spain, the United Kingdom and the United States. Data for Finland refer to persons aged 15-64 (excluding unemployment pensioners). 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.

f) Data in brakets are based on small sample sizes and, therefore, must be treated with care.

Sources: Data for *Austria, Belgium, Denmark, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, the Netherlands, Portugal and the United Kingdom* are based on the European Labour Force Survey and were supplied by Eurostat.
Australia: Australian Bureau of Statistics, *The Labour Force Australia.*
Canada: Unpublished 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: Unpublished data from the *Supplementary Labour Force Survey* (biennial since 1989) supplied by the Central Statistical Office.
France: Institut National de la Statistique et des Études Économiques, Enquête sur l'Emploi.
Japan: Statistics Bureau, Management and Coordination Agency, Report on the Special Survey of the Labour Force Survey.
Mexico: Data from the biennial Encuesta Nacional de Empleo (ENE) supplied by the Secretaría del Trabajo y Previsión Social (STPS).
New Zealand: Unpublished data from the Household Labour Force Survey supplied by the Department of Statistics.
Norway: Unpublished data from the Labour Force Survey supplied by the Central Statistical Office.
Spain: Data from the Labour Force Survey supplied by the Ministry of Employment and Social Security.
Sweden: Statistics Sweden, AKU.
Switzerland: Data from the Labour Force Survey supplied by the Swiss Federal Statistical Office.
Turkey: Data from the Household Labour Force Survey supplied by the State Institute of Statistics.
United States: Bureau of Labor Statistics, Employment and Earnings.

Table R. **Incidence of long-term unemployment from survey-based data among men in selected OECD countries**[a, b, c, d, e]

As a per cent of male unemployment

	1983		1991		1992		1993		1994		1995	
	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	6 months and over	12 months and over
Australia	56.1	28.8	51.1	25.8	61.5	37.6	59.3	39.5	59.4	38.7	54.2	34.2
Austria	..	..	..	..	..	..	..	..	30.8	18.4	28.5	17.4
Belgium	78.9	58.0	71.8	57.9	71.7	56.3	65.2	45.7	72.4	53.4	76.4	61.4
Canada	30.2	10.9	24.1	7.7	29.8	12.3	32.9	15.7	32.1	16.8	28.5	15.5
Czech Republic	..	..	..	..	..	..	35.4	19.2	38.9	20.7	51.5	30.2
Denmark	60.8	38.9	49.5	28.4	48.4	25.1	42.4	23.4	52.1	31.9	51.9	31.9
Finland	32.0	20.7	36.8	9.7	..	..	53.7	34.0	..	..	49.3	35.4
France	62.4	39.0	53.9	34.8	54.8	33.6	54.3	31.6	60.2	37.3	66.8	44.5
Germany	66.5	42.8	56.5	35.8	55.6	36.6	55.7	36.5	59.7	40.8	62.9	45.6
Greece	48.8	23.2	63.3	37.5	60.3	37.8	64.5	41.5	65.8	41.3	63.9	42.0
Iceland	..	..	..	..	..	..	..	..	..	..	27.3	10.8
Ireland	67.1	41.4	79.9	65.1	78.6	62.0	78.6	62.0	81.0	66.8	..	..
Italy	78.2	54.5	83.6	66.6	68.5	57.7	73.9	54.9	76.5	58.9	78.0	61.9
Japan	34.9	16.3	44.4	22.2	40.7	19.8	38.9	20.0	40.5	21.6	44.4	23.9
Luxembourg	56.5	34.8	41.7	25.0	23.5	5.9	50.0	25.0	58.6	33.2	47.7	24.5
Mexico	..	..	..	..	..	..	..	..	..	..	7.4	1.3
Netherlands	66.8	46.9	64.5	52.9	72.3	45.5	64.6	44.4	63.7	42.8	73.4	48.6
New Zealand	..	..	46.9	25.6	53.0	33.6	53.5	35.0	50.6	33.7	43.7	26.8
Norway	14.3	2.9	37.6	18.8	40.1	23.2	45.1	25.4	43.5	28.1	44.4	28.6
Portugal	..	..	53.8	33.4	31.4	24.3	32.3	30.9	52.8	41.2	60.2	46.2
Spain	69.9	48.9	61.7	42.7	59.0	38.3	64.4	42.5	68.6	49.6	67.2	50.7
Sweden	25.9	10.8	18.1	4.4	26.1	8.5	34.2	12.2	40.3	19.3	37.2	17.2
Switzerland	..	..	25.9	14.8	36.0	14.0	46.3	17.9	46.7	21.3	48.4	32.3
Turkey	..	..	60.6	36.8	62.8	40.4	65.1	42.6	64.3	41.9	59.7	34.0
United Kingdom	70.0	50.7	51.2	32.6	61.4	39.6	66.7	47.3	68.5	51.2	66.1	49.5
United States	28.2	16.0	14.9	7.4	22.7	12.6	22.5	13.3	22.2	13.9	18.7	11.0

Sources and notes: See Table Q.

Table S. **Incidence of long-term unemployment from survey-based data among women in selected OECD countries**[a, b, c, d, e]

As a per cent of female unemployment

	1983		1991		1992		1993		1994		1995	
	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	6 months and over	12 months and over
Australia	47.0	25.3	47.0	23.4	54.2	29.4	53.5	31.8	53.2	33.0	47.3	25.6
Austria	..	..	..	..	..	..	..	..	33.1	18.5	31.8	17.4
Belgium	84.1	69.0	79.7	64.5	76.8	61.0	74.6	59.0	77.7	62.6	78.7	63.2
Canada	24.6	7.5	22.1	6.4	25.6	9.2	27.9	11.2	27.6	12.2	25.2	11.5
Czech Republic	..	..	..	..	..	..	37.2	17.5	42.6	22.2	53.3	30.9
Denmark	71.3	48.3	57.2	34.3	51.1	28.6	48.1	26.8	55.8	32.4	42.4	24.8
Finland	29.1	19.0	26.3	8.4	..	..	51.3	25.7	..	..	45.1	28.7
France	70.5	44.8	61.1	39.1	60.8	38.1	61.6	36.4	63.0	39.3	70.8	46.6
Germany	65.1	40.2	51.8	27.5	54.2	30.4	63.2	43.2	66.7	47.0	67.9	50.9
Greece	67.6	42.9	76.9	54.4	76.1	56.9	75.0	57.0	77.9	57.1	77.8	57.4
Iceland	..	..	..	..	..	..	..	..	..	..	31.7	14.0
Ireland	53.9	25.2	70.2	52.8	70.9	49.9	70.9	49.9	74.1	55.3	..	..
Italy	82.9	59.0	84.6	69.0	69.7	57.7	77.7	59.4	80.7	62.7	80.8	63.9
Japan	21.4	4.8	27.8	11.1	29.8	10.5	23.5	8.8	29.4	11.8	28.4	9.9
Luxembourg	57.7	34.6	15.4	15.4	43.8	18.8	68.4	36.8	48.4	24.3	47.2	20.6
Mexico	..	..	..	..	..	..	..	..	..	..	9.0	1.7
Netherlands	73.0	49.2	55.5	39.2	75.8	40.2	72.9	46.5	73.4	44.2	75.4	37.9
New Zealand	..	..	34.9	17.0	43.6	23.5	41.3	24.1	38.4	23.3	32.8	18.0
Norway	14.3	7.1	41.3	22.1	42.8	24.0	46.5	30.2	43.9	29.8	31.4	17.3
Portugal	..	..	61.1	41.7	40.2	34.8	40.5	39.0	57.4	42.4	64.4	51.2
Spain	77.7	58.5	74.6	58.8	73.1	56.2	75.5	58.4	78.4	62.9	77.1	62.2
Sweden	23.8	9.7	14.5	3.4	22.8	7.1	28.5	8.9	35.0	13.9	32.4	13.6
Switzerland	..	..	22.0	14.6	38.3	23.3	46.2	21.8	50.0	33.3	53.8	35.4
Turkey	..	..	72.6	48.2	71.8	48.7	69.4	48.8	72.2	49.6	75.6	55.1
United Kingdom	58.0	35.2	39.0	21.6	48.5	26.6	55.0	32.5	53.3	33.9	50.5	32.2
United States	17.9	9.6	10.0	4.7	17.0	9.0	17.0	9.1	18.1	10.2	15.5	8.1

Sources and notes: See Table Q.

Table T. **Public expenditure and participant inflows in labour market programmes in OECD countries**

Programmes categories	Australia						Austria					Belgium							
	Public expenditures as a per cent of GDP			Participant inflows as a per cent of the labour force			Public expenditures as a per cent of GDP					Public expenditures as a per cent of GDP				Participant inflows as a per cent of the labour force			
	1992-93	1993-94	1994-95	1992-93	1993-94	1994-95	1991	1992	1993	1994	1995	1991	1992	1993	1994	1991	1992	1993	1994
1. Public employment services and administration	**0.24**	**0.23**	**0.20**				**0.11**	**0.12**	**0.12**	**0.13**	**0.13**	**0.19**	**0.19**	**0.22**	**0.23**				
2. Labour market training	**0.17**	**0.16**	**0.17**	**3.5**	**4.0**	**3.8**	**0.12**	**0.09**	**0.10**	**0.11**	**0.12**	**0.23**	**0.24**	**0.27**	**0.29**	**8.0**	**7.9**	**8.6**	**9.1**
a) Training for unemployed adults and those at risk	0.16	0.14	0.16	3.5	3.6	3.6	0.12	0.09	0.10	0.11	0.12	0.14	0.13	0.16	0.18	1.8	1.9	2.5	3.1
b) Training for employed adults	0.01	0.01	0.01	–	0.4	0.2	–	–	–	–	–	0.08	0.10	0.11	0.11	6.1	6.1	6.0	6.0
3. Youth measures	**0.09**	**0.08**	**0.07**	**1.2**	**1.2**	**1.2**	**0.01**	**0.01**	**0.01**	**0.01**	**0.01**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**
a) Measures for unemployed and disadvantaged youth	0.05	0.04	0.04	0.3	0.5	0.5	0.01	0.01	0.01	0.01	0.01	–	–	–	–	–	–	–	–
b) Support of apprenticeship and related forms of general youth training	0.04	0.05	0.03	0.9	0.8	0.7	–	–	–	–	–	–	–	–	–	–	–	–	–
4. Subsidised employment	**0.21**	**0.22**	**0.21**	**2.4**	**2.3**	**2.0**	**0.06**	**0.03**	**0.04**	**0.04**	**0.05**	**0.63**	**0.64**	**0.62**	**0.71**	**..**	**..**	**..**	**..**
a) Subsidies to regular employment in the private sector	0.10	0.11	0.06	1.9	1.8	1.2	0.01	0.02	0.03	0.01	0.02	0.07	0.07	0.07	0.13	0.5	0.6	0.6	2.3
b) Support of unemployed persons starting enterprises	0.01	0.02	0.03	–	0.1	0.1	–	–	–	–	–	–	–	–	–	–	–	–	–
c) Direct job creation (public or non-profit)	0.10	0.09	0.13	0.5	0.4	0.7	0.04	0.01	0.01	0.03	0.03	0.56	0.57	0.56	0.58	..	..	..	..
5. Measures for the disabled	**0.05**	**0.07**	**0.07**	**0.1**	**0.6**	**0.7**	**0.06**	**0.05**	**0.06**	**0.06**	**0.06**	**0.16**	**0.15**	**0.15**	**0.15**	**..**	**..**	**..**	**..**
a) Vocational rehabilitation	0.02	0.03	0.02	0.1	0.3	0.3	0.03	0.03	0.03	0.03	0.03	0.06	0.05	0.05	0.04	..	..	..	..
b) Work for the disabled	0.03	0.04	0.04	–	0.3	0.3	0.02	0.02	0.02	0.03	0.03	0.10	0.10	0.10	0.10	..	..	..	..
6. Unemployment compensation	**1.85**	**1.90**	**1.64**				**0.99**	**1.08**	**1.34**	**1.41**	**1.31**	**2.01**	**2.15**	**2.34**	**2.25**				
7. Early retirement for the labour market reasons	**–**	**–**	**–**				**0.09**	**0.08**	**0.10**	**0.13**	**0.13**	**0.75**	**0.74**	**0.73**	**0.70**				
TOTAL	**2.61**	**2.65**	**2.37**				**1.43**	**1.45**	**1.77**	**1.89**	**1.81**	**3.96**	**4.11**	**4.33**	**4.33**				
Active measures (1-5)	0.76	0.75	0.73	7.2	8.0	7.6	0.35	0.29	0.33	0.35	0.37	1.21	1.22	1.26	1.39	..	..	..	..
Passive measures (6 and 7)	1.85	1.90	1.64				1.08	1.15	1.44	1.54	1.44	2.75	2.89	3.07	2.95				

– Nil or less than half of the last digit used.
.. Data not available.

Table T. **Public expenditure and participant inflows in labour market programmes in OECD countries** *(cont.)*

Programmes categories	Canada										Czech Republic								Denmark									
	Public expenditures as a per cent of GDP					Participant inflows as a per cent of the labour force					Public expenditures as a per cent of GDP				Participant inflows as a per cent of the labour force				Public expenditures as a per cent of GDP					Participant inflows as a per cent of the labour force				
	1991-92	1992-93	1993-94	1994-95	1995-96	1991-92	1992-93	1993-94	1994-95	1995-96	1992	1993	1994	1995	1992	1993	1994	1995	1991	1992	1993	1994	1995	1991	1992	1993	1994	1995
1. Public employment services and administration	**0.21**	**0.21**	**0.21**	**0.20**	**0.19**						**0.09**	**0.10**	**0.11**	**0.11**					**0.10**	**0.11**	**0.10**	**0.12**	**0.12**					
2. Labour market training	**0.36**	**0.39**	**0.37**	**0.34**	**0.32**	**2.6**	**2.7**	**2.9**	**2.5**	**2.3**	**0.01**	**0.01**	**0.01**	**0.01**	**0.3**	**0.2**	**0.3**	**0.3**	**0.36**	**0.40**	**0.48**	**0.71**	**1.00**	**7.6**	**8.7**	**11.1**	**11.6**	**12.8**
a) Training for unemployed adults and those at risk	0.34	0.37	0.36	0.32	0.29	2.4	2.5	2.8	2.4	2.3	0.01	0.01	0.01	0.01	0.3	0.2	0.3	0.3	0.24	0.27	0.38	0.40	0.61	1.7	2.1	3.0	2.7	4.0
b) Training for employed adults	0.02	0.02	0.02	0.02	0.03	0.2	0.2	0.2	–	–	–	–	–	–	–	–	–	–	0.12	0.13	0.11	0.31	0.40	5.9	6.6	8.1	8.9	8.9
3. Youth measures	**0.02**	**0.02**	**0.02**	**0.02**	**0.01**	**0.5**	**0.4**	**0.4**	**0.5**	**0.5**	**0.04**	**0.03**	**0.01**	**0.01**	**0.4**	**0.1**	**0.1**	**0.1**	**0.25**	**0.30**	**0.37**	**0.20**	**0.16**	**1.4**	**1.7**	**1.8**	**1.7**	**1.8**
a) Measures for unemployed and disadvantaged youth	0.02	0.02	0.02	0.02	0.01	0.5	0.4	0.4	0.5	0.5	0.04	0.03	0.01	0.01	0.4	0.1	0.1	0.1	0.25	0.30	0.37	0.20	0.16	1.4	1.7	1.8	1.7	1.8
b) Support of apprenticeship and related forms of general youth training	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
4. Subsidised employment	**0.02**	**0.02**	**0.03**	**0.04**	**0.04**	**0.2**	**0.2**	**0.2**	**0.2**	**0.2**	**0.15**	**0.04**	**0.04**	**0.03**	**2.2**	**0.5**	**0.4**	**0.3**	**0.36**	**0.40**	**0.50**	**0.49**	**0.58**	**2.3**	**2.4**	**2.8**	**1.4**	**1.4**
a) Subsidies to regular employment in the private sector	–	–	–	–	–	–	–	–	–	–	0.09	0.02	0.02	0.01	1.2	0.2	0.2	0.1	0.05	0.06	0.06	0.06	0.04	0.4	0.4	0.4	0.3	0.3
b) Support of unemployed persons starting enterprises	–	0.01	0.02	0.02	0.03	–	–	–	0.1	–	0.03	0.01	–	–	0.5	0.1	–	–	0.09	0.11	0.11	0.10	0.08	0.2	0.2	0.2	0.1	0.1
c) Direc job creation (public or non-profit)	0.02	0.02	0.02	0.02	0.02	0.2	0.2	0.2	0.2	0.2	0.03	0.02	0.02	0.02	0.5	0.2	0.2	0.2	0.22	0.23	0.33	0.34	0.46	1.7	1.8	2.2	1.0	1.0
5. Measures for the disabled	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**0.01**	**0.01**	**0.01**	**–**	**–**	**–**	**–**	**–**	**0.38**	**0.44**	**0.52**	**0.48**	**0.46**	**1.5**	**1.9**	**2.7**	**2.7**	**2.7**
a) Vocational rehabilitation	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	0.23	0.28	0.35	0.31	0.31	1.5	1.9	2.7	2.7	2.7
b) Work for the disabled	–	–	–	–	–	–	–	–	–	–	0.01	0.01	0.01	–	–	–	–	–	0.15	0.16	0.16	0.18	0.15	. .	. .	. .	. .	. .
6. Unemployment compensation	**2.28**	**2.24**	**1.96**	**1.53**	**1.31**						**0.18**	**0.16**	**0.18**	**0.15**					**3.49**	**3.71**	**4.09**	**3.74**	**3.00**					
7. Early retirement for labour market reasons	**–**	**–**	**0.01**	**0.01**	**0.01**						**–**	**–**	**–**	**–**					**1.24**	**1.28**	**1.40**	**1.39**	**1.56**					
TOTAL	**2.89**	**2.88**	**2.62**	**2.14**	**1.88**						**0.48**	**0.34**	**0.35**	**0.30**					**6.19**	**6.64**	**7.46**	**7.13**	**6.88**					
Active measures (1-5)	0.61	0.64	0.64	0.60	0.56	3.3	3.3	3.6	3.2	2.9	0.30	0.18	0.18	0.16	3.0	0.8	0.9	0.7	1.46	1.64	1.97	2.00	2.32	12.8	14.6	18.4	17.4	18.8
Passive measures (6 and 7)	2.28	2.24	1.98	1.54	1.32						0.18	0.16	0.18	0.15					4.73	4.99	5.49	5.13	4.56					

– Nil or less than half of the last digit used.
. . Data not available.

Table T. **Public expenditure and participant inflows in labour market programmes in OECD countries** *(cont.)*

Programmes categories	Finland										France								Germany									
	Public expenditures as a per cent of GDP					Participant inflows as a per cent of the labour force					Public expenditures as a per cent of GDP				Participant inflows as a per cent of the labour force				Public expenditures as a per cent of GDP					Participant inflows as a per cent of the labour force				
	1991	1992	1993	1994	1995	1991	1992	1993	1994	1995	1991	1992	1993	1994	1991	1992	1993	1994	1991	1992	1993	1994	1995	1991	1992	1993	1994	1995
1. Public employment services and administration	**0.15**	**0.16**	**0.17**	**0.17**	**0.16**						**0.13**	**0.14**	**0.15**	**0.16**					**0.22**	**0.24**	**0.25**	**0.24**	**0.23**					
2. Labour market training	**0.34**	**0.47**	**0.48**	**0.47**	**0.43**	**2.0**	**2.9**	**2.8**	**3.3**	**3.6**	**0.35**	**0.39**	**0.45**	**0.44**	**5.7**	**5.6**	**5.6**	**5.4**	**0.47**	**0.65**	**0.56**	**0.42**	**0.38**	**4.1**	**4.1**	**1.9**	**1.8**	**2.0**
a) Training for unemployed adults and those at risk	0.34	0.47	0.48	0.47	0.43	2.0	2.9	2.8	3.3	3.6	0.29	0.32	0.39	0.39	3.8	3.9	4.0	4.0	0.44	0.62	0.53	0.40	0.38	3.7	3.6	1.6	1.7	1.9
b) Training for employed adults	–	–	–	–	–	–	–	–	–	–	0.06	0.06	0.05	0.06	1.9	1.7	1.6	1.4	0.03	0.03	0.03	0.02	–	0.5	0.5	0.3	0.1	–
3. Youth measures	**0.06**	**0.06**	**0.11**	**0.12**	**0.14**	**0.4**	**0.5**	**1.5**	**1.8**	**2.0**	**0.23**	**0.26**	**0.29**	**0.27**	**3.1**	**3.4**	**3.1**	**3.2**	**0.05**	**0.06**	**0.07**	**0.06**	**0.06**	**0.6**	**0.6**	**0.6**	**0.6**	**0.7**
a) Measures for unemployed and disadvantaged youth	0.01	0.02	0.05	0.06	0.06	0.1	0.3	0.8	1.2	1.2	0.09	0.08	0.10	0.08	1.3	1.3	1.3	1.1	0.04	0.05	0.06	0.06	0.05	0.4	0.4	0.4	0.4	0.4
b) Support of apprenticeship and related forms of general youth training	0.05	0.04	0.06	0.06	0.08	0.2	0.2	0.7	0.6	0.7	0.14	0.17	0.19	0.18	1.8	2.1	1.9	2.1	0.01	0.01	0.01	0.01	0.01	0.2	0.2	0.2	0.2	0.2
4. Subsidised employment	**0.69**	**0.93**	**0.79**	**0.77**	**0.68**	**4.0**	**4.9**	**4.9**	**6.2**	**5.1**	**0.11**	**0.13**	**0.20**	**0.21**	**1.2**	**1.8**	**2.4**	**2.9**	**0.34**	**0.51**	**0.47**	**0.37**	**0.41**	**1.5**	**1.2**	**1.1**	**1.3**	**1.3**
a) Subsidies to regular employment in the private sector	0.07	0.16	0.16	0.15	0.11	0.6	1.2	1.3	1.9	1.2	0.05	0.04	0.04	0.05	0.4	0.4	0.5	0.8	0.06	0.07	0.07	0.06	0.07	0.1	0.2	0.1	0.1	0.2
b) Support of unemployed persons starting enterprises	0.02	0.03	0.06	0.06	0.04	0.1	0.2	0.5	0.5	0.3	0.02	0.02	0.02	0.03	0.2	0.2	0.2	0.3	–	–	–	0.01	0.02	–	0.1	0.1	0.1	0.2
c) Direct job creation (public or non-profit)	0.61	0.74	0.58	0.56	0.53	3.3	3.5	3.1	3.8	3.6	0.04	0.07	0.13	0.13	0.6	1.2	1.6	1.8	0.28	0.43	0.40	0.31	0.31	1.3	1.0	1.0	1.1	0.9
5. Measures for the disabled	**0.15**	**0.18**	**0.17**	**0.15**	**0.13**	**0.6**	**0.8**	**0.7**	**0.7**	**0.7**	**0.06**	**0.08**	**0.09**	**0.08**	**0.1**	**0.2**	**0.3**	**0.4**	**0.25**	**0.25**	**0.28**	**0.26**	**0.26**	**0.3**	**0.3**	**0.2**	**0.2**	**0.3**
a) Vocational rehabilitation	0.05	0.07	0.08	0.07	0.06	0.6	0.7	0.7	0.7	0.7	0.01	0.02	0.02	0.03	0.1	0.2	0.3	0.4	0.15	0.14	0.15	0.14	0.13	0.3	0.3	0.2	0.2	0.3
b) Work for the disabled	0.10	0.10	0.09	0.08	0.07	0.1	–	–	–	–	0.05	0.06	0.06	0.06	. .	. .	. .	. .	0.10	0.11	0.13	0.12	0.13	. .	. .	. .	. .	. .
6. Unemployment compensation	**1.75**	**3.44**	**4.54**	**4.28**	**3.62**						**1.47**	**1.61**	**1.73**	**1.57**					**1.49**	**1.48**	**2.00**	**2.03**	**2.08**					
7. Early retirement for labour market reasons	**0.51**	**0.49**	**0.48**	**0.47**	**0.43**						**0.47**	**0.40**	**0.39**	**0.38**					**0.30**	**0.47**	**0.59**	**0.27**	**0.06**					
TOTAL	**3.64**	**5.73**	**6.74**	**6.43**	**5.60**						**2.82**	**3.00**	**3.28**	**3.12**					**3.13**	**3.65**	**4.21**	**3.66**	**3.47**					
Active measures (1-5)	1.38	1.80	1.72	1.68	1.55	7.1	9.1	10.0	11.9	11.4	0.89	1.00	1.17	1.17	10.2	11.1	11.4	11.9	1.33	1.69	1.62	1.35	1.33	6.6	6.3	3.9	4.0	4.2
Passive measures (6 and 7)	2.25	3.93	5.01	4.75	4.05						1.94	2.01	2.11	1.95					1.80	1.96	2.59	2.31	2.14					

– Nil or less than half of the last digit used.
. . Data not available.

Table T. **Public expenditure and participant inflows in labour market programmes in OECD countries** *(cont.)*

Programmes categories	Greece								Ireland				Italy					
	Public expenditures as a per cent of GDP				Participant inflows as a per cent of the labour force				Public expenditures as a per cent of GDP		Participant inflows as a per cent of the labour force		Public expenditures as a per cent of GDP		Participant inflows as a per cent of the labour force			
	1991	1992	1993	1994	1991	1992	1993	1994	1990	1991	1990	1991	1991	1992	1991	1992	1993	1994
1. Public employment services and administration	**0.08**	**0.16**	**0.17**	**0.15**					**0.13**	**0.14**			**0.08**	**0.08**				
2. Labour market training	**0.27**	**0.15**	**0.10**	**0.07**	**1.3**	**1.4**	**1.4**	**1.1**	**0.49**	**0.48**	**2.5**	**3.4**	**–**	**0.02**	**–**	**–**	**–**	**–**
a) Training for unemployed adults and those at risk	0.05	0.04	0.01	0.01	0.2	0.2	0.2	0.2	0.33	0.31	0.7	1.6	–	0.02	–	–	–	–
b) Training for employed adults	0.22	0.11	0.09	0.05	1.0	1.2	1.3	0.9	0.16	0.17	1.8	1.8	–	–	–	–	–	–
3. Youth measures	**0.04**	**0.03**	**0.03**	**0.03**	**0.3**	**0.3**	**0.3**	**0.3**	**0.46**	**0.43**	**2.9**	**3.1**	**0.61**	**0.83**	**4.1**	**3.8**	**3.6**	**3.5**
a) Measures for unemployed and disadvantaged youth	–	–	–	–	–	–	–	–	0.28	0.29	2.2	2.4	0.30	0.28	1.5	1.4	1.5	1.5
b) Support of apprenticeship and related forms of general youth training	0.04	0.03	0.03	0.03	0.3	0.3	0.3	0.3	0.18	0.14	0.7	0.7	0.32	0.55	2.6	2.3	2.1	2.0
4. Subsidised employment	**0.12**	**0.12**	**0.08**	**0.11**	**0.8**	**0.7**	**0.6**	**0.8**	**0.28**	**0.28**	**1.3**	**1.5**	**–**	**–**	**–**	**–**	**0.2**	**0.3**
a) Subsidies to regular employment in the private sector	0.05	0.08	0.07	0.07	0.6	0.6	0.5	0.5	0.02	0.01	0.2	0.2	–	–	–	–	0.1	0.2
b) Support of unemployed persons starting enterprises	0.06	0.03	0.01	0.03	0.3	0.2	0.1	0.2	0.02	0.02	0.2	0.1	–	–	–	–	–	–
c) Direct job creation (public or non-profit)	–	–	–	–	–	–	–	–	0.24	0.25	0.9	1.2	–	–	–	–	–	–
5. Measures for the disabled	**0.01**	**0.01**	**0.01**	**0.01**	**–**	**–**	**–**	**–**	**0.16**	**0.15**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**
a) Vocational rehabilitation	0.01	0.01	0.01	0.01	–	–	–	–	0.16	0.15	–	–	–	–	–	–	–	–
b) Work for the disabled	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
6. Unemployment compensation	**0.50**	**0.60**	**0.61**	**0.51**					**2.93**	**3.15**			**0.60**	**0.71**				
7. Early retirement for labour market reasons	**–**	**–**	**–**	**–**					**0.05**	**0.10**			**0.28**	**0.32**				
TOTAL	**1.02**	**1.06**	**1.00**	**0.87**					**4.51**	**4.73**			**1.58**	**1.96**				
Active measures (1-5)	0.51	0.46	0.39	0.36	2.5	2.5	2.4	2.2	1.52	1.48	6.7	8.1	0.70	0.93	4.1	3.8	3.8	3.8
Passive measures (6 and 7)	0.50	0.60	0.61	0.51					2.99	3.25			0.88	1.03				

– Nil or less than half of the last digit used.

Table T. **Public expenditure and participant inflows in labour market programmes in OECD countries** *(cont.)*

Programmes categories	Japan				Luxembourg					Netherlands									
	Public expenditures as a per cent of GDP				Public expenditures as a per cent of GDP					Public expenditures as a per cent of GDP					Participant inflows as a per cent of the labour force				
	1991-92	1992-93	1993-94	1994-95	1991	1992	1993	1994	1995	1991	1992	1993	1994	1995	1991	1992	1993	1994	1995
1. Public administration services and administration	**0.03**	**0.03**	**0.03**	**0.03**	**0.04**	**0.03**	**0.04**	**0.04**	**0.04**	**0.14**	**0.16**	**0.21**	**0.20**	**0.17**					
2. Labour market training	**0.03**	**0.03**	**0.03**	**0.03**	**0.02**	**0.02**	**0.04**	**0.02**	**0.02**	**0.22**	**0.23**	**0.25**	**0.20**	**0.16**	**1.5**	**1.6**	**1.5**	**1.3**	**1.2**
a) Training for unemployed adults and those at risk	0.03	0.03	0.03	0.03	0.02	0.02	0.04	0.02	0.02	0.22	0.23	0.25	0.20	0.16	1.5	1.6	1.5	1.3	1.2
b) Training for employed adults	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
3. Youth measures	**–**	**–**	**–**	**–**	**0.11**	**0.11**	**0.09**	**0.11**	**0.09**	**0.06**	**0.06**	**0.08**	**0.10**	**0.09**	**0.9**	**0.8**	**0.8**	**0.8**	**0.7**
a) Measures for unemployed and disavantaged youth	–	–	–	–	0.06	0.07	0.05	0.06	0.07	0.01	0.02	0.04	0.06	0.06	0.1	0.1	0.2	0.2	0.2
b) Support of apprenticiceship and related forms of general youth training	–	–	–	–	0.05	0.04	0.04	0.05	0.03	0.05	0.04	0.04	0.04	0.03	0.7	0.7	0.6	0.6	0.5
4. Subsidised emloyment	**0.04**	**0.03**	**0.04**	**0.05**	**0.03**	**0.04**	**0.02**	**0.02**	**0.04**	**0.05**	**0.07**	**0.08**	**0.09**	**0.10**	**0.4**	**0.4**	**0.4**	**0.3**	**0.4**
a) Subsidies to regular employment in the private sector	0.03	0.03	0.04	0.05	0.02	0.03	0.02	0.02	0.04	0.03	0.03	0.02	0.01	0.01	0.2	0.2	0.3	0.2	0.2
b) Support of unemployed persons starting enterprises	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
c) Direct job creation (public or non-profit)	–	–	–	–	0.01	–	–	–	–	0.02	0.05	0.06	0.07	0.09	0.2	0.2	0.2	0.1	0.2
5. Measures for the disabled	**–**	**–**	**–**	**–**	**0.10**	**0.07**	**0.05**	**0.06**	**0.06**	**0.62**	**0.61**	**0.61**	**0.58**	**0.54**	**0.1**	**0.1**	**0.1**	**0.2**	**0.2**
a) Vocationl rehabilitation	–	–	–	–	0.01	0.01	0.01	0.01	–	–	–	–	–		–	–	–	–	–
b) Work for the disabled	–	–	–	–	0.09	0.06	0.04	0.04	0.06	0.62	0.61	0.61	0.58	0.54	0.1	0.1	0.1	0.2	0.2
6. Unemployment compensation	**0.22**	**0.26**	**0.30**	**0.35**	**0.25**	**0.24**	**0.35**	**0.45**	**0.47**	**2.49**	**2.58**	**2.87**	**3.15**	**3.06**					
7. Early retirement for labour market reasons	**–**	**–**	**–**	**–**	**0.52**	**0.50**	**0.52**	**0.31**	**0.31**	**–**	**–**	**–**	**–**	**–**					
TOTAL	**0.31**	**0.34**	**0.40**	**0.46**	**1.05**	**1.00**	**1.10**	**1.02**	**1.03**	**3.58**	**3.72**	**4.11**	**4.31**	**4.12**					
Active measures (1-5)	0.09	0.09	0.10	0.11	0.29	0.27	0.24	0.25	0.26	1.09	1.14	1.24	1.16	1.06	2.9	2.9	2.9	2.6	2.5
Passive measures (6 and 7)	0.22	0.26	0.30	0.35	0.76	0.73	0.87	0.77	0.78	2.49	2.58	2.87	3.15	3.06					

– Nil or less than half of the last digit used.

Table T. **Public expenditure and participant inflows in labour market programmes in OECD countries** *(cont.)*

Programmes categories	New Zealand							Norway										Portugal							
	Public expenditures as a per cent of GDP				Participant inflows as a per cent of the labour force			Public expenditures as a per cent of GDP					Participant inflows as a per cent of the labour force					Public expenditures as a per cent of GDP				Participant inflows as a per cent of the labour force			
	1991-92	1992-93	1993-94	1994-95	1991-92	1992-93	1993-94	1991	1992	1993	1994	1995	1991	1992	1993	1994	1995	1991	1992	1993	1994	1991	1992	1993	1994
1. Public employment services and administration	**0.14**	**0.14**	**0.12**	**0.12**				**0.13**	**0.15**	**0.17**	**0.18**	**0.17**						**0.08**	**0.08**	**0.11**	**0.11**				
2. Labour market training	**0.42**	**0.40**	**0.37**	**0.34**	**4.7**	**2.2**	**5.3**	**0.29**	**0.32**	**0.33**	**0.28**	**0.23**	**2.8**	**3.1**	**3.5**	**3.6**	**2.8**	**0.18**	**0.28**	**0.26**	**0.22**	**1.1**	**1.3**	**1.4**	**2.1**
a) Training for unemployed adults and those at risk	0.42	0.40	0.37	0.34	4.7	2.2	5.3	0.29	0.32	0.33	0.28	0.23	2.8	3.1	3.5	3.6	2.8	0.02	0.04	0.04	0.05	0.1	0.2	0.2	0.5
b) Training for employed adults	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	0.16	0.23	0.23	0.16	1.0	1.1	1.2	1.6
3. Youth measures	**0.03**	**0.05**	**0.07**	**0.07**	**0.2**	**0.4**	**0.3**	**0.11**	**0.13**	**0.12**	**0.11**	**0.08**	**..**	**..**	**..**	**..**	**..**	**0.37**	**0.44**	**0.36**	**0.29**	**2.5**	**2.7**	**2.7**	**2.1**
a) Measures for unemployed and disadvantaged youth	0.02	0.02	0.03	0.02	–	0.1	0.1	0.11	0.13	0.12	0.11	0.08	..	..	..	..	..	0.27	0.32	0.22	0.15	1.6	1.5	1.5	1.1
b) Support of apprenticeship and related forms of general youth training	0.01	0.03	0.04	0.05	0.2	0.3	0.3	–	–	–	–	–	..	..	..	..	..	0.10	0.12	0.13	0.14	0.9	1.2	1.1	1.0
4. Subsidised employment	**0.15**	**0.22**	**0.19**	**0.15**	**2.3**	**2.7**	**2.8**	**0.20**	**0.23**	**0.33**	**0.28**	**0.23**	**..**	**..**	**..**	**0.6**	**..**	**0.06**	**0.04**	**0.10**	**0.05**	**0.7**	**0.4**	**0.4**	**0.7**
a) Subsidies to regular employment in the private sector	0.05	0.10	0.07	0.10	1.3	1.4	1.4	0.03	0.04	0.07	0.09	0.09	..	..	..	0.1	..	–	–	–	–	–	–	–	–
b) Support of unemployed persons starting enterprises	0.06	0.06	0.05	0.02	0.2	0.2	0.2	–	–	–	–	–	..	..	..	..	..	0.04	0.03	0.08	0.04	0.4	0.3	0.2	0.2
c) Direct job creation (public or non-profit)	0.04	0.06	0.07	0.04	0.7	1.1	1.2	0.17	0.19	0.25	0.19	0.14	..	..	..	0.6	..	0.02	0.01	0.02	0.01	0.2	0.1	0.1	0.5
5. Measures for the disabled	**0.05**	**0.05**	**0.04**	**0.01**	**1.5**	**1.5**	**1.5**	**0.21**	**0.21**	**0.22**	**0.48**	**0.64**	**..**	**..**	**..**	**..**	**..**	**0.04**	**0.05**	**0.05**	**0.06**	**0.1**	**0.2**	**0.2**	**0.2**
a) Vocational rehabilitation	0.01	0.01	0.01	0.01	1.5	1.5	1.5	0.02	0.02	0.02	0.19	0.30	..	..	..	..	..	0.04	0.04	0.05	0.05	0.1	0.2	0.1	0.1
b) Work for the disabled	0.04	0.04	0.03	–	..	..	..	0.19	0.19	0.19	0.29	0.34	..	..	..	..	..	–	–	–	0.01	–	–	–	–
6. Unemployment compensation	**1.95**	**2.07**	**1.62**	**1.30**				**1.19**	**1.43**	**1.49**	**1.31**	**1.10**						**0.37**	**0.53**	**0.84**	**0.99**				
7. Early retirement for labour market reasons	**–**	**–**	**–**	**–**				**–**	**–**	**–**	**–**	**–**						**0.10**	**0.10**	**0.12**	**0.16**				
TOTAL	**2.73**	**2.93**	**2.41**	**2.00**				**2.13**	**2.47**	**2.65**	**2.65**	**2.46**						**1.20**	**1.51**	**1.84**	**1.87**				
Active measures (1-5)	0.78	0.86	0.79	0.69	8.7	6.8	9.9	0.94	1.04	1.16	1.34	1.35	..	..	..	..	..	0.73	0.89	0.88	0.73	4.4	4.6	4.6	4.9
Passive measures (6 and 7)	1.95	2.07	1.62	1.30				1.19	1.43	1.49	1.31	1.10						0.47	0.63	0.95	1.15				

– Nil or less than half of the last digit used.
.. Data not available.

Table T. **Public expenditure and participant inflows in labour market programmes in OECD countries** *(cont.)*

Programmes categories	Spain										Sweden								Switzerland									
	Public expenditures as a per cent of GDP					Participant inflows as a per cent of the labour force					Public expenditures as a per cent of GDP				Participant inflows as a per cent of the labour force				Public expenditures as a per cent of GDP					Participant inflows as a per cent of the labour force				
	1991	1992	1993	1994	1995	1991	1992	1993	1994	1995	1991-92	1992-93	1993-94	1994-95	1991-92	1992-93	1993-94	1994-95	1991	1992	1993	1994	1995	1991	1992	1993	1994	1995
1. Public employment services and administration	**0.12**	**0.11**	**0.11**	**0.10**	**0.09**						**0.21**	**0.25**	**0.25**	**0.27**					**0.07**	**0.10**	**0.12**	**0.12**	**0.10**					
2. Labour market training	**0.18**	**0.10**	**0.12**	**0.23**	**0.35**	**..**	**..**	**..**	**0.7**	**0.8**	**1.01**	**1.09**	**0.76**	**0.78**	**4.5**	**3.6**	**4.1**	**4.4**	**0.01**	**0.03**	**0.06**	**0.08**	**0.08**	**0.3**	**0.9**	**1.0**	**1.3**	**1.6**
a) Training for unemployed adults and those at risk	0.15	0.07	0.09	0.17	0.28	..	..	..	0.4	0.5	0.97	1.04	0.73	0.75	3.1	3.1	3.3	3.7	0.01	0.02	0.06	0.07	0.08	0.3	0.9	1.0	1.2	1.5
b) Training for employed adults	0.03	0.03	0.03	0.06	0.07	..	..	..	0.2	0.3	0.05	0.04	0.03	0.02	1.4	0.5	0.8	0.7	–	–	–	–	–	0.1	0.1	0.1	0.1	0.1
3. Youth measures	**0.05**	**0.07**	**0.10**	**0.09**	**0.08**	**0.3**	**0.3**	**0.3**	**0.3**	**0.3**	**0.14**	**0.32**	**0.31**	**0.23**	**0.8**	**3.1**	**3.4**	**2.5**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**
a) Measures for unemployed and disadvantaged youth	0.04	0.07	0.10	0.09	0.08	0.3	0.3	0.3	0.3	0.3	0.13	0.32	0.31	0.23	0.8	3.1	3.4	2.5	–	–	–	–	–	–	–	–	–	–
b) Support of apprenticeship and related forms of general youth training	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
4. Subsidised employment	**0.40**	**0.28**	**0.20**	**0.17**	**0.19**	**4.7**	**2.9**	**1.5**	**1.2**	**1.2**	**0.26**	**0.56**	**0.87**	**0.90**	**1.1**	**3.6**	**6.4**	**6.3**	**–**	**–**	**0.01**	**0.05**	**0.09**	**0.1**	**0.1**	**0.3**	**0.6**	**0.7**
a) Subsidies to regular employment in the private sector	0.12	0.09	0.09	0.11	0.12	3.0	1.6	–	0.1	–	0.09	0.17	0.22	0.27	0.5	1.2	2.1	2.1	–	–	–	0.01	0.01	–	–	–	0.1	0.1
b) Support of unemployed persons starting enterprises	0.20	0.14	0.05	0.02	0.01	0.5	0.3	0.3	0.2	0.1	0.02	0.04	0.06	0.09	0.1	0.2	0.4	0.5	–	–	–	–	–	–	–	–	–	–
c) Direct job creation (public or non-profit)	0.08	0.05	0.06	0.04	0.05	1.2	0.9	1.1	1.0	1.0	0.16	0.35	0.58	0.54	0.5	2.2	4.0	3.8	–	–	0.01	0.04	0.08	–	0.1	0.2	0.5	0.5
5. Measures for the disabled	**0.01**	**0.01**	**0.01**	**0.01**	**0.01**	**0.1**	**0.1**	**0.1**	**0.1**	**0.1**	**0.83**	**0.86**	**0.80**	**0.82**	**0.7**	**1.1**	**1.2**	**1.4**	**0.15**	**0.18**	**0.20**	**0.20**	**0.20**	**..**	**..**	**..**	**..**	**..**
a) Vocational rehabilitation	–	–	–	–	–	–	–	–	–	–	0.11	0.12	0.09	0.10	0.5	0.7	0.7	0.8	0.11	0.13	0.14	0.15	0.15	..	..	..	..	..
b) Work for the disabled	0.01	0.01	0.01	0.01	0.01	0.1	0.1	0.1	0.1	0.1	0.72	0.74	0.70	0.72	0.2	0.4	0.6	0.6	0.05	0.05	0.07	0.06	0.05	..	..	..	..	..
6. Unemployment compensation	**2.85**	**3.17**	**3.59**	**3.26**	**2.60**						**1.57**	**2.65**	**2.72**	**2.52**					**0.36**	**0.95**	**1.65**	**1.44**	**1.25**					
7. Early retirement for labour market reasons	**–**	**–**	**–**	**–**	**–**						**0.08**	**0.06**	**0.05**	**0.02**					**–**	**–**	**–**	**–**	**–**					
TOTAL	**3.60**	**3.75**	**4.12**	**3.86**	**3.32**						**4.11**	**5.79**	**5.75**	**5.54**					**0.60**	**1.26**	**2.04**	**1.89**	**1.73**					
Active measures (1-5)	0.76	0.58	0.53	0.60	0.72	..	..	..	2.2	2.4	2.46	3.07	2.98	3.00	7.1	11.4	15.2	14.6	0.24	0.31	0.39	0.45	0.47	..	..	..	..	..
Passive measures (6 and 7)	2.85	3.17	3.59	3.26	2.60						1.65	2.71	2.77	2.54					0.36	0.95	1.65	1.44	1.25					

– Nil or less than half of the last digit used.
.. Data not available.

Table T. **Public expenditure and participant inflows in labour market programmes in OECD countries** *(cont.)*

Programmes categories	United Kingdom [a]								United States						
	Public expenditures as a per cent of GDP				Participant inflows as a per cent of the labour force				Public expenditures as a per cent of GDP				Participant inflows as a per cent of the labour force		
	1991-92	1992-93	1993-94	1994-95	1991-92	1992-93	1993-94	1994-95	1991-92	1992-93	1993-94	1994-95	1990-91	1991-92	1992-93
1. Public employment services and administration	**0.20**	**0.22**	**0.24**	**0.21**					**0.08**	**0.08**	**0.08**	**0.07**			
2. Labour market training	**0.15**	**0.13**	**0.15**	**0.13**	**1.0**	**1.1**	**1.3**	**1.2**	**0.05**	**0.04**	**0.04**	**0.04**	**0.9**	**0.7**	**0.7**
a) Training for unemployed adults and those at risk	0.15	0.13	0.14	0.12	0.9	1.1	1.2	1.2	0.05	0.04	0.04	0.04	0.9	0.7	0.7
b) Training for employed adults	–	–	0.01	0.01	–	–	–	0.1	–	–	–	–	–	–	–
3. Youth measures	**0.17**	**0.15**	**0.14**	**0.13**	**0.7**	**0.7**	**0.8**	**0.9**	**0.03**	**0.04**	**0.04**	**0.03**	**0.5**	**0.5**	**0.9**
a) Measures for unemployed and disadvantaged youth	–	–	–	–	–	–	–	–	0.03	0.04	0.04	0.03	0.5	0.5	0.8
b) Support of apprenticeship and related forms of general youth training	0.17	0.15	0.14	0.13	0.7	0.6	0.8	0.8	–	–	–	–	0.1	–	0.1
4. Subsidised employment	**0.02**	**0.04**	**0.02**	**0.03**	**0.2**	**0.1**	**0.2**	**0.3**	**0.01**	**0.01**	**0.01**	**0.01**	**0.4**	**0.3**	**0.3**
a) Subsidies to regular employment in the private sector	–	–	–	–	–	–	–	–	–	–	–	0.01	0.3	0.3	0.3
b) Support of unemployed persons starting enterprises	0.02	0.01	0.02	0.01	0.2	0.1	0.1	0.1	–	–	–	–	–	–	–
c) Direct job creation (public or non-profit)	–	0.03	–	0.01	–	–	0.1	0.2	0.01	0.01	0.01	0.01	0.1	0.1	0.1
5. Measures for the disabled	**0.02**	**0.03**	**0.03**	**0.03**	**0.1**	**0.1**	**0.1**	**0.2**	**0.04**	**0.04**	**0.04**	**0.04**	**0.8**	**0.8**	**0.8**
a) Vocational rehabilitation	–	–	–	–	0.1	0.1	0.1	0.1	0.04	0.04	0.04	0.04	0.8	0.8	0.8
b) Work for the disabled	0.02	0.02	0.02	0.02	0.1	0.1	0.1	0.1	–	–	–	–	–	–	–
6. Unemployment compensation	**1.41**	**1.59**	**1.60**	**1.41**					**0.66**	**0.60**	**0.43**	**0.35**			
7. Early retirement for labour market reasons	**–**	**–**	**–**	**–**					**–**	**–**	**–**	**–**			
TOTAL	**1.98**	**2.15**	**2.17**	**1.94**					**0.88**	**0.81**	**0.65**	**0.55**			
Active measures (1-5)	0.57	0.56	0.57	0.53	1.9	2.0	2.4	2.5	0.22	0.21	0.21	0.20	2.7	2.4	2.7
Passive measures (6 and 7)	1.41	1.59	1.60	1.41					0.66	0.60	0.43	0.35			

a) Excluding Northern Ireland.
– Nil or less than half of the last digit used.

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