OECD Employment Outlook

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The OECD Employment Outlook

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

The *OECD Employment Outlook* is the joint work of staff of the Directorate for Employment, Labour and Social Affairs, and has benefitted from contributions from national government delegates. It is published on the responsibility of the Secretary-General of the OECD.

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ORGANISATION FOR ECONOMIC CO-OPERATION AND DEVELOPMENT

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Editorial

Globalisation: Coping with the Challenge

The many faces of globalisation reflected in rising imports, outflows of foreign direct investment (sometimes tied directly to offshoring of production) and inflows of immigrants, have contributed to rising job insecurity in many OECD countries recently. According to some commentators, globalisation is leading to significant job losses, not just in industry, but increasingly in some hitherto non-traded services, and exerting downward pressure on the wages and working conditions of many OECD workers. When this is combined with rapid technological change (*e.g.* in the ICT sector and the Internet), the spectre of job losses is not confined mainly to blue-collar workers but could also hit many white-collar workers too. These anxieties have been fuelled by the rapid integration of two huge labour-surplus countries, China and India, into the world trading system, as well as the recent EU enlargement.

Not surprisingly, these anxieties have been heightened against the backdrop of relatively sluggish employment growth in a majority of OECD countries, notably in continental Europe. OECD projections are for a small improvement in the employment record in 2005-2006 for the OECD area as a whole. On current trends, there would be 36 million unemployed workers in the OECD area in 2006, only one million less than in 2004.

Globalisation holds the promise of better living standards…

Such concerns are in stark contrast with evidence that past episodes of trade and investment liberalisation have been an important source of rising employment and living standards. Increased market openness creates new business opportunities for all participating countries, promotes consumer choice and makes room for higher real incomes. Past experience also shows that protectionist policies are a blind alley: countries that have been more open to trade have also tended to experience higher economic growth than less open economies.

… but also entails adjustment costs

Yet, realising the gains from trade requires the move of production factors away from activities in which a country is relatively less efficient than its trading partners and towards activities where it is relatively more efficient. This means that job losses in some sectors, along with new job opportunities in other sectors, are an inevitable accompaniment of the process of globalisation. The challenge is to ensure that the adjustment process involved in matching available workers with new job openings works as smoothly as possible.

The size of the adjustment challenge needs to be put in perspective. Only a fraction of job losses recorded in OECD countries is likely to be directly attributable to trade and investment liberalisation. To illustrate this, data for 15 OECD countries over the period 1900-2000 show

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that the high-import-competition industries within manufacturing only accounted for 4 per cent of total employment on average. However, adjustment is neither automatic nor painless. Chapter 1 shows that workers losing their job in high import-competing industries are slower to become re-employed and experience larger wage cuts once re-employed than other job losers. This reflects the fact that trade-displaced workers tend to be older, less educated and more often possess skills specialised in declining occupations and industries, as compared to other job losers.

Programmes targeted on trade-displaced workers may be justified in specific circumstances…

Though trade-displaced workers tend on average to suffer larger adjustment difficulties than other groups, it does not necessarily follow that specific policy measures are needed. However, there may be grounds to implement targeted support measures and re-employment services when trade shocks disproportionately affect specific regions giving rise to large-scale lay-offs in local labour markets with few alternative jobs available on the spot. Indeed, as illustrated in Chapter 2, regional employment imbalances are often persistent, even in countries where workers are relatively mobile across regions. Likewise, targeted programmes may make sense when entire sectors are affected by trade and investment liberalisation – and the problem is particularly acute when declining sectors are located in already depressed regions. But it has to be acknowledged that such targeted measures have a mixed record, sometimes becoming *de facto* barriers to adjustment. So they should be used sparingly, strongly oriented towards facilitating orderly adjustment and time-limited.

In addition, it is sometimes claimed that trade-displaced workers have a particular claim to public assistance on the grounds that their situation results from a deliberate policy decision to liberalise trade and investment flows which will increase income and welfare for the rest of society. A variant of this argument, much used in the United States, is that without specific aids for trade-displaced workers, it may be impossible to pursue trade liberalisation initiatives. If such political economy arguments prevail, care should be taken to minimise the inefficiencies and inequities that can result from singling out trade-displaced workers for assistance beyond that offered to other workers encountering similar difficulties in the labour market.

… but the overarching goal is to provide income support for job losers in general, while also promoting re-employment incentives

Except in these specific circumstances, the challenges of trade displacement are not very different from those arising from job loss in general. Therefore, the overriding policy requirement here is to provide income support to job losers in general, while at the same time fostering their move into new jobs.

Unemployment benefits are the most obvious way to compensate "losers" from import competition and delocalisation. These benefits may further equity goals by leading to a more even distribution of the benefits and costs of international economic integration. They may also support efficiency goals by enabling job seekers to look longer for a job that makes good use of their skills. However, inefficiencies might also result, since unemployment benefits tend to blunt incentives for trade-displaced workers to search actively for a new

job. Labour supply disincentives may be particularly strong in the case of trade-displaced workers whose job experience and skills are a poor match for the available jobs. Typically, such workers will have to accept a significant cut in pay in order to become re-employed. In such instances, unemployment benefit payments that appear quite modest, when compared to previous earnings, may be much higher compared to *prospective* earnings, thereby creating a strong unemployment trap.

Since the overall policy requirement is to ensure that displaced workers have opportunities and incentives to adjust, measures that incite displaced workers to withdraw from the labour market, *e.g.* through the use of early retirement, disability benefits or unemployment benefits with lax job-search requirements, should be avoided. Indeed, every effort should be made to keep displaced workers in close contact with the labour market. Nonetheless, it should be acknowledged that policy makers often face a difficult trade-off between providing adequate benefits and preserving work incentives.

Ensuring that work is financially attractive vis-à-vis benefit receipt is one way of achieving this,…

One way to address this trade-off is by providing a financial incentive to jobseekers who find a job. Such in-work benefits are typically targeted on low-income individuals and care should be taken in designing them in a manner that reduces the risk of deadweight loss. But experience shows that they can be an effective way of promoting work incentives (Chapter 3). Wage insurance schemes, which replace part of the difference in earnings between old and new jobs, are an interesting innovation being tried in a few countries (France, Germany and the United States) with the aim of encouraging displaced workers to find new jobs more quickly. However, such schemes raise difficult design issues and have not been evaluated rigorously yet.

… activation strategies, if well designed, can help promote access to new jobs,…

"Activation" strategies are essential for ensuring that adequate benefit levels are consistent with strong work incentives (Chapter 4). Such strategies, which include job-search assistance, counselling, training and other re-employment services, are particularly well suited to situations of trade displacement. Indeed, successful adaptation to changing trade patterns requires that labour flows smoothly from declining to expanding industries. For example, the re-integration of displaced workers possessing obsolete skills can be facilitated if adequate re-training programmes can qualify these workers for new jobs at a reasonable cost. Active labour programmes should be designed carefully, however. For instance, it may make sense for many displaced workers, especially older ones, to become re-employed in the same sector – rather than moving into new occupations which would imply a significant retraining investment. This is possible because high labour turnover rates mean that there is considerable hiring, even in declining industries. Earnings losses are also significantly smaller for workers finding a new job in the same industry. In short, training and other intensive measures should be reserved for a relatively small number of individuals for whom job-search assistance alone is inadequate.

Providing the right individualised services for displaced workers is part of the general challenge of designing effective employment services, evaluating their impact, and expanding the provision of programmes which are found to be cost-effective. Good performance management of employment services is key to meeting this challenge (Chapter 5).

... job-search assistance following advance notification of job loss can also help...

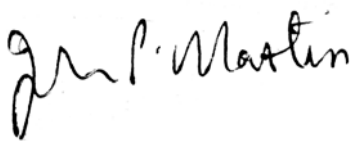
The job losses caused by trade shocks are sometimes sufficiently predictable to allow adjustment assistance to begin in advance of workers' layoffs. The period of advance notification before lay-offs occur, which is often provided by legislation, can provide a breathing space for implementing proactive measures. It is also of value in its own right for giving workers a head start in searching for a new job. Displaced workers receiving advance notification tend to spend less time unemployed than workers laid-off without any advance warning, and there is also some indication of a positive impact on post-displacement wages for workers who have received advance notification. Dispatching staff from public employment services to firms where layoffs have been announced, or even creating a public employment office on the premises of the dismissing firm, may be especially helpful.

... and, more generally, well-functioning labour markets should be in place

Assisting displaced workers to find new jobs will be much easier where overall labour market performance is strong. In this respect, ensuring that labour markets are dynamic and that people of working-age have opportunities and incentives to work is more important than ever. The OECD's on-going reassessment of its *Jobs Strategy* should provide a comprehensive framework for achieving this.

In sum, the adjustment costs of globalisation should be acknowledged and addressed by policy

Overall, claims that globalisation is the main cause of the labour market problems experienced by OECD countries are exaggerated. The process through which the gains from open markets occur, however, leads to adjustment costs. And these costs should be acknowledged and addressed mainly by general policy measures that compensate job losers while promoting re-employment chances. Failure to acknowledge the worker adjustment challenges of globalisation, and to implement much-needed reforms, may erode public support for open trade policies.



John P. Martin
Director for Employment, Labour and Social Affairs
June 2005

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OECD Employment Outlook

Introduction

Short-term Employment Prospects

Rising oil prices and volatile exchange rate fluctuations have affected growth prospects in the OECD area as a whole, in particular in the euro zone. As a result, the OECD employment picture is expected to improve only slowly in 2005-2006 – with, however, substantial cross-country differences in expected performance. Likewise, wages would continue to grow moderately over the projection period, with real wages growing below labour productivity gains on average in the OECD area.

The following sections present a summary of the assessment of the economic situation and employment performance as given in the May 2005 edition of the *OECD Economic Outlook*.

A. Economic outlook to the year 2006

In 2004, economic growth continued to be led by the United States and by large and rapidly growing emerging non-OECD economies, notably China. In the OECD area as a whole, real GDP growth averaged 3.4% last year, up from 2.1% in 2003, but growth slowed over the course of the year against the backdrop of rising and volatile oil prices, coupled with exchange rate shifts (Table 0.1).

Among the large OECD economies, economic growth was fastest in the United States, albeit somewhat below past projected rates. Economic growth in 2004 in the United States was mainly driven by strong domestic demand led by household consumption and business investment. The strong expansion in the United States and non-OECD Asia was accompanied by faster economic growth in Japan, Canada, Korea, Mexico, New Zealand and the United Kingdom and, albeit at a slower pace, in Australia, as compared to the previous year. The growth performance in 2004 in the euro area was uneven, with Germany, Italy and the Netherlands under performing, while most of the other euro area countries recording moderate or high growth. Growth in the euro area was driven mainly by external demand, but was inadequate to absorb fully existing cyclical slack, due in part to the interplay of a strong euro and soaring oil prices. Turkey recorded exceptionally strong growth. Economic growth was also strong in new members of the European Union – Czech Republic, Hungary, Poland and Slovak Republic.

Short-term projections indicate that economic growth will pick up somewhat in the OECD area from around mid-2005. Some rebalancing of growth is also expected across OECD regions, with a gradual easing of economic expansion in the United States and the United Kingdom during the projection period, accompanied by some acceleration in the EU-19 – up from 1.6% in 2005 to 2.3% in 2006 – and in Japan – up from 1.5% in 2005 to 1.7% in 2006. However, the growth performance will remain uneven among EU-19 countries. While new members of the EU as well as Ireland, Spain and Sweden are expected to record relatively high growth rates in 2005-2006, performance in other EU countries will be weak.

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Table 0.1. **Growth of real GDP in OECD countries**[a, b]

Percentage change from previous period

	Share in total OECD GDP 2000	Average 1992-2002	2003	2004	Projections	
					2005	2006
North America						
Canada	3.2	3.6	2.0	2.8	2.8	3.1
Mexico	3.3	2.7	1.4	4.4	4.0	4.2
United States	36.2	3.2	3.0	4.4	3.6	3.3
Asia						
Japan	12.2	1.0	1.5	2.6	1.5	1.7
Korea	2.8	5.6	3.1	4.6	4.3	5.0
Europe						
Austria	0.8	2.2	0.8	2.0	1.9	2.3
Belgium	1.0	2.0	1.3	2.7	1.3	2.4
Czech Republic	0.6	2.0	3.7	4.0	4.1	4.3
Denmark	0.6	2.3	0.7	2.4	2.4	2.4
Finland	0.5	3.3	2.5	3.4	2.2	2.9
France	5.7	2.0	0.5	2.3	1.4	2.0
Germany	7.6	1.3	–0.1	1.0	1.2	1.8
Greece	0.7	2.8	4.7	4.2	2.8	3.2
Hungary	0.5	3.1	3.0	4.0	3.6	3.9
Iceland	0.0	3.1	4.2	5.2	6.2	5.3
Ireland	0.4	7.9	3.6	4.9	5.3	5.0
Italy	5.3	1.6	0.4	1.0	–0.6	1.1
Luxembourg	0.1	4.8	2.9	4.5	3.3	3.9
Netherlands	1.6	2.7	–0.9	1.4	0.5	1.7
Norway	0.6	3.4	0.4	2.9	3.1	2.5
Poland	1.5	4.4	3.8	5.3	4.2	4.5
Portugal	0.7	2.4	–1.1	1.0	0.7	2.1
Slovak Republic	0.2	4.6	4.5	5.5	4.8	5.7
Spain	3.0	2.8	2.5	2.7	3.0	3.2
Sweden	0.9	2.6	1.6	3.0	2.8	3.3
Switzerland	0.8	1.3	–0.3	1.7	1.3	2.0
Turkey	1.7	2.9	5.8	8.9	6.3	6.1
United Kingdom	5.5	3.0	2.2	3.1	2.4	2.4
Oceania						
Australia	1.8	3.9	3.6	2.9	2.5	3.4
New Zealand	0.3	3.7	3.3	4.4	2.9	2.4
OECD Europe	**40.2**	**2.3**	**1.3**	**2.5**	**1.8**	**2.4**
EU-15	**34.4**	**2.2**	**0.9**	**2.0**	**1.4**	**2.1**
EU-19	**37.1**	**2.3**	**1.1**	**2.2**	**1.6**	**2.3**
Total OECD	**100.0**	**2.7**	**2.1**	**3.4**	**2.6**	**2.8**

a) The OECD Secretariat's projection methods and underlying statistical concepts and sources are described in detail in "Sources and Methods: OECD Economic Outlook" which can be downloaded from the OECD Internet site (*www.oecd.org/dataoecd/29/23/25501352.pdf*).

b) Aggregates are computed on the basis of 2000 GDP weights expressed in 2000 purchasing power parities.

Source: OECD Economic Outlook, No. 77, May 2005.

In particular, growth rates in 2005 are projected to be 1% or lower in the Netherlands and Portugal and a recession is predicted in Italy. The OECD projections also indicate some slowing of growth in 2005 in Greece, New Zealand and Turkey, albeit from high rates of growth, and a continuation of strong growth in Korea.

B. Employment and unemployment

Employment growth continued to remain sluggish in 2004, even in a number of countries recording strong economic growth (Table 0.2). Indeed, one-half of the countries experienced either negative employment growth (Czech Republic, France, Hungary,

Table 0.2. **Employment and labour force growth in OECD countries**[a]

Percentage change from previous period

	Employment						Labour force					
	Level 2003 (000s)	Average 1992-2002	2003	2004	Projections		Level 2003 (000s)	Average 1992- 2002	2003	2004	Projections	
					2005	2006					2005	2006
North America												
Canada	15 664	1.9	2.3	1.8	1.2	1.5	16 954	1.5	2.3	1.4	0.9	1.4
Mexico	39 712	2.6	1.1	3.9	2.0	2.6	40 745	2.6	1.3	4.5	2.9	2.5
United States	137 734	1.4	0.9	1.1	1.6	1.7	146 509	1.2	1.1	0.6	1.2	1.4
Asia												
Japan	63 162	–0.2	–0.2	0.2	0.4	0.3	66 664	0.2	–0.3	–0.4	0.1	0.0
Korea	22 139	1.5	–0.1	1.9	1.3	1.4	22 916	1.6	0.2	2.0	1.2	1.3
Europe												
Austria	4 145	0.5	0.1	1.0	0.9	1.1	4 389	0.6	0.3	1.0	0.9	1.0
Belgium	4 189	0.7	0.1	0.7	0.3	1.0	4 550	0.7	0.7	0.5	0.7	0.9
Czech Republic	4 698	–0.3	–0.7	–0.3	0.2	0.3	5 097	0.0	–0.1	0.3	0.1	0.2
Denmark	2 704	0.4	–1.1	0.1	0.3	0.4	2 864	0.0	0.0	0.2	0.0	0.0
Finland	2 356	0.7	–0.3	0.0	0.6	0.5	2 590	0.4	–0.4	–0.2	0.2	0.3
France	24 623	1.0	–0.2	–0.1	0.3	0.7	27 287	0.9	0.6	0.2	0.3	0.2
Germany	38 314	0.2	–1.0	0.3	0.6	0.8	42 152	0.4	0.0	0.5	1.0	0.2
Greece	3 977	0.6	1.3	2.8	1.2	1.4	4 437	0.9	0.7	3.6	0.9	1.0
Hungary	3 878	–0.5	1.3	–0.6	0.5	0.4	4 122	–0.9	1.3	–0.3	0.6	0.1
Iceland	157	1.4	0.1	–0.5	1.6	2.8	162	1.3	0.2	–0.8	1.3	2.3
Ireland	1 811	4.1	1.9	3.0	1.4	1.3	1 899	2.9	2.1	2.8	1.3	1.2
Italy	21 823	0.3	1.0	1.5	0.0	0.4	23 919	0.3	0.6	0.8	0.3	0.4
Luxembourg	193	1.5	1.0	1.2	1.3	1.5	201	1.7	1.9	1.7	1.5	1.4
Netherlands	8 285	1.9	–0.4	–0.7	–0.6	1.2	8 639	1.6	0.8	0.2	0.7	1.0
Norway	2 269	1.3	–0.8	0.3	0.7	1.2	2 375	1.1	–0.1	0.3	0.4	0.8
Poland	13 617	–0.9	–1.2	1.3	1.5	1.9	16 945	–0.2	–1.6	0.5	0.6	0.7
Portugal	5 084	0.8	–0.5	0.1	0.4	1.1	5 426	0.9	0.9	0.5	0.9	0.7
Slovak Republic	2 165	. .	1.8	0.3	0.9	0.9	2 624	. .	0.4	1.0	0.7	0.4
Spain	16 695	2.4	2.7	2.5	2.7	2.5	18 822	2.2	2.6	2.0	2.0	2.1
Sweden	4 232	0.1	–0.2	–0.4	0.4	1.0	4 449	–0.1	0.7	0.2	–0.1	0.6
Switzerland	4 175	0.4	–0.1	0.2	0.3	1.1	4 351	0.4	0.9	0.4	0.2	0.5
Turkey	21 647	0.9	–0.9	0.3	1.5	1.7	24 141	1.1	–0.7	0.1	1.8	1.8
United Kingdom	28 178	0.9	0.9	0.9	0.4	0.2	29 664	0.4	0.8	0.6	0.6	0.5
Oceania												
Australia	9 517	1.9	2.3	1.9	2.4	1.8	10 125	1.5	1.8	1.4	2.1	1.8
New Zealand	1 951	2.3	2.3	3.4	2.1	0.5	2 046	1.7	1.7	2.6	2.2	1.0
OECD Europe[b]	219 212	**0.7**	**0.1**	**0.7**	**0.7**	**1.0**	241 103	**0.7**	**0.4**	**0.6**	**0.8**	**0.7**
EU-15	166 607	**0.8**	**0.3**	**0.8**	**0.6**	**0.9**	181 286	**0.7**	**0.7**	**0.7**	**0.8**	**0.6**
EU-19[b]	190 964	**0.6**	**0.2**	**0.8**	**0.7**	**0.9**	210 073	**0.6**	**0.5**	**0.7**	**0.7**	**0.6**
Total OECD[b]	509 091	**1.0**	**0.0**	**1.1**	**1.1**	**1.3**	547 062	**1.0**	**0.2**	**0.9**	**1.0**	**1.0**

. . Data not available.

a) See note *a)* to Table 0.1.

b) Averages for 1992-2002 exclude the Slovak Republic.

Source: *OECD Economic Outlook*, No. 77, May 2005.

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Iceland, Netherlands and Sweden) or practically no employment growth (eight countries) in 2004. Employment growth gathered pace in the United States in 2004 and in the first half of 2005, albeit with a significant lag *vis-à-vis* the growth recovery. Moreover, economic expansion translated into marked employment growth in Ireland, Greece, Mexico, New Zealand and Spain. In Germany, economic growth was not strong enough to boost employment prospects in 2004.

In the OECD area, employment growth will be slow to pick up and is expected to stall at 1.1% in 2005, before slightly picking up pace at 1.3% in the following year. Employment growth in the United States will accelerate to attain 1.7% in 2006. Meanwhile, employment growth in Europe is expected to be weaker, which will widen the gap in employment performance with the United States. However, only the Netherlands will continue to record negative employment growth in 2005. Employment growth rates exceeding 2% are expected only in Australia, Mexico, New Zealand and Spain.

In 2004, unemployment in the OECD area experienced a small decline and attained 6.7% of the labour force, representing over 37 million persons (Table 0.3). Unemployment rates are expected to decline only slowly in 2005 and 2006, by just around one million persons, representing in 2006 6.4% of the labour force. While unemployment has fallen markedly in Australia, Canada, Italy, Japan, New Zealand, Spain, the United Kingdom and the United States, it has risen in 14 other countries, including France and Germany, where current high levels of unemployment rates are projected to slightly recede only in 2006. The unemployment rate in the United States is projected to decline, falling from 5.5% in 2004 to 4.8% in 2006, reflecting faster employment growth during the period. Meanwhile, the unemployment rate in Japan is expected to fall from 4.7% in 2004 to 4.1% in 2006 to attain levels witnessed during the past decade. In Japan, the fall in the unemployment rate is partly due to sluggish labour force growth. By contrast, unemployment in Europe is expected to remain at high levels until 2006, representing nearly 15 million persons in the EU-15 and around 19 million people in the EU-19. Furthermore, unemployment rates in 2004 were stable at their 2003 levels and are expected to fall only mildly to attain 8% in the EU-15 and 8.8% in the EU-19 in 2006. In 2006, unemployment rates are likely to rise in the Netherlands and in the United Kingdom and will remain high in Belgium, Czech Republic, France, Germany, Greece, Italy, Poland, Spain, Slovak Republic and Turkey. Unemployment rates are expected to be unchanged at low levels until 2006 in Australia, Canada and Korea and are projected to rise somewhat in Mexico and New Zealand.

C. Compensation and labour costs

Wages (nominal compensation per employee in the business sector) have continued to grow moderately in the OECD area, rising from 2.9% in 2003 to reach 3.1% in 2004, the growth rate achieved during 1992-2002 (Table 0.4). OECD projections indicate that this moderate pace will continue over 2005-2006. According to the projections, European countries recording high wage growth, in particular Ireland and the United Kingdom will continue to do so during the next two years. In the United States, nominal wage growth, at 4.4% in 2004, has been faster than OECD average and wages are expected to grow at the same pace until 2006. Similar trends in nominal wage growth are also expected to take place in Australia, Canada, Korea and New Zealand. On the other hand, wages continued to fall in absolute terms in Japan in 2004 for the second consecutive year and are expected to record limited gains during the next two years.

Table 0.3. **Unemployment in OECD countries**[a]

	Percentage of labour force					Millions				
	Average 1992-2002	2003	2004	Projections		Average 1992-2002	2003	2004	Projections	
				2005	2006				2005	2006
North America										
Canada	9.0	7.6	7.2	6.9	6.8	1.4	1.3	1.2	1.2	1.2
Mexico	3.2	2.5	3.0	3.9	3.8	1.1	1.0	1.3	1.7	1.7
United States	5.4	6.0	5.5	5.1	4.8	7.4	8.8	8.1	7.7	7.3
Asia										
Japan	3.8	5.3	4.7	4.4	4.1	2.5	3.5	3.1	2.9	2.7
Korea	3.5	3.4	3.5	3.4	3.3	0.8	0.8	0.8	0.8	0.8
Europe										
Austria	5.2	5.5	5.6	5.6	5.5	0.2	0.2	0.2	0.2	0.2
Belgium	8.4	7.9	7.8	8.2	8.0	0.4	0.4	0.4	0.4	0.4
Czech Republic	6.0	7.8	8.3	8.3	8.2	0.3	0.4	0.4	0.4	0.4
Denmark	6.1	5.6	5.7	5.4	5.0	0.2	0.2	0.2	0.2	0.1
Finland	12.5	9.0	8.9	8.5	8.3	0.3	0.2	0.2	0.2	0.2
France	10.8	9.8	10.0	10.0	9.6	2.8	2.7	2.7	2.7	2.6
Germany	7.9	9.1	9.3	9.6	9.1	3.2	3.8	3.9	4.1	3.9
Greece	10.4	10.4	11.0	10.8	10.5	0.4	0.5	0.5	0.5	0.5
Hungary	8.7	5.9	6.2	6.3	6.0	0.4	0.2	0.3	0.3	0.2
Iceland	3.6	3.4	3.1	2.8	2.3	0.0	0.0	0.0	0.0	0.0
Ireland	9.4	4.6	4.4	4.4	4.3	0.1	0.1	0.1	0.1	0.1
Italy	10.8	8.8	8.1	8.4	8.4	2.5	2.1	2.0	2.0	2.0
Luxembourg	2.8	3.8	4.3	4.4	4.3	0.0	0.0	0.0	0.0	0.0
Netherlands	4.9	4.1	5.0	6.3	6.1	0.4	0.4	0.4	0.5	0.5
Norway	4.4	4.5	4.5	4.2	3.8	0.1	0.1	0.1	0.1	0.1
Poland	14.4	19.6	19.0	18.2	17.3	2.5	3.3	3.2	3.1	3.0
Portugal	5.5	6.3	6.7	7.2	6.9	0.3	0.3	0.4	0.4	0.4
Slovak Republic	. .	17.5	18.1	17.9	17.5	. .	0.5	0.5	0.5	0.5
Spain	14.6	11.3	10.8	10.2	9.8	2.3	2.1	2.1	2.0	2.0
Sweden	6.4	4.9	5.5	5.0	4.7	0.3	0.2	0.2	0.2	0.2
Switzerland	3.3	4.0	4.2	4.0	3.5	0.1	0.2	0.2	0.2	0.2
Turkey	7.7	10.3	10.2	10.4	10.5	1.8	2.5	2.5	2.6	2.6
United Kingdom	7.4	5.0	4.7	4.9	5.2	2.1	1.5	1.4	1.5	1.6
Oceania										
Australia	8.1	6.0	5.6	5.2	5.2	0.7	0.6	0.6	0.5	0.6
New Zealand	7.0	4.6	3.9	4.0	4.5	0.1	0.1	0.1	0.1	0.1
OECD Europe[b]	**9.1**	**9.1**	**9.0**	**9.1**	**8.8**	**20.7**	**21.9**	**21.9**	**22.3**	**21.8**
EU-15	**9.1**	**8.1**	**8.1**	**8.2**	**8.0**	**15.5**	**14.7**	**14.7**	**15.1**	**14.8**
EU-19[b]	**9.4**	**9.1**	**9.0**	**9.1**	**8.8**	**18.7**	**19.1**	**19.1**	**19.4**	**18.9**
Total OECD[b]	**6.8**	**6.9**	**6.7**	**6.7**	**6.4**	**34.8**	**38.0**	**37.2**	**37.2**	**36.2**

. . Data not available.
a) See note *a)* to Table 0.1.
b) Averages for 1992-2002 exclude the Slovak Republic.
Source: *OECD Economic Outlook*, No. 77, May 2005.

In the OECD area, unit labour costs in the business sector grew by 0.5% in 2004, down by 0.4 percentage point compared to 2003. Unit labour costs are expected to rise over the next two years to reach 1.6% in 2006, according to OECD projections. In 2004, OECD European economies recorded a marked decline in the pace of growth of unit labour costs, which are likely to reach the pace observed during 1992-2002, to attain 1.2% in the EU-19 in 2006.

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Table 0.4. **Business sector labour costs in OECD countries**[a, b]

Percentage change from previous period

	Compensation per employee					Unit labour costs				
	Average 1992-2002	2003	2004	Projections		Average 1992-2002	2003	2004	Projections	
				2005	2006				2005	2006
North America										
Canada	2.9	1.2	2.4	3.6	3.4	1.0	1.5	1.3	1.8	1.4
Mexico	12.4	5.0	4.7	4.8	4.3	12.4	4.8	4.6	2.8	2.7
United States	3.5	3.6	4.4	4.3	4.5	1.6	0.3	0.8	2.3	2.7
Asia										
Japan	0.0	–0.2	–0.4	0.2	0.4	–1.0	–2.2	–3.2	–0.9	–0.9
Korea	7.1	7.3	3.5	5.0	5.8	2.7	3.8	0.5	1.9	2.0
Europe										
Austria	2.1	1.8	2.2	2.3	2.2	0.1	1.1	0.9	1.2	0.9
Belgium	2.8	2.5	2.7	2.3	2.0	1.4	1.1	0.4	1.2	0.6
Czech Republic	. .	7.5	5.2	5.9	6.2	. .	3.0	0.5	1.9	2.1
Denmark	3.2	3.7	3.8	3.8	3.9	0.7	1.4	1.0	1.1	1.5
Finland	3.2	2.2	3.9	3.8	2.7	0.3	–0.8	0.3	1.2	–0.2
France	1.7	2.5	3.0	2.3	2.9	0.7	1.6	0.2	1.0	1.4
Germany	1.9	1.7	0.1	0.1	0.6	0.8	0.8	–0.6	–0.5	–0.5
Greece	8.4	3.7	3.6	5.6	5.7	5.9	0.1	2.3	3.9	3.7
Hungary	. .	5.8	9.4	4.8	7.2	. .	4.0	5.2	1.1	3.0
Iceland	6.1	–0.4	6.7	6.5	6.2	4.1	–5.0	0.1	1.3	3.6
Ireland	4.1	2.4	4.0	4.9	4.9	0.1	0.5	2.2	0.8	0.9
Italy	3.1	3.2	3.1	3.2	2.5	1.6	3.4	3.0	3.6	1.5
Luxembourg	3.2	2.3	4.6	3.4	3.5	2.0	0.3	0.3	0.9	1.0
Netherlands	3.0	3.2	1.8	2.0	0.3	2.1	3.8	–1.2	0.2	–0.2
Norway	4.3	4.1	3.4	3.8	3.9	2.0	2.3	–0.9	–0.1	1.6
Poland	. .	–1.0	2.6	2.5	2.6	. .	–6.3	–1.7	–0.2	0.0
Portugal	5.7	3.5	2.3	2.5	2.7	3.8	4.6	1.3	2.1	1.6
Slovak Republic	. .	4.1	9.5	6.9	5.9	. .	2.1	3.9	3.7	1.0
Spain	4.2	4.9	4.1	4.4	4.5	3.0	3.9	3.3	3.5	3.5
Sweden	4.8	2.4	2.9	3.0	3.6	1.9	0.1	–1.6	–0.1	1.0
Switzerland	2.1	0.8	1.1	1.3	1.5	1.2	1.0	–0.5	0.3	0.4
Turkey	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .
United Kingdom	4.1	4.7	4.4	5.2	4.7	2.0	3.0	1.8	2.8	2.1
Oceania										
Australia	3.4	3.1	5.6	4.8	4.5	1.2	1.9	4.5	5.0	2.9
New Zealand	2.2	2.7	3.3	3.9	4.2	0.9	1.6	1.5	3.1	2.1
OECD Europe[c]	**2.7**	**2.8**	**2.7**	**2.7**	**2.7**	**1.1**	**1.7**	**0.9**	**1.4**	**1.1**
EU-15	**3.4**	**3.5**	**3.0**	**3.1**	**3.1**	**1.4**	**2.4**	**1.1**	**1.8**	**1.4**
EU-19[c]	**2.9**	**3.0**	**2.9**	**2.9**	**2.9**	**1.2**	**1.9**	**1.0**	**1.6**	**1.2**
Total OECD less high-inflation countries[c, d]	**2.9**	**2.9**	**3.1**	**3.2**	**3.3**	**1.1**	**0.8**	**0.4**	**1.6**	**1.6**
Total OECD[c]	**3.1**	**2.9**	**3.1**	**3.2**	**3.3**	**1.5**	**0.9**	**0.5**	**1.6**	**1.6**

. . Data not available.

a) See note *a)* to Table 0.1.

b) Aggregates are computed on the basis of 2000 GDP weights expressed in 2000 purchasing power parities.

c) Countries shown.

d) High inflation countries are defined as countries which had 10% or more inflation in terms of GDP deflator on average between 1992 and 2002 on the basis of historical data. Consequently, Hungary, Mexico, Poland and Turkey are excluded from the aggregate.

Source: *OECD Economic Outlook*, No. 77, May 2005.

In 2004, a number of European economies recorded negative growth in unit labour costs, where strong labour productivity gains exceeded low or negative nominal wage growth, but growth in unit labour costs is expected to become positive in 2006 in all European economies, except in Finland, Germany and in the Netherlands. In the United States, the moderate pace of growth of unit labour costs in 2004 is projected to accelerate this year and gain momentum during 2006 to reach 2.7%, reflecting tighter labour markets and labour productivity growth falling back to longer-run averages, as this will also gradually be the case in many other OECD countries during the next two years.

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Chapter 1

Trade-adjustment Costs in OECD Labour Markets: A Mountain or a Molehill?

Concerns that international trade and investment represent a growing threat to workers in OECD countries currently run very high. How many workers are losing their jobs as a result of rising imports or the "delocalisation" of jobs? Are trade-displaced workers able to move into new jobs which offer pay comparable to that on the jobs lost to international competition, or are these layoffs a pathway to long-term unemployment and chronic under-employment? How can governments best assist workers displaced by trade to re-integrate into the labour market? For example, should these workers be retrained for jobs in more dynamic industries? If the only jobs available to some job losers pay much less than their prior jobs, should a wage insurance scheme be set up to compensate them for a part of their lost earnings power?

Introduction[1]

Fears that "globalisation" implies increasing job losses and downward pressure on wages appear to be widespread and are an important source of popular ambivalence towards the increasingly open character of OECD economies. Such concerns are not new since international economic integration has proceeded at a rapid pace in recent decades: the volume of world trade growing sixteen fold over the second half of the twentieth century, while annual outflows of foreign direct investment were 25 times higher in the end of the 1990s than they were in 1950 (OECD, 1998). However, recent developments appear to have heightened workers' fears that rising trade competition threatens their jobs and past gains in wages and employment conditions, particularly in the OECD countries where wages are highest (Fontagné and Lorenzi, 2005; Husson, 2005; Kohler and Chaves, 2003; Scott, 2005). Increased international sourcing of production activities – including the "offshoring" of white-collar jobs in information technology (IT) and business process services – has led some commentators to conclude that a large share of high-wage workers will soon be in direct competition with workers in countries where wages are far lower. Anxieties about "delocalisation" and "a race to the bottom" are also reinforced by the increasing integration of India and China into the world trading system. Finally, the proposals for further trade and investment liberalisation associated with on-going WTO negotiations and the Doha Development Agenda also appear to portend intensified international competition for OECD workers.

In light of these concerns, it is timely to review the impact of rising international economic integration on OECD labour markets, as well as what is known about best-practice policy responses. However, it is important to place such a review within its broader policy context, namely, the need to identify the overall requirements for successful adjustment to structural economic change. The drivers of structural economic change extend beyond rising international trade and investment, including *e.g.* technological change and increased demands for environmental quality, and meeting this challenge requires policy responses that extend far beyond appropriate employment programmes and labour market regulation. Nonetheless, labour-market policies play a critical role since well-functioning labour markets that enable workers to move smoothly from declining to expanding activities lie at the heart of the adjustment process. To the extent that they are well-founded, workers' fears concerning trade may thus indicate important gaps in the adaptive capacity of OECD national economies, in addition to being symptomatic of an important source of employment insecurity.[2]

This chapter analyses adjustment costs borne by workers in OECD countries who are adversely affected by international trade and investment. Its purpose is to provide an assessment of trade-adjustment costs in the labour market and the policy tools available to reduce these costs or to compensate the workers most affected. The analysis of possible policy responses encompasses both measures targeted specifically at assisting trade-displaced workers and more general policies which may play an important role in enhancing the

re-employment prospects of workers adversely affected by trade-related structural adjustment. These policies are assessed in light of the available evidence concerning the magnitude and nature of the adjustment costs borne by workers and the effectiveness of the various types of programmes that have been implemented by OECD governments.[3]

The chapter is organised as follows. The long-run effects of international trade on employment and wages in OECD countries are briefly discussed in Section 1. In Section 2, attention turns to analysing the size of trade-adjustment costs related to job displacement and how these costs are distributed across the workforce. In particular, new estimates of the incidence and consequences of trade-related job displacement in 14 EU countries are juxtaposed with Kletzer's (2001, 2002) influential findings concerning trade-related job loss in the United States. Attention then turns to an analysis of policy responses in Section 3. A brief final section places the main findings from the chapter within the context of the on-going reassessment of the OECD Jobs Strategy.

Main findings

- The most important long-run impacts of international trade and investment on labour markets have been to raise average real wages, while inducing shifts in the sectoral and occupational composition of employment. Neither economic theory nor the historical record suggests that aggregate employment performance has been undermined by increased international economic integration. However, it is likely that growing trade with low-wage countries has played some role in increasing wage inequality in many OECD countries.
- Increases in international competition create labour-market adjustment costs because they are associated with an increase in job displacement and some of the affected workers experience long unemployment spells and/or large wage losses once re-employed. However, trade is only one of many drivers of job turnover and structural change and it is difficult to estimate precisely the share of job displacement that is attributable to international factors.
- Adjustment costs appear to be higher for trade-displaced workers than for other job losers. In both the United States and Europe, workers displaced from jobs in the industries facing the most intense international competition are slower to become re-employed and experience larger wage losses once re-employed than do job losers in other industries. Large wage losses on the post-displacement job are a particularly important source of post-displacement earnings losses in the United States. By contrast, long-term unemployment and labour force withdrawal following displacement are the biggest sources of earnings losses in Europe. In both the United States and Europe, the adjustment costs borne by trade-displaced workers are highly variable, implying that adjustment assistance needs for this group are very diverse.
- The higher average costs borne by workers displaced from jobs in high-international-competition industries, *vis-à-vis* other displaced workers, do *not* appear to be causally related to international competition having more often provoked their layoffs. Compared with other job losers, displaced manufacturing workers in both Europe and the United States tend be older, less educated and to have had higher tenure on the lost job; all characteristics that are associated with above-average re-employment difficulties and larger earnings losses following re-employment. Trade-displaced workers are also more likely to have vocational skills specialised to declining occupations and industries.

- The overarching need is to implement general labour market policies that can lower adjustment costs *indirectly* by strengthening job creation, upgrading work-force skills and steering workers towards the jobs where they are most productive. Such policies would foster more efficient labour re-allocation, even as earnings losses are reduced for trade-displaced workers. By reducing the economic insecurity and possible inequities associated with trade-related displacement, such "win-win" policies might also reduce political opposition to international economic integration and structural economic change more generally.
- *Direct* assistance is also appropriate for many trade-displaced workers, including: *i)* earnings-replacement benefits that provide adequate income security for job losers, while preserving incentives for re-employment (see also Chapter 3); *ii)* prompt access of job losers to an array of active measures (see also Chapters 4 and 5); and *iii)* whenever feasible, advance notice and other proactive measures to initiate the adjustment process *before* the job loss occurs. To succeed, such policies will need to take account of the specific barriers confronting trade-displaced workers as they attempt to reintegrate into productive employment.
- Providing adjustment assistance for trade-displaced workers raises difficult problems of policy design, among which are deciding: *i)* the appropriate balance between proactive and reactive measures; *ii)* whether and when it is desirable for labour market programmes to differentiate between trade-displaced workers and other displaced workers; *iii)* the extent to which workers experiencing earnings losses due to international competition should be compensated; and *iv)* how compensation can best be provided so as to avoid undermining incentives for trade-displaced workers to search actively for a new job.
- At the macroeconomic level, successful adaptation to changing trade patterns requires that labour flow from declining to expanding industries. However, it does not follow that workers displaced from declining industries should be encouraged to direct their job search towards expanding industries. Indeed, the majority of workers displaced from manufacturing jobs become re-employed in this same sector, despite the downward trend of manufacturing employment in most OECD countries. Earnings losses are also significantly larger for workers who change industry. The high turnover rates characterising OECD labour markets mean that there is considerable hiring in declining industries and it makes sense for some, particularly older, workers displaced in these industries to search for new jobs in the same industry in which they can make good use of their experience and skills.
- While it is preferable to assist trade-displaced workers using *general* earnings-replacement and active labour market policies in most instances, experience in a number of OECD countries suggests two types of situations in which *targeted* programmes – that is, programmes that serve only trade-displaced workers (or a sub-set of this group) – may represent a useful supplement to general programmes:
  - Targeted measures may sometimes be more cost-effective. For example, a dedicated programme may be better able to provide a co-ordinated package of services for workers affected by mass layoffs, especially, those occurring in declining sectors and regions where a protracted process of labour shedding can be foreseen and the affected workers face a distinct combination of barriers to finding suitable new employment. However, targeted measures of this type have a mixed record, sometimes

becoming *de facto* barriers to adjustment. Accordingly, they should be used sparingly, strongly oriented towards facilitating orderly adjustment and time-limited.

- Equity or political economy arguments are sometimes advanced as justification for targeted programmes (*e.g.* that trade-displaced workers have a particular claim to public assistance on the grounds that their situation results from a deliberate policy decision to liberalise trade and investment flows). If such non-economic arguments prevail, care should be taken to minimise the inefficiencies and inequities that can result from singling out trade-displaced workers for assistance beyond that offered to other workers encountering similar difficulties in the labour market.

1. The long-run effects of trade on labour market outcomes

A. *Aggregate gains from trade*[4]

The aggregate gains from trade are clearly demonstrated by the theoretical literature on the economics of international trade. Welfare gains are realised when countries specialise in the production of the goods and services in which they have a comparative advantage, where these comparative advantages can be due to either relative technology differences (Ricardian models) or different factor intensities (Hecksher-Ohlin models). Since trade liberalisation facilitates international specialisation in production, it normally results in higher real aggregate incomes and welfare.[5] Additional efficiency gains from trade may be achieved through a variety of channels. These include the resulting increase in overall product market competition (Markusen, 1981), the exploitation of economies of scale and enhanced product variety (Krugman, 1979), and "dynamic" gains such as those from technology spillovers or increases in R&D intensities (Bartelsman *et al.*, 2004a; Rivera-Batiz and Romer, 1991). International sourcing is a form of trade and the general arguments for efficiency gains from trade apply to it (Bhagwati *et al.*, 2004). For example, "fragmentation" of production via international sourcing of intermediate inputs lowers the cost of domestic production, when producers import goods and services from (relatively) more efficient foreign producers and then incorporate these intermediates into final production.

Although it is difficult to measure the gains from trade precisely, the empirical literature supports theoretical arguments that trade increases aggregate productivity and welfare. A study of trade among 63 countries associated a rise of one percentage point in the ratio of trade to GDP with an increase in per-capita income of between 0.5 and 2% (Frankel and Romer, 1999). In a panel data study of 21 OECD countries, Bassanini and Scarpetta (2001) found that an increase in trade openness of 10 percentage points – roughly the increase experienced in the examined economies between 1988 and 1998 – resulted in an increase in output per working-age person of 4%. A number of studies have provided evidence that more open countries typically grow faster than less open ones, in addition to enjoying higher income levels at any given period of time (Dollar, 1992; Sachs and Warner, 1995; Harrison, 1996; Edwards, 1998; Frankel and Romer, 1999). Indeed, the contribution of international trade to economic growth can be significant. In the 1990s, countries that have been more open to trade and investment have experienced average annual growth rates twice those of less open countries.[6]

B. *Winners and losers in the labour market*

Trade theory demonstrates that trade liberalisation may reduce the welfare of certain individuals even as it improves aggregate productivity and income. In particular, the real wages

of certain workforce groups may fall after trade barriers are lowered, including those whose skills are specialised to import-competing industries (as demonstrated by the Ricardo-Viner model) or low-skilled workers in a country in which high-skilled labour is relatively abundant (as demonstrated by the Stolper-Samuelson property of the Hecksher-Ohlin model). Since free trade is Pareto-efficient under standard assumptions, the winners from trade liberalisation could afford to compensate the losers and still enjoy net gains. In fact, however, a comprehensive compensation scheme is rarely if ever implemented and policies to foster international integration must be expected to generate losers as well as winners. This raises the possibility that trade may have distributional effects that violate equity norms or create political opposition to trade liberalisation, even when it would increase aggregate income.

A large body of research addresses the question whether changing trade patterns – in particular, rising trade with low-wage emerging economies – have been an important cause of the trend toward rising inequality that has recently characterised labour market outcomes in most OECD countries (Feenstra and Hanson, 2003; OECD, 1997; Torres, 1997).[7] Such a link is plausible on theoretical grounds. A major proximate cause of increased inequality has been the declining position of less educated workers in the labour market. As noted above, expanded trade between OECD countries and emerging economies, where the latter have a comparative advantage in the production of goods that make intensive use of low-skilled workers, could reduce the wages and/or employment rate of less educated workers in the OECD area. However, most researchers have concluded that trade made a relatively modest contribution to the declining labour market position of low-skilled workers and have pointed to skill-biased technological change as being a more important factor.[8] Nonetheless, it is very difficult to disentangle the causal impacts of these (and other) factors.

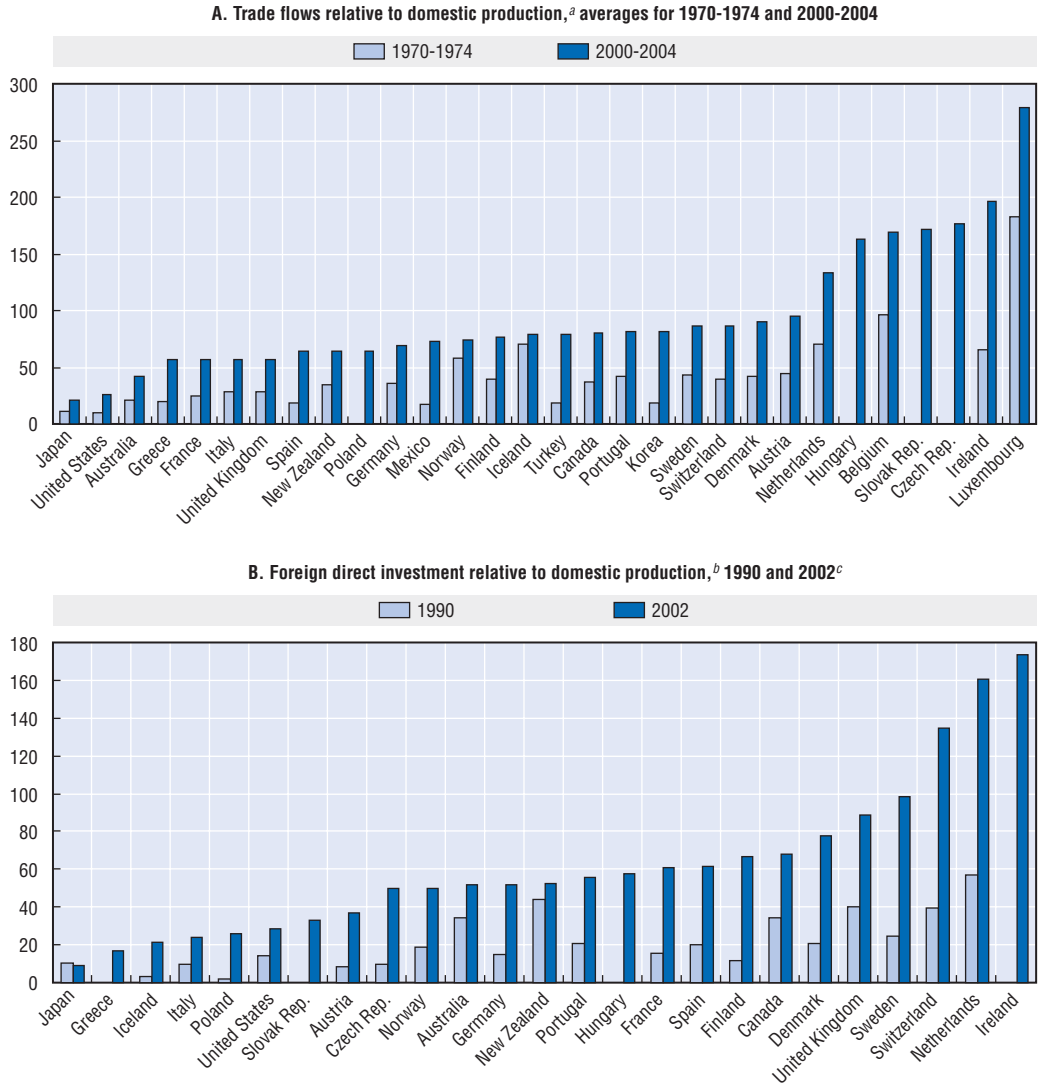
Standard trade theory assumes full employment of labour and capital. The introduction of unemployment into standard trade models can have important implications for assessing the impacts of trade liberalisation, but these implications vary according to the manner in which unemployment (or other factor-market distortions) are introduced into the model and are difficult to summarise. As a practical matter, empirical studies suggest that openness to trade typically is not an important determinant of aggregate unemployment in developed economies (see sub-section C below).[9] However, Rodrik (1998) has argued that greater international economic integration has been a source of increased economic insecurity. Data for 104 countries suggest that countries with greater exposure to foreign trade have experienced greater income and consumption volatility during the past three decades. The link between trade openness and insecurity appears to be strongest when trade liberalisation results in a strong specialisation in production, a pattern that may be more typical for small developing countries than for OECD countries. Nonetheless, the long-run increase in the integration of OECD countries into the international economy may have been a source of increased "turbulence" in labour markets.

C. Can high-wage countries remain competitive in the "global" economy?

Simple inspection of recent trends in international trade flows and employment performance illustrates the apparent plausibility of fears that high-wage workers are at a competitive disadvantage in an increasingly open world economy, but also the possibility that the implications of trade are in fact much more benign – consistent with theory and the consensus in the empirical literature summarised above. A first point of reference is that OECD economies have become significantly more open to trade since 1970, with the size of trade flows relative to GDP ("trade openness") having more than doubled in many

countries (Chart 1.1, Panel A). Data on the scale of foreign direct investment (FDI) relative to GDP also indicate a strong trend toward increasing international economic integration, although internationally comparable measures of "FDI openness" can only be calculated for a shorter historical period and for fewer countries (Chart 1.1, Panel B). Although the trend increase in openness to trade and FDI has been universal in the OECD region, large cross-country differences characterise both the levels and rates of increase of these two summary indices of openness. Some of the differences in the relative economic weight of

Chart 1.1. **OECD-wide trend towards increased international economic integration co-exists with large cross-country differences in the size of trade and FDI relative to GDP**



a) Sum of exports and imports as a percentage of GDP.
b) Sum of inward and outward international direct investment positions as a percentage of GDP.
c) Data for the Czech Republic and New Zealand refer to years 1993 and 2002, data for Denmark refer to years 1991 and 2002, data for Norway refer to years 1990 and 2001, data for Poland refer to years 1992 and 2002, data for Portugal refer to years 1995 and 2002 and data for Spain refer to years 1992 and 2001.

Source: OECD Economic Outlook, *National Accounts* and Foreign Direct Investment databases.

Statlink: *http://dx.doi.org/10.1787/472130642470*

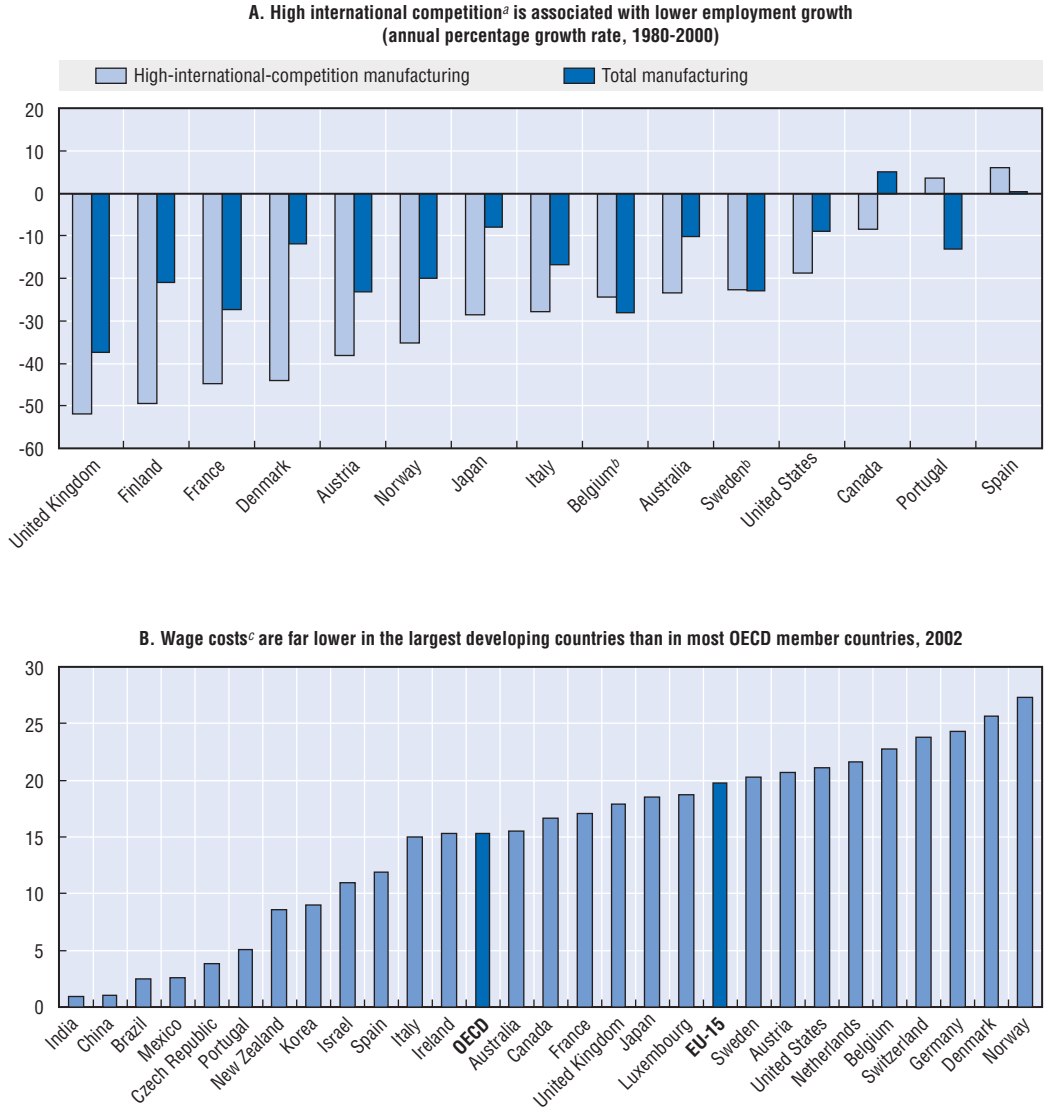
trade and FDI in different countries reflect geography (*e.g.* trade flows tend to be higher relative to GDP in small countries or those close to their main trading partners), but different policy stances also play an important role, as reflected in regulatory barriers to foreign trade and investment (Golub, 2003; Nicoletti *et al.*, 2003).

If openness to trade represents a systematic threat to OECD workers, one would expect to be able to detect an association between higher or more rapidly increasing trade openness and poor labour market performance. When 1970-2000 employment growth rates for moderately detailed manufacturing industries are juxtaposed with data on trade flows, it can be seen that employment fell more rapidly in the subset of industries that experienced the strongest growth in international competition in 11 of the 15 countries analysed (Chart 1.2, Panel A), with the average employment decline across these 15 countries being 27% in high-international-competition industries, as compared to 16% for total manufacturing.[10] This association suggests that rising international competition may have been a significant factor resulting in employment declines in certain OECD manufacturing industries.[11] However, the resulting impact on the aggregate labour market is muted by the fact that high-international-competition industries accounted for less than 4% of total employment in 2000 in these 15 countries and all of manufacturing for 22% (unweighted averages).

Internationally comparative data on average wage costs for 2002 confirm the existence of very large wage differentials for production workers in manufacturing, with average wage costs being dramatically lower in India, China and Brazil – developing countries with large populations and an increasing presence in global markets – than in most OECD countries (Chart 1.2, Panel B). There are also large wage differentials within the OECD (*e.g.* between Central and Eastern European (CEE) and Western European countries, and between Mexico and the United States).[12] It has been argued that such large wage differences produce a strong incentive for managers to move production jobs to low-wage countries – especially, in view of the fact that new technologies facilitate the fragmentation of production and outsourcing, while increased international integration of capital markets makes investors more sensitive to international cost differentials – and that the industrial relations climate is being undermined by employers' recurrent threats to "delocalise" jobs, unless unions accept to make concessions on wages and working conditions (Bronfenbrenner, 2000; Kohler and Chaves, 2003). However, these wage-level comparisons make no allowance for international differences in labour productivity and such an adjustment is required to assess the extent to which the continuing competitive viability of manufacturing in high-wage countries is menaced by excessive unit labour costs.

In light of these statistics, it might appear natural to conclude that workers in high-wage countries cannot compete successfully with workers from low-wage countries. However, aggregate employment performance does not appear to have suffered in the OECD countries that are most open to trade or where trade openness has increased most rapidly (Chart 1.3). There is substantial cross-country variation within the OECD area in employment-to-population ratios, but these differences are not systematically associated with the large cross-country differences in trade openness (neither in levels nor in first differences). Nor is any systematic bivariate association evident between cross-country differences in trade openness and either unemployment rates or real wages (data not shown). These findings are, of course, consistent with the fundamental insight from trade theory discussed above, as well as with the empirical observation that higher average wage levels in OECD countries are associated with higher productivity.[13] The rapid integration of a number of low-wage

Chart 1.2. **International competition may be a factor restraining employment and wages in some industries**



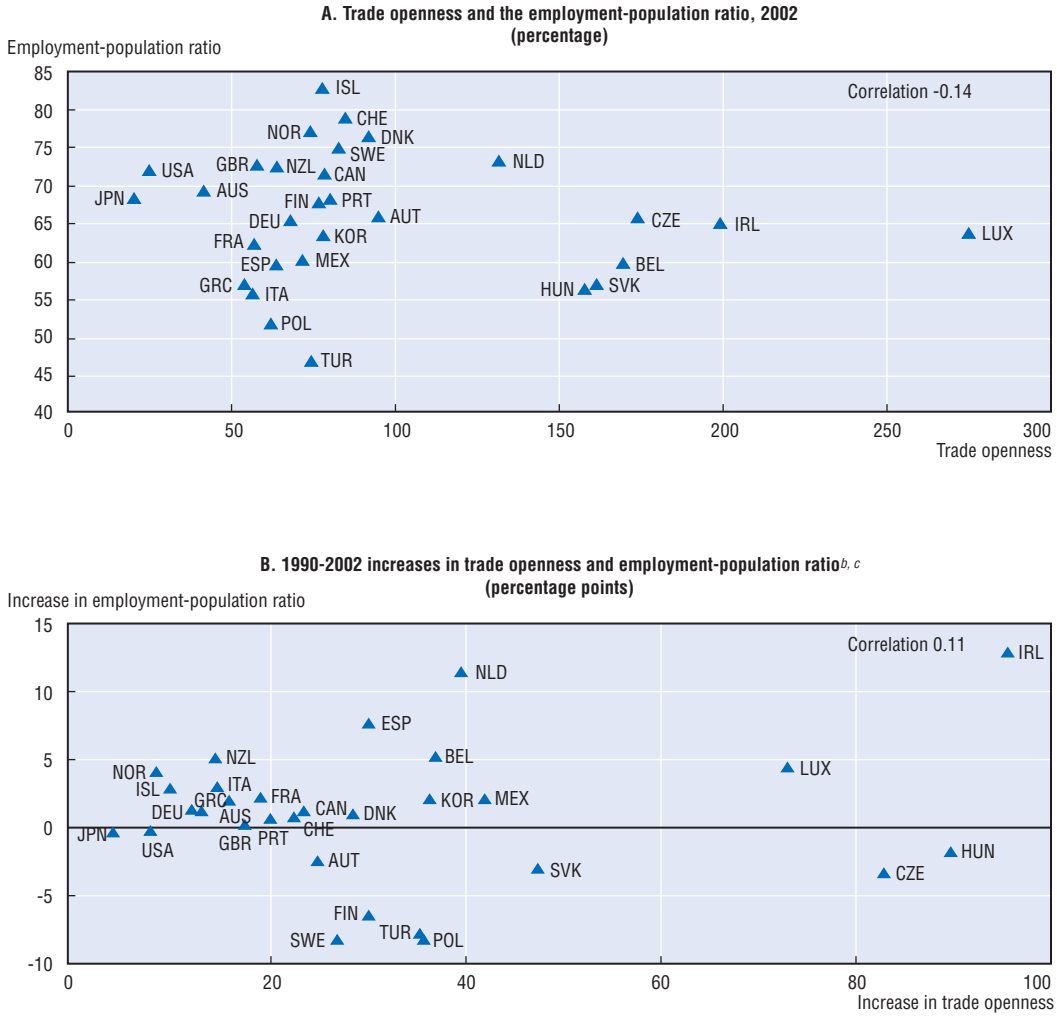
a) High-international-competition industries are those manufacturing industries where the net imports ratio rose most strongly during 1980-2000 (see OECD, 2005b, Annex 1.A1.1 for further explanation).
b) Data cover the period 1980 to 1999.
c) Average hourly compensation in US dollars for production workers in manufacturing in 2002. Countries are ranked in ascending order of hourly compensation evaluated at market exchange rates.

Source: OECD STAN database and US Department of Labor, Bureau of Labor Statistics, Foreign Labor Statistics, November 2004 (*ftp://ftp.bls.gov/pub/special.requests/ForeignLabor/ichccsuppt02.txt*), except that wage data for India are estimates based on 2001 and 2003 data from Oxford Economic Forecasting (*www.oef.com*).

Statlink: *http://dx.doi.org/10.1787/084588843842*

economies into the world trading system is changing the international division of labour in a way that implies employment losses in certain industries in most OECD countries, but employment opportunities generally have improved sufficiently in other industries to preclude an adverse effect on aggregate employment.[14]

Chart 1.3. **Aggregate employment performance is not systematically related to trade openness**[a]



Note: The correlation coefficients shown in this chart are not statistically significant.

a) Trade openness defined as the sum of exports and imports as a percentage of GDP.

b) Data for the increase in trade openness for the Czech Republic and the Slovak Republic cover the period 1993-2002. For Hungary the period covered is 1991-2002.

c) Period used to calculate the increase in the employment-population ratio starts as follows: Austria 1994, the Czech Republic 1993, Hungary 1992, Iceland 1991, Mexico 1991, Poland 1992, the Slovak Republic 1994 and Switzerland 1991.

Source: *OECD Economic Outlook* and Labour Market Statistics databases.

Statlink: *http://dx.doi.org/10.1787/175364164563*

In sum, a quick review of recent history casts considerable doubt on fears that trade with low-wage countries has been a barrier to achieving high employment and rising living standards in OECD countries. However, the future need not resemble a smooth extrapolation of the past. Indeed, the apparent increase in fears concerning the economic implications of globalisation reflects, in part, the belief that competition from low-wage countries has begun to take qualitatively new forms that will prove more damaging to workers in developed countries than were past forms of competition. Box 1.1 discusses whether the international sourcing of business services is likely to represent such a break with past experience. Once again, the available evidence is overall reassuring.

Box 1.1. **Is international sourcing different?**

The recent increase in the international sourcing of intermediate business services has attracted a great deal of attention in OECD countries, not least because it is widely interpreted to imply that many high-quality service jobs – jobs which are typically held by persons with post-secondary education who previously considered themselves protected from competition with workers in low-wage countries – are now at risk of being lost to "offshoring". There are no official statistics on offshoring service activities but analysts have used various types of data to estimate its size and composition.[1] IMF data on services trade flows suggest that international sourcing of business services remains quite modest in size and that many OECD countries (notably, including the United States) have registered trade surpluses in the business services most associated with offshoring, in effect, "insourcing" more service jobs than they outsource (Amiti and Wei, 2005a and b). Using other types of data for the United States, McCarthy (2002) estimated that a little over 100 000 service jobs moved offshore in 2000 and Goldman Sachs concluded that approximately one-half million layoffs can be attributed to offshoring during 2001-2003 (as reported in the media).

Predicting the future growth of services offshoring is even more difficult than measuring its current extent. An OECD analysis of occupational employment data suggests that 15-20% of total employment in Australia, Canada, the EU15, and the United States correspond to service activities that potentially could be subject to international sourcing (van Welsum and Vickery, 2005), while the ILO (2001), using somewhat more stringent criteria, estimated that between 1 and 5% of service sector jobs were "contestable" by low-wage countries. However, it would not be reasonable to forecast that all of these jobs – or even most of them – will actually be outsourced, as is illustrated by the persistence of manufacturing jobs in OECD countries after decades of intense trade competition in industrial goods. Among available forecasts of services sourcing in the coming years, McCarthy (2004) forecasts that a total of 3.4 million white-collar jobs in the United States would move offshore by 2015, while Parker (2004) estimates that 1.2 million IT and service jobs will be outsourced from 16 European countries over the same time horizon.[2] Although these forecasts confirm that services offshoring is an important economic development that will probably grow, these job loss estimates are not large relative to total turnover in jobs. For example, McCarthy's widely-cited estimate for the United States implies an average quarterly job-loss rate of approximately 55 000, far smaller than the 7.7 million jobs destroyed on average every quarter from 1992 to 2003 (Spletzer *et al.*, 2004).

While research on the labour-market effects of international sourcing of service-sector jobs is just beginning, there is much more evidence regarding the effects of offshoring production jobs in the manufacturing sector (Amiti and Wei, 2005a).[3] The research literature measuring the impact of international sourcing on productivity, employment and wages in the manufacturing sector – which primarily involves the importation of intermediate goods, rather than services – has turned up similar results to those for studies of the effects of international trade in final goods: international sourcing improves productivity[4] while increasing skill demands and, consequently, reducing the relative wages and/or employment of low-skilled labour. Feenstra and Hanson (2003) attribute a 15% increase in the relative wage of US non-production (*i.e.* "skilled") workers to international sourcing, while Hijzen (2003) applies the same method to the UK manufacturing sector and finds that sourcing accounts for 12% of the increase in wage inequality in that country during the 1990s. Using data from input-output (IO) tables, Hijzen *et al.* (2004) find that international sourcing also had a large positive impact on skill

Box 1.1. **Is international sourcing different?** *(cont.)*

demand in the UK labour market during 1982-1996. Geishecker and Görg (2004) apply a similar method combining data from IO tables with German household panel data and find that low–skilled workers saw their real wages reduced by up to 1.8% in the 1990s, as a result of offshoring, while those of skilled workers were increased by up to 3.3%.

In sum, the evidence suggests that international sourcing of intermediate goods has had qualitatively similar effects to those observed for trade in final goods and services, although it may have had a particularly strong impact on the skill composition of labour demand and more of the resulting structural adjustments occurs *within* industries, rather than *between* industries. Bhagwati *et al.* (2004) argue that international sourcing of services is likely to have qualitatively similar impacts.

1. For the purposes of this chapter, international sourcing is defined as the procurement of services (or material inputs) from a foreign supplier, which may be owned by the procurer or an independent firm. It is common to refer to this phenomenon as "outsourcing" but that terminology is imprecise, inappropriately including domestic outsourcing and excluding the sourcing of intermediate inputs to foreign affiliates (Bhagwati *et al.*, 2004; OECD, 2004b).
2. Deloitte Research (2004) has made similar forecasts for both the United States and Western Europe (as reported in the media). Katalyse forecasts that France will lose 202 000 service jobs during 2006-2010, 80% of which represent foregone job creation, rather than the offshoring of existing jobs (as reported in the media).
3. A study of 10 OECD countries found that international sourcing of goods in these economies grew by 30% between 1970 and 1990 (Hummels *et al.*, 1999). It also found that outsourced components in the vertical production chain make up about 21% of these countries' exports.
4. For example, Görg, Hanley and Strobl (2004) examine plant-level data in Ireland and find that, for exporting firms involved in offshoring intermediates, an increase in international sourcing intensity of one percentage point was associated with a 1.2% increase in productivity at the level of the plant. Similar positive results are found for Germany (Görzig and Stephan, 2002; Görg and Hanley, 2003, 2004).

2. Labour market adjustment costs

A. What is the policy rationale for addressing adjustment costs?

If countries are to realise the potential gains from trade and investment liberalisation, labour and other factors of production must flow away from activities in the economy in which it is relatively less efficient than its trading partners and towards activities in which the economy enjoys comparative advantage. However, the mobility of labour between jobs and sectors can be impeded by many factors, including heterogeneous skills, asymmetric information, geographic mismatch and poor job-search skills. It follows that structural adjustment to trade liberalisation may imply significant adjustment costs, particularly for workers displaced from firms in import-competing sectors.[15] These workers may experience lengthy spells of unemployment or be forced to accept new jobs that pay lower wages than those paid by their previous employment.[16]

Several considerations suggest that the labour-market adjustment costs associated with trade-related displacement may merit a policy response.[17] These considerations suggest possible motivations for policy intervention on efficiency, equity and political economy grounds:

- *Efficiency* – The long spells of joblessness following displacement and the sometimes large and persistent reductions in earnings once re-employed (Kuhn, 2002; Jacobson, *et al.*, 1993a, b) both suggest that the labour market may not be matching trade-displaced workers with employers who could make productive use of their skills in an efficient manner. Market failure could result from information imperfections (*e.g.* workers not being aware of the nature of new jobs demanded) and result in under-employment of

productive capacity if re-employed workers occupy jobs which do not match their productivity potential.[18] Policies that improve the efficiency of job search for trade-displaced workers or improve their access to retraining may also be able to improve allocative efficiency. Finally, the substantial public spending triggered by layoffs (*e.g.* for unemployment benefits and job-search assistance) raises the possibility that employers' decisions to shed workers will be distorted towards excessive layoffs, unless other policies cause them to internalise these social costs (Blanchard and Tirole, 2003).

- *Equity* – It may be judged unjust for the broad majority of the population to benefit from the gains from trade while high adjustment costs are borne by a minority of workers. This consideration suggests that some compensation might be provided to the losers, for example, via income transfer payments or assistance to become re-employed quickly in a new job offering earnings comparable to those on the lost job – thus reconciling equity with efficiency objectives.
- *Political economy* – Not assisting trade-displaced workers could erode political support for an open trading system. For example, 60 years of public opinion survey evidence for the United States indicates that fears of job loss account for the low level of public support for further trade liberalisation, but that support is significantly increased if trade liberalisation is combined with increased adjustment assistance for trade-displaced workers (Scheve and Slaughter, 2001).

In order to judge whether any of these rationales for adjustment assistance policy justify policy interventions – and if so, what types of interventions – an understanding of the size, nature, and distribution of the adjustment costs associated with trade-related displacement is essential. It turns out to be quite difficult to measure the incidence and the costs of trade-related displacement. Nonetheless, this is becoming an active area of research and the following two sub-sections review that literature and present some new empirical results. Prior to reviewing this evidence, it is useful to clarify several conceptual issues that arise (see Box 1.2). Doing so highlights the importance of collecting *direct* evidence on the incidence of trade-related displacement and consequent costs, since the indirect evidence used in many previous studies is likely to understate significantly the adjustment costs due to trade displacement and their concentration on a minority of trade-displaced workers who experience major difficulties re-integrating into employment.

B. The incidence of trade-related job displacement

Trade-displaced workers appear to be a significant (but difficult to count) minority of job losers

The task of measuring worker displacement resulting from trade liberalisation is one riddled with difficulties. Most fundamentally, the reasons for enterprise shut-downs and smaller scale layoffs are often complicated and involve several contributing factors. Trade may have weakened markets for locally produced goods, but poor productivity, deficient management skills and other factors often play a more significant role in an enterprise's performance. These causes also may be intertwined, rendering discrimination between trade-related structural changes and those provoked by technological developments or shifts in consumer preferences even more problematic. Nonetheless, several different methods can be used to identify job losers for whom international trade is likely to have played a significant role in causing their employer to terminate their job. Doing so provides qualitative insights into the incidence and costs of trade displacement.

Box 1.2. **Estimating the incidence and costs of trade displacement**

It is notoriously difficult to estimate the incidence of trade-related displacements and the resulting adjustment costs, as can be illustrated by considering the adjustment-cost estimates presented in Magee, Bergsten and Krause's pioneering study of the welfare effects of trade liberalisation in the United States (Magee *et al.*, 1972). In the absence of direct data on either the incidence of trade-related displacement or the average costs borne by a trade-displaced worker, Magee *et al.* used available proxy measures. They assumed that the incidence of displacement equalled their estimate of the net employment decline in import-competing industries following trade liberalisation and estimated costs per displacement by the product of the average duration of unemployment for all unemployed workers (as indicated by labour force statistics) and the average wage rate in each industry predicted to shed labour.[1] This approach is potentially problematic:

- *Incidence* – Employment reductions in import-competing industries provide an unreliable indicator of the incidence of trade-related displacement because these *net* employment changes are the outcome of far larger *gross* job flows.[2] The net employment reductions caused by rising imports (or falling exports) at the sectoral level almost surely understate greatly the associated rise in gross job destruction. Expressed differently, changes in trade patterns will typically induce significant reallocation of workers across firms within an industry, due to the high level of heterogeneity in the impact of trade on the competitive position of different firms within narrow manufacturing industries (Klein *et al.*, 2003). However, not all of the job destruction induced by international trade will result in job displacement, since some of these reductions will be accomplished through voluntary attrition. In principle, this off-set could be large, since worker turnover rates are even higher than job turnover rates. However, the size of this off-set is uncertain, since the overlap between potentially trade-displaced workers and workers who voluntarily quit their jobs may be quite low.[3] Finally, using net employment changes to estimate trade displacement implicitly assumes that increased trade results in only a *temporary* increase in layoffs, whereas it is possible that increased openness to international trade and investment flows leads to a *permanent* increase in the rate of labour reallocation (and, hence, job destruction), since the competitive position of firms becomes more sensitive to international shocks (Rodrik, 1998).
- *Costs* – It is problematic to estimate the economic losses borne by trade-displaced workers as equalling the product of the average length of unemployment spells for *all* unemployed persons and an average wage rate. This approach is likely to result in a substantial underestimate of displacement costs because displaced workers tend to have longer unemployment spells than other unemployed persons and earnings losses often persist after a new job has been found (*i.e.* wages on the new job are often considerably below those on the prior job). The extensive research literature on job displacement in the labour market of the United States documents both of these points (see Kletzer, 1998, for a survey of this literature and Farber, 2003, for more recent results). The pattern also appears to be qualitatively similar in other OECD countries, although the evidence is more limited and international comparisons raise the difficult issue of incomplete comparability. The table below reproduces summary estimates of post-displacement adjustment costs for nine OECD countries from Kuhn (2002). Even a year after being displaced, substantial fractions of workers remain jobless, although this fraction appears to be much higher in some countries (*e.g.* Belgium and France) than in others (*e.g.* Japan, the United Kingdom and the United States). For those becoming re-employed, wages on the new jobs tend to average a little below prior wages, but average wage losses rise significantly with tenure on the prior job in most countries. Although not shown in the table, higher wage losses for older workers appear to be a universal pattern, while studies using data for the United States find that wage losses are also larger for displaced workers becoming re-employed in a different industry (Carrington, 1993; Neal, 1995; Kletzer, 2001). Another pattern that has important implications for designing policy responses is that unemployment durations and earnings losses differ greatly across displaced workers, even after controlling for

Box 1.2. **Estimating the incidence and costs of trade displacement** *(cont.)*

individual characteristics that influence average costs (*e.g.* job tenure, age, educational attainment), with a significant minority experiencing long periods of unemployment or very large earnings losses, while others appear to fare very well.

Estimates of displacement incidence and costs for selected OECD countries

		Incidence rate (annual)[a]	Probablity of still being jobless after		Displacement-induced percentage wage changes (mean)	
			6 months	12 months	All workers	Workers with more than 10 years of job tenure
A. Total layoffs						
Canada	1995	4.9	0.47 (Men) 0.68 (Women)	0.30 (Men) 0.41 (Women)	–1 (Men) –2 (Women)	–11 (Men) –7 (Women)
Japan	1995	3.5	0.23 (Men) 0.25 (Women)	0.14 (Men) 0.11 (Women)	–4 (Men) 0 (Women)	. .
Netherlands	1993-95	4.1	0.46[e]	0.28[e]	. .	. .
United Kingdom	1990-96	4.7	0.2	0.12[f]	–4	–6[h]
United States	1993-95	4.9	0.33[g]	0.24[g]	0	–19
B. Mass layoffs only[b]						
Belgium	1983	2.1	0.72 (Men)[d]	. .	–6[d]	–6[i]
Denmark	1988	1.6	0.37 (Men)[d]	. .	–1[d]	. .
France[c]	1984-90	0.5 (Men)	0.62 (Men)[e]	0.45 (Men)[e]	. .	10
Germany[c]	1984-90	1.1 (Men)	0.52 (Men)[e]	0.40 (Men)[e]	. .	2

. . Data not available.
a) Workers displaced in a year as a percentage of total employment.
b) Workers separating from dying firms (Belgium and France) or dying plants (Denmark and Germany).
c) Workers aged 25 to 50 with a minimum of four years of tenure.
d) Workers with a minimum of three years of tenure.
e) Conditional on a positive spell of joblessness.
f) After 10 months.
g) Workers with a minimum of one year of tenure.
h) Workers with a minimum of five years of tenure.
i) Workers with a minimum of six years of tenure.

Source: Kuhn, P.J. (ed.) (2002), *Losing Work Moving On*, W.E. Upjohn Institute for Employment Research, Kalamazoo, MI.

The foregoing considerations suggest that reliable estimates of the adjustment costs borne by trade-displaced workers should be based on the best possible estimates of the incidence of trade-related job displacement and the actual adjustment experience of those workers, including earnings losses that continue after they are re-employed.

1. A number of subsequent studies have adopted the same basic strategy for estimating the adjustment costs borne by trade-displaced workers, albeit with some refinements. For example, Baldwin *et al.* (1980) applied this methodology in a later study of the net benefits of trade liberalisation for the United States, but allowed the expected duration of unemployment for trade-displaced workers to vary across industries to reflect differences in the demographic composition of their workforces.
2. The pioneering study of Davis, Haltiwanger and Schuh (1996) showed that manufacturing employment in the United States declined at an annual rate of 1.1% during 1973-1988, but that this modest net decline resulted from a gross job creation rate of 9.1% and a gross job destruction rate of 10.3%. That is, the gross flows were an order of magnitude higher than the net flows, indicative of a high level of reallocation of employment across firms within detailed industries. This qualitative result has been confirmed by many subsequent studies, including for services industries and other countries (Davis and Haltiwanger, 1999).
3. Davis and Haltiwanger (1999) survey a number of empirical studies which indicate that worker turnover rates are even higher than job turnover rates. Nonetheless, they conclude that a significant share of job destruction in the United States is accomplished via involuntary layoffs. This share may be particularly high for jobs threatened by imports, which tend to be held by older and high-tenure production workers with relatively little formal education and low turnover rates.

Box 1.3 presents estimates of trade-related displacement and gross labour-market flows based on five statistical sources for the United States. Comparisons of these estimates provide several useful insights for analysing trade-adjustment costs and policy responses. First, the incidence of trade displacement cannot be measured with precision using existing statistics and labour market programmes are also likely to find it difficult to differentiate among job losers according to whether international competition was an important cause of their being laid-off. Nonetheless, certain order-of-magnitude comparisons can be drawn, albeit tentatively: *i)* job losses that can be confidently identified as having been caused by trade competition are a small share of total job displacement; however, *ii)* trade competition could play a significant role in a much higher share of layoffs; furthermore, *iii)* a significant fraction of workers are displaced every year – with 5% being a reasonable estimate for the United States; where *iv)* this represents a little more than one-third of total job destruction; suggesting that *v)* the high rate of voluntary labour mobility allows nearly two-thirds of all employment reductions to be achieved via voluntary attrition. These magnitudes are subject to considerable uncertainty and probably differ for other OECD countries. Nonetheless, it appears likely that other national labour markets are also characterised by a co-existence of substantial voluntary labour-market mobility with significant rates of trade-related job displacement.

Table 1.1 compares the annual displacement rates in the United States reported in Kletzer (2001) with parallel estimates for Europe and Canada.[19] The average annual displacement rate in the 14 ECHP countries is 2.8%, slightly higher than the 2.2% incidence rate that Kletzer estimates for the United States, while the estimate for Canada is substantially higher, at 6.7%.[20] Differences in displacement rates across industry groupings are of greatest interest for this chapter's analysis, since they provide an indication of the importance of international trade in generating permanent layoffs. In all three areas, displacement rates are higher in manufacturing than in services, with this difference being particularly strong in the United States (4.6% *versus* 1.7%).[21] In Canada, the displacement rate in high-international-competition industries is higher, at 8.3%, than in the rest of

Table 1.1. **Manufacturing workers are displaced more often than service workers, but evidence for a direct link between trade and job loss rates is mixed**

Average annual displacement rates (percentage of total employment)

Industry	Canada[a] 1983-1999	14 European countries[b] 1994-2001	United States[c] 1979-1999
Manufacturing	6.5	3.7	4.6
High-international-competition	8.3	3.7	5.9
Medium-international-competition	5.9	4.5	6.2
Low-international-competition	5.9	3.5	4.3
Services and utilities[d]	4.5	3.2	1.7
Total employment[e]	6.7	2.8	2.2

a) Average annual permanent layoff rates, where permanent layoffs are defined as layoffs that occur when the separated worker does not return to the same employer in the same year the layoff took place or in the following year. Estimates based on the 1% Longitudinal Worker File (LWF) as calculated by Statistics Canada.

b) Secretariat estimates based on data from the European Community Household Panel (ECHP) for Austria, Belgium, Denmark, Finland, France, Germany, Greece, Ireland, Italy, Luxembourg, the Netherlands, Portugal, Spain and the United Kingdom.

c) Estimates based on data from the Displaced Workers Survey (DWS), as calculated by Kletzer (2001).

d) Services for Europe.

e) Estimates for the United States exclude employment in the primary sector and construction.

Source: Statistics Canada's LWF for Canada; ECHP, waves 1 to 8 (April 2003) for Europe; and Kletzer, L.G. (2001), *Job Loss from Imports: Measuring the Loss*, Institute for International Economics, Washington, DC, for the United States.

Box 1.3. **Counting trade-displaced workers in the United States: lessons from five data sources**

The chart below compares incidence measures related to trade displacement which have been calculated from five different data sources for the United States. Preceding from the most restrictive to the most encompassing measures of trade displacement and labour turnover:

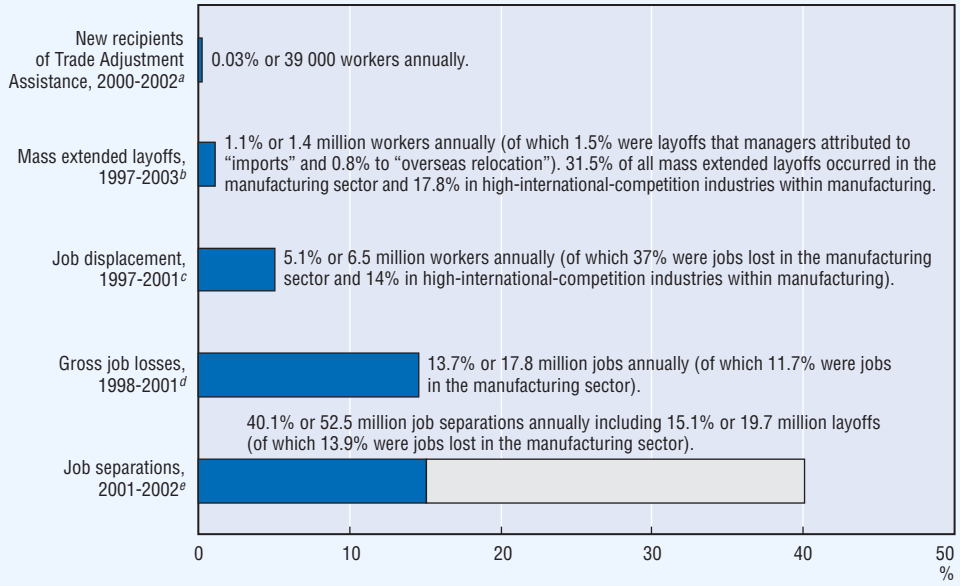
- *The Trade Adjustment Assistance* (TAA) programme provides income-replacement benefits and adjustment assistance to certified trade-displaced workers that supplement the unemployment insurance benefits and re-employment services available generally to the unemployed (see sub-section 3.E below for a more detailed description of TAA). During 2000-2002, an average of 39 000 workers became new recipients under this programme annually, representing 0.03% of total non-farm employment. However, this represents a lower-bound estimate of trade displacement since the eligibility criteria used to define trade-displaced workers under TAA are somewhat narrow (*e.g.* workers displaced by trade in services are not covered) and the administrative process under which workers are certified for this programme almost certainly results in low coverage rates among potentially eligible workers (Kletzer and Rosen, 2005).
- *The Mass Layoffs Statistics* (MLS) programme builds on administrative data collection associated with the unemployment insurance system to provide statistics on large-scale layoffs. These data are especially useful for analysing trade displacement because managers are interviewed following every "mass layoff event" and are asked to identify the economic reason for the job losses. Among the possible reasons that can be reported are "imports" and "overseas relocation of the work". During 1997-2003, the MLS data indicate that an average of 1.4 million workers lost their jobs in mass layoffs each year, corresponding to an annual incidence rate of 1.1%. However, managers cited imports as the reason for job loss for just 1.5% of all workers involved in mass layoffs and the corresponding figure for overseas relocation was 0.8%. Combining these two reasons, 2.3% of all mass layoffs are identified as being trade-related displacements each year, representing just 0.02% of total employment. This is very close to the incidence rate implied by the TAA programme data and also provides a strongly downward biased estimate of the true figure for two reasons: *i)* the MLS statistics miss many layoffs that fail to satisfy the minimum-size thresholds applying to establishment employment levels and the number of jobs shed over a five-week period;[1] and *ii)* the two trade-related reasons that employers can cite as being the principle cause of the layoffs are included in a lengthy list that contains other items, which are much more frequently cited and typically would also apply to managerial decisions to cut employment in response to trade competition (*e.g.* "financial difficulty" and "reorganisation within firm").[2]
- *The Displaced Worker Survey* (DWS) is a household survey which has collected data on nationally representative samples of displaced workers since 1979 and has been widely used by researchers, since it contains quite extensive information on the characteristics of displaced workers and their adjustment experience following job loss, unlike the administrative data collected in the MLS. According to DWS data, an average of 6.5 million workers were displaced each year during 1997-2001, representing an annual incidence rate of 5.1%, nearly five-times as high as the MLS-based estimate. None of the DWS variables provide direct information concerning whether international trade caused these workers to lose their jobs and researchers have had to use proxy indicators to infer which observations correspond to trade-displaced workers. In particular, a number of researchers have used the industry of the lost job as a proxy indicator for the role of trade competition.[3] Kletzer (2001) has analysed these questions in greatest detail and finds that 14% of all displaced workers identified in the DWS (or 0.7% of all workers annually) lost a job in a manufacturing industry facing intense international competition.[4]

Box 1.3. **Counting trade-displaced workers in the United States: lessons from five data sources** *(cont.)*

- The incidence rates of trade (and total) displacement provided by the TAA, MLS and DWS data can be compared with the total turnover of jobs and workers, in order to gauge the scale of job displacement relative to total flux in the labour market. According to the *Business Employment Dynamics* (BED) statistics, an average of 17.8 million jobs were destroyed every year during 1998-2001, implying an annual gross job losses incidence rate of 13.7%.[5] The gross job losses rate is thus nearly three times greater than the displacement rate calculated from DWS data, suggesting that nearly two-thirds of the time employers make use of natural attrition, rather than layoffs, to achieve reductions in the size of their labour force.[6] Indeed, labour turnover rates in the *Job Openings and Labor Turnover Statistics* (JOLTS) are even higher than the BED gross job losses rates, with 52.5 million job separations being reported every year, an annual incidence rate of 40.1%. Of perhaps greater relevance for drawing comparisons with trade-displacement rates, the annual incidence rate for involuntary layoffs in JOLTS is 15.1%.[7]

Counting trade-displaced workers: searching for faces in a (swirling) crowd?

Five measures of job-loss rates in the United States, annual percentages of total non-farm employment



a) Average value for 2000-2002 based on Trade Adjustment Assistance participation data reported in Kletzer and Rosen (2005).

b) Average values for 1997-2003 as calculated from data reported at the Mass Layoffs Statistics homepage of the US Bureau of Labor Statistics (*www.bls.gov/mls/home.htm*).

c) Average values for the periods 1997-1999 and 1999-2001 in Farber (2003), which have been converted to an annual rate using the adjustments for multiple job losses and recall bias in Abbring *et al.* (2002). Shares in manufacturing and high-international-competition industries within manufacturing are from Kletzer (2001).

d) Average annual gross job losses rate for 1998-2001 from Table 2 of Pinkston and Spletzer (2004).

e) Average annual job separation rates calculated as the sum of the 12 monthly rates reported at the Job Openings and Labor Turnover Survey (JOLTS) homepage of the US Bureau of Labour Statistics (*www.bls.gov/jlt/home.htm*). Area in darker shading corresponds to employer-initiated separations, principally layoffs.

Source: OECD calculations using the sources mentioned in notes a-e, as well as employment estimates from the Current Employment Statistics homepage of the US Bureau of Labor Statistics (*www.bls.gov/ces/home.htm*).

Box 1.3. **Counting trade-displaced workers in the United States: lessons from five data sources** *(cont.)*

1. The MLS data cover establishments employing at least 50 workers where at least 50 people filed for unemployment insurance during a consecutive five-week period. Establishments employing 50 or more workers accounted for almost 57% of total employment within the scope of the MLS programme in 2003, so the establishment-size threshold omits more than one-third of the labour force (Brown, 2004). Also omitted are layoffs involving fewer than 50 workers or that are extended over a prolonged period of time, but the extent of the resulting bias is unknown.
2. In 2004, the interview questions used for the MLS were modified so as to do a better job of identifying mass layoffs resulting from the movement of work to another site (Brown, 2004). In the first three quarters of 2004, 8% of extended mass layoffs were associated with the movement of work (corresponding to 41 000 job losers). 26% of these layoffs involved offshoring and nearly three-quarters of those represented the shifting of work to out-of-country production sites of affiliates, rather than outsourcing of work to independent firms. A large majority of the layoffs related to offshoring represented manufacturing jobs that were relocated to Mexico and China.
3. It is clearly inaccurate to assume that all displacement in high-international-competition industries are trade displaced, while no job losers in other industries are. Provided that trade-displaced workers are sufficiently over-represented in high-international-competition industries, this method should nonetheless provide an indication of differences between trade-displaced workers and other job losers in terms of the *e.g.* the distribution of ages or average wage losses. Since this method introduces both upward and downward bias in the number of trade-displaced workers, it is unclear whether it results in an under- or over-estimate of the true incidence rate.
4. Total manufacturing accounted for 37% of all displaced workers (corresponding to 1.9% of all workers annually).
5. The BED data are usually reported on a quarterly basis (*e.g.* Spletzer *et al.*, 2004) which are sometimes "annualised" by summing the four quarterly values. Doing so generates substantially higher estimates of job turnover then the annual rates presented in Chart 1.4, which were calculated by Pinkston and Spletzer (2004) based on 12-month changes in establishment-level employment.
6. The 5.1% annual displacement rate estimated from DWS data is 37% of the 13.7% gross job losses rate estimated from BED data. Since manufacturing accounts for a disproportionate share of job displacements, but only a proportionate share of gross job losses, it appears that the share of job deaths resulting in layoffs is higher in manufacturing than in the rest of the economy.
7. There are two major explanations for why the rate of involuntary layoffs recorded by JOLTS is nearly three times as high as the displacement rate calculated from DWS data: *i)* the annual layoff rate estimated from JOLTS data is the sum of 12 *monthly* rates, implying that the same worker can separate from multiple jobs in a single year and that many of the layoffs recorded are probably temporary (though all last at least seven days); and *ii)* the JOLTS layoff data combine persons fired for cause with persons laid off for economic reasons (*i.e.* displaced workers).

manufacturing (5.9%), consistent with losses of comparative advantage causing elevated rates of job loss.[22] By contrast, there is no consistent association between the intensity of international competition and displacement rates within the manufacturing sectors of either the EU or the United States. This may indicate that inter-industry differences in exposure to international competition have been particularly strong in Canada manufacturing,[23] but probably also reflects the more accurate assignment of job losers to industry in the Canadian database underlying these calculations (which relies upon employers, rather than workers, to identify the industry of employment).

Econometric estimates of job losses from international competition tell a similar story

The bivariate association between more intense international competition in an industry and a higher incidence of job displacement is only suggestive of a causal link between international competition and job loss, because layoffs can be influenced by numerous factors in addition to declining comparative advantage. Multivariate techniques are better suited for isolating the true impact of changes in international trade on the incidence of job displacement, although causal impacts remain difficult to pin down due to the possibility of endogeneity bias.[24] Another difficulty (as noted above) is that it generally is not possible to differentiate among displaced workers according to whether any

particular layoff occurred as a result of international trade. Accordingly, most researchers have analysed the impact of trade on employment using industry-level measures of job loss. Also for reasons of data availability, much of the econometric research studying the impact of trade on job loss has focussed on *net* employment changes, rather than theoretically preferable measures, such as the incidence of job displacement or *gross* job destruction.[25]

OECD (2005b) surveys twelve recent econometric studies which have used multivariate regression techniques to study the association between *net employment growth* rates in particular industries and the intensity of trade competition, when controlling for other factors likely to affect industry employment levels (see Panel A of Annex Table 1.A2.1). These studies suggest the following conclusions:

- Most of these studies have found qualitative evidence in support of the hypothesised link between rising import competition (or declining export competitiveness) and declining employment at the level of more or less disaggregated manufacturing industries. Thus far, there is little evidence for a detrimental impact of international sourcing of business services on sectoral employment, probably due to the smaller magnitudes of the trade flows involved and the generally more buoyant employment performance of this sector.[26]
- The estimated elasticities tend to be quite small and to vary considerably across studies, suggesting that the specific methods and data sources adopted have a substantial effect on estimation results. This variability may indicate that the strategies being used to identify employment effects due to changes in trade competition are not very satisfactory, particularly in the context of potentially strong endogeneity bias. Some studies allow these response elasticities to vary across industries and often find that the negative impact of international competition appears to be much stronger in some industries than others (*e.g.* Kletzer, 2002), perhaps reflective of differences in the importance of product differentiation (Helpman and Krugman, 1985).

Recently, an increasing number of econometric studies of the impact of trade competition on employment have used data on *job displacement rates* as the dependent variable and hence provide more directly relevant evidence for assessing trade-adjustment costs. OECD (2005b) also summarises ten recent studies analysing the relationship between trade competition and job displacement (or gross job losses), using regression analysis to control for other factors affecting the rate of job loss (see Panel B of Table 1.A2.1). The following conclusions emerge:

- Most of these studies find some evidence supporting the hypothesis that increased import competition (or reduced export competitiveness) is associated with a temporary increase in the rate of job loss. By contrast, there appears to be no evidence that a higher level of openness is associated with a permanently higher level of labour market turbulence, as reflected in a persistent increase in the incidence of job displacement (although this possibility has not received much scrutiny from researchers).
- The estimated effects tend to be relatively small and are not robust to variations in model specification or data sources. However, this is a very new area of research and it is to be hoped that more robust results will soon become available.

C. The characteristics of trade-displaced workers and their adjustment costs

The policy implications of trade-related displacement will vary critically depending upon the nature and extent of the adjustment difficulties encountered by the workers

affected, including the amount of time spent jobless and any earnings losses on the new job. Prior research for a considerable number of countries has shown that the adjustment costs borne by displaced workers range from small (or nonexistent) to very large and that certain personal characteristics (*e.g.* being older or having little formal education) are associated with greater post-displacement difficulties (Kletzer, 1998; Kuhn, 2002). This section presents estimates of the characteristics of trade-displaced workers and their adjustment costs, focussing on whether they differ from other job losers in ways that have implications for the operation of public programmes to reduce adjustment costs from trade.[27]

Are trade-displaced workers different from other displaced workers?

Using industry as a proxy for trade displacement, Kletzer (2001) compares trade-displaced workers with other job losers.[28] She finds that workers displaced from high-international-competition manufacturing industries in the United States are quite similar to those displaced from other manufacturing industries, except that women and ethnic minorities represent significantly larger shares of all job losers in high-international-competition industries (Table 1.2, Panel A).[29] In terms of age, education, job tenure and prior earnings, workers displaced in high-international-competition manufacturing industries are similar

Table 1.2. **Are trade-displaced workers different: a comparison for the United States, 1979-1999**

	High-international-competition manufacturing	Medium-international-competition, manufacturing	Low-international-competition, manufacturing	All manufacturing	Services and utilities
A. Workers' characteristics					
Age at displacement (years)					
55-64 (%)	10.4	10.3	8.7	10.1	8.2
Mean age	39.1	38.4	37.8	38.6	37.3
Education					
Less than high school (%)	21.3	21.9	18.2	21.0	11.9
Mean years of education	12.3	12.3	12.5	12.3	13.2
Share female (%)	44.9	30.4	35.1	36.9	50.4
Share minority (%)	19.0	16.5	16.7	17.6	17.0
Predisplacement occupation					
White collar (%)	31.3	28.6	34.5	30.7	64.5
Blue collar (%)	66.8	68.7	62.1	66.8	21.3
Job tenure at time of displacement (years)					
Greater than 10 (%)	22.1	21.6	19.4	21.5	12.7
Mean job tenture	6.8	6.5	5.9	6.5	4.6
Weekly earnings on the old job					
Mean (US dollars)	402.97	400.41	375.11	396.88	368.65
B. Adjustment costs					
Share reemployed at survey date (%)	63.4	65.4	66.8	64.8	69.1
For reemployed					
Mean change in log earnings	–0.132	–0.126	–0.086	–0.121	–0.038
Share with no earnings loss or earning more (%)	36.0	34.0	38.0	35.0	41.0
Share with earnings losses greater than 30 per cent (%)	25.0	25.0	26.0	25.0	21.0

Source: Kletzer, L.G. (2001), *Job Loss from Imports: Measuring the Loss*, Institute for International Economics, Washington, DC, Table D2, p. 102.

to those losing jobs in medium-international-competition industries, but moderately different from those in low-international-competition industries (where the workers are younger and had lower job tenure and earnings on the lost job). However, the contrast is much sharper between workers displaced in manufacturing and those losing jobs in the service sector. The latter are considerably younger, better educated, more likely to be women and to have held a white-collar job, and their prior earnings and job tenure are also lower.

More detailed analysis for the United States indicates that the characteristics of workers displaced from jobs in the different detailed industries within the high-international-competition group vary considerably (Kletzer, 2001). For example, the textile, clothing and footwear sector is characterised by lower tenure than many of the other vulnerable industries, but still higher than in most service sectors; it also tends to have a higher share of female workers and pays wages below manufacturing industry averages (Kletzer, 2001; Rosen, 2002). By contrast, steel industry workers are more often male and higher paid than those in other manufacturing industries. Tenure is also higher and firms tend to be larger and concentrated in regions where iron ore or coal is found. This suggests that a decline in employment by steel firms can have a large negative effect on local demand for production workers.[30] Employment in shipbuilding has similar characteristics. In sum, trade competition does not so much target particular types of workers, as jobs in particular industries, and adjustment assistance policy needs to reflect the varied needs of a very heterogeneous group of job losers.

In many respects, the situation is qualitatively similar in Europe (Table 1.3, Panel A). As in the United States, European workers displaced from jobs in manufacturing tend to be somewhat older and to have significantly more tenure and higher earnings on the prior job than workers displaced from service jobs. They are also much more likely to be employed in blue-collar jobs. The characteristics of workers displaced from high-international-competition industries also differ somewhat from other displaced manufacturing workers, with the former group being older and having had more tenure and slightly higher earnings on the lost job.[31]

Are adjustment costs higher for trade-displaced workers than for other displaced workers?

In the United States, workers displaced from jobs in high-international-competition manufacturing industries are moderately less likely to be re-employed at the survey date (63%) than displaced workers from other manufacturing industries (67% for workers displaced from low-international-competition manufacturing) and the re-employment gap is somewhat larger *vis-à-vis* service sector workers (69% re-employed) (Table 1.2, Panel B).[32] Re-employment rates following displacement appear to be considerably lower in Europe than in the United States, averaging 57% for all of manufacturing and just 52% in high-international-competition industries within manufacturing (Table 1.3, Panel B).[33] This difference suggests that displaced workers typically find it more difficult to find a new job in Europe than in the United States and/or are more inclined to withdraw from the labour force. Such a difference would be consistent with prior research suggesting that institutional differences between Europe and the United States (*e.g.* stricter employment protection legislation, more generous earnings-replacement benefits and a more compressed wage structure in Europe) tend to result in longer unemployment spells and higher inactivity rates among working-age persons in Europe (OECD, 2003, 2004).[34]

Table 1.3. **Are trade-displaced workers different: a comparison for 14 European countries,[a] 1994-2001**

	High-international-competition manufacturing	Medium-international-competition, manufacturing	Low-international-competition, manufacturing	All manufacturing	Services	All sectors
A. Workers' characteristics						
Age at displacement (years)						
15-24 (%)	10.4	13.1	11.6	11.8	12.2	11.4
25-54 (%)	75.1	75.8	78.1	76.4	78.0	76.9
55-64 (%)	14.5	11.2	10.3	11.9	9.8	11.7
Mean age	40.9	38.8	39.4	39.7	37.9	39.2
Share female (%)	31.7	44.9	26.2	34.8	43.2	38.2
Predisplacement occupation						
White collar (%)	31.9	20.0	27.1	25.9	73.3	48.5
Blue collar (%)	68.1	80.0	72.9	74.1	26.7	51.5
Job tenure at time of displacement (years)						
Greater than 10 (%)	32.1	30.4	27.7	30.0	18.6	21.5
Mean job tenure	7.0	6.6	6.2	6.3	4.7	5.0
Hourly earnings on old job						
Mean (euros)	9.51	9.15	9.08	9.43	9.15	9.08
B. Adjustment costs						
Share reemployed two years later (%)	51.8	58.7	59.6	57.0	57.2	57.3
For reemployed						
Mean change in log earnings	0.001	–0.038	0.028	–0.001	0.073	0.040
Share with no earnings loss or earning more (%)	44.0	45.7	47.3	45.8	49.6	47.1
Share with earnings losses greater than 30 per cent (%)	5.4	7.0	6.8	6.5	8.4	7.5

a) Austria, Belgium, Denmark, Finland, France, Germany, Greece, Ireland, Italy, Luxembourg, the Netherlands, Portugal, Spain and the United Kingdom.

Source: European Household Panel, waves 1 to 8, April 2003.

Workers displaced from high-import-competing industries in the United States experience an average pay cut of 13% once re-employed, with one-quarter experiencing earnings losses of 30% or more (Table 1.2, Panel B). Workers displaced from the rest of manufacturing fare a little better, whereas earnings losses once re-employed are significantly smaller for workers displaced from jobs in the service sector, for whom the mean earnings loss is just 4%, although one displaced service worker in five reports an earnings loss of at least 30%. By contrast, earnings are unchanged on average for European workers becoming re-employed following the loss of a job in manufacturing and actually increase an average of 7% for workers displaced from jobs in the service sector (Table 1.3, Panel B). The share of European workers reporting wage losses of at least 30% is far smaller than in the United States (8% *versus* 22%, for all displaced workers), evidence that earnings changes between the old and new jobs vary less widely in Europe. In sum, it appears that trade-displaced workers are at a somewhat greater risk of experiencing wage losses once re-employed, than are other job losers, in both Europe and the United States, but both the average size of these losses and their variability is much greater in the United States.[35]

Prior research on adjustment costs following job displacement suggests that many of the personal characteristics that differentiate persons losing jobs in manufacturing from their counterparts in the service sector – and, to a lesser extent, workers displaced from

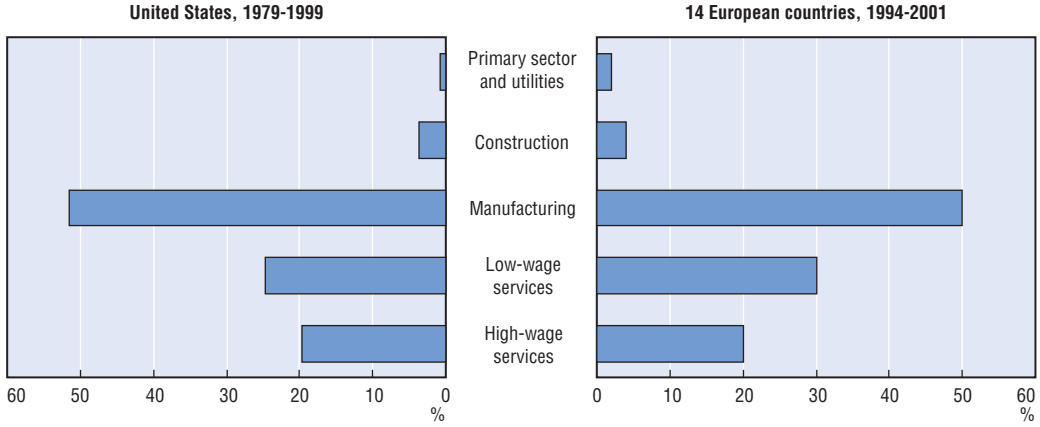
high-international-competition industries from those displaced from the remainder of manufacturing – (*e.g.* being older and having higher job tenure and lower educational levels) are likely to be associated with higher earnings losses (Farber, 2003; Kuhn, 2002).[36] This raises the question whether the higher earnings losses suffered by trade-displaced workers (as proxied by industry) reflect an independent causal effect of trade having caused these layoffs or, instead, merely reflects the tendency for the workers displaced by trade to have individual characteristics that represent barriers to successful adjustment? Using DWS data for the United States, Kletzer (2001, 2002) estimates multivariate models of adjustment cost following displacement and finds no evidence for an *independent* effect of having been displaced as a result of international competition, when controls are included in the regression equations for individual characteristics, such as age, education and tenure on the lost job. Since she is not able to include good controls in her regression equations for the tendency of trade-displaced workers to have qualifications that are most suited to employment in declining industries and occupations, and to live in areas where the local labour market is characterised by high unemployment and stagnant hiring, this constitutes quite strong evidence that a worker's characteristics and how well they match with local labour demand are much more important for determining post-displacement costs than is the precise reason for the layoff.[37]

Do trade-displaced workers find new jobs in dynamic sectors of the economy?

Since trade-displaced workers tend to have been laid off from jobs in declining industries, it is natural to ask how often they make a successful transition to employment in expanding sectors of the economy. The picture turns out to be rather complex, with many displaced workers becoming re-employed in the same industry or a closely related one. For example, in both the United States and Europe, half or more of workers displaced from a job in manufacturing become re-employed in that sector, despite the downward trend in manufacturing employment in most of these countries (Chart 1.4). Not surprisingly, most of the rest moved to jobs in the service sector, with service industries such as retail trade, where job skill requirements tend to be relatively low and general,

Chart 1.4. **The majority of workers displaced from manufacturing jobs find a new job in manufacturing**

Re-employment by broad industrial sector (percentage)



Source: Kletzer, L.G. (2001), *Job Loss from Imports: Measuring the Loss*, Institute for International Economics, Washington, DC, for the United States; and ECHP; waves 1 to 8 (April 2003) for Europe.

Statlink: *http://dx.doi.org/10.1787/127517456764*

Table 1.4. **Many displaced workers find a new job in the same industry and doing so reduces earnings losses**

Workers displaced in:	Share re-employed in same industry (%)	Mean earnings changes (%) for workers re-employed in:	
		Same industry	Different industry
A. United States (1979-1999)[a]			
High-international competing manufacturing	19.4	–1.9	–20.0
All manufacturing	18.7	–3.1	–19.1
Non-manufacturing	25.9	–3.7	–7.1
B. 14 European countries (1994-2001)[b]			
Manufacturing	43.6	2.2	–2.7
Non-manufacturing	49.7	6.5	5.9

a) Industry change defined in terms of three-digit industries (235 industries).
b) Industry change defined in terms of one-digit industry groupings (18 industries).

Source: Kletzer, L.G. (2001), *Job Loss from Imports: Measuring the Loss*, Institute for International Economics, Washington, DC, for US estimates and European Household Panel, waves 1-8, April 2003 for the European countries.

accounting for the bulk of this outflow. Re-employment in the same industry also remains quite common when assessed in terms of the most detailed industrial classifications available in the two databases (235 industries for the United States and 18 for Europe) (Table 1.4). Importantly, wages on the new job compare more favourably to those on the old job for displaced workers who remain in the same industry, especially in the United States.[38]

These patterns in the industry of re-employment highlight an important distinction between labour-market adjustment to trade at the macro and micro levels. At the macro level, the adjustment challenge is to facilitate the flow of labour resources from declining to expanding sectors, so as to take full advantage of emerging sources of comparative advantage. However, the situation is more complex at the micro level, since it often makes sense for workers displaced from declining sectors to search for a new job in the same sector. The high gross flows characterising labour markets mean that there is considerable hiring even in declining sectors (*cf.* sub-sections 2.A-B above). Remaining in the same industry may make particular sense for older and high-tenure displaced workers, whose skills and experience are likely to be highly specialised to the sector or occupation in which they have been working.[39] The macro-level re-allocation requirements are not necessarily compromised by such an outcome, since expanding sectors may be able to meet their recruitment needs by attracting labour force entrants and voluntary job changers.

The policy challenge from trade displacement

The empirical analysis of trade displacement just presented provides some useful orientation for analysing adjustment assistance policies. A first insight that emerges is that trade-adjustment costs would be greatly reduced if policies can be put in place that minimise the extent to which trade-related job displacement serves as a pathway to long-term unemployment, premature labour force withdrawal and persistent under-employment (*i.e.* re-employment at significantly lower wages). If this is to be done, policies will need to address the most important barriers to re-employment in jobs making full use of displaced workers' productive skills. A second insight that emerges from the foregoing analysis is that trade-displaced workers are a diverse group whose adjustment difficulties range from apparently minor to very great, with older, higher tenure and less educated job losers –

especially, those unable to find a new job in the same industry – suffering the greatest earnings losses.[40] The challenge to lower trade-adjustment costs is thus closely related to the life-long-learning agenda, which aims to maintain workers' employability as they age and job skill requirements increase (OECD, 2004a, Chapter 4). A third insight, is that the nature of the adjustment barriers encountered by trade-displaced workers may vary depending on the national institutional environment. In particular, the greatest source of high adjustment costs in Europe is low re-employment rates following job displacement, while earnings loses on the post-displacement job are the dominant source of losses in the United States.[41]

3. Policies to reduce trade-adjustment costs[42]

As was highlighted in Sections 1 and 2, international trade is an important driver of structural change and long-run increases in living standards. These structural adjustments take place through voluntary job transfers to a considerable extent, either directly from one job to another or through the replacement of older cohorts of workers with younger ones. However, firm closure and job displacement are an inevitable and particularly challenging part of the adjustment process and this can be painful for those individuals and communities involved, while costs for society as a whole can be large in terms of lost human capital and production. The policy challenge is to facilitate labour reallocation, so as to take best advantage of new possibilities, while at the same time limiting adjustment costs for individuals, communities and society as a whole. The purpose of this section is to analyse how this can best be done in light of the preceding empirical analysis of trade displacement, placing the emphasis on broad policy orientations rather than the detailed content of specific measures.[43]

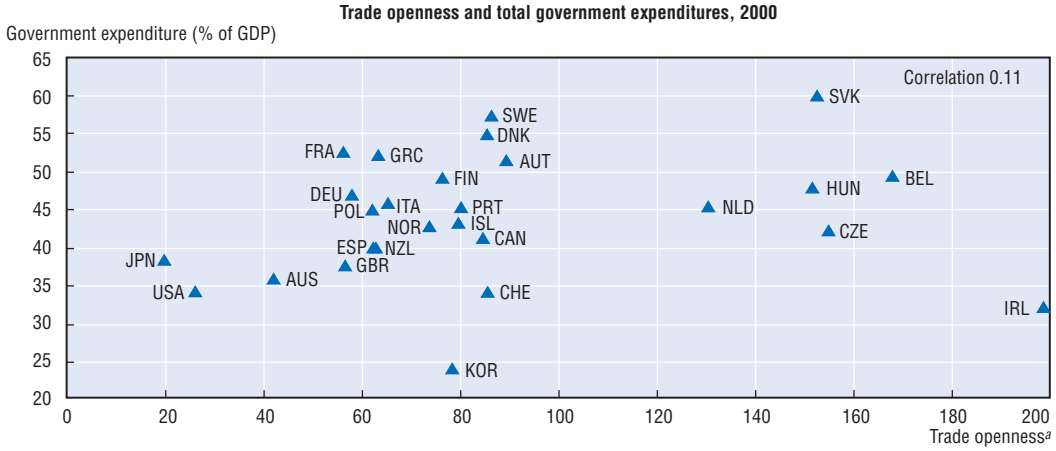
A. Is there still a role for domestic labour market policy in the global economy?

A first question concerning policy responses is whether domestic labour market policy is still feasible and effective in national economies that are increasingly open. For example, it has been argued that increasingly "footloose" multinational corporations have gained so much bargaining leverage for demanding a "good business climate" that governments are increasingly unable to levy tax revenues that are adequate to meet social objectives and collective consumption needs (*e.g.* as described in the final report of the World Commission on the Social Dimension of Globalisation; see ILO, 2004). In fact, international economic integration is compatible with a large public sector, since government spending exceeds 50% of GDP in a number of OECD countries that are very open to international trade (Chart 1.5). There even appears to be some tendency for government spending to be higher in the OECD countries where trade is largest relative to GDP.[44] The association between greater trade openness and higher public spending is even more evident when attention focuses on labour market programmes which are of particular relevance for providing adjustment assistance to trade-displaced workers (*e.g.* expenditures on active labour market programmes (ALMPs) and unemployment benefits, data not shown). Indeed, some researchers have argued that higher spending on such programmes is complementary to trade openness, because greater international integration tends to increase the demands for adjustment assistance and social insurance against earnings volatility (Agell, 1999; Auer *et al.*, 2005; Rodrik, 1998).

Simple cross-country comparisons also suggest that globalisation has not rendered domestic labour market policy powerless to protect workers against employment

Chart 1.5. **Globalisation has not implied lower public spending**

Trade openness and total government expenditures, 2000



Note: Correlation 0.11 not statistically significant.

a) Trade openness defined as the sum of exports and imports as a percentage of GDP.

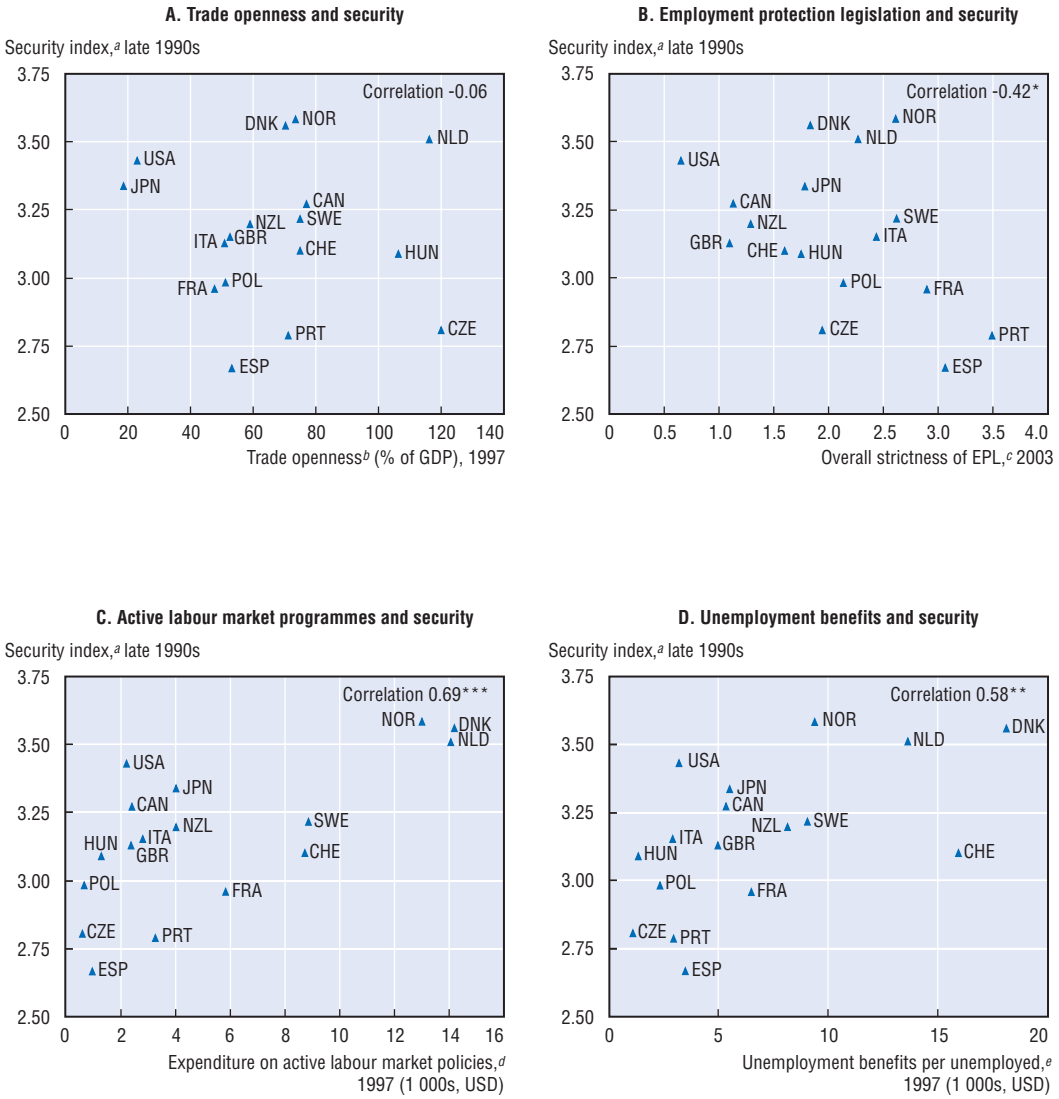
Source: *OECD Economic Outlook* database.

Statlink: *http://dx.doi.org/10.1787/425883525777*

insecurity created by intensifying international competition. The four scatter plots presented in Chart 1.6 show that workers' perceptions of employment security have no clear association with the level of trade openness in their country of residence, but do vary with domestic employment policy stances. In particular, perceived security tends to be higher in countries where spending on ALMPs and unemployment benefits is more generous. By contrast, workers feel somewhat less secure in countries where employment protection legislation (EPL) is more strict, perhaps due to an awareness that the incidence of long-term unemployment is higher in these countries (OECD, 2004a, Chapter 2). In sum, increased international integration has clearly changed the context for employment policy making, but does not appear to have undermined national governments' ability to implement such policies nor the potency of these policies for affecting the level of employment security.

The continued viability and potential efficacy of domestic labour market policy means that it is worthwhile to analyse which policies would best meet the trade-adjustment challenge implied by the analysis in Section 2. ALMPs and unemployment benefit systems clearly constitute key components of the required policy response, since they have the potential to assist trade-displaced workers to move into good new job matches more quickly, while cushioning the impact of displacement-related earnings losses on family incomes. The labour-market adjustment costs associated with globalisation can thus be viewed as providing an additional reason for reforming these programmes, so as to assure their adequacy and enhance their effectiveness. The heterogeneity of the assistance needs of trade-displaced workers also reinforces the more general argument that public employment services should provide individually tailored packages of activation services to unemployed persons in a timely fashion (see Chapters 4 and 5 for a detailed analysis of how this can be done). The long periods of joblessness that sometimes follow displacement highlight both the importance of unemployment benefits for this group, as well as the need to assure that the tax/benefit system also provides them with economic incentives to

Chart 1.6. **Perceptions of employment security vary more strongly with labour market policy than with trade openness**



***, **, * means statistically significant at 1%, 5% and 10% levels, respectively.

a) Average answer, by country, to the following question from ISSP "Do you worry about the possibilities of losing your job?" – Scale from 1 (I worry a great deal) to 4 (I don't worry at all).

b) Sum of exports and imports as a percentage of GDP.

c) Scale of 0 to 6 from least to most restrictive.

d) Expenditure on active labour market policies per unemployed converted to USD using PPPs.

e) Expenditure on unemployment benefits per unemployed converted to USD using PPPs.

Source: OECD (2004a), *Employment Outlook*, Chapter 2; and *OECD Economic Outlook* database (for trade openness).

Statlink: *http://dx.doi.org/10.1787/721741078757*

become re-employed (see Chapter 3 for a detailed analysis of these issues). In addition to reinforcing broader arguments for enhancing the effectiveness of ALMPs and the unemployment benefit system, the challenge to reduce trade-related adjustment costs raises more specific issues, a number of which are discussed below.

B. Choosing how to intervene: five strategic choices

Table 1.5 illustrates two strategic choices that must be made in assembling a policy package to reduce trade-adjustment costs, namely, finding good balances between: *i)* direct and indirect measures; and *ii)* general and targeted measures. There appears to be a broad consensus that both direct and indirect measures have an important role to play. The key types of direct assistance to trade-displaced workers have already been identified, namely, ALMPs and unemployment benefits. However, indirect measures are also essential in order to provide an economic environment in which it is possible for workers displaced from declining sectors of the economy to find new jobs that make good use of their skills.[45] If there is a broad consensus that both direct and indirect measures are important, for lowering trade-related adjustment cost, there appears to be much less consensus about whether targeted programmes (*i.e.* programmes that serve only trade-displaced workers or a subset of this group) have a legitimate role to play. Sub-section E below analyses OECD countries' experiences with targeted programmes.

A national strategy for reducing trade-adjustment costs also needs to confront three additional strategic choices:

- *The relative emphasis to be placed upon proactive and reactive measures* – In practice, reactive measures always play a large role (*e.g.* income support and job-search assistance provided after workers have become unemployed). The main question would thus appear to be whether proactive measures also have a significant role to play and, if they do, what form they should take. This question is discussed in sub-section C, below.
- *How much and how to compensate trade-displaced workers for their losses* – The question of compensating "losers" from trade liberalisation receives much attention in the welfare analysis of trade theorist, but tends not to be discussed in the context of labour-market programmes providing assistance for trade-displaced workers (or other job losers).

Table 1.5. **A partial taxonomy of measures for reducing labour-market adjustment costs from trade**

Types of measures	Direct	Indirect
General	Unemployment insurance and other income-replacement benefits available to all displaced workers and/or all unemployed under common rules. Active labour market programmes available to all displaced workers and/or all unemployed under common rules.	Macroeconomic policies conducive to strong growth and high employment. Framework conditions for efficient reallocation of labour in response to structural change (*e.g.* adjustment-friendly EPL and wage-setting institutions). Education and life-long learning programmes to up-skill the workforce. Broad trade policy measures to restrict imports ("protectionism").
Targeted	Special adjustment assistance or supplementary income-replacement benefits to all trade-displaced workers. Special adjustment assistance to specific subgroups of trade-displaced workers (*e.g.* job losers in specific firms or sectors which face intense import competition).	Industry redevelopment or rationalisation programmes (*e.g.* tax subsidies, public-private partnerships to develop new sources of comparative advantage). Local economic development. Industry-specific trade policy (*e.g.* trade safeguards or anti-dumping measures under WTO rules).

Memo item: Other strategic choices involve finding: *i)* the right balance between proactive measures (*e.g.* advance notification and encouragement to the reassignment of workers within firms) and reactive measures (*e.g.* job search assistance and unemployment benefits after job loss); *ii)* the right balance between compensating trade-displaced workers for their losses and maintaining incentives for them to move quickly into new jobs that make good use of their skills; and *iii)* the right division of responsibilities between the pubic and private sectors for financing, administering and delivering adjustment assistance measures.

Sub-section D below considers the extent to which compensating trade-displaced workers for their earnings losses might be adapted as a policy goal and how any such compensation can best be provided, so as to avoid undermining these workers' incentives to become re-employed.

- *Public versus private responsibilities* – A final strategic issue is determining the extent to which the private sector, in particular employers, should be required to assume responsibility for financing, administering and delivering adjustment assistance to trade-displaced workers (or employees at risk of becoming trade-displaced workers). This issue is invoked at several points below, in the context of specific measures, but no attempt is made to identify cross-cutting principles.

C. What role for proactive measures?

The job losses caused by trade shocks are sometimes sufficiently predictable to allow adjustment assistance to begin in advance of workers' layoffs. An early start may provide time for cooperation between the firm, public employment services and, when present, labour representatives to plan to minimise the adverse impact on workers whose jobs are ending or, potentially, even to prevent some job losses. Several types of proactive measures are briefly discussed below and their potential contributions to lowering adjustment costs assessed.

Advance notification can support re-employment of displaced workers, especially if combined with timely job-search assistance

Employer-provided advance notice of planned layoffs is of value, in its own right, for giving workers a head start in searching for a new job, as well as being a prerequisite for implementing additional proactive measures. Research in the United States has shown that displaced workers receiving advance notice spend less time unemployed than workers laid-off without any advance warning (Nord and Ting, 1991, 1992; Addison and Portugal, 1992; Swaim and Podgursky, 1990).[46] There is also some indication of a positive effect on post-displacement wages for workers who have received advance notification (Rhum, 1994). Though research on this topic in countries outside the United States has been very limited, a significant positive effect on the probability of obtaining a job during the notice period has been documented for blue-collar workers in Sweden (Storrie, 1992).[47]

The positive impact of advanced notice in reducing adjustment costs may be enhanced if the notified workers are also offered job-search assistance or retraining during the notice period, although rigorous evaluation results are lacking. Most OECD countries have rapid-response systems in place that are triggered by the announcement of a collective dismissal and then work to mitigate the potential effects of a mass layoff (*e.g.* by orienting workers toward existing vacancies in advance of dislocation).[48] Outreach is typically emphasised, with employment office personnel being dispatched to firms where particularly damaging layoffs have been announced. Nordic countries provide some of the most comprehensive proactive services to workers affected by an announced collective dismissal. In Finland, an office of the Public Employment Service is often established on the premises of the dismissing firm. Through these field offices, workers may access all of the services offered by the PES during the notice period, including training. Costs are frequently shared by the enterprise. Because most such proactive initiatives are limited to mass layoffs from large firms, workers from small and medium enterprises needing such services will have a more arm's length relationship with the PES. This consideration makes outreach particularly important.

Policies to prevent job-loss are sometimes considered, but results are varied

As a general rule, prevention – *i.e.* policies that aim to avoid job losses – is better than cure *only* for layoffs that would result in an efficiency loss for the economy. The labour reallocation induced by trade (and structural adjustment generally) increases aggregate efficiency and it should be facilitated, rather than impeded, by public policy.[49] Nonetheless, it has been argued that market failure could lead to excess layoffs in some situations (*e.g.* when government, rather than employers, bear a significant share of the resulting costs), and that efficiency might be enhanced by an appropriate tax on layoffs (Blanchard and Tirole, 2003). In fact, governments often have used different incentives intended to reduce layoffs (*e.g.* by favouring the internal redeployment of workers). As noted, these measures can be fiscal, such as the "experience-rating" system determining firms' contributions to the unemployment insurance system in the United States.[50] However, more interventionist forms that directly regulate which layoffs are allowed and how they must be handled are also used in all OECD countries, albeit to widely different degrees (OECD, 2004a, Chapter 2).

It is far from clear that most of the policy instruments that have been used in OECD countries to prevent layoffs (or to require employers shedding workers to assume the major responsibility for providing adjustment assistance to workers laid off), in fact contribute to greater efficiency or more equitable patterns of compensation. Cahuc and Kramarz's (2004) recent critique of French practice illustrates the pitfalls that can arise. Under current law, firms announcing large-scale restructuring are required to negotiate a social plan ("*plan de sauvegarde de l'emploi*"), setting forth a strategy for reintegrating the workers whose jobs are being discontinued. Retraining agreements ("*congé de conversion*") offering job losers six months of training and job-search support, are often a compulsory component of this plan, as are other measures such as severance pay. Cahuc and Kramarz argue that this policy package results in a slow and legalistic process which discourages labour mobility that is desirable from an efficiency perspective, while providing adjustment assistance to workers who are laid-off that is less timely, less well targeted and less effective than could be provided by an alternative strategy in which the public employment service takes responsibility for providing adjustment assistance to job losers (see Chapters 4 and 5 for an analysis of how such a system can operate effectively).

D. Should trade-displaced workers be compensated for their losses (and if so, how)?

Compensation raises difficult issues

The policy challenge, as formulated in the introduction to Section 3 above (*i.e.* "to facilitate labour reallocation, so as to take advantage of new possibilities, while at the same time limiting adjustment costs for individuals, communities and society as a whole"), would probably command broad agreement. However, it begs several difficult questions concerning whether workers whose economic interests are damaged by international competition should be compensated for their losses and, if so, how much compensation they should receive and how it should be delivered to them. Since the answers to these questions depend to a considerable degree on judgements concerning equity, economic reasoning cannot provide a definitive answer. However, several general observations can be made:

- Although full compensation has been emphasised in standard trade theory (*e.g.* for demonstrating that trade liberalisation improves Pareto-efficiency), it probably does not provide a useful standard for making policy choices (Facchini and Williams, 2001). A first

argument for incomplete compensation is that full compensation would be very likely to dull incentives for the reallocation of labour required to realise the potential gains from trade.[51] A second argument for incomplete compensation is that some of the earnings losses associated with trade displacement may have less claim to be compensated than others. Whether trade-displaced workers accepting a lower wage in order to become re-employed should be compensated for that loss might be thought to vary according to whether the higher earnings on their previous job reflected sector-specific skills acquired through costly investments in human capital or pure economic rents.[52]

- Compensation for trade-displaced workers may reduce efficiency by dulling re-employment incentives – although well-designed tax/benefit and activation systems can reduce disincentive effects (see Chapters 3, 4 and 5). However, social insurance arguments can be made for some level of compensation being efficiency-enhancing. This argument is most familiar in the context of unemployment insurance, which insures workers against earnings losses due to unemployment and may have efficiency advantages over private insurance schemes (Blanchard and Tirole, 2003).[53]
- Most of the efficiency and equity arguments that can be advanced for compensating trade-displaced workers appear to apply with equal force to other displaced workers facing analogous re-integration difficulties. This observation supports a presumption that compensation for trade-displaced workers should be channelled through general income transfer and ALMP programmes also available to other persons in a similar situation. Two possible grounds for treating trade-displaced workers more generously would be greater cost-effectiveness (*i.e.* that compensation can be provided to trade-displaced workers such that the benefits exceed the costs, but this is not possible for other groups suffering similar losses) and non-economic considerations (*e.g.* the belief that equity requires extra compensation for trade-displaced workers[54] or that such compensation is necessary for obtaining political support for trade liberalisation[55]).
- As a mechanism for compensating losers from trade competition, severance payments have the important disadvantage that the level of compensation paid does not reflect the size of the earnings losses, as affected by either the length of time spent unemployed following displacement or the size of the earnings reduction (if any) between the old and the new jobs.[56] By contrast, unemployment benefits have the advantage of varying to reflect the magnitude of earnings losses resulting from post-displacement joblessness, at least to a considerable extent, but also create labour supply distortions which may be particularly severe in the case of trade-displaced workers.[57] Furthermore, unemployment benefits typically do not provide any compensation for wage losses once re-employed. Wage insurance has been proposed as a mechanism for compensating such losses.

Wage insurance may be a useful addition to the policy tool kit

A system of wage insurance pays a displaced worker who accepts a new job at a lower wage within a specified period of time an earnings subsidy that replaces a fraction of the difference between earnings on the old and new jobs. The idea of providing wage insurance to trade-displaced workers has been promoted as serving a threefold purpose. First, this would help provide more equitable gains from globalisation by reducing the adjustment costs faced by those who are hurt by trade and investment liberalisation. Second, wage insurance would serve as an incentive to speedy re-employment as unemployment benefits become less attractive relative to accepting a new job, potentially in growth sectors. Once on the new job, the employee would be more likely to receive the type of

training necessary for advancement in the new firm or sector. Finally, by mitigating workers' anxieties about the job and earnings insecurities related to trade liberalisation, political opposition to further opening of product and service markets would also be diminished.[58]

France, Germany and the United States have recently introduced wage insurance programmes for certain displaced workers. These initiatives – which are briefly described in Box 1.4 – are too recent to allow any firm conclusions to be drawn concerning their effectiveness in practice. Indeed, these types of schemes raise a number of complex issues related to design details and possible distortions that have yet to receive careful scrutiny. In particular, it will be important to clarify whether subsidising re-employment at low wages could tend to blunt incentives for displaced workers to search for good job matches or to invest in on-the-job training in their new job. Similarly, the relatively high levels of labour turnover and year-to-year earnings variability in the labour force (OECD, 2003, Chapter 2), suggest that eligibility for wage insurance needs to be tightly targeted on job changers for whom wage reductions are involuntary and are likely to have a significant impact on living standards. Finally, the striking difference in the risk of experiencing large wage losses once re-employed, which Section 2 documented for Europe and the United States, suggests that the suitability and most appropriate design of wage insurance will vary according to the national context.[59]

Box 1.4. **Three examples of wage insurance**

The French *Article R. 322-6 du code du travail, Arrêté du 26 mai 2004* provides for a system of wage insurance known as *conventions d'allocations temporaires dégressives* that was first introduced in 1999. Under this programme, workers displaced in a mass layoff who are re-employed on a permanent contract at a lower wage are eligible to receive a subsidy covering up to 75% of the difference in earnings between the new and previous jobs, up to a monthly maximum state contribution of EUR 153. The previous employer is also required to make a contribution to supplementing the new, lower salary. If the employer is unable to make such a contribution, the state's contribution can be raised to as much as EUR 229. This subsidy is available for a maximum period of two years.

Germany instituted a programme of wage insurance in 2003 (*Entgeltsicherung für ältere Arbeitnehmer*) which is limited to job losers aged 50 years and older. Workers becoming re-employed in a new job paying less than their previous jobs are eligible for two types of earnings supplements. First, a payment of 50% of the earnings gap between the prior and new jobs is offered. Second, pension contributions on the new job are supplemented up to 90% of the level on the prior job. One notable aspect of this scheme is that no time limit is placed on these earnings supplements.

A wage insurance scheme for older trade-displaced workers was recently introduced in the United States. Since August 2003, workers at least 50 years of age who are certified as being trade-displaced workers and meeting all of the eligibility criteria for the Trade Adjustment Assistance programme (TAA, see Box 1.5 below) may choose Alternative Trade Adjustment Assistance (ATAA) instead. This programme offers a wage subsidy to workers who start a new full-time job within 26 weeks of separation and who are paid wages below those on the previous job. Provided that the worker does not earn more than USD 50 000 per year in the new employment, a payment of 50% of the difference between the new salary and the old salary is paid, up to a maximum of USD 10 000 over two years. This subsidy is available for a maximum period of two years following the layoff.

Source: Information provided by national authorities.

The French, German and US wage insurance schemes have yet to be subjected to careful evaluation. However, a pilot wage insurance programme in Canada provides some insight into the potential of these types of programmes to speed re-employment and better reconcile efficiency and equity objectives (Bloom *et al.*, 1999). The Earnings Supplement Project (ESP) was tested on two groups comprising a total of 5 912 individuals in 1995 and 1996. Two separate randomised experiments were carried out targeting displaced workers and repeat users of unemployment benefits. Beneficiaries who found full-time jobs within 26 weeks, at wages inferior to their weekly insurable earnings, were eligible for supplemental payments equal 75% of the earnings difference. A weekly maximum was set at CAD 250 and payments could be received for a maximum of two years. Key findings indicated that the treatment and control groups looked for jobs with similar intensity but that ESP participants were willing to consider a wider range of jobs, including those that paid less than their previous jobs. Of ESP participants, 20.5% received the supplemental benefit. Results suggest that the programme increased the percentage of displaced workers who found full-time jobs by 4.4 percentage points, reflecting both a shift from part-time to full-time work, as well as an increase in overall employment. Programme designers expected the reduced job-search period and incentive to accept lower paid jobs to provoke a wage-suppressing effect. In fact, the wages of ESP participants were 4.6% lower than those of the control group (though this difference is not statistically significant). The programme had almost no effect on the amount or duration of unemployment benefits received by the two groups.

E. What role for targeted programmes?

Most OECD countries have followed a strategy of providing trade-adjustment assistance (at least implicitly) via general systems of unemployment insurance and ALMPs. Advocates of general programmes maintain that it makes little sense to set up targeted programmes that favour one type of displaced worker while excluding others facing similar labour market difficulties. If they require assistance, trade-displaced workers will then be aided along with those displaced for other reasons, structural or cyclical. By contrast, a targeted programme may give an arbitrary advantage to workers displaced by trade over similar workers displaced by other factors such as changes in technology or changes in consumer preferences. A second argument against targeted programmes is that it is often difficult to differentiate between trade-displaced workers and other job-losers. Indeed, factors such as rapidly changing technology may make it increasingly difficult to isolate the various causes of worker displacement with sufficient precision (Rosen, 2002).[60] Finally, targeted programmes for trade-displaced workers may be particularly susceptible to political capture that pushes them towards reducing pressures to adjust, rather than fostering more efficient adjustment (OECD, 2005a).

Despite these difficulties, targeted programmes may have a positive, if limited, role to play. The empirical analysis in Section 2 suggests that special programmes targeting trade-displaced workers might have some advantages, since trade-displaced workers constitute a somewhat distinct group whose members' adjustment assistance needs probably differ in some respects from those of other persons served by employment programmes. These differences would not appear to provide a strong argument for targeting in general, since the characteristics of trade-displaced workers overlap extensively with those of other job losers. Nonetheless, it should not be ruled out entirely that certain sub-groups of trade-displaced workers might have sufficiently distinct needs from most of the workers served

by general ALMPs to justify setting up a special programme for serving them, particularly when trade displacement takes the form of mass layoffs that have a strong negative impact on the local labour market.

Targeted programmes have taken two distinct forms in the recent experience of OECD countries. First, the United States has maintained a general programme aimed at all trade-displaced workers, which provides more extensive adjustment assistance than is available to other displaced workers. Second, a number of OECD countries have operated special programmes for more or less narrowly-defined groups of trade-displaced workers, typically focussing on a particular industry or locality. Since these two types of targeting are quite different, they will be discussed separately.

Targeted programmes for all trade-displaced workers: the case of TAA

The United States is unique within the OECD for having operated a targeted programme for trade-displaced workers, the Trade Adjustment Assistance programme (TAA), for over 40 years.[61] This programme is national is scope and, in principal, is available to all workers losing their jobs due to imports. TAA offers a more generous set of unemployment benefits and ALMPs to workers certified as trade-displaced than are available to other displaced workers. However, the mix of services offered by TAA – especially, the relative emphasis placed on supplementary unemployment benefits *versus* training – has fluctuated quite markedly since the programme was enacted (see Box 1.5 for a brief history of the TAA). This programme operates in a national context where general programmes for displaced workers are modest as compared to most other OECD countries.[62]

The TAA has been subject to considerable evaluation, although the constant evolution of the programme means that many past evaluation results are now of questionable relevance (Baicker and Rehavi, 2004; Decker and Corson, 1995; GAO, 2001; OTA, 1987). Some of the services it has provided have been innovative and shown high returns (Jacobson *et al.*, 2004), but others have not. However, 40 years of experience with the TAA has not revealed any clear economic efficiency rationale for having a targeted programme for all trade-displaced workers. In particular, TAA has not made use of unique types of adjustment assistance that are especially tailored to meet the distinct needs of trade-displaced workers. Rather, it has offered a shifting mix of the same types of job-search assistance, retraining and relocation services routinely offered to participants in ALMPs.[63] Furthermore, the cumbersome procedure involved in certifying job losers for TAA has resulted in low take-up rates and often long delays in the receipt of adjustment assistance (GAO, 2004b; Kletzer and Rosen, 2005).

Instead, it appears that the TAA programme exists primarily for political reasons related to how majority coalitions have been obtained for trade liberalisation legislation in the United States (Destler, 2005; Kletzer and Rosen, 2005). A second factor reinforcing political support for TAA may be the relatively modest levels of support offered by the general unemployment insurance and ALMP systems in the United States, which heighten the overall level of anxiety associated with the prospect of increased trade competition.

Targeted programmes for specific groups of trade-displaced workers

Rather than using targeted policies that are intended to aid all trade-displaced workers, some OECD countries have chosen to target adjustment assistance measures to sub-groups of trade-displaced workers for limited periods of time. Using such targeted

Box 1.5. **Trade Adjustment Assistance (TAA): a programme in constant evolution**

TAA in the United States was created by the Trade Expansion Act of 1962, which implemented an early round of multilateral tariff reductions under the GATT system (*e.g.* tariffs on imports from the European Community were cut by 50%). The TAA programme was brought in as a vehicle to help workers in sectors in decline as a result of trade liberalisation make less painful transitions to growing sectors through provision of income support and re-employment services. The programme also offered assistance to firms in need of restructuring. Since 1962, over 3 million workers have been certified eligible for TAA, out of which about 2 million workers have received assistance. Historically, the generosity of the TAA programmes has closely tracked the different trade negotiation rounds, the approval of the North American Free Trade Agreement (NAFTA) and, more recently, the renewal of the President's trade-promotion authority to pursue WTO negotiations.

The generosity of the assistance offered and its composition have fluctuated markedly during the more than 40-year history of the TAA. For example, stringent eligibility requirements which had kept the number of beneficiaries low during the 1960s and early 1970s were relaxed by the Trade Act of 1974, in advance of the Tokyo Round of GATT negotiations. The Omnibus Budget Reconciliation Act of 1981 sharply reduced programme spending during the 1980s, while shifting spending priority from income support to training. In 1993, the push to enact the NAFTA in the US Congress prompted the creation of a sister programme, the NAFTA Transitional Adjustment Assistance or NAFTA-TAA, which was somewhat more generous than the TAA. In 2002, the Trade Adjustment Assistance Reform Act merged NAFTA-TAA into TAA, which generally adopted the more generous provisions previously limited to workers affected by trade with Canada and Mexico.

The history of TAA illustrates the difficulty of objectively identifying trade-displaced workers. Overly-stringent criteria resulted in no workers being certified in the first seven years of its existence, and relatively few in the following five. Relaxed criteria resulted in a swelling of programme spending to a high of USD 1.6 billion in 1980 when they were once again tightened, in part, in response to evaluations suggesting that TAA had become to a considerable degree a "deluxe" unemployment insurance system for auto workers on temporary layoff. The NAFTA-TAA expanded eligibility criteria to include workers from upstream suppliers or downstream finishers as well as those from plants that relocated to Canada or Mexico (Baicker and Rehavi, 2004).

The TAA Reform Act of 2002 also moved towards providing greater income support. For example, the maximum duration of benefit eligibility was extended to 78 weeks, up from 52, and workers participating in remedial education may continue to receive benefits for an additional 26 weeks. The revamped programme also makes it easier to waive the training requirement for receiving income benefits. Perhaps most interestingly, the TAA now includes a refundable tax credit for health insurance, the Health Care Tax Credit, and an experimental wage insurance programme for older trade-displaced workers (*i.e.* those aged 50 and older), the Alternative Trade Adjustment Assistance programme (see Box 1.4 above).

Source: Information provided by national authorities; Baicker, K. and M. Rehavi (2004), "Policy Watch: Trade Adjustment Assistance", *Journal of Economic Perspectives*, Vol. 18, No. 2, pp. 239-255; Kletzer, L.G. and H. Rosen (2005), *Easing the Adjustment Burden on US Workers*, Institute for International Economics, Washington, DC.

initiatives may help smooth labour reallocation because the impact of trade liberalisation tends to be localised, hitting particular sectors and/or regions hard. For example, targeted programmes are sometimes adopted in order to deal with trade shocks that produce localised layoffs on a scale that threatens to overwhelm the existing labour market policy infrastructure. Another potential advantage of such programmes is that their reduced size and one-off character makes it easier to tailor them to meeting the specific needs of the workers affected. Finally, targeted measures can sometimes be put in place in advance of layoffs actually occurring, thereby easing adjustment.[64]

In almost all of the eight sectors examined in the OECD horizontal study of trade and structural adjustment there are examples of sector-specific measures being used, sometimes successfully, to help the adjustment process, whether to help textiles and clothing producers in Australia to be competitive in a low-tariff environment or to cope with mass layoffs in Sweden's Östergötland county (OECD, 2005a). Often, these programmes combine adjustment assistance for trade-displaced workers with measures to revitalise the local economy and/or to improve the competitiveness of the affected industry. Nonetheless, it is difficult to generalise concerning these types of measures, since no clear criteria have emerged for determining when they are appropriate and they have been quite varied in their design and effectiveness. Box 1.6 provides several examples of sectoral targeted policies that illustrate this variety (see also Table 1.A3.1 in OECD, 2005b).

What differentiates successful from unsuccessful programmes? There is no simple recipe, but it appears that these targeted programmes should remain exceptional, being limited to cases where they offer a clear advantage over reliance upon general employment programmes or provide a necessary "safety valve" for diffusing political opposition to an open trading system. This appears most likely to apply when shifting trade patterns displace a large number of workers facing particularly great barriers to re-employment in one or a few localities. Targeted assistance also has been justified as being necessary to address specific market failures. However, such claims are difficult to assess and should be carefully scrutinised (OECD, 2005a). Past experience also suggest that it is particularly important for these programmes to emphasise facilitating orderly adjustment, since targeted assistance otherwise easily evolves into *de facto* barriers to adjustment. Such an orientation can be re-enforced by using time-limited programmes with clear exit strategies.

Conclusions

As a flashpoint for public anxieties concerning economic insecurity, the perceived impact of globalisation on OECD labour markets certainly looms large, more a mountain than a molehill. However, the empirical analysis in Sections 1 and 2 of this chapter suggests that the actual impact of international economic integration is unlikely to confirm the worst of these fears. Trade-related job displacement and the attendant adjustment difficulties represent a serious policy challenge, but international trade and investment appear to be far from being the biggest sources of employment and earnings insecurity for workers. Furthermore, the analysis in Section 3 suggests that familiar policy instruments, such as unemployment benefits and active labour market programmes, can significantly reduce the insecurity resulting from trade-related displacement by fostering re-integration into employment and cushioning the impact of earnings losses on family incomes. Nonetheless, it does not follow that trade-adjustment costs are no more than a molehill. Rather than asking, "Are trade-adjustment costs a mountain or a molehill?", the chapter's analysis suggests that a better question would be "How best can assistance to

Box 1.6. **Two examples of sectoral programmes for trade-displaced workers**

Austrian Steel Foundation – In the late 1980s, privatisation of the loss-making Austrian steel industry led to significant layoffs in this sector. As part of a social plan to help cope with this situation, negotiations between management and the works councils led to the creation of the Austrian Steel Foundation. The Foundation provides services tailored to individual worker needs and includes vocational orientation, small business start-up assistance, extensive training or formal education (sometimes for several years) and job-search assistance. Retraining programmes are concentrated on re-qualification and occupational reorientation rather than on marginal skill upgrades. The Foundation is financed by the steel firms and programme participants themselves, as well as by the government (in the form of unemployment benefits) and remaining employees who pay a solidarity levy of 0.25% of gross wages toward the Foundation.

Evaluations have suggested positive results. One rigorous evaluation suggests that, in the five years following completion of the Foundation's programme, employment prospects were significantly higher for participants than non-participants. Younger participants and low-wage workers also achieved significant wage gains compared to the control group. There is little in the way of evidence, however, to suggest whether the positive results associated with this employment foundation come from the unique characteristics of this effort. Also, participation rates among eligible workers have been relatively low. While there is no clear explanation for this, the answer may lie with the extended length and elevated effort characteristic of the programme. The Austrian Government later rolled-out this type of policy to help adjustment in other sectors.

Australian experience – Australia has administered a number of adjustment assistance programmes aimed at industries hit hard by trade liberalization, with some success. And, beginning in 2004, it introduced several new programmes targeting workers in the sugar, automobile components and the textile, clothing and footwear (TCF) sectors. Such programmes have a long history in the TCF sector in Australia.* Workers in the Australian TCF sector lived, for the most part, in declining areas with little or no job growth. Many had been recruited as migrant workers, had few educational qualifications and spoke little English. Tenure among displaced workers was high and many were in older age groups. Over 70% were women. Recognising the dramatic impact that trade liberalisation would have on employment in the TCF sector and the limited employability of many of the workers in the sector, the Australian Government put in place a generous labour market adjustment plan to assist TCF displaced workers by providing up to 24 months of skills and language retraining. It was assumed that, once they had been re-skilled, displaced workers would move into growing areas of industry. Rigorous evaluations of the programme found variable results. A four-year longitudinal study of a sample of the displaced workers suggests that up to a third had still not found employment by the end of the analysis period. Only 31% of men from non-English-speaking backgrounds aged 45 or older had returned to work after the four-year period. Evidence suggests that training helped those who had the best pre-training employment prospects, but that, for those with poorer prospects, the length of training had a large and significant negative impact in the likelihood of finding re-employment.

* For ninety years, the TCF industries benefited from substantial assistance to provide employment for the increasing population, and safeguard local industry from imports. However, assistance began to decline in the 1980s under the "Button Plan", when the government sought to encourage the development of industries which were internationally competitive, export-oriented, innovative, responsive to market signals and less dependent on community support. The removal of tariffs and quotas on TCF industries prompted many employers to restructure operations in an effort to meet international productivity standards that would allow them to compete in open markets. Once productivity improvements were exhausted, firms began to close or outsource manufacturing. In the period between 1989 and 1993, employment in the TCF industry fell by 22%.

Source: Information provided by national authorities; Evans-Klock, C., P. Kelly, P. Richards and C. Vargha (1998), "Worker Displacement: Public Policy and Labour-Management Initiatives in Selected OECD Countries", ILO Employment and Training Papers, No. 24, Geneva; Weller, S. and M. Webber (1999), "Re-employment after Retrenchment: Evidence from the TCF Industry Study", *Australian Economic Review*, Vol. 32, No. 2, pp. 105-129; Weller, S. and M. Webber (2001), *Refashioning the Rag Trade: Internationalising Australia's Textiles, Clothing and Footwear Industries*, UNSW Press, Sydney; Winter-Ebmer, R. (2003), "Coping with a Structural Crisis: Evaluating an Innovative Redundancy-retraining Project", IZA Discussion Paper No. 277, Bonn.

trade-displaced workers be incorporated into an overall strategy for achieving high employment rates in the context of continuous structural economic change and population ageing?".

Posed this way, the challenge to lower the costs from trade-related structural adjustment overlaps greatly with the broader reform agenda associated with the OECD Jobs Strategy. Indeed, one of the keys to maintaining high levels of employment and broadly shared prosperity is to reconcile a high level of adaptability, at the level of firms and the overall labour market, with sustained "employability" and earnings security for individual members of a diverse and ageing labour force. A number of labels have been coined to characterise success at meeting this challenge, such as "flexicurity" or "protected mobility", but much remains to be learned about how best to achieve the desired outcome. This chapter has underlined how increasing international economic integration raises the stakes for meeting this challenge, as well as some elements of an effective policy response. The comprehensive reassessment of the OECD Jobs Strategy is certain to revisit this challenge, albeit within the context of a broader assessment of the policy requirements for good labour market performance.

Notes

1. This chapter draws upon input that the OECD Directorate for Employment, Labour and Social Affairs provided to the OECD's horizontal project on trade and structural adjustment (OECD, 2005a). Some of the material in this chapter was originally prepared by Ricardo-Luis Tejada, who served as a consultant for that project.
2. Concerns about inadequate adjustment capacities prompted the 2003 OECD Ministerial Council Meeting to request that the OECD Secretariat undertake a horizontal project on "trade and structural adjustment". The main conclusion of that study, which was endorsed by the 2005 Ministerial Council Meeting, is that a broad and comprehensive policy response is required to foster successful adjustment via the reallocation of labour and capital to more efficient uses, while limiting adjustment costs for individuals, communities and society as a whole (OECD, 2005a).
3. Kongsrud and Wanner (2005) presents a more detailed analysis of policies to improve the overall adaptive capacity of OECD economies, than is presented in this chapter, while OECD (2005a) analyses a wider spectrum of policy responses (including, *e.g.* fiscal policy, trade safeguard measures and core labour standards) and also considers trade and structural adjustment policies in developing countries. Many of these issues are also analysed in Ghose (2003) and ILO (2004, 2005).
4. This section provides a highly simplified overview of a vast literature on the gains from trade. A good analytical survey of trade theory is provided by Bhagwati *et al.* (1998) and the many studies cited therein.
5. While international trade improves aggregate welfare in all trading countries under quite general conditions, this need not always be the case. Samuelson (2004) illustrates this general point with an example intended to resemble certain aspects of current trading patterns between the United States and China. In this example, technological catch-up by China results in an adverse shift in the terms of trade against the United States and a permanent reduction in US per capita real income, even as world GDP increases.
6. However, there are some dissenting voices, especially as regards the benefits of openness for the growth performance of low-income countries (*e.g.* Rodrik and Rodríguez, 2001). The balance of the evidence supports a positive effect from openness, but additional institutional preconditions – such as the effective rule of law – may need to be in place in order for less developed countries to realise the potential advantages from trade liberalisation.
7. Förster and Mira d'Ercole (2005) show that the trend towards widening inequality in market incomes appears to have halted in the majority of OECD countries over the period 1995-2000.
8. Much of the initial research focussed on the United States, but more recent studies have reached similar conclusions for other advanced economies (Dewatripont *et al.*, 1999a). However, the shift of labour demand away from less skilled workers has been primarily reflected in falling relative

wages in some countries (*e.g.* the United States) and by falling relative employment in others (*e.g.* a number of Continental European countries). Krugman (1994) conjectured that this difference reflected greater rigidity in the structure of relative wages in the latter countries. Subsequent research has generated some support for this conjecture (see the discussion in OECD, 2004a, Chapter 3).

9. Nor is trade policy an effective instrument for reducing aggregate unemployment when it is too high. Monetary and fiscal policy are better suited to counteract cyclical fluctuations in unemployment, whereas structural reforms in the labour and product markets appear to be required to reduce structural unemployment where it is too high (OECD, 1999; Layard *et al*., 1991).

10. OECD (2005b), Annex 1.A1 explains the data sources and methodology underlying these calculations and discusses the results in greater detail.

11. However, the overall weak performance of manufacturing employment indicates that other factors, such as rapid productivity gains and adverse shifts in the composition of consumption demand, are also important sources of retrenchment in this sector (Fontagné and Lorenzi, 2005).

12. The OECD sectoral database used in the calculations reported in Panel A of Chart 1.2 does not allow a parallel historical analysis of wage trends to be undertaken, in order to assess whether wage growth has been more restrained in the industries facing the most intense international competition.

13. For example, Konings (2003) finds that while wage rates are some five times lower in the typical firm in Central Europe than in high-wage countries like Belgium, labour productivity is also approximately five times lower in Central Europe, suggesting that there is no systematic labour cost advantage from moving production to the low-wage countries. This conclusion is borne out by a regression analysis of firm-level labour demand that provides no evidence that low-wage competition from Central and Eastern Europe has a negative effect on jobs in Belgian manufacturing. Similarly, Konings and Murphy (2005) finds no evidence that multinational enterprises headquartered in high-wage EU countries relocate jobs to low-wage EU-accession countries in response to these wage differentials, while other studies find that the main driving force for investing in Central and Eastern Europe for most companies is not the low wage costs, but rather the attainment of first-mover advantages and the opportunity to get access to a growing market (EC, 2004, Chapter 5).

14. Sectoral case studies for OECD countries illustrate these points more concretely, showing how some industries have contracted under import competition, while others grew by making productivity gains and/or exploiting new export markets (OECD, 2005a). National case studies are also revealing. For example, aggregate labour market performance has improved markedly in recent years in Australia and New Zealand following the introduction of major structural reforms, a key component of which were sharp reductions in barriers to international trade and investment. However, the transition experiences of CEE member states of the OECD make it clear that large negative structural shocks, such as those associated with opening economies to trading at world prices, can result in a substantial increase in unemployment that persists for a considerable period of time.

15. In order to highlight the long-run effects of trade on production patterns and the level and distribution of income, theoretical models of trade typically abstract from the adjustment costs associated with this reallocation, assuming either instantaneous and costless mobility of all factors across sectors (*e.g.* the two-sector Heckscher-Ohlin model) or the combination of perfect mobility for some factors and zero mobility for other "sector-specific" factors (Ricardo-Viner models). However, a full accounting of the cost and benefits of trade must incorporate adjustment costs.

16. Other, social and psychological costs following job displacement include increased risks of divorce, declining health status and higher mortality (Eliason, 2004; Eliason and Storrie, 2004).

17. Trade-adjustment costs also arise for non-labour factor inputs (*e.g.* premature scrapping of fixed capital). However, only labour adjustment cost are analysed in this chapter.

18. See Mortensen and Pissarides (1999) for a formal analysis of potential market failures in bilateral search models of the labour market. It should be emphasised, however, that not all of the *private* costs borne by displaced workers represent *social* costs and hence a drag on overall efficiency gains from trade. For example, some of the wage losses upon re-employment may represent a rent component in the prior wage.

19. Kletzer's estimates for the United States are based on data from the Displaced Worker Survey (DWS), probably the best single source of information concerning the incidence of job displacement in the United States and clearly the best source of information about the personal characteristics of a large and nationally representative sample of displaced workers and adjustment costs that they bear. The estimates for Europe are based on data for 14 European countries from the European Community Household Panel (ECHP) – due to small sample sizes in the ECHP, statistics are not reported on a country-by-country basis – and were calculated by the OECD Secretariat. (Note *b)* to Table 1.1 identifies

the 14 European countries included in the ECHP analysis.) The estimates for Canada are based on the 1% Longitudinal Worker File (LWF) and were provided to the OECD by Canadian authorities. Juxtaposition of these results is useful for assessing whether the findings of Kletzer (2001, 2002) and other researchers concerning trade displacement in the United States also hold for other OECD countries. Two caveats applying to this assessment are the omission of many OECD countries from the analysis and the likelihood that these comparisons reflect, in part, differences in the three data sources. Both the DWS and the ECHP are household surveys, but only the latter is a true longitudinal database which allows workers to be observed prior to being displaced and then to be followed for some years, whereas the DWS relies upon retrospective questions to collect more or less comparable information (*i.e.* persons are asked about permanent layoffs occurring in the previous 3 years). Other differences between the two data sources are that the DWS offers larger sample sizes and a much more detailed industrial classification. By contrast, the LWF was created by combining information from four administrative databases, with much of the original information having been provided by employers.

20. As Kletzer (2001) acknowledges, her estimated displacement rate is "conservative" since she omits the construction and mining sectors (the industries with the highest displacement rates) and makes no correction for workers displaced multiple times or recall bias. The 5.1% incidence rate reported in Box 1.3 covers all industries, incorporates such corrections and is only moderately lower than the Canadian estimate in Table 1.1. While Kletzer's estimate understates the incidence of job displacement, she argues that inter-industry comparisons, which are emphasised in the analysis of trade-related displacement below, should not be much affected.

21. This difference between the results for the United States and those for Canada and the EU is due, at least in part, to differences in the period for which incidence rates were estimated. Kletzer's estimates correspond to the period 1979-1999, meaning that her estimate of the displacement rate in manufacturing is inflated by the sharp recession at the beginning of the 1980s, during which job loss rates were very high in US manufacturing.

22. OECD (2005b, Annex 1.A1) explains the methods used to group manufacturing industries according to whether international competition is high, medium or low. It also presents evidence that it is reasonable to assume that trade displacement has been strongly concentrated among manufacturing workers.

23. For example, Canada has experienced a quadrupling of imports from China between 1995 and 2003 (Roy, 2004) and some research suggests that the Canada-US Free Trade Agreement led to significant employment losses in less-skill-intensive industries in Canada (Beaulieu, 2000).

24. Trade theory suggests that export and import prices are preferable to trade volumes, as independent variables in a regression analysis, at least for "small" countries, since world trading prices should be largely exogenous (whereas trade flows and employment are jointly determined). However, price data for trade raise difficult measurement issues and it is less clear in practice that evidence based on trade prices is necessarily superior (Kletzer, 2002).

25. While estimates of the impact of trade competition on industry-level employment are of limited value for assessing trade-adjustment costs, they do provide useful information concerning the impact of trade on the industrial composition of employment.

26. Amiti and Wei (2005a,b) find no such effects in regression models estimated for 78 industries in the United Kingdom and 96 industries in the United States. However, a small negative employment effect does emerge when the US model is re-estimated for 450 detailed industries.

27. Unfortunately, it was not possible to include Canada in this analysis, which is limited to a comparison of Europe and the United States. Prior studies of Canadian job displacement suggest that most of the qualitative findings presented in this sub-section would also hold for Canada (Abe *et al.*, 2002; Kuhn and Sweetman, 1999).

28. The inter-industry differences in displacement rates documented in sub-section B (above) suggest that comparisons of job losers, between manufacturing and other industries (and, perhaps, also between high, medium and low-international-competition industries within manufacturing) may be qualitatively informative concerning differences between trade-displaced workers (as a group) and other job losers, but will also tend to understate those differences.

29. This difference reflects the demographic composition of the workforce in several industries facing intense import competition, notably, the textile, footwear and clothing industries.

30. Shelburne and Bednarzik (1993) show that employment is more geographically concentrated in the industries where trade-displacement is likely to be greatest in the United States than in other industries. This suggests that trade-displaced workers have an above-average risk of beginning

their job search in a local labour market that is depressed and that policies to assist these workers will often need to take into account the resulting spatial mismatch between labour supply and demand.

31. In contrast to the results for the United States, women are a significantly smaller share of workers displaced from high-international-competition industries than from medium-international-competition industries in Europe.

32. The lower re-employment rate for workers displaced from high-international-competition manufacturing, as compared to the rest of manufacturing, probably reflects the higher share of women in the former group. Swaim and Podgursky (1994) show that women experience more post-displacement joblessness than men, because they more frequently respond to job loss by withdrawing from the labour force. However, the re-employment rate for displaced service workers is significantly higher than that for their manufacturing counterparts, despite a larger share of the former being women.

33. The estimated re-employment rates are not fully comparable between the DWS and the ECHP, but in both cases re-employment rates are calculated an average of approximately two years after the layoff.

34. Lower re-employment rates can significantly lower the gains from international trade (at least, for some period of time). For example, McKinsey Global Institute (2003) compares the net economic gains (for the entire economy) to offshoring back-office and IT functions for Germany and the United States. This study concludes that the gains are much lower in Germany due to the lower re-employment rate of workers displaced by international sourcing.

35. The large wage losses experienced by many displaced workers in the United States also appear to be quite persistent (Jacobsen *et al.*, 1993a and b; Kletzer, 1998).

36. The combined impact of several of these factors may be particularly large. For example, Jacobson *et al.* (1993b) found that high-tenure workers who lost jobs from distressed manufacturing firms suffered much greater earnings losses than other displaced workers, averaging 25% per year.

37. Dewatripont *et al.* (1999b) reach a similar conclusion. They estimate panel regression models for 2-digit industries in four European countries and find that the association between rapid import growth and a higher incidence of long-term unemployment vanishes when controls for industry and worker characteristics are added to their regression models.

38. The weaker apparent relationship between industry of re-employment and earnings losses in Europe may reflect the low level of industry detail available in the ECHP and/or the effect of more compressed wage structures.

39. It is this industry-specificity of skills that probably explains why wage losses are greater for displaced workers changing industry than for those remaining in the same industry (Carrington, 1993; Kletzer, 1998; Neal, 1995).

40. Although no evidence is available concerning the costs associated with displacements caused by international sourcing of services, the chapter's findings concerning workers' characteristics and post-displacement costs suggest that these costs would be lower on average than those associated with job displacement due to imports of manufactured goods. The workers affected by services offshoring are likely to be younger, better educated and less geographically concentrated than displaced manufacturing workers. They will also tend to have job experience and skills that are in greater demand in the labour market.

41. This difference is reminiscent of Krugman's conjecture (see note 8 above), albeit in a dynamic form: greater wage flexibility in the United States than in Europe leads to higher re-employment rates for displaced workers, but also to larger wage losses on the new job.

42. For ease of writing, the argument in this section is presented in terms of policies to reduce the adjustment costs borne by trade-displaced workers. However, much of the argument should be understood as potentially applying to all workers displaced by structural economic change. Indeed, the empirical analysis in Section 2 suggests that it is difficult to differentiate among job losers according to the role of trade in causing them to be laid off and, in any case, that the adjustment challenge is much the same for all workers displaced by structural change, regardless of the role played by trade.

43. Annex 1.A3 in OECD (2005b) provides a more detailed discussion of specific policy measures, including numerous national examples of labour-market programmes providing direct assistance to trade-displaced workers.

44. Rodrik (1997) shows that there is a strong positive association between government spending and the intensification of international economic integration across a large sample of OECD and non-OECD countries, and concludes that this relationship is probably causal. In support of this finding,

he cites the work of political scientist Katzenstein (1984, 1985) who has "documented in detail" how small European states with highly open economies, such as Austria, the Netherlands and Sweden, have "complemented their pursuit of liberalism in the international economy with a strategy of domestic compensation".

45. One priority is to assure adequate job creation and labour demand. The framework conditions required here are essentially the macroeconomic and demand-side structural policies enumerated in the OECD Jobs Strategy (OECD, 1994, 1999), as well as policies to unlock the full growth potential of the service sector (OECD, 2005c). A second priority is to adapt labour supply to labour demand, as the latter evolves, for example, by facilitating the mobility of labour from declining to expanding sectors and regions (Chapter 2 of this volume and Kongsrud and Wanner, 2005) and upgrading workforce skills (OECD, 2004a, Chapter 4). Finally, trade safeguards under WTO rules may have a limited role to play (OECD, 2005a).

46. In this respect, the most marked impact of generous advance notice lies in allowing some workers to avoid post-displacement unemployment altogether, by giving workers ample time to search for new jobs, rather than its role in reducing jobless spells after then worker has become unemployed (Addison and Blackburn, 1997).

47. Since a minimum notice period is required by law in most OECD countries, it is difficult to assess the net benefits from notice by comparing the costs bone by, respectively, workers laid-off with and without having received advance notice. However, the absence of any such legal requirement in the United States until the Worker Adjustment and Retraining Notification Act (WARN) of 1988 and the rather limited coverage of the requirement for 60 days notice in that legislation, mean that such comparisons can be made for displaced workers in this country. A number of studies have done so, notably using data from the Displaced Worker Survey.

48. In fact, this type of orientation can even be initiated before there has been any notification of specific layoffs. For example, Portuguese labour market policy makes vocational guidance and labour market information available to workers in sectors at risk of layoffs resulting from restructuring or other economic factors.

49. A significant share of overall productivity growth is due to flows of workers from low- to high-productivity firms (Bartelsman *et al*., 2004b).

50. In most US states, firms contribute to an unemployment benefit "account" from which the company draws in the event of dismissals. When the benefits paid to dismissed employees exceed contributions made, the company's account falls into deficit, which it must pay back over time. If designed appropriately, such experience-rating schemes can serve to internalise the social costs of mass layoffs and discourage inefficient dismissals, but there is considerable uncertainty what degree of experience-rating is optimal. Other fiscal measures that have been used to reduce layoffs (*e.g.* public subsidies to encourage work-sharing) appear less desirable since they tend to create inefficiencies (*e.g.* distort working-time choices) and also represent a net burden on the fiscal system.

51. The theoretical demonstration that trade liberalisation can be Pareto-improving when combined with an appropriate set of lump-sum transfers leaves unanswered the question whether an incentive-compatible compensation system realistically can be implemented. Dixit and Norman (1980, 1986) showed that an incentive-compatible system of commodity taxes exists under standard assumptions. Subsequent contributions have shown that this may no longer be the case once account is taken of unemployment (Brecher and Choudhri, 1994) or adjustment costs (Feenstra and Lewis, 1994), although the latter paper argues that the combination of the Dixit-Norman pattern of taxes with a subsidy to imperfectly mobile factors for moving between industries can achieve Pareto gains under certain conditions.

52. Jean and Nicoletti (2002) show that workers employed in industries shielded from product market competition sometimes receive substantially higher wages than comparable workers in other industries. They interpret these pay premia as reflecting a share of the monopoly rents that accrue to firms in such industries, which has been captured by workers through bargaining.

53. Unemployment insurance can also act as a subsidy for efficiency-enhancing investments in searching for a good job match. A similar argument can be made for potential efficiency gains from offering partial social insurance against the risk that workers' investments in specific human capital will lose their value due to changing trade patterns or other types of structural change. Such insurance might be able to encourage greater investments in human capital, while also reducing a potentially important source of economic insecurity.

54. For example, the argument is sometimes made that workers who suffer job loss as a result of trade liberalisation do so as a direct result of a change in government policy and that this linkage creates a stronger entitlement to public compensation for their losses, than that existing for other job losers.

55. There has been some recent research on government spending and public support for trade in OECD countries that seems to support this view (Hays *et al*., 2005).

56. High levels of severance may also reduce adjustment capacity in the labour market by discouraging voluntary labour mobility. However, the lump-sum character of severance payments tends to limit post-displacement, labour-supply distortions. Furthermore, other forms of employment protection, such as advance notification, may facilitate adjustment (as discussed above).

57. As compared with other recipients of unemployment benefits, labour supply distortions may tend to be particularly large for trade-displaced workers, because benefit levels that appear "reasonable" in terms of earnings on the lost job may in fact be very high relative to potential earnings in available new jobs (Kongsrud and Wanner, 2005). For national examples of innovative schemes intended to better reconcile unemployment benefits with strong incentives to become re-employed, see OECD (2005b, Annex 1.A3).

58. The idea of providing wage insurance to workers displaced by trade or international sourcing has received particular attention from US economists (see Lawrence and Litan, 1986; Baily *et al*., 1993; Jacobson *et al*., 1993a; Kletzer and Litan, 2001, Kletzer 2003; Brainard and Litan, 2004). American researchers appear to have been particularly attracted to this approach because there is a considerable body of empirical research for the United States documenting the often deep and enduring earnings losses suffered by displaced workers and it is believed that the public's awareness of these wage losses reinforces political support for protectionist measures. Some have argued, however, that there is no compelling reason that wage insurance be offered only to trade-displaced workers (Kletzer and Rosen, 2005).

59. Wage insurance may have a role to play in European countries, even though few displaced workers become re-employed at wages significantly lower than those on their prior jobs (*cf.* Section 2), provided that reluctance to accept such pay cuts is an important explanation for why re-employment rates are low. For example, Burtless and Shaefer (2002) proposed a wage insurance scheme as being useful to counteract long-term unemployment in Germany. They argue that the high level of unemployment in that country is not due to high inflows into joblessness, but rather to low outflows caused by the negative incentive effects of the unemployment insurance system on re-employment rates.

60. A good example of the difficulty in defining trade-displaced workers is provided by Kucera and Milberg (2002) who find that the bulk of displacement related to trade between 10 OECD countries and non-OECD countries is due to decreased exports to these economies (largely as a result of the 1980s debt crisis) and not surging import penetration. In this example, policies targeted at displaced workers in import-competing industries would miss those in export sectors altogether, despite the fact that their job-losses were trade-related.

61. During the 1970s Australia ran, and quickly scrapped, a passive benefit programme aimed at workers displaced from trade-impacted industries, the Australian Structural Adjustment Assistance programme, which was initiated in 1973 following significant tariff cuts and then terminated in 1976. The programme failed to move participants back into employment, partly because of the disincentives to job search created by supplementary unemployment benefits. Indeed, its termination came on the heels of a government evaluation which concluded that the provision of special unemployment benefits to designated displaced workers reduced worker mobility. Additional reasons for ending the programme were the degree of arbitrariness apparent in determining which workers were eligible for the programme and pressures on government to provide similar benefits to other displaced workers (Leigh, 1990).

62. The United States spends less on LMPs relative to GDP than any OECD country except Mexico, about 40% of the unweighted average. With regard to ALMP, average expenditure across the OECD was five times higher than in the United States (OECD, 2004a).

63. Two recent exceptions are the Health Care Tax Credit subsidising individual health insurance for up to two years (GAO, 2004a) and the Alternative Trade Adjustment Assistance (ATAA) wage insurance programme for older workers, both of which were enacted in 2002 and are just beginning to operate. However, there does not appear to be any inherent reason that either of these provisions would not be suitable for other displaced workers. In fact, France and Germany recently enacted wage insurance programmes for displaced workers which do not restrict eligibility to workers laid off as a result of international trade (see Box 1.4 above).

64. The distinction between narrow targeted programmes, such as are discussed here, and general ALMPs is not always clear-cut, because the latter often encompass a capacity to make similar interventions (*e.g.* to set up rapid response cells when a factory closing is announced, see above).

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Chapter 2

How Persistent are Regional Disparities in Employment?

The Role of Geographic Mobility

Is there a regional dimension to employment performance? Yes, as regional disparities in employment performance are often persistent, and employment problems and success often anchor in some particular regions. Differences across regions in educational attainment and sectoral specialisation patterns are factors behind observed regional disparities. Local factors probably intervene as well – although this is difficult to apprehend. Geographic mobility does not always contribute to reduce regional disparities. These findings raise some challenges for policy. While mobility is not an end in itself, there may be some barriers embedded in existing policies, in particular housing policies. Policies to enhance job creation in depressed regions may also be required.

Introduction

Policy analysis typically focuses on labour market developments at the national level. Yet, in many OECD countries, there are persistent regional disparities in employment performance. There are countries where labour shortages in certain regions coexist with continuously high unemployment in other regions. It is therefore important to assess the extent to which such disparities persist, the underlying factors at work, and what policies might help to reduce them.

The issue of regional disparities did not figure prominently in the 1994 OECD Jobs Strategy. Since then, some authors have argued in favour of addressing the regional dimension of labour market problems, as part of a successful strategy for reducing overall unemployment. This can encompass tackling obstacles to geographical labour mobility and wage adjustment, as well as promoting local job creation. A chapter in the 2000 *Employment Outlook* reviewed this debate and documented trends in regional labour markets. This chapter updates the assessment of regional labour market disparities presented in the 2000 *Employment Outlook*, notably as regards persistence and sheds light on the factors behind persistence, including the role of geographic mobility. The chapter also adds to earlier analysis by examining how policies can help reduce regional disparities and contribute to improved overall employment performance.

The first section of the chapter provides evidence on existing regional disparities as well as on regional migration and commuting flows. The second section reviews some policy issues arising from the first section's findings, regarding mobility, employment creation and labour force mobilisation at the regional level. The role that housing policy may play in inhibiting geographic mobility is first examined. Then, the extent to which welfare benefits and employment programmes may shape incentives to move is assessed. This is followed by a discussion of measures aimed at enhancing job creation in low-employment regions. The chapter ends with a concluding section.

Main findings

- Regional inequalities in unemployment and employment rates are especially pronounced in Italy, Belgium, Germany, Spain, Turkey and Central and Eastern European countries. The unemployment rate in low-unemployment regions, at around 3-5%, is very similar across countries. By contrast, the unemployment rate in high-unemployment regions varies considerably across countries, ranging from 4 to 27 %. In addition, in most countries, disparities across regions in employment rates and unemployment rates tend to coincide, *i.e.* high-unemployment regions often have low employment rates.
- Regional inequalities within countries decreased slightly in the OECD over the 1993-2003 period, but they remain relatively persistent.
- Employment problems and success seem to be anchored in particular regions, as the relative position of individual regions did not change much between 1993 and 2003. On average, 80% of European regions which had very high unemployment in 1993, remained

in the same position in 2003. The equivalent figure is about 65% in North America and less than 50% in the Asia/Pacific region. Employment problems also tend to cluster in space, as the labour market performance of any individual regions is often more linked to that of neighbouring regions, including foreign ones, than to the performance of non-neighbouring regions within the same country.

- Analysis suggests that demographic factors and participation behaviour may not play a major role in explaining regional disparities – *i.e.* high-unemployment regions generally do not face large increases in labour supply. Demand-side factors seem to play a significant role in explaining regional disparities. In part, this seems to be linked to the initial sectoral specialisation of regions, especially in those countries where regional employment disparities are high. Differences in average levels of educational attainment also seem to have some impact on regional inequalities, but not a so important one in countries with strong regional employment disparities.
- Internal migration which, in principle, may play a self-equilibrating role in reducing regional disparities, varies considerably across countries. In North America and Asia/Pacific countries, working-age individuals are more mobile than in Europe. The decline in inter-regional migration observed in many countries since the 1970s seems to have halted in most cases, with gross flows even increasing in some countries. The propensity to migrate is much higher among the highly skilled, implying that the low skilled are more dependent on local employment opportunities.
- The question arises as to the extent to which net internal migration responds to and reduces regional employment imbalances. First, in most countries, net internal migration goes from low-employment/high-unemployment regions to regions with better labour market performance. By contrast, in the Czech Republic, France and the Netherlands, net internal migration most often takes place towards low-employment and high-unemployment areas. This somewhat counter-intuitive result indicates that labour is not the only, and perhaps not even the main, motivation for inter-regional migration in these countries. Second, even when flows go in the "right" direction, it is not sure that this will reduce regional employment disparities, in particular if it is the highly skilled who move and regional employment disparities relate to regional productivity differentials. Nevertheless, there are cases where barriers to mobility may be a problem.
- Commuting flows are more important than migration flows, in both gross and net terms, and seem to be on a rising trend. Between one and 16% of the employed in OECD countries commute between regions every day.
- Although promoting geographic mobility is not an end in itself, removing obstacles to internal migration may be an important policy issue, especially in countries where regional disparities are pronounced. In this respect, consideration should be given to some obstacles to geographic labour mobility arising from housing policies. For a number of reasons, including higher transaction costs, homeowners are probably less likely to migrate than renters. Further reducing tax incentives and subsidies in favour of homeownership, which are still in place in most OECD countries, may thus help in reducing obstacles to mobility. Policies aimed at reducing transaction costs – legal, taxes, but also real-estate fees – on housing would also help. While housing allowances are more favourable to mobility than direct provision of social housing, ways may also be found to increase the mobility of social housing renters. And help to overcome credit

constraints, which may weigh particularly on low-income workers when looking for rental accommodation to move to a new job, may also be needed.

- Ensuring that unemployment and other welfare benefits, as well as employment programmes, do not inhibit mobility and support change is also desirable. In part, this means that income-replacement benefits should support job search in general (see Chapter 4). As to mobility specifically, the difficulty is to strike the right balance between the requirements imposed on unemployed workers to accept a job in another location and measures aimed at making such a move feasible. Financial support to allow the unemployed to find and take up a job in another region exists in a few countries, but could perhaps be used more extensively.
- Finally, general demand-side requirements are probably important as well. This means that removing general obstacles to labour demand in line with the Job Strategy recommendations, would disproportionately benefit low-employment regions. In particular, stronger wage adjustment to local conditions may help improve incentives to invest and create jobs in depressed regions (although lower wages would at the same time encourage high-skilled workers – the most mobile – to leave depressed regions thus possibly reducing their growth potential). There may also be a role for devolving responsibility for some employment programmes to regions. However, this should be done within an agreed framework which sets clear objectives and central government funding should be made dependent on achievement of the agreed objectives. Some have also argued that targeted policies, like enterprise zones, may help as well. But evaluations of such initiatives show mixed results.

1. Disparities in labour market performance: is there a regional dimension to employment problems?

While labour market performance is often considered only from a national perspective, most OECD countries experience substantial variations in employment outcomes at the sub-national level. Previous editions of the *Employment Outlook* (1989, 1990, and 2000) reported that regional disparities in unemployment rates increased in many countries during the 1970s and early 1980s, without showing any reverse trend since then. This section updates these studies to cover the past decade and attempts to identify factors underlying regional disparities. In particular, important and persistent variations in labour market performance at the sub-national level suggest that, at least in some countries, employment problems have a specific local dimension. The policy implications of this finding are potentially important. If regional employment patterns were largely explained by national factors, general macroeconomic and structural policies designed to improve overall demand and supply conditions would simultaneously address regional imbalances. In contrast, if there are strong region-specific factors behind regional employment patterns, the case for policies which address the region-specific dimension is stronger.[1]

A. Employment and unemployment at the regional level

The analysis of labour market performance at the sub-national level raises first the issue of the choice of a relevant territorial division. The difficulties faced in this task are discussed in Box 2.1. Despite these caveats, some observations can be made on the basis of available data.

Box 2.1. **Measuring regional disparities in employment, migration and wages**

The choice of regional unit

For various reasons, such as a better knowledge of local job opportunities, housing tenure and social ties in a given area, individuals tend to operate in localised labour markets. Accordingly, for the purposes of this analysis, an ideal geographical partition of national territories would reflect these so-called "functional" labour markets that, to some extent, correspond to areas of relatively intensive "employment transactions". Following this line of argument, some countries offer territorial grids where regional units are defined by the commuting patterns of workers, as for instance, the Travel-to-Work Areas in the United Kingdom or the Economic Areas in the United States. However, such territorial grids only exist in a few OECD countries and can be unstable over time. Besides, the other variables required for the analysis lead in the chapter – such as the level of education, and migration flows – are often not available at that territorial level.

Consequently, this chapter refers to regional units defined on the basis of administrative, rather than functional criteria. For European countries, regional units mainly refer to administrative areas, as described by the second least disaggregated level of Eurostat's classification, the Nomenclature of Territorial Units for Statistics. For most non-European countries, territorial grids are based on the main regional political and administrative units, such as states or provinces for North America and Oceania, or prefectures in Japan (see Annex Table 2.A1.1). While this type of territorial grid is more stable over time, cross-country comparisons of regional disparities remain imprecise and need to be interpreted with caution. Indeed, the historical and political grounds for defining administrative regions may differ widely across countries. The corresponding regional units may differ in terms of economic weight, population density and other factors, which may affect cross-country comparisons of regional disparities (see Annex Table 2.A1.1).

Even within countries, regional units may differ in nature. In some countries, some of the regional units in fact correspond to cities. This is the case for Berlin, Brussels, London, Prague, Tokyo and Vienna. The employment situation, migration and commuting patterns from/to these regions, will be quite different from that of larger and much less populated regions.

Measuring inter-regional migration

Cross-country comparison of gross and net migration rates should be interpreted with caution. Both measures depend upon the size of the administrative regions considered. Abstracting from the mobility patterns of individuals, the smaller the size of a region, the larger is the size of measured migration or commuting flows. While data provided for Australia, Canada, and the United States refer to "Level 1" regions (*i.e.* relatively aggregated entities), migration rates for the other countries refer to smaller regions. And even within these two groups of countries, as mentioned above, the size of regions can vary significantly (Annex Table 2.A1.1).

Regional wage data

As will be discussed below, wage adjustment across regions may play a role in reducing regional disparities in employment. Hence a test of whether wages do indeed play this role would logically belong to the policy discussion in this chapter. However, while data on earnings at the regional level are available for Australia, Japan and the United States, they are not available for European countries. One survey was conducted in the European Union in 1995, but it was not re-conducted since. Data on the structure of earnings have been recently published for the year 2002, but the regional information is scarce. It has therefore not been possible to document trends in regional wages.

While disparities in employment and unemployment rates between countries have tended to decrease, regional disparities within countries are more persistent

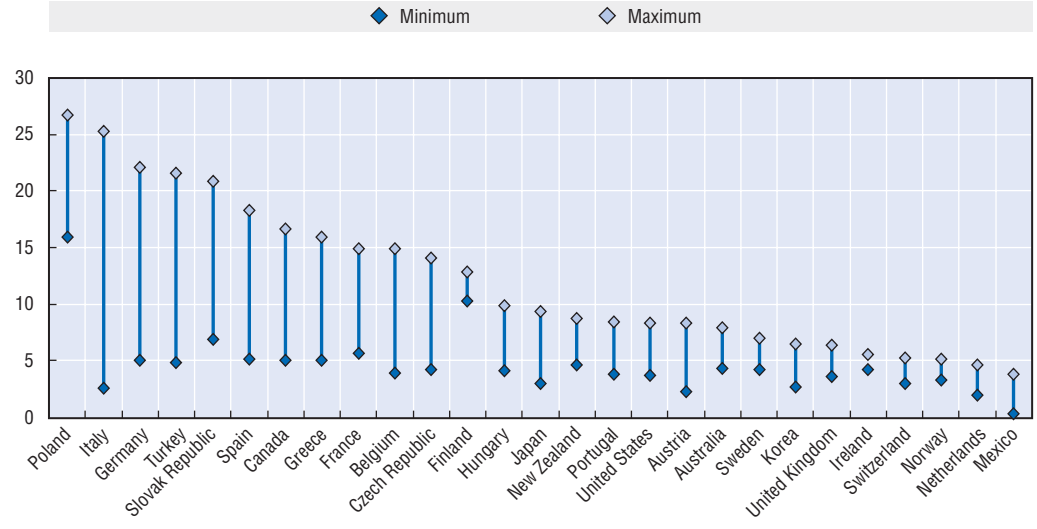
Regional disparities in employment outcomes are an inescapable fact of labour market analysis. In most of the 26 OECD countries for which data are available, differences between the maximum and minimum employment rates at the sub-national level often exceed 10 percentage points (Chart 2.1). The unemployment rate in the highest-unemployment region is often several times higher than the rate in the lowest-unemployment region. Interestingly, some countries combine full employment in some areas with mass unemployment in others. Regional disparities in labour market performance are stubbornly high in Germany and Italy, where they correspond to a major regional divide, but also in Belgium and Turkey (Chart 2.2). By contrast, measures of regional dispersion in employment and unemployment rates are quite low in Ireland, the Netherlands and Norway. As will be seen in more detail below, regional disparities in unemployment and employment rates within countries often coincide: employment rates are lower in high-unemployment regions than in low-unemployment regions.[2]

Taking together all the 339 regions included in the 16 OECD countries for which data are available over the period 1993-2003, regional variations in both employment and unemployment rates have been reduced (Chart 2.3).[3] However, these trends reflect a certain convergence in national labour market performance, rather than a decrease in regional disparities within countries. In fact, on average, regional inequalities *within* countries experienced only a very modest decline, while cross-country differences in labour market performance have been reduced markedly over the past decade.

These trends are maintained or even reinforced when looking separately at Europe, North America, and the Asia/Pacific area, which include economies that, in addition to their geographic proximity, are closely integrated and whose labour market institutions may be relatively similar. Within these broad zones, cross-country differences in labour

Chart 2.1. **Regional disparities in labour market performance, 2003**[a]

Regional unemployment rate in percentage



a) 2000 for Japan, Korea, New Zealand and Switzerland.

Source: See Annex 2.A1.

Statlink: *http://dx.doi.org/10.1787/542310754745*

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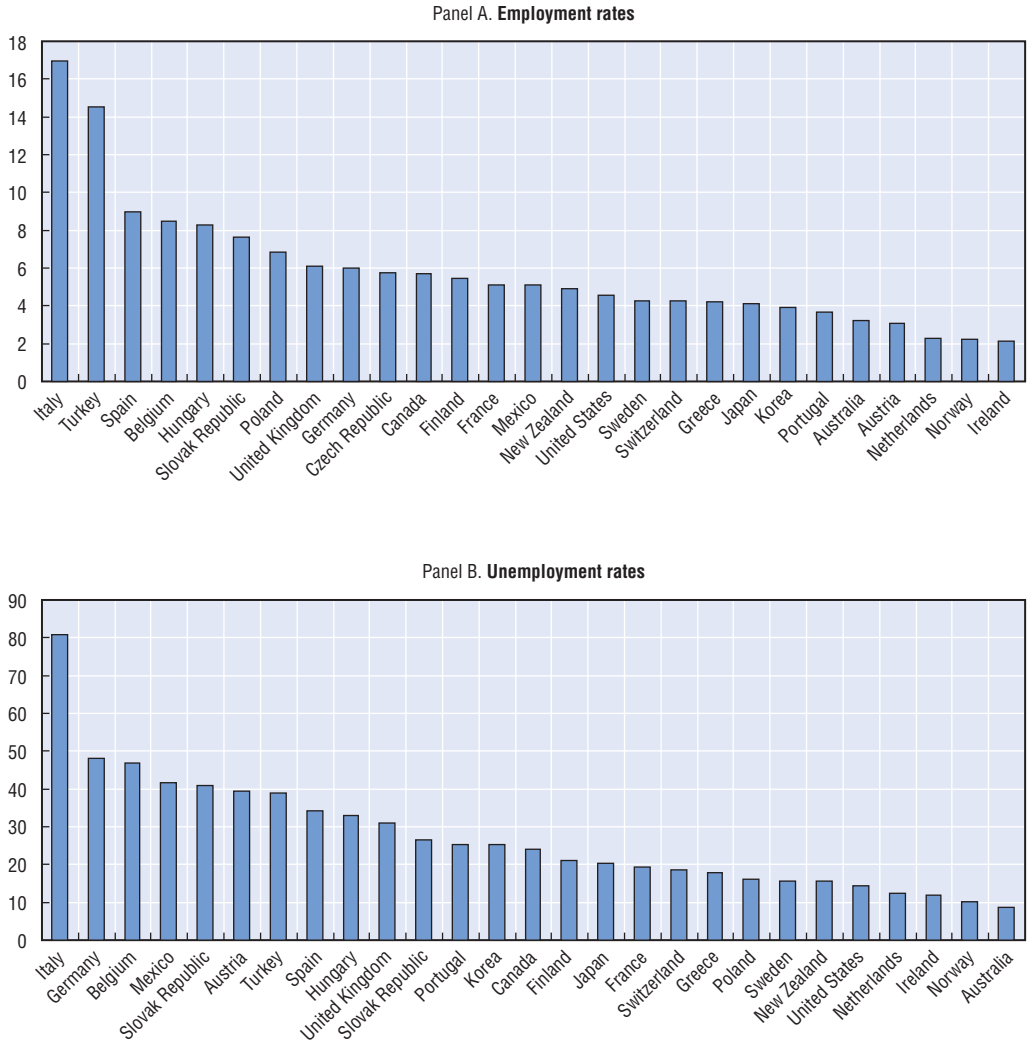
Chart 2.2. **Regional disparities vary significantly across countries**

Coefficient of variation[a] in 2003



a) The weighted coefficient of variation is defined as:
$\sqrt{(w_i * (ER_i - ER_n)^2)}/ER_n$
Where w_i is the share of the working-age population (labour force) in region i in the national working-age population (labour force), ER_i (UR_i) is the employment rate (unemployment rate) of region i and ER_n (UR_n) the national employment rate (unemployment rate).

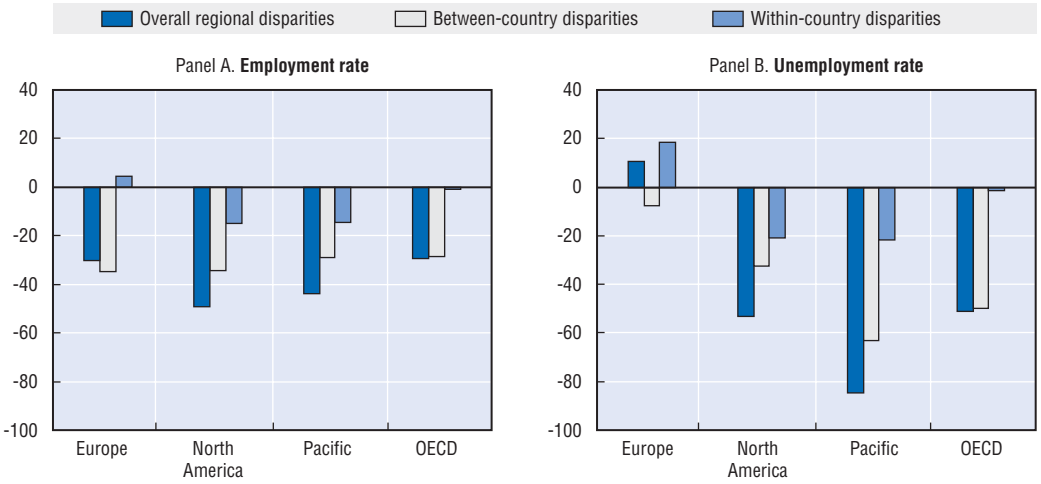
Source: See Annex 2.A1.

Statlink: *http://dx.doi.org/10.1787/310883257503*

market performance have been reduced even more substantially than at the OECD level, and regional disparities *within* countries have thus become even more important over the past decade. In 2003, regional disparities within countries accounted for more than half of total regional disparities in employment rates, as observed across Europe or North America as a whole, and in the case of the Asia/Pacific area, they accounted for as much as 95% of overall regional inequalities (see Annex Table 2.A2.2 in OECD, 2005c). The same patterns emerge when considering regional disparities in unemployment rates. In absolute levels, regional disparities *within* countries decreased in North America and the Asia/Pacific area over the past decade, while they increased in Europe.

Chart 2.3. **Between-and within-country components of regional disparities[a] across broad geographic zones,[b] 1993-2003[c]**

Percentage change



a) The figures refer to the change of the Theil index and the contribution of its between- and within-country components in percentage points. See text for explanation.

b) Europe corresponds to Belgium, Denmark, France, Germany, Greece, Ireland, Italy, the Netherlands, Portugal, Spain and the United Kingdom; North America corresponds to Canada and the United States; Pacific corresponds to Australia, Japan, Korea and New Zealand; OECD corresponds to all countries listed above.

c) 1990-2000 for Pacific.

Source: See Annex 2.A1.

Statlink: *http://dx.doi.org/10.1787/654350515400*

Overall, however, the increase in European regional disparities in both employment and unemployment was primarily driven by Italy (Table 2.1). Regional variations in employment rates also widened in Belgium, Portugal, and Switzerland. In contrast, they lowered noticeably in France, Greece, Netherlands, Norway, Spain, and in the United Kingdom. As to regional disparities in unemployment rates, they increased in Spain and the United Kingdom, and to a lesser extent in France and Portugal, while they decreased in Germany, Greece, Norway and Switzerland. In North America, the situation is also contrasted: in Canada, regional disparities in unemployment rates increased when those in employment rates decreased, while, in the United States, both types of employment disparities decreased. In the Asia/Pacific area, the strong reduction in within-country disparities in unemployment rate is mostly attributable to Korea.

Employment problems and success seem to be anchored in some particular regions…

Not only are regional disparities relatively persistent, but in addition it is often the same regions that are performing either better or worse than the national average. About three out of four European regions in 1993 with very low employment rates relative to the national average were still in the same position in 2003 (Chart 2.4). There is also a strong persistence for regions with highest employment rates compared to the national average. Indeed, most of the changes in relative employment rates over the past decade were driven by regions with intermediate rates (see also Overman and Puga, 2002; European Commission, 2002).

The picture is more mixed in North America. In terms of employment rates, persistence of regional outcomes among regions with highest and lowest employment

Table 2.1. **Evolution of regional disparities in labour market performance over the past decade**[a]

	Number of regions	Period	Employment rate		Unemployment rate	
			Evolution of the Theil index	Country contribution to the evolution of the Theil index of average within-country disparities across broad geographic zones	Evolution of the Theil index	Country contribution to the evolution of the Theil index of average within-country disparities across broad geographic zones
			Difference over the period	Percentages	Difference over the period	Percentages
Europe			0.051		2.202	
Belgium	11	1993-2003	0.101	5.6	–0.075	–0.1
France	22	1993-2003	–0.094	–28.5	0.245	1.8
Germany	36	1993-2003	0.009	1.5	–2.850	–39.1
Greece	13	1993-2003	–0.217	–12.7	–2.997	–3.5
Italy	20	1993-2003	0.587	181.2	18.156	120.0
Netherlands	12	1993-2003	–0.038	–3.3	0.165	0.5
Norway	7	1993-2003	–0.043	. .	–0.474	. .
Portugal	5	1993-2003	0.038	2.2	1.038	1.6
Spain	16	1993-2003	–0.182	–36.8	2.493	13.5
Switzerland	7	1990-2000	0.043	. .	–2.514	. .
United Kingdom	11	1993-2003	–0.032	–9.7	0.607	4.9
North America			–0.055		–0.688	
Canada	10	1993-2003	–0.112	27.9	1.211	–23.1
United States	51	1993-2003	–0.046	72.1	–0.957	123.1
Pacific			–0.022		–3.556	
Australia	8	1993-2003	–0.025	9.2	–0.074	0.1
Japan	47	1990-2000	–0.010	40.2	–1.348	27.6
Korea	15	1990-2000	–0.057	48.3	–13.110	72.3
New Zealand	12	1990-2000	–0.035	2.3	–0.136	0.0

a) See text for explanation.

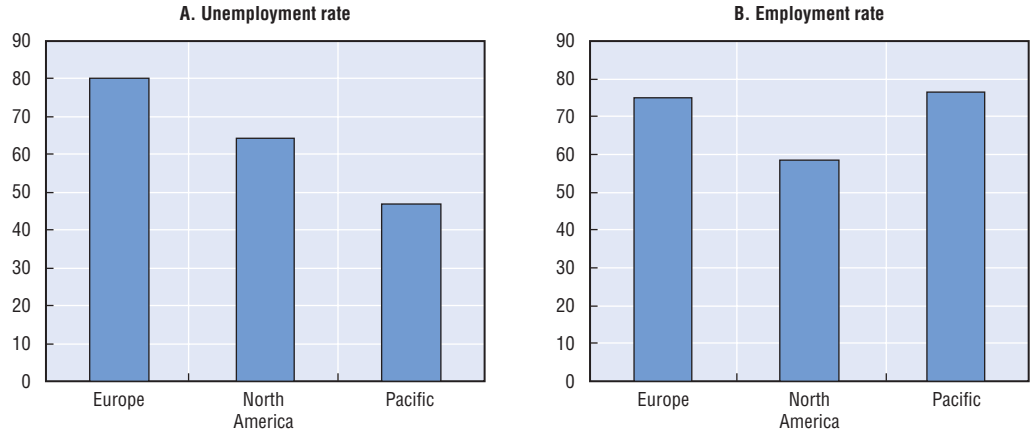
Source: See Annex 2.A1.

rates relative to the national average is also strong, but regions with intermediate rates also show a much greater "mobility". However, looking at the relative unemployment rate distribution, the results are less clear-cut. Nearly 65% of the regions with highest unemployment rates in 1993 still had high unemployment in 2003, and intermediate regions have tended to experience greater mobility. But more than half of the regions that had below average unemployment in 1993 ended up in 2003 with unemployment rates closer to or even higher than the national average.

Regional developments have been quite different in the Asia/Pacific area, with changes in regional ranking being, on average, less frequent and more evenly distributed across worst-off, best-off and intermediate regions. By 2003, more than 70% of regions were in the same employment position as in 1993. And while the position of regions seems less fixed over time when considering the relative unemployment rate distribution, it is worth noting that, in contrast to what happened in European or North American countries, intermediate regions have not experienced greater mobility than best-off or worst-off regions.

Chart 2.4. **Regional employment problems are relatively persistent**

Percentage of regions with high unemployment (low employment) rate[a] in 1993 remaining in the same position in 2003



a) High unemployment (low employment) is defined as belonging to the upper (lower) quintile of the unemployment (employment) distribution. Example: in Europe, 80% of the regions which were in the upper quintile of the unemployment distribution were still in the upper quintile of the unemployment distribution in 2003.

Source: See Annex 2.A1.

Statlink: *http://dx.doi.org/10.1787/143811435426*

… and tend to cluster in space

The labour market performance of individual regions may be closely linked to the outcomes of their surrounding, geographically contiguous regions – which may be located in different countries. This suggests that employment problems and success would have a regional dimension, and raises the issue of whether regional policies are required, hand-in-hand with general structural measures.

Overman and Puga (2002) showed that neighbouring effects at the sub-national level are very strong in Europe. This result would also apply to most non-European countries. Indeed, the employment and unemployment outcomes of individual regions seem much closer to the average outcomes of their neighbours than to the average outcomes of other regions within the same country (Table 2.2). In most countries, the employment rate of a particular region is positively (and significantly) correlated with the average employment rate of its neighbours, including foreign neighbouring regions. By contrast, there is no such regular correlation with the employment rate of other regions in the country.[4] Regional unemployment exhibits a similar pattern: neighbouring regions located in different countries have more in common than non-neighbouring regions within the same country.

In sum, employment problems and success would thus be localised in space, as part of geographic clusters that would not necessarily coincide with national boundaries. This suggests that national factors would give only a partial explanation to labour market performance.

B. Regional disparities in labour market performance: underlying factors

Since cross-country variation in labour market outcomes have tended to decline over the past decade, disparities at the sub-national level are of increasing relevance. In addition, employment problems and success appear to be anchored in some areas. It is therefore important to shed further light on the sources of such regional disparities. While

Table 2.2. **Regional employment outcomes and neighbouring effects, 1993-2003**[a]

Average of correlation coefficient between the rate of an individual region...

	Employment rate	Unemployment rate
Panel A. All regions[b]		
… and the average rate of national regions excluding the region itself and its neighbours	0.05	0.27
… and the average rate of neighbouring regions	0.43	0.54
Panel B. Border regions[c]		
… and the average rate of national regions excluding the region itself and its neighbours	0.15	0.28
… and the average rate of domestic neighbours	0.49	0.57
… and the average rate of foreign neighbours	0.42	0.35

a) 1990-2000 for Japan, Korea, New Zealand and Switzerland; 1993-2003 for Australia, Belgium, Canada, France, Germany, Greece, Italy, the Netherlands, Norway, Portugal, Spain and the United States; 1995-2003 for Austria and Sweden; 1996-2003 for Mexico and the United Kingdom; 1997-2003 for Hungary; 1998-2003 for the Czech Republic, Poland and the Slovak Republic; 2000-2003 for Turkey. Results for individual countries can be found in Annex Table 2.A2.3 in OECD (2005c).

b) Unweighted average of correlation calculated with the average rates over the period of the following countries: Australia, Austria, Belgium, Canada, the Czech Republic, France, Germany, Greece, Hungary, Italy, Japan, Korea, Mexico, the Netherlands, New Zealand, Norway, Poland, Portugal, the Slovak Republic, Spain, Sweden, Switzerland, Turkey, the United Kingdom and the United States.

c) Unweighted average correlation calculated with the average rates over the period of the following countries: Austria, Belgium, Canada, the Czech Republic, France, Germany, Hungary, Italy, Mexico, the Netherlands, Norway, Poland, Portugal, the Slovak Republic, Spain, Sweden, Switzerland and the United States.

Source: See Annex 2.A1.

limitation of the analysis prevents to establish firm causality, this section confirms results obtained in other studies concerning a number of such potential sources.

New job creation is an important source of regional disparities in employment rates

Overall, regional disparities in employment rates seem to be mostly driven by the capacity of regional labour markets to generate new jobs, rather than by labour supply or demographic factors. In 22 out of the 27 countries examined, regions that ended up in 2003 with employment rates lower than the national average have tended to experience over the past decade a weaker employment growth than regions that ended up with relatively high employment rates (Table 2.3). And over the same period, demographic changes have tended to counteract the detrimental effect that depressed job creation has had on employment rates: in 17 out of these 22 countries, the pace of growth of the working-age population has been, on average, weaker in regions that ended up with relatively low employment rates than in their better performing counterparts.[5]

The fact that job-creation patterns often lie behind regional employment disparities does not mean that supply-side factors do not intervene. Depressed regions tend to experience both higher unemployment rates and lower participation rates than their better performing counterparts. However, in most cases, differences in unemployment rates are relatively more marked than differences in participation rates. The Netherlands is the only country where participation behaviour is the only source driving differences in employment rates, but participation also plays an important role in Italy and Turkey.[6] In addition, discouragement effects are likely to occur in regions where job creation is lagging and unemployment is high, so that differences in participation behaviour between less and better performing regions in terms of employment rates may be partly related to the dynamism of regional labour demand. All in all, demand-side factors thus seem to play an important role in accounting for regional disparities in employment rates.

Table 2.3. **Regional disparities in employment rates: supply or demand driven?**

Comparison between regions with lower (less performing) and higher (better performing) employment rates than the national average in 2003[a]

Percentage points

	Number of regions	Differences between less and better performing regions in average…			Comparison between less and better performing regions in 2003[b]			
					Differences in average…		Ratios of average…	
		Period	… annual growth rate of employment	… annual growth rate of the working-age population	... unemployment rate	... participation rate	… unemployment rate	... participation rate
Australia	8	1993-2003	–0.70	–0.89	–0.43	–3.21	0.93	0.95
Austria	9	1995-2003	–0.41	–0.37	2.47	–2.05	1.67	0.97
Belgium	11	1993-2003	–0.05	0.15	5.86	–5.34	2.16	0.92
Canada	10	1995-2003	–0.62	–0.66	2.78	–4.05	1.43	0.94
Czech Republic	8	1998-2003	–0.74	–0.14	4.70	–2.96	1.90	0.96
Finland	4	1999-2003	–0.51	–0.75	3.50	–4.76	1.39	0.94
France	22	1993-2003	–0.05	–0.24	2.43	–4.36	1.30	0.94
Germany	36	1993-2003	–0.51	–0.38	6.21	–2.68	1.96	0.96
Greece	13	1993-2003	0.46	–0.43	1.06	–3.67	1.13	0.94
Hungary	7	1997-2003	–0.11	0.06	3.29	–7.81	1.77	0.88
Ireland	2	1993-2003	0.43	0.74	1.26	–2.44	1.30	0.96
Italy	20	1993-2003	–0.41	0.23	13.00	–10.58	4.31	0.84
Japan	47	1990-2000	–0.20	–0.21	1.08	–3.79	1.25	0.94
Korea	15	1990-2000	–0.42	–0.63	1.35	–2.82	1.40	0.95
Mexico	32	1996-2003	–0.56	0.29	1.01	–9.31	1.26	0.93
Netherlands	12	1993-2003	–0.41	–0.24	–0.04	–3.11	0.99	0.96
New Zealand	12	1995-2003	0.05	0.51	0.26	–3.64	1.06	0.95
Norway	7	1993-2003	–0.28	–0.36	0.30	–2.98	1.07	0.96
Poland	16	1998-2003	–1.96	–0.94	4.10	–4.66	1.23	0.93
Portugal	5	1993-2003	–4.06	–3.43	3.22	–3.10	1.75	0.96
Slovak Republic	4	1998-2003	–0.09	0.13	7.37	–1.58	1.55	0.98
Spain	16	1993-2003	–0.64	–0.39	5.72	–6.12	1.65	0.91
Sweden	8	1995-2003	–1.14	–0.96	1.53	–4.79	1.31	0.94
Switzerland	7	1990-2000	–0.18	–0.09	0.61	–3.49	1.16	0.95
Turkey	7	2000-2003	0.25	0.75	6.87	–15.41	2.44	0.75
United Kingdom	11	1996-2003	–0.14	–0.27	2.26	–6.27	1.60	0.92
United States	51	1993-2003	0.23	0.26	1.19	–4.51	1.22	0.94

a) Less (better) performing regions were identified as regions with an employment rate lower (higher) than the national average in the last year of the period.

b) 2000 for Japan, Korea and Switzerland.

Source: See Annex 2.A1.

Production and skill patterns may explain part of regional disparities in employment outcomes

Since employment growth tends to be less dynamic in some sectors, such as agriculture and some manufacturing sectors, than in others, employment growth differentials at the regional level may simply mirror differences in initial sectoral specialisation. When looking at a three sector classification (agriculture, manufacturing and services) most empirical analyses suggest that the industry-mix provides only a partial explanation of regional variations in employment changes.[7] Using more detailed industry classifications (and often, longer time-periods and refined methodologies), some studies find stronger evidence for the industry-mix explanation of regional disparities in employment growth.[8] This is also the case of the analysis conducted in this chapter. The

differentials in employment growth rates between low-employment regions and their better-performing counterparts over the period 1993-2003 have been divided in two components (along the lines of a shift-share analysis): a so-called "structural part" reflecting the contribution of the initial regional specialisation (based on a one-digit industry classification), and a so-called "regional part", indicating the extent to which employment growth rates in each industry contribute to regional variations in overall employment outcomes. The role of the initial sectoral specialisation is thus found to be relatively important in countries where regional disparities are high: initial sectoral specialisation would make for 30% of the average growth employment differential between less performing and better performing regions in Italy, almost 50% in Germany and 40% in Spain (Annex Table 2.A2.4 in OECD, 2005c).

Differences across regions in average educational attainment of the working-age population are another possible factor at work. Regions where unskilled labour is relatively abundant are likely to be disproportionately affected by skill-biased technological change. A number of empirical studies show that educational attainment affects regional unemployment rates (see for instance Overman and Puga, 2002; Newell, 2003 and Elhorst, 2003 for a survey) and Chart 2.5 confirms these findings. Differences in average employment rates between less and better performing regions in 2003 (relative to the national average) are split into two components: the first one, shown on the chart, reflects the contribution of the skill composition of the working-age population while the other one, so-called regional part, indicates the extent to which differences in employment rates for each level of educational attainment (low, medium and high) contribute to regional employment outcomes. In most cases, both effects seem to matter, the regional part being however often predominant. Yet, the role of education seems less important than that of sectoral specialisation in countries with high regional disparities.

Using the same methodology, differences in the age structure of the working-age population seem to play only a very minor role in most OECD countries in accounting for regional disparities in employment rates, a small role in France, the Netherlands, Norway and Sweden, and a more important one in Korea and Ireland.[9]

Overall, production specialisation patterns and education seem to provide part of the explanation for observed regional disparities in employment outcomes. The specific regional dimension (or the unexplained part) remains nevertheless significant in many cases, with some regions holding winning cards and others lagging behind.

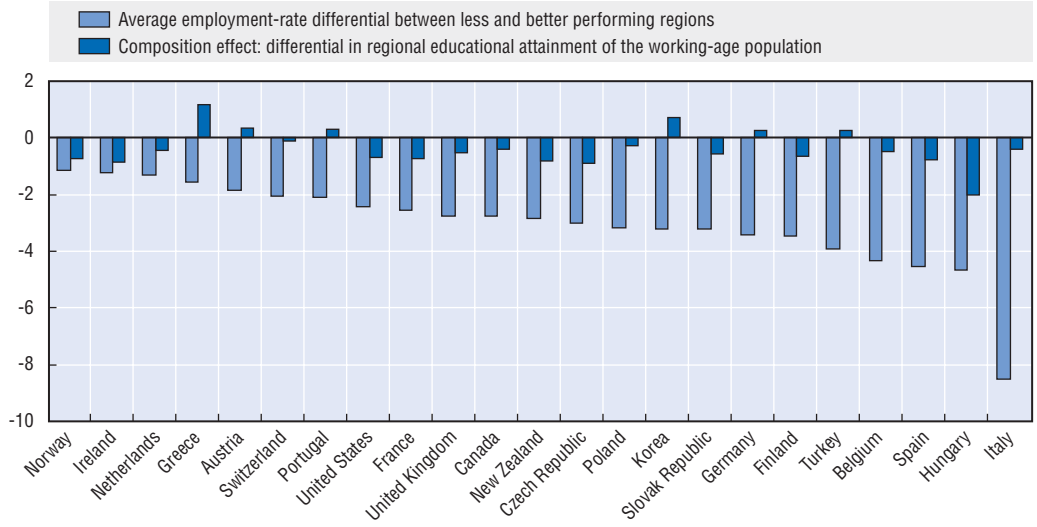
Geographic concentration of economic activities

Economic activities and population are unevenly distributed among regions within countries and tend to be remarkably concentrated in space (see also OECD, 2005a). In most countries, more than one half of the national income is produced in a few core regions that account for less than one quarter of the country's total surface (Annex Table 2.A2.5 in OECD, 2005c).

Agglomeration of population and economic activities may arise because of the benefits of locating in areas endowed with natural advantages such as raw materials, availability of fertile soil, suitability of weather conditions or easy access by land or water. However, the fact that industries such as textiles and clothing or software are often concentrated in space suggests that forces beyond natural endowments can also lead to concentration of economic activities. Ellison and Glaeser (1999) find that natural advantages

Chart 2.5. **To what extent are regional disparities in employment rates related to the average educational attainment of the regional working-age population?**

A decomposition of the average employment-rate differential between regions with lower (less performing) and higher (better performing) employment rates than the national average in 2003[a, b]



a) For each country, regions are divided into two groups: those with employment rates higher than the national average in 2003 (regions R1) and those with employment rates lower than the national average (regions R2). Average employment rates are then calculated for both groups of regions and their differential is split into two components:
$ER_{R1} - ER_{R2} = \Sigma\ ER_{i,\,R2}\ (S_{i,\,R1} - S_{i,\,R2}) - \Sigma\ S_{i,\,R1}\ (ER_{i,\,R1} - ER_{i,\,R2})$
In each country, ER_{R1} (resp. ER_{R2}) is the average employment rate over regions R1 (resp. R2); $ER_{i,\,R1}$ (resp. $ER_{i,\,R2}$) is the average employment rate for the educational attainment i (less than upper secondary education, upper secondary education, tertiary education) over regions R1 (resp. R2); and $S_{i,\,R1}$ (resp. $S_{i,\,R2}$) is the average share of educational attainment i in the working-age population of regions R1 (resp. R2). The first term on the right-hand side expresses the differential in regional employment rates that would have been observed if, for each category of workers, average employment rates were the same in regions R1 and R2. Regional disparities are thus only attributed to the educational composition of the regional working-age population. A negative result indicates that regions R1 are hampered by a relatively unfavourable skill composition of the working-age population.

b) 1998 for Korea and New Zealand; 2002 for the Netherlands.

Source: See Annex 2.A1.

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would only explain between 20 and 50% of the observed geographic concentration in the United States.

Irrespective of natural advantage, firms may benefit from being located alongside many other firms if the scale of the economic environment adds to productivity, that is, if agglomeration generates external economies. This approach underlines the role of interactions between economic agents in the same geographic space – rather than interactions between agents and nature – in determining industrial location. Empirical studies reviewed by Rosenthal and Strange (2004) suggest that doubling city size would increase average productivity of firms in the city by 3 to 8%. There are three main types of positive agglomeration externalities:

- Agglomeration would allow firms to purchase intermediate inputs at lower costs (reflecting increasing returns to scale).
- Employers' needs and workers' skills should be better matched in large cities or in industrial zones. This would result in productivity gains. Moreover, agglomeration

should make it quicker and thus less costly for firms to fill a vacancy and for workers to find a new job.

- Spatial proximity of producers in the same industry should facilitate knowledge spillovers and human capital externalities.

The empirical literature provides evidence that all three sources of agglomeration economies may play a key role in explaining geographic concentration of economic activities – although their relative importance is difficult to assess (for recent surveys, see Rosenthal and Strange, 2004; Duranton and Puga, 2004). Besides, other factors may reinforce the agglomeration process. For instance, concentration of economic activities, going hand-in-hand with concentration of employment, creates large markets, which may induce new producers to locate where consumers are. In turn, large cities offer great consumption amenities and may be more attractive for workers and their families to live in.[10]

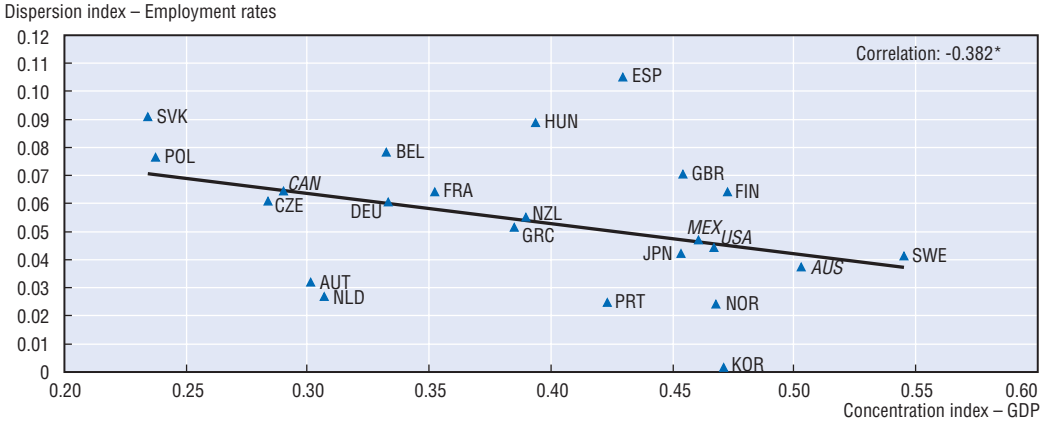
Since both economic activities and the working-age population tend to be concentrated in space, agglomeration does not necessarily lead to regional disparities in labour market performance. As pointed out by Martin (2003), when population follows mobile capital (physical and human) from declining regions to growing regions, this reduces the labour market slack in the former and alleviates labour market shortages in the latter, without generating much regional disparity. However, it is worth noting that, in most countries, the working-age population tends to be less concentrated in space than economic activities (Annex Table 2.A2.5 in OECD, 2005c). Moreover, the extent to which the spatial distribution of production differs from that of the working-age population varies across countries, and, at first glance, the larger these differences, the greater the regional disparities in employment rates (Chart 2.6, Panel B). Various studies stress that, compared to Europe, the United States experiences both a greater concentration of economic activities and less important sub-national disparities in labour market performance (Puga, 2002; Martin, 2003). This result is confirmed by Chart 2.6 (Panel A): the greater spatial concentration of production in the United States does not result in larger regional variations in employment rates than in many European countries where economic activities are less agglomerated. In sum, in the presence of agglomeration, workers' geographic mobility could play a key role in adjusting regional labour markets.

C. Regional disparities in labour market performance and workers' geographic mobility

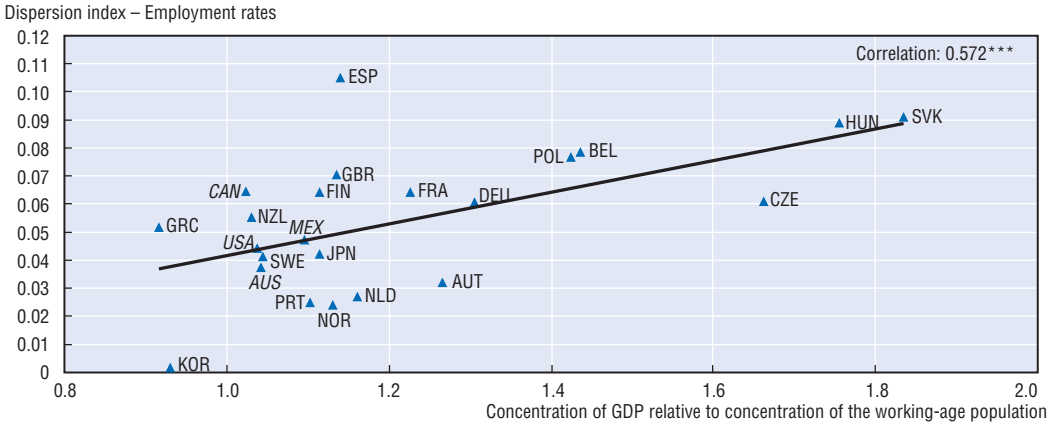
The persistence of regional disparities within each country suggests that "market" mechanisms are often too weak to play a self- equilibrating role. The movement of labour from depressed regions to better performing regions is one such mechanism. Wage adjustment, *i.e.* the reduction of relative wages in high-unemployment regions may also play a role, by attracting capital in regions where wages are decreasing and providing further incentives to labour mobility out of these regions; this effect is less direct, however, as it requires factors to be both mobile and to respond to wage incentives. This section examines mainly the role of internal migration as an adjustment mechanism.[11] The limited availability of earnings' data by region makes analysis of the interaction between wage and regional disparities problematic. However, results on the role of relative wages as an equilibrating mechanism obtained in other studies will be reviewed.

Chart 2.6. **Agglomeration phenomena and regional disparities in employment rates**[a]

Panel A. **Regional disparities in employment rates and spatial concentration of GDP**



Panel B. **Regional disparities in employment rates and spatial concentration of GDP and working-age population**



***, **, *, statistically significant at 1% level, 5% level and 10% level, respectively.
Countries in italics correspond to regional level 1.

a) The dispersion index corresponds to the weighted coefficient of variation of regional employment rates. The concentration index is the one proposed by Spiezia (2002), which is defined by $0.5 \sum_i |y_i - a_i| / (1 - a_{min})$ where y_i is the production share of region i, a_i is the area of region i as a percentage of the country area and a_{min} is the relative area of the smallest region. If the production share of each region equals its relative area, then there is no concentration and the index equals 0. The index increases with geographic concentration and reaches a maximum of one when all production is concentrated in the region with the smallest area.

Source: See Annex 2.A1.

Statlink: *http://dx.doi.org/10.1787/324225278035*

Gross internal migration flows tend to be lower in Europe than in North America and Asia/Pacific…

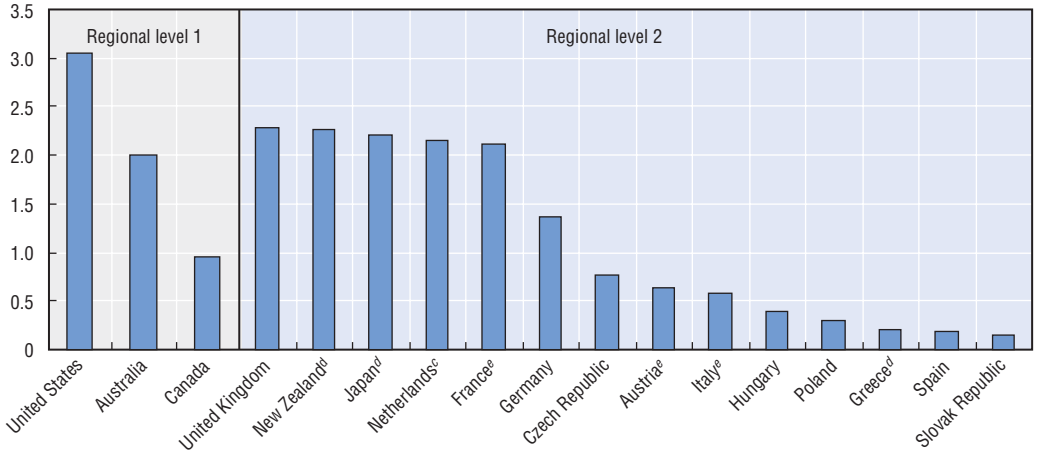
Inter-regional migration and commuting may be examined in terms of *gross* and *net* flows. Gross flows give a general picture of the extent to which individuals are mobile. If motivated by job reasons – which is not always the case as individuals may change residence without changing job – they may contribute to labour market adjustment by permitting a better match between jobs and worker characteristics. However, gross flows do not necessarily impact on the size of regional populations, as the same region may experience simultaneously both in- and out-migration. Net flows, on the other hand, are

the appropriate measure for the direct effect of individuals' geographic mobility on working-age population at the regional level.

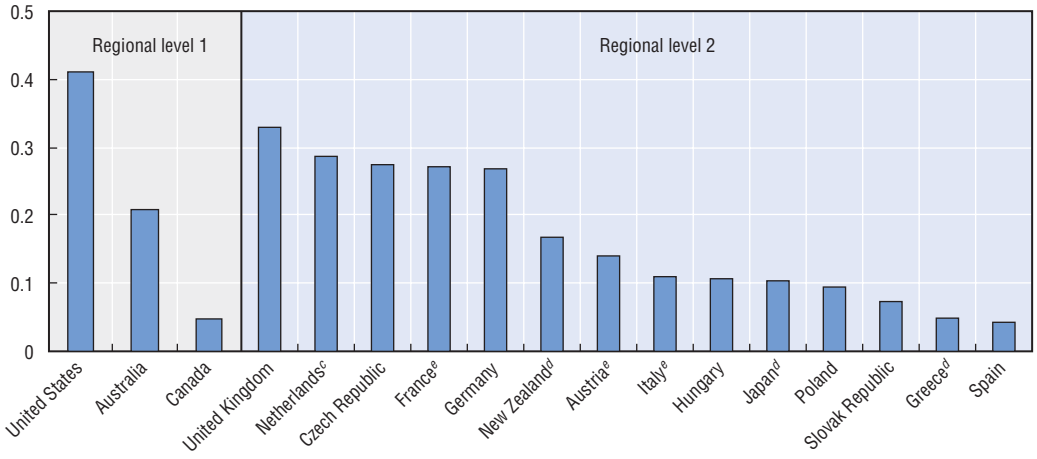
As seen in Box 2.1, cross-country comparisons of gross and net migration rates require caution. However, with these caveats in mind, a general picture emerges from the data. On average, internal gross migration flows, as measured by the proportion of the working-age population within each national economy that changed region of residence over the year, tend to be lower in Europe than in the United States or in countries belonging to the Asia/Pacific area (Chart 2.7). In Europe, however, the situation is not uniform across countries. Southern and Eastern European countries generally have very low gross migration rates, below 1 per cent

Chart 2.7. **Internal migration rates, 2003**

Panel A. **Gross outflows as a percentage of the population aged 15-64**[a]



Panel B. **Net flows as a percentage of the population aged 15-64**[b]



a) Except for Australia and Italy for which the population of reference is the total population and for Japan for which the population of reference is the population aged more than 5 years.
b) Total net migration rate is calculated as the ratio of the sum of the absolute values of regional net flows divided by two, to the total population aged 15-64.
c) 1999.
d) 2001.
e) 2002.

Source: See Annex 2.A1.

Statlink: *http://dx.doi.org/10.1787/446812368715*

of the working age population, while France and the United Kingdom have relatively high gross migration rates.[12] In any case, gross migration rates remain significantly lower than in the United States (migration rates shown for the United States are at the state level and they would be higher if measured for smaller regions, of a size comparable with that used for most European countries).

... but their decline has halted

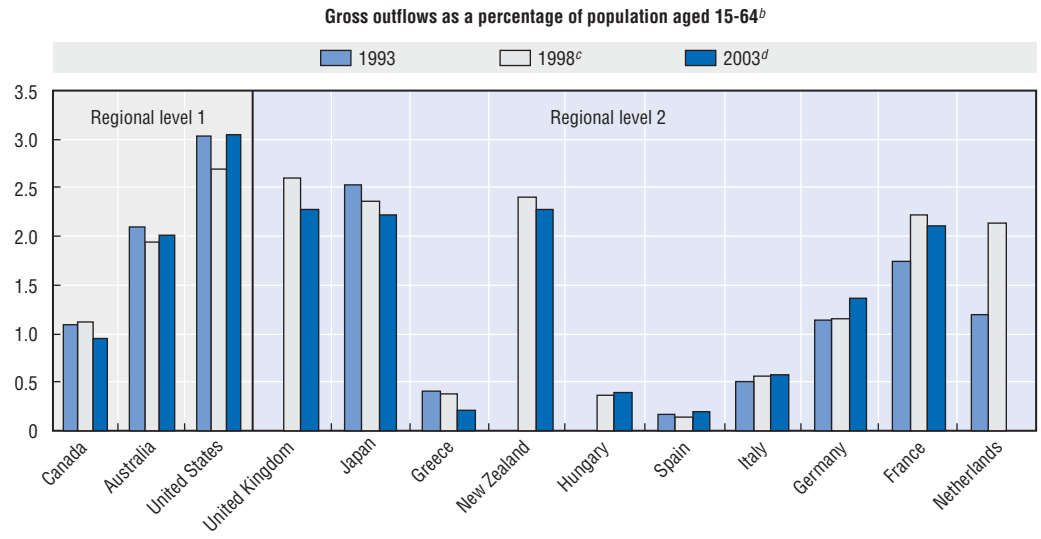
These general patterns, which were highlighted in previous editions of the *Employment Outlook* (1990, 2000), have been relatively stable over the past decade in most countries. In Spain and Italy, migration flows have stabilised though at a low level. Some increasing trend in mobility is noticeable in other European countries such as France, and the Netherlands, and since the late 1990s in Germany (Chart 2.8). Overall, except in Japan, the decline in inter-regional migration observed in previous decades has ended (OECD, 1990).

Net internal migration does not always contribute to reducing regional employment disparities

In all countries, a relatively small proportion of internal gross flows corresponds to a redistribution of the working-age population among different regions: total net migration rates are quite low, below 0.3% in most cases (Chart 2.7, Panel B). Again, the United States stands out with a net migration rate higher than in other countries. The differences across countries are much lower than for gross migration rates, however, indicating that, if motivated by labour reasons, working-age population migration flows may fulfil more of a matching function than one of serving to redistribute the population across regional labour markets. This is especially noticeable for Canada, Japan and New Zealand.[13] By contrast,

Chart 2.8. **Evolution of internal migration rates**[a]

Gross outflows as a percentage of population aged 15-64[b]



a) Countries are ranked according to the change in migration rates over the longest available period.
b) Except for Australia and Italy for which the population of reference is the total population and for Japan for which the population of reference is the population aged more than 5 years.
c) 1996 for New Zealand; 1999 for Hungary, the Netherlands and the United Kingdom.
d) 2001 for Greece, Japan and New Zealand; 2002 for France.

Source: See Annex 2.A1.

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the Czech Republic stands out as a country in which gross migration flows are low, but tend to redistribute across regions a relatively important share of the population.

Looking at the *direction* of inter-regional migration flows, and the extent to which they contribute to re-equilibrating regional employment disparities, the results are mixed for the period 1998-2003. In eight of the 15 countries considered, working-age migrants tend to move from low-employment rate regions to high-employment rate regions and from high-unemployment regions to low-unemployment regions (Table 2.4). In four countries, net migration flows slightly tend to reinforce regional disparities for one of the two measures considered (either the employment or the unemployment rate). But in the remaining three countries, *i.e.* the Czech Republic France and the Netherlands, migration flows tend to reinforce regional disparities on both counts, as positive net migration proceeds mostly in low-employment rate/high-unemployment rate regions. This result is not attributable to the migration of retirees towards more attractive and sunny regions, as it still holds when looking at the 25-54 age group. It is also in line with the findings of some empirical studies (Box 2.2). For the countries concerned, this somewhat counter-intuitive result indicates that labour is not the only, and perhaps not even the main, motivation for inter-regional migration. It may also reflect the presence of barriers to job-related mobility, an issue which will be discussed in Section 2 of the chapter.

Table 2.4. **Internal migration net flows by regional labour market performance, 1998-2003**

Average ratios over the period for all persons aged 15-64[a]

	Level	Number of regions	Period	Net internal migration rates[b]	As a percentage of working-age population[c, d]			
					Average net migration into high-employment rate regions	Average net migration into low-employment rate regions	Average net migration into high-unemployment rate regions	Average net migration into low-unemployment rate regions
Australia	1	8	1998-2003	0.14	0.43	–0.28	0.43	–0.26
Austria	2	9	1996-2002	0.16	0.14	0.22	–0.24	0.11
Canada	1	10	1998-2003	0.14	0.20	–0.14	–0.14	0.21
Czech republic	2	8	2002-2003	0.24	–0.58	0.29	0.29	–0.63
France	2	22	1997-2002	0.22	–0.42	0.18	0.20	–0.22
Germany	2	36	1998-2003	0.20	0.25	–0.14	–0.18	0.18
Hungary	2	7	1999-2003	0.06	0.02	0.00	–0.02	0.03
Italy	2	20	1997-2002	0.12	0.20	–0.38	–0.30	0.18
Japan	2	47	1995-2000	0.06	0.09	–0.11	0.04	–0.02
Netherlands	2	12	1994-1999	0.24	0.48	0.17	0.30	0.25
New Zealand	2	12	1996-2001	0.16	0.12	–0.13	0.11	–0.01
Poland	2	16	2001-2003	0.08	0.06	–0.16	–0.19	0.05
Spain	2	16	1998-2003	0.04	0.00	–0.01	–0.01	–0.01
United Kingdom	2	37	1999-2003	0.22	0.08	–0.30	–0.26	0.04
United States	1	51	1998-2003	0.33	0.28	–0.32	–0.33	0.47

a) Figures refer to total population instead of working-age population for Australia and Italy, and to persons aged more than five years for Japan.

b) Total net internal migration rates are calculated as the sum of the absolute values of regional net flows divided by two and by the total working-age population one year before.

c) Sum of net internal migration by region (*i.e.* inflows minus outflows over one year).

d) Low-unemployment regions were identified by ordering regions in the first year of the period considered in terms of ascending unemployment rate, taking regions until the cumulative labour force passed one-third of the total labour force, and including the last region in the calculation with an appropriate fractional weight. High-unemployment regions similarly contain the third of labour force with the highest unemployment rates.

Source: See Annex 2.A1.

Box 2.2. **Do wages and workers' mobility respond to regional labour market imbalances?**

Internal migration can play a major adjustment role in countries where its incidence is high. Blanchard and Katz (1992) find that internal migration responds significantly to state-specific shocks to labour demand in the United States. In this study, an adverse shock to employment would lead initially to an increase in the unemployment rate, a strong cut in nominal wages and a small decline in the participation rate. Lower nominal wages, in turn, would stimulate labour demand, but not enough to offset the effects of the initial shock. Indeed, adjustment occurs mainly via workers leaving the depressed area, and doing so quickly: a loss of 100 jobs in the initial year would be associated with 30 more unemployed workers, a decrease in participation by five workers, and thus net out-migration of 65 workers. After five to seven years, both unemployment and participation would return to pre-shock rates.

Likewise, Blanchard and Katz (1992), Debelle and Vickery (1999) find that internal migration is a key adjustment mechanism among Australian regions, and Choy *et al*. (2002) reach similar conclusions for New Zealand.

In contrast, in Europe where migration flows are on average significantly lower than in Australia, New Zealand and the United States, Decressin and Fatas (1995) show that adjustment to region-specific shocks tends to occur mainly via changes in labour force participation rather than inter-regional migration. More precisely, in the first year following an adverse shock to labour demand, 78% of the impact would be borne by workers dropping out of the labour force, compared to 18% in the United States. And the reverse holds for net out-migration: in the United States, from the first year onwards, net out-migration would account for 52% of the adjustment process, whereas in Europe it is only after the third year that net out-migration would account for a similar proportion. In other words, in Europe, workers first tend to leave the labour force in response to a decline in labour demand in their region rather than migrate to another region or country. This finding is confirmed by Nahuis and Parikh (2002), based on a more detailed analysis of employment dynamics in European regions.

Wage rigidities may hamper adjustment through internal migration in Europe. In particular, collective bargaining agreements that set the same wage norm for the country as a whole will tend to reduce the scope for regional wage differentials (OECD, 2004a). This, in turn, would reduce worker incentives to move from high-unemployment regions to areas that offer better job opportunities and higher wages. For instance, Brunello *et al*. (2001) suggest that labour mobility from lagging Italian regions to leading ones has declined significantly as a result of lower earning differentials.

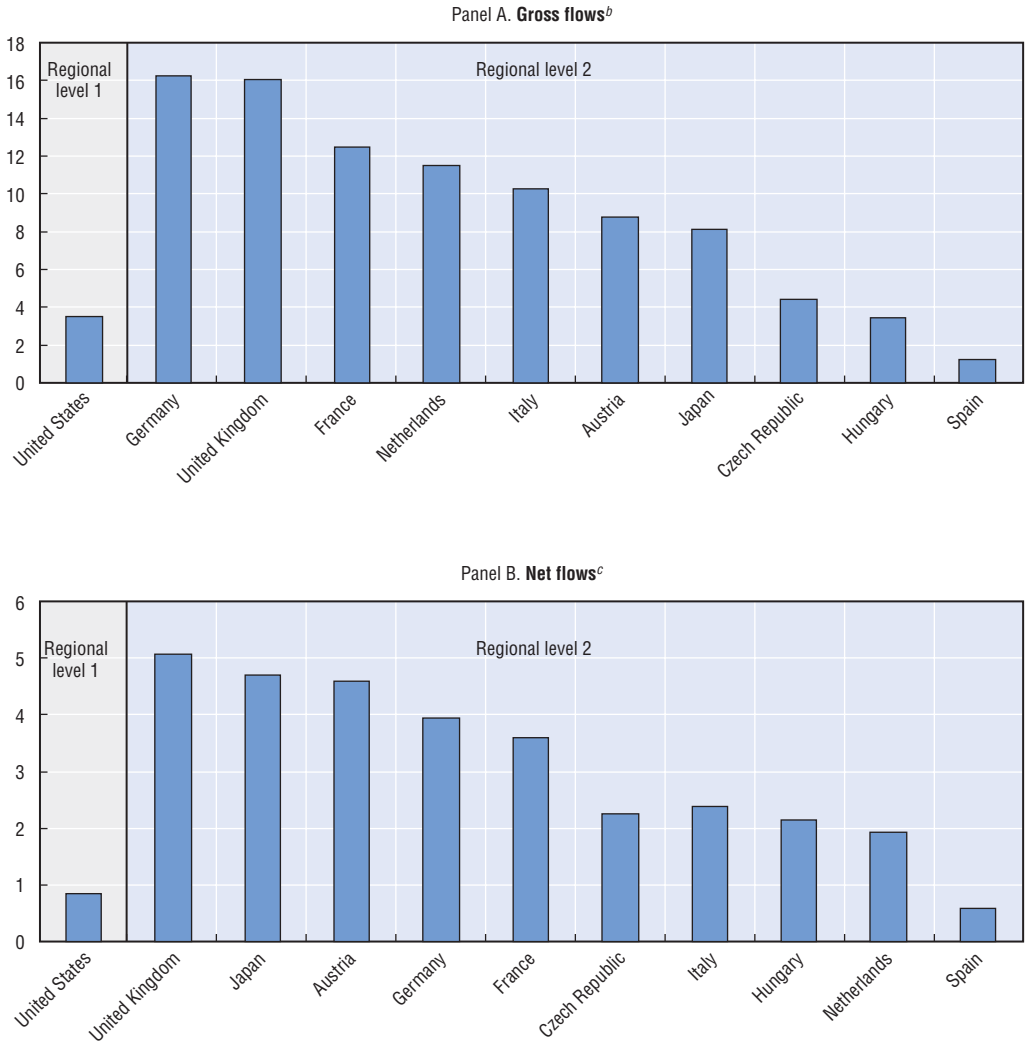
Between 1 and 16 per cent of the employed commute between regions every day

Commuting is often an alternative to migration. Households may choose to commute rather than migrate to take up a new job because perceived transportation costs may not be as high as relocation costs (both economic costs associated with moving and disruption costs associated with the loss of social network, locational amenities, etc.). However, the commuting decision relates to both labour and housing markets. With rising income and declining commuting costs, households tend to demand larger dwellings and lot size, that often cannot be accommodated within the cities. Thus, the increase in commuting rates as well as in the commuting distance observed in some countries over the most recent period is also the consequence of new urban developments, *i.e.* urban sprawl associated with the

development of transport infrastructure, and not necessarily a sign of better match between neighbouring regional labour markets.[14] In almost all countries considered, commuting flows as a ratio of working-age population are higher than internal migration flows, and often significantly so.[15] The increase in the number of two-earner families is also a factor that may have lowered inter-regional migration and increased commuting. Commuting is particularly high in gross terms in the United Kingdom, where 16% of the employees commute daily between regions, but also in Austria, Germany and Japan (Chart 2.9). However, for these countries except Japan, high commuting rates are partly explained by the fact that capital cities account for one region in their own. By contrast, commuting rates are particularly low in Spain.

Chart 2.9. **Commuting rates in selected OECD countries, 2003**[a]

Percentage of resident employment



a) 2000 for Japan and the United States; 2001 for the United Kingdom; and 2002 for France.
b) Employed workers crossing regional borders to get from their place of residence to their place of work.
c) Total net commuting flows are calculated as the sum of the absolute values of regional net commuting flows divided by two.

Source: See Annex 2.A1.

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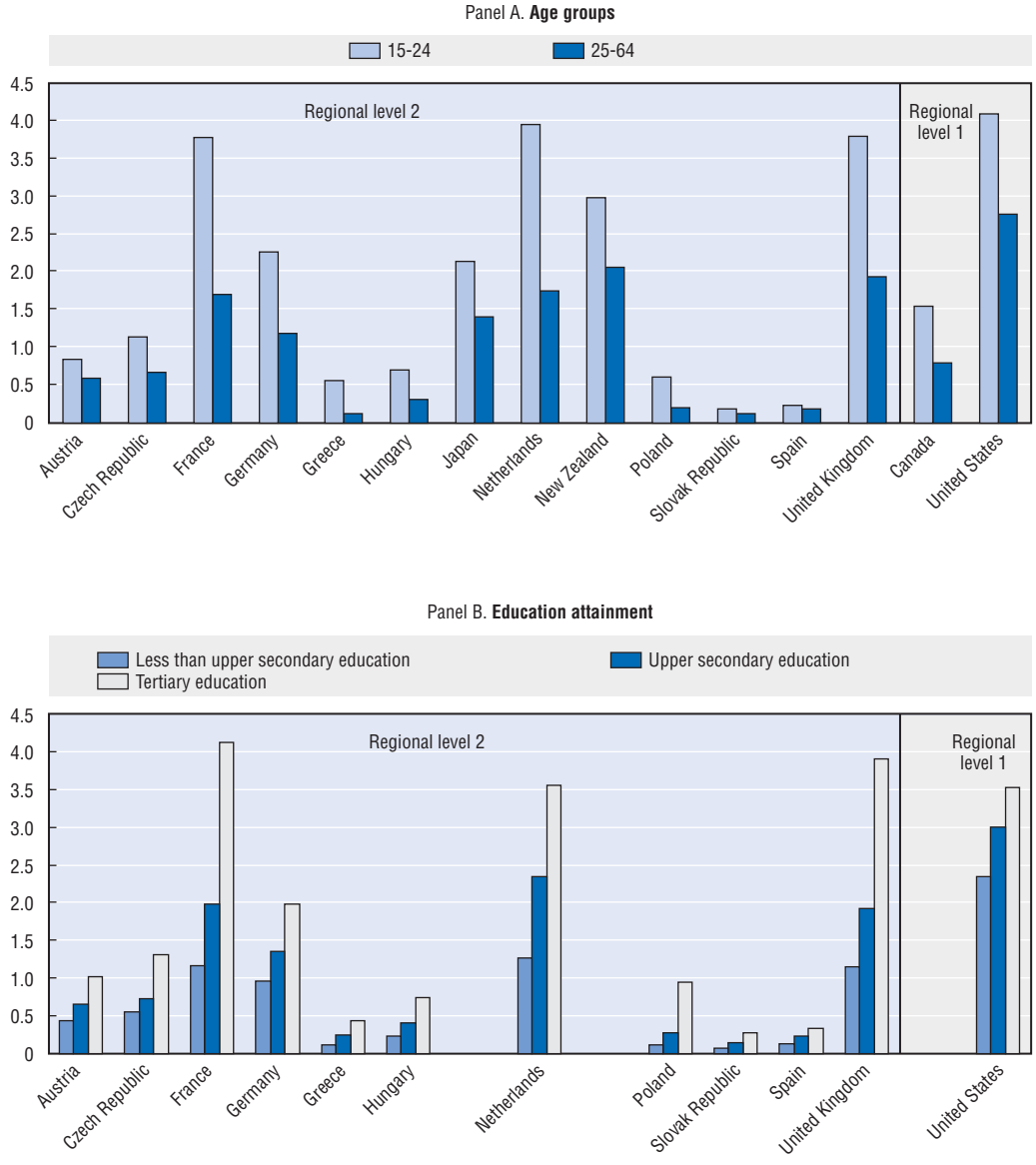
Migration and commuting patterns differ across population groups

Migration and commuting behaviour are far from homogenous across population groups. While migration rates of men are generally only very slightly higher than for women, except for Japan (Annex Table 2.A2.6 in OECD, 2005c), young people are much more likely to move than their older counterparts, with the sole exception of the Slovak Republic and Spain (Chart 2.10). Highly educated groups are generally the most mobile. This is especially the case in France and the United Kingdom, the two European countries with the highest inter-regional migration rates. These results are confirmed at the

Chart 2.10. **Youth and the highly-educated are the most mobile groups**

Internal migrations[a] by socio-economic characteristics, percentages, 2003[b]



a) Proportion of persons aged 15-64 who changed region of residence over the year.
b) 1999 for the Netherlands; 2001 for Greece; and 2002 for Austria and France.

Source: See Annex 2.A1.

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household's level by an econometric analysis for a number of European countries (see below). Differences in mobility patterns between groups with different levels of educational attainment are less marked in the United States. Overall, this implies that workers with a weaker position in the labour market are less likely to move and thus more dependent on local employment opportunities. This is an important finding in view of the over-arching policy goal of greater mobilisation of under-represented groups.

The profile of commuters is somewhat different. Gender differences are more marked, probably reflecting the still important divide in family tasks which makes it more difficult for women to spend much time in commuting – France, with women's commuting rates just above that of men, being the only exception (Annex Table 2.A2.6 in OECD, 2005c).[16] By contrast, there seems to be little difference in commuting behaviour across age groups. As to education levels, the situation seems more diversified across countries than for migration. While commuting is more important among the highly skilled in the United Kingdom, and Germany, it is more important among the low and medium skilled in Austria, France, and Italy. In part, this may reflect alternative forms of urban development: while the richest groups may be leaving the centres in some countries, in others the middle class and the poorest groups increasingly live in the suburbs and commute to city centres to work.

2. Public policy and regional disparities

As such, differences among regions in employment and unemployment rates are not necessarily a matter of policy concern. There is no reason to expect the same participation patterns across all regions. And, even assuming similar participation patterns, it is logical that unemployment rates will differ across regions: owing to spatial specialisation patterns, supply and demand shocks are likely to affect disproportionately certain areas.

However, the *persistence* of regional disparities in employment and unemployment may also be symptomatic of policy failure, including inadequate functioning of labour markets. Though it can be expected that certain working-age individuals living in depressed areas will decide to move to obtain employment, they may face obstacles to mobility. Mobility is obviously not an end in itself, and the links between geographic mobility and regional imbalances are complex (Box 2.3), but removing some barriers to mobility may help in some cases. Conversely, firms may decide to create jobs in locations where labour resources are more abundant – thus bringing the jobs to where people live. But supply and demand constraints, including insufficient regional wage adjustment, agglomeration effects, and local governance problems, may inhibit such job creation.

The next sections will examine policies which may affect labour mobility and job creation in high-unemployment regions. It will focus on housing policies, unemployment and other non-employment benefits as potential variables that may lock-in individuals in depressed areas, as well as on attempts to revitalise local participation and job creation. Broader policy instruments which may also facilitate local firm and job creation – like infrastructure investment or relocation of government administration into depressed areas or remote regions, as well as tax policy at large – important as they are, will be largely ignored as they lie outside the scope of this chapter.

Box 2.3. **Migration, wages, and productivity**

The persistence of regional employment and unemployment differentials over time suggests that they should be viewed as long-run "structural" phenomena. The nature of the policy response needed to reduce regional disparities in employment obviously depends on the causes of such disparities. In general, regional disparities in employment in a given country are positively correlated with disparities in productivity levels (see Sestito, 2004, for Europe).

The mobility of labour supply from lagging regions to more active ones can play some role in reducing employment disparities. This is the case in particular if labour demand is generally lagging in the country, but is in excess in some particular areas. However, even in those cases, the extent to which geographic mobility can reduce disparities is probably limited. Firstly, since – as observed in Section 1.C – the young and the highly skilled are the more likely to move, increased out-migration may have the negative effect of de-skilling regional population and further weaken regional growth potential. Secondly, housing probably sets some endogenous limits to migration flows. Housing prices normally tend to increase more in the most dynamic regions than in the lagging ones, and such a widening of the difference in the cost of housing represents an important disincentive to move. Cannari *et al.* (2000), for example, find that this has restrained internal migration between the South and the North of Italy over the 1967-92 period.

Insufficient wage adjustment at the regional level may also be partly responsible for observed employment disparities. In particular, intermediary wage-bargaining and coordination systems – *i.e.* those relying mostly on industry level bargaining, such as in particular Germany, Spain and to a lesser extent Italy (OECD, 2004a) – where outcomes are influenced mainly by the economic conditions prevailing in the leading sectors and regions of the economy may create a gap between wages and productivity in lagging regions. In the absence of other adjustment mechanisms, this may lead to persistent regional disparities in employment outcomes. This hypothesis has often been put forward as a key factor behind North-South regional imbalances in Italy, and West-East imbalances in Germany (see, for instance, Brunello *et al.*, 2001; Davies and Hallet, 2001). De Koning *et al.* (2004) also argue that centralised wage bargaining is a major cause of unemployment in Eastern Germany, Southern Italy and Southern Spain. Decentralising wage-setting could thus help in reducing regional employment disparities. It is probably not going to do all the job, however. One aspect is that reduced wages in the lagging regions will increase migration incentives, which, as seen above, may be problematic if the more productive groups of workers are leaving. More generally, policies to enhance regional productivity levels may also be needed (see Section 2.C).

A. Removing barriers to mobility arising from housing policies

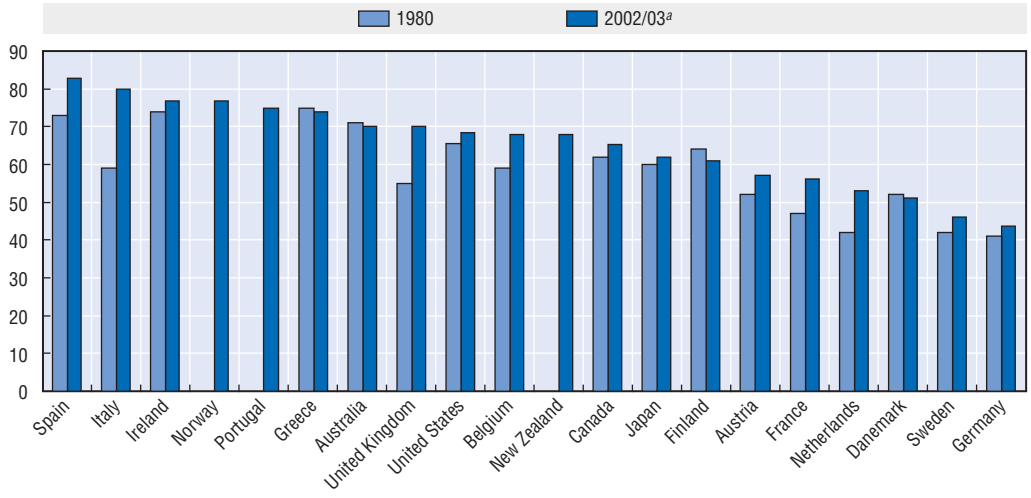
As already mentioned, geographic mobility of labour is not an end in itself, and the focus of this section is rather on removing potential obstacles to mobility in existing housing policies. As housing costs (mortgage payments or rents) are typically the largest component of households' budgets, decisions to change residence in order to take up a new job are likely to be influenced by housing market conditions and housing policies.

Home ownership tends to reduce mobility

Owner occupier is the largest single tenure category for households in most OECD countries. Its share has been increasing in most EU countries since 1980, and substantially

Chart 2.11. **Share of owner-occupied housing, 1980 and 2002/03**

Owner-occupied housing as a percentage of total occupied housing stock



a) 2001 for New Zealand, Norway and Portugal.

Source: Danish National Agency for Enterprise and Housing, Housing Statistics in the EU, 2003 for Austria, Denmark, France, Germany, Netherlands, Portugal and Sweden; Population and Housing Census, Statistics Norway for Norway; IMF, *World Economic Outlook* 2004 for other countries.

Statlink: *http://dx.doi.org/10.1787/146066386887*

in the United Kingdom, Italy, Spain, Belgium and the Netherlands (Chart 2.11). Three groups of countries can be distinguished: those with *i)* low owner-occupier rates, below 60%, in continental Europe and most of Nordic countries, which are generally characterised by rather large social-rented sectors; *ii)* mid-level owner-occupation, from 60 to 70%, comprising most of English-speaking countries, Belgium, Finland, Japan and New Zealand, and *iii)* high owner-occupation above 70%, including Southern European countries, Ireland and Norway.

Home ownership is frequently cited as an obstacle to geographic labour mobility. Home owners are less likely than others to move to a new location to accept a new job, due to high transaction costs and potential capital losses. This is suggested, for a number of European countries, by regression analysis carried out for the purpose of this chapter (Box 2.4) and is consistent with the empirical literature testing the links between housing tenure, mobility and unemployment performance. Both macro-studies, using variation between countries or regions over time, or micro-studies using individual data, generally find that high home-ownership rates tend to be associated with higher unemployment and/or lower job mobility (Table 2.5). These results are likely fragile though, due to possible selectivity bias – people who expect to move in the future are likely to chose rental housing over ownership. Moreover, the fact that ownership, job choice, and the choice of place of residence are jointly determined should also be taken into account. However, micro-studies, which use (longitudinal) data on individuals or households and generally take into account the endogeneity of housing decision, often conclude that home ownership is associated with lower residential or labour mobility or higher unemployment.[17]

Even if one accepts this finding at face value, it does not mean that governments should discourage home-ownership in order to promote geographic mobility. Decisions about whether to buy a new house or opt for rental accommodation depend on many socio-cultural factors that cannot be easily manipulated by policy. Instead, what is

Box 2.4. **To what extent are migration decisions related to the socio-economic characteristics of households?**

The table below provides econometric estimates of the extent to which socio-economic characteristics affect the probability to migrate for job reasons. A panel analysis is conducted for households belonging to 8 European countries (Austria, France, Germany, Greece, Italy, Portugal, Spain, and the United Kingdom) over the period 1994-2001. Data are taken from the European Community Households Panel (ECHP).

Change in the probability of migration by socio-economic characteristics of the household in Europe, 1994-2001

Probit model[a]

Housing tenure	
Reference household: Private rent	
Owner-occupied	–0.797***
Social rent	–0.203***
Rented from employer	0.096
Rent free	0.000
Educational attainment[b]	
Reference household: High-educated	
High and low/medium-educated	–0.102***
Low/medium-educated	–0.259***
Age groups[c]	
Reference household: Aged 25-34	
Aged 15-24	0.403***
Aged 35-44	–0.153***
Aged 45-54	–0.220***
Aged 55-64	–0.334***
Labour force and cohabitational status	
Reference household: Single employed	
Single unemployed	–0.033
Single inactive	–0.097**
Both employed	–0.118***
Employed and Unemployed	–0.075*
Employed and Inactive	–0.073**
Unemployed and Incative	–0.074
Both unemployed	0.121
Both inactive	–0.185***
Number of children	–0.045*
Country dummies	Yes
Observed probability (%)	0.80
Predicted probability (%)	0.89
Number of observations	128 638
test of Wald	1 522.2
R^2	0.1862

***, **, *, statistically significant at 1% level, 5% level and 10% level, respectively.

a) The coefficients listed above correspond to the impact of a discrete change in the dummy from 0 to 1 on the probability estimated at the mean points.

b) The educational attainment refers to the reference person of the household and its partner in the case of a couple family and only to the reference person for a single person. High-educated corresponds to tertiary education and low/medium-educated to upper and less than upper secondary education.

c) Average age of the reference person of the household and its partner.

Source: Secretariat estimates based on the European Community Household Panel (ECHP), waves 1 to 8 (1994-2001).

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Box 2.4. **To what extent are migration decisions related to the socio-economic characteristics of households?** *(cont.)*

As seen in the table, the observed probability of migration is very low, at 0.8%. This is partly explained by the fact that only households declaring that they changed residence for job reasons – *i.e.* about 15% of the households who changed residence – are included in the sample. A regression has also been run including all the households changing residence, whatever the purpose, and, although the probability of migration is higher (at about 5%), the effect obtained for the explaining variables are quite similar.

The reference household has been chosen as being the most likely to migrate: it is composed of a single person without children, renting its housing on the private market, highly educated, and relatively young (aged 25-34), and indeed his/her probability of migration predicted by the model, at 11%, is well above that predicted for the whole sample (0.9%).

The results obtained are consistent with those found in other empirical studies. The effects of the type of housing tenure on the probability of migration are relatively strong: homeownership significantly reduces the probability of migration compared with private rental, and social housing also reduces it, but to a lesser extent. As expected, the more educated are the head of the household and his/her partner, the more likely they are to move for job reasons. The analysis also finds that migration probabilities decline with age – the effect being statistically significant. Single persons are always more likely to move than couples. And while the probability is highest for employed single persons, the fact of having two members of the household employed is an obstacle to migration for job reasons. Finally, having children also reduces the likelihood to move for job reasons. The effect of unemployment on the probability to move does not come out in the regression. The unemployment differential between the region of origin and the region of destination of households has been tried out but are not significant. This is also the case for the national unemployment replacement rate (gross or net), which is not really surprising given the lack of individual information provided by this measure. Finally, although it would have been interesting to introduce a distance variable to explain the probability of migration, this has not been feasible due to lack of appropriate data.

important is to remove certain obstacles to mobility available in current regulations as well as tax and benefit systems pertaining to housing markets.

Tax and subsidy systems tend to favour homeownership

Housing policies have played a major role in ownership developments.[18] In most OECD countries, the tax and subsidy systems have favoured home ownership and squeezed the development of rental market through its effect on housing supply and demand (Table 2.6); Germany is an exception. In part, to an unknown extent, incentives have been capitalised into property values,[19] but they have also contributed to high ownership rates. The rationale for this policy is not always clear. Support to housing at large is often justified by the specific nature of housing as a good and the positive externalities for society associated with its consumption (Laferrère, 2005). As to ownership, it is often argued in the United States that positive external effects on the community are larger in the case of owners since they are more invested in the community than renters.[20] Positive effects on children's education are also invoked, especially for low-income households (Boehm and Schlottmann, 2001).[21] In many countries, incentives to homeownership have been provided to support the construction sector and/or economic activity at large.

Table 2.5. **Selected empirical studies on housing tenure, job mobility and unemployment**

Study	Type of data	Country/area	Main results
A. Housing tenure and unemployment (and/or employment)			
Oswald (1999)	Macro	OECD	Ownership increases unemployment.
Green and Hendershott (2001)	Macro/meso	United States	Ownership increases duration of unemployment.
Van Leuvensteijn and Koning (2000)	Micro	Netherlands	Ownership reduces unemployment probability and shortens its duration.
Flatau *et al.* (2004)	Macro/meso	Australia	No significant relationship.
Brunet and Lesueur (2003)	Micro	France	ownership increases duration of unemployment.
B. Housing tenure and residential/labour mobility			
Van Ommeren (1996)	Micro	Netherlands	Ownership reduces the probability of migration.
Böheim and Taylor (1999)	Micro	United Kingdom	Private renters are the most likely to move; mortgage holders are the least likely to move.
Gardner *et al.* (2001)	Micro	United Kingdom	Private renting increases the probability to move for job reasons.
Barcelo (2003)	Micro	France, Italy, Germany, Spain, United Kingdom	Ownership (and social renting) reduces probability of migration of unemployed, but not probability of finding a job in the local labour market.
Henley (1998)	Micro	United Kingdom	Negative housing equity affected mobility in the early 1990s; mobility is rather unresponsive to labour market conditions; travel-to-work effects are weak, suggesting high transaction costs for owner-occupiers.
Cameron and Muellbauer (1998)	Macro/ regional	United Kingdom	High housing prices and negative returns on housing markets reduces mobility, all the more so when ownership rate is high.
Gobillon (2001)	Micro	France	Ownership and social renting reduces mobility.
Van Leuvensteijn and Koning (2004)	Micro	Netherlands	Housing tenure is strongly affected by job commitment , while home-ownership does not affect job mobility.

Incentives to promote home ownership take several forms, and although still pervasive, their size has been reduced in a number of countries (Table 2.6). The main tax incentive for owner-occupation is the ability for households to deduct all or part of the interest paid on their mortgage from their income for tax purposes. This incentive exists in most OECD countries, although it has been reduced in several European countries since the mid-1990s. France and the United Kingdom have simply abolished it, while Denmark, Finland and Greece have limited its scope (Scanlon and Whitehead, 2004). A second tax incentive, available in most OECD countries, is that sales of owner-occupied housing are free from capital gains tax if certain criteria are met, such as minimum holding period and value ceilings (Catte *et al*., 2004). Thirdly, many countries do not tax the imputed rental income from home ownership. On the subsidy side, subsidised mortgage interest rates, often following the German *Bausparen* model (Scanlon and Whitehead, 2004), are most common, with eligibility often being limited to buyers of new homes, young people, and/or first-time buyers. Some countries have recently tightened regulations on these subsidies to ensure that they are in fact used to purchase housing (France and Portugal), while others, such as Sweden, have abolished them.

In some cases, regulation of the rental market has also served to bias incentives towards ownership. Housing market imperfections justify the existence of rental regulations,[22] but experience has shown that strong de-linking of rents from housing market conditions curtails the size and hinders the functioning of rental markets by reducing supply. This has led many OECD countries to revise their rental market policies, allowing a wider use of short-term contracts and of rent-indexation clauses and

Table 2.6. **Policy incentives to home ownership in selected OECD countries**

	Tax and subsidy incentives to owner-occupation over rental	Evolution of tax relief to home ownership or rental
Australia	Support	Increasing
Austria	Support	Decreasing
Belgium	Strongly support	Constant
Denmark	Support	Decreasing
Finland	Neutral	Constant
France	Support	Decreasing
Germany	Discourage	Decreasing
Greece	Support	Decreasing
Italy	Strongly support	Decreasing
Netherlands	Strongly support	Decreasing
Spain	Support	Decreasing
Sweden	Neutral	Decreasing
United Kingdom	Strongly support	Decreasing
United States	Strongly support	Increasing

Source: OECD Secretariat, based on Ball, M. (2003), "European Housing Review 2004", Royal Institute of Chartered Surveyors (RICS), Ireland; and Scanlon, K. and C. Whitehead (2004), "International Trends in Housing Tenure and Mortgage Finance", CML Research, London, November (*www.cml.org.uk/servlet/dycon/zt-cml/cml/live/en/cml/pdf_pub_resreps_51full.pdf*).

liberalising to varying degrees new rental contracts (ECB, 2003). Some countries, such as Germany, Portugal and Spain, have made one-off adjustments to bring old rental contracts more in line with new ones. But in many countries a significant part of the rental market remains effectively strongly regulated, with the other part facing tight conditions and rapidly rising rents (a problem especially acute in the Czech Republic; OECD, 2005b).[23]

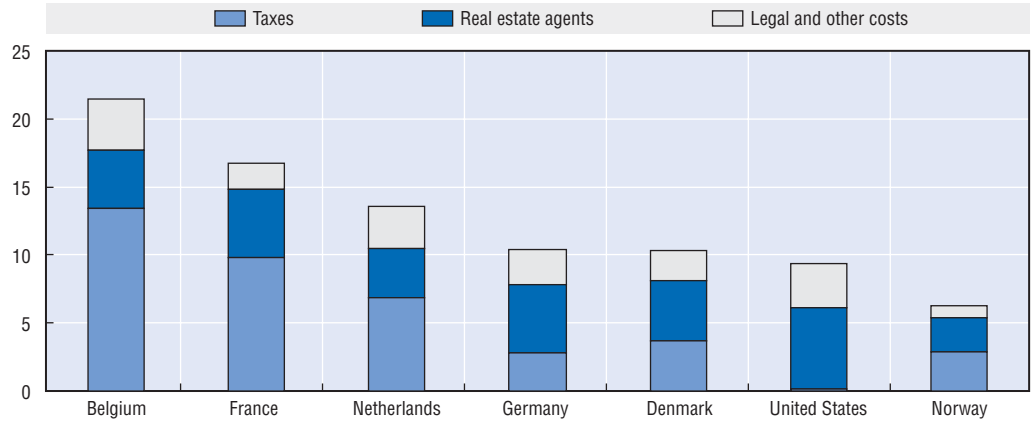
While disincentives previously weighing on the supply of rental accommodation have been removed, housing costs of new entrants on the market such as cash-constrained young households and people who want to move location have thus been raised. Complete liberalisation, however, would entail a significant deterioration of living standards of households on old rents that probably would not be addressed by the existing benefit systems. In times of budget consolidation, governments have difficulties designing and implementing compensation schemes for the low-income households and often prefer the *status quo*.

Higher transaction costs and the risk of capital losses probably make homeowners less mobile

Homeowners can face high transaction costs when they consider moving to a new location to accept a job. They have to pay *ad valorem* taxes such as stamp duties at the time of the title transfer, which can be quite high. In addition, lawyers have to be present at conveyance in many countries, and they levy legal fees.[24] Recording and conveyance fees are also often levied by local governments. Finally, the amounts charged by real estate agents, who are often a necessary intermediary in the search process, are generally quite expensive – possibly reflecting problems in the functioning of brokerage markets. While they are less than 2% in the United Kingdom and 3% in Japan and New Zealand, commission rates are most often higher in other OECD countries, reaching 6-7% in the United States (Delcoure and Miller, 2002). As to the overall transaction costs, there are few comparable estimates across countries; those that are available are not recent and cover a limited number of countries. They suggest that transactions costs are generally higher in continental European countries than in Nordic countries and the United States (Catte *et al.*, 2004) (Chart 2.12). Other sources

Chart 2.12. **Transaction costs in housing markets in selected OECD countries**

Percentage of the transaction value



Source: Denmark, Ministry of Business, "Boligrapport" 1997.

Statlink: *http://dx.doi.org/10.1787/426614483382*

indicate that they are lowest in the United Kingdom,[25] which goes hand-in-hand with high transaction levels in that country.

Besides transaction costs, moving may entail important capital losses for homeowners.[26] Housing not only accounts for a large part of households' monthly outlays, but also represents an important medium to store their wealth. And, by definition, people who lose their job are more likely to live in regions experiencing recessions that in turn drive down the prices of houses. This can make housing a highly illiquid asset, as households become unable to finance a down payment on a new home from the sale proceeds of their current home. When indebted, they will also need additional funds to repay the existing mortgage. The effect may be especially strong for households with high initial loan-to-value ratios, and can also be reinforced in times of high interest rates, as many households may become locked-in to below-market interest rates. When the downturn has a particular regional focus, lock-in effects associated with negative equity may last in the worst affected regions and may interact with transaction cost factors. Henley (1998) finds evidence of such an effect for the United Kingdom in the 1990s during the boom in housing prices, and Chan (2001) for the United States in the first half of the 1990s.

Social housing could be made more mobility-friendly

Empirical studies also find evidence that social housing tenure reduces mobility compared with private rental, although less than homeownership. Obviously, social housing renters have specific characteristics which make them less prone to move in the first place (reflecting, *inter alia*, lower income levels and larger family size). However, controlling for these factors, Barcelo (2003) confirms this result for a number of European countries, Gobillon (2001) for France and Gardner *et al.* (2001) for the United Kingdom. It also comes out quite clearly in the econometric analysis presented in Box 2.4.

For a social housing tenant, moving location is likely to imply losing access to social housing, thus reducing significantly the gains associated with taking up a new job in another region. Indeed, social rents being most often substantially below market levels, social housing supply is commonly rationed and queuing is widespread. Being a resident in the area is often an eligibility criterion required, with minimum residence periods

required in some cases, and the length of the waiting period is very often a criterion considered in the allocation process. Besides, while income levels are taken into account for access to social housing in most countries (except Australia), there is often no means-testing once the tenant is in the flat; for people who have increased their income level, moving would thus imply losing access to social housing.[27]

The importance of this disincentive effect on mobility has probably been reduced since the 1980s, along with the size of the social housing sector. Only Germany and Ireland, where the sector was relatively small, have given renewed priority to investment in social housing in the 1990s. For a number of reasons – mainly the fact that direct social housing supply does not achieve the equity objectives in countries in which income level matters for access but not afterwards, and problems associated with the geographical concentration of disadvantaged population groups – governments have progressively shifted social housing support from direct supply of housing towards housing allowances. With rising housing prices and rent levels, the sums allocated to housing allowances have been growing strongly in many countries; in France for example, 45% of the tenants benefit from this scheme and the benefit covers about half of the rent (Laferrère, 2005). Compared with direct supply, housing allowances have no direct disincentive effect on mobility.[28] There may be an indirect effect, however, as they have been found to cause rent increases, which discourages mobility. Susin (2002) finds that low-income renters in the 90 largest US cities have incurred higher rent increases where there is more housing "vouchers". Laferrère and le Blanc (2004) also find higher rent increases for households benefiting from housing allowances, as landlords are able to capture part of the subsidy. Despite these indirect effects, from the point of view of mobility, housing allowances remain probably a more effective instrument than direct provision.

Policy reforms to avoid that social housing allocation mechanisms and rent-setting methods as such impede mobility have not been implemented yet. Some countries, such as France in its "Plan de cohésion sociale", have made an explicit link between the lack of social housing and employment problems and policy, and plan to increase the supply of social housing.[29] One possibility in terms of the management of the existing stock, might be to waive residency or queuing requirements in the case of unemployed workers taking up a job in the region.

This raises a number of institutional/governance issues, however. While the central government is generally funding a large part of social housing investment, it is rarely involved in the management of the social housing stock. The structure of the organisation that manages social housing and the degree of governmental control – whether national, provincial/regional or local – differs across countries. In Australia, most social housing is administered by state governments, while in Ireland, the United Kingdom and the United States, local governments are mostly in charge (Ditch *et al.*, 2001). In France and the Netherlands, most of the stock is managed by housing associations, some of the French ones being linked to local authorities. Co-ordination among these various organisations is thus difficult to implement, especially when they are local as they may have little interest in providing priority for social housing to a person from another region taking a job that a local unemployed might have taken. The United Kingdom is trying to put in place a system aimed at helping social tenants to move. It consists mainly in centralising in one place (electronically) information about job and social housing opportunities in other areas and facilitating the use of already existing systems for mobility (including home swaps).[30]

Increasing housing prices and precarious labour conditions make mobility difficult for the less skilled

As mentioned above, it is likely that the move required to find a new job will lead the unemployed person to a region with higher economic activity than its region of origin. Housing prices have increased substantially since the mid-1990s in a number of OECD countries, especially in growing regions, making it difficult for low-income people to move. The rising trend in temporary employment observed in a number of OECD countries (OECD, 2002) is also hampering mobility; on a tight housing market, it is very difficult that a landlord will rent his/her flat to someone who has only a temporary contract in hand. This is also the case for potential tenants on permanent contracts but with no financial guarantee. Little evidence is available on programmes possibly in place in some countries to alleviate this problem and it is unclear what type of measures would be appropriate.

B. Ensuring that unemployment insurance benefits and ALMPs do not inhibit mobility and support change

The role of unemployment insurance and other related welfare benefits is to provide some income replacement in case of unemployment. As underlined in OECD (2003) and Chapter 3 of this publication, what matters most is to ensure that such transfers do not result in the unemployed exiting the labour force, but rather contributes to their return to employment. Beyond this general mobilisation issue, some features of the transfer system may inhibit potential geographic mobility more specifically.

Unemployment benefits may reduce or support mobility, depending on design features of the system

In theory, the effect of unemployment insurance (UI) benefits on geographic mobility is ambiguous. On the one hand, providing an income replacement reduces the opportunity cost for the unemployed of rejecting a job offer. This is true whatever the location of the job, but given that mobility has a cost, people who are well insured against the risk of unemployment will in principle have a lower incentive to move to regain employment (see for example Hassler *et al*., 2001). On the other hand, as will be noted below, availability of income-replacement benefits may support mobility if benefits are provided hand-in-hand with job-search support and mobility requirements. In particular, income support may relax the financial constraints associated with search and moving costs and thus favour mobility, especially for low-skilled unemployed. In addition, income-replacement systems may help improve the matching of vacancies with unemployed job-seekers and ensure that more workers are employed in activities where they have their comparative advantage, thus supporting allocative efficiency (Marimon and Zilibotti, 1999). Obviously, the net effect of benefits will depend on design features of the system in terms of eligibility conditions, level and duration of benefits. The impact on job-search behaviour will also depend on the groups – the disincentive effects being probably stronger for low-wage job-seekers (Carone *et al.*, 2003).

To some extent this is an empirical issue. The higher generosity of UI in (continental) European countries has often been presented as one factor explaining lower labour mobility in Europe compared with the United States. Likewise, in Canada, since 1971, eligibility conditions to unemployment insurance (now called Employment Insurance) are easier in regions recording high unemployment levels, which may have reduced incentives to move to low-unemployment regions.[31]

There is no clear correlation between UI net replacement rates and gross migration rates across countries. Recent empirical studies trying to assess the link between unemployment insurance and geographic mobility come to a similar conclusion. Using household data for France, Germany, Spain and the United Kingdom for the 1994-2001 period, Tatsiramos (2004) finds that receiving unemployment benefits does not reduce the probability to move, except for Germany. The gross replacement rate does not come out in the regression shown in Box 2.2 either.

In general, the policy issue is one of ensuring that income-replacement benefits support job-search and do not create obstacles to mobility. In most OECD countries, eligibility criteria for unemployment benefits include requirements on geographic mobility. In Germany, Norway, and Sweden, there is a requirement for geographic relocation in principle, but the wording of legislation is often vague and the risk of being forced to accept a job at the other end of the country is probably very small (OECD, 2000). Requirements concerning travel-to-work time, rather than geographic relocation, tend to be more precise in most countries, ranging from two hours in the United Kingdom to four hours in Belgium (Table 2.7). Some countries, such as France and Japan, do not have requirements on this count, while others, such as Austria, Norway and Sweden, require the unemployed to accept work anywhere in the country, in principle. Most countries have some waivers regarding the obligation to accept a job fulfilling these requirements, the most common one being not to endanger family life, but they are rarely precisely defined. In general, it is difficult to assess how these requirements are implemented in practice.

Effective active labour market policies can stimulate job-search in general and may include mobility support

In some countries, such as Finland and Sweden, active labour market policies (ALMPs) have been assigned the explicit aim of reducing unemployment in regions where it is high (for a general discussion of the role of ALMPs see Chapter 4). However, fears have been expressed that programmes targeted at high-unemployment regions may have had an adverse effect on adjustment by locking-in displaced workers in depressed regions, thus aggravating the persistence of regional unemployment disparities. By definition, demand-oriented programmes such as public works or wage subsidies provide a job locally and thus prevent mobility during programme participation, but this is not a problem *per se*. However, programme participation often allows participants to re-qualify for a new period of unemployment benefit, and they may entail more long-run locking-in effects on individual search behaviour and mobility.

A number of empirical studies based on micro-data, mostly for Finland and Sweden, have attempted to test the link between ALMPs and mobility. Fredriksson and Johansson (2003) find that participation in job creation and training programmes during 1993-1997 in Sweden has reduced the outflows to jobs outside the home region, a result driven mainly by the fact that programme participation reduces employment prospects in general. By contrast, Lindgren and Westerlund (2003), using other data sets covering the 1993-1995 period, conclude that the *type* of programmes matters: participants in training programmes exhibit greater post-programme mobility than those in demand-oriented programmes or those in open unemployment. Higher mobility among the programme participants than among the open-unemployed is due to higher probability of commuting, while the probability of migration is lower. For Finland, Hämäläinen (2002) finds that obligatory job placement and youth measures increased the likelihood that the unemployed would

Table 2.7. **Conditions required for an unemployed to accept a job entailing commuting**

	Distance and/or time of commuting	Family or other waivers	Sanction in case of refusal
Australia	Up to 90 minutes journey between home and place of work or number of people living in the same area regularly commute; cost less than 10 per cent of wage.	–	First time: 18 per cent reduction of allowance for 26 weeks; second time: 24 per cent for 26 weeks; other times: disqualification for 8 weeks.
Austria	Full mobility if family not endangered.	Yes	Suspension of benefits for 8 weeks.
Belgium	After 6 months, up to 4 hours commuting or absence from home of more than 12 hours; these causes cannot be invoked if less than 25 km.	No	–
Czech Republic	No precise conditions; places outside residence region should be included in job search unless serious family reasons proven.	Yes	Disqualification from entitlement and possibly from the list of job seekers.
Denmark	Up to 3 hours commuting during the first 3 months; more after. Workers with at least bachelor cannot refuse any transportation time if the vacancy cannot be filled otherwise.	Yes	First time: suspension of benefits for 3 weeks; disqualification from entitlement if two refusals in 12 months.
Finland	Job in home and neighboring regions should be accepted; single without children should even accept job outside this area.	Yes according to specified list of criteria (health, working hours, obligation to take care of children, etc.).	Suspension of benefits for 60 days; 90 days if repeated refusals.
France	No requirement.	–	–
Germany	Up to 2 and 2.5 hours commuting if daily working respectively under or above 6 hours. Can be exceeded in regions with long distance. Unemployed can also be asked to move to take up a job unless important reason and/or important costs.	Yes for moving.	Suspension of benefits for 3 weeks the first time, 6 weeks the second time, or 12 weeks any other time, with entitlement period cut accordingly.
Ireland	Full mobility within reasonable distance.	No	Suspension of benefits for 9 weeks.
Iceland	Requirements evaluated for each unemployed.	No	Suspension of benefits for 8 weeks.
Italy	Up to 50 km commuting.	No	Loss of unemployment seniority?
Japan	No requirements.	–	-
Netherlands	Up to 3 hours daily commuting with public transport.	No	Disqualification from entitlement to benefits.
Norway	Full mobility within the country.	For older workers or important social reasons including responsibility of children; no obligation if wage inferior to unemployment benefit.	Suspension of benefits for 8 weeks the first time, 12 weeks the second time in 12 months, 6 months if three times in a year.
Portugal	Full mobility if no serious prejudice to the unemployed or his/her family.	Yes	Disqualification from entitlement.
Spain	Less than 30 km except when commuting time exceeds 25 per cent of daily working time; cost less than 20 per cent of wage with a lower bound on the wage minus cost trip equal to the minimum wage.	Yes	Suspension of benefits from 3 months the first time, 6 months the second time.
Sweden	Full mobility within the country after the first 100 days of unemployment.	Yes for certain family reasons, for medical reasons, lack or high costs of transport or problems in finding accommodation; no obligation if wage inferior to 90 per cent of daily unemployment benefit.	25 per cent reduction in benefits for 40 days the first time, 50 per cent for 40 days the second time, disqualification from entitlement if third time.
United Kingdom	Up to 1 hour commuting distance each way.	Yes for religious or conscientious objection, or possible health damage.	Between 1 and 26 weeks of suspension of benefits.
United States	Required commuting distance varies according to area; travel expenses can be taken in to account in some states.	–	Disqualification from entitlement in most states; suspension (1 to 10 weeks in some) in a few states, with benefit amount sometimes reduced when suspension terminates.

Source: OECD based on Danish Ministry of Finance (2004), Availability criteria in 25 countries.

migrate to another region in periods of high unemployment, although the effect of ALMPs remains moderate compared with other factors such as family ties and wealth.

A number of countries provide financial support to assist unemployed people to move for job-related reasons. Such schemes have been in place at least since the mid-1980s in Austria, Finland, Norway, and Sweden and since 1990 in Switzerland. France introduced mobility support in 2002. The budget allocated to these schemes is very small – representing between 0.1% (France, Norway and Switzerland) and 0.5% (Austria, Germany and Sweden) of total expenditures on ALMPs. Relocation assistance to help a job seeker accept a job offer in a different location is also one type of support available for unemployed in Australia as part of the "Active Participation Model" introduced in 2003. Canada has phased out a mobility assistance scheme. A few countries, such as Austria and the United Kingdom, also have schemes covering travel and/or accommodation expenses for interviews, when the job is located beyond normal travelling distance. An evaluation of the "travel to interview scheme" in the United Kingdom evidenced that it is typically used by those seeking jobs demanding relatively high levels of skills and paying relatively high wages. It was not clear whether the assistance was allowing additional job search outside the local area.[32]

C. Promoting job creation at the local level

The previous sections looked at how to remove barriers to workers' mobility. This section examines policies which have been adopted with the specific purpose of bringing jobs to depressed areas. This includes targeted programmes, including subsidies, tax concessions and other support to local economic development.

Although few evaluations of such policies are available, it is possible to identify, on a priori grounds, certain conditions under which a local dimension to employment policies can be effective. First, programmes that help bring jobs to depressed areas should not be carried out in a manner than impedes mobility of jobseekers to high-employment areas. This is especially important in cases where local authorities are funded on the basis of population numbers, without any consideration for their ability to place jobseekers into jobs – indeed, in such a setting, local authorities may have little financial incentive to facilitate mobility. Second, attention should be given to the risk that local governments shift clients that they serve through locally-financed benefits (*e.g.* social assistance in some countries) to benefits funded from the programmes that central governments decentralise (*e.g.* certain active labour market programmes). Third, and more fundamentally, it is essential to complement local employment programmes with measures that directly address the causes of local backwardness, such as governance weaknesses or poor infrastructure.

Targeted programmes: the example of Enterprise Zones

Central governments may intervene by targeting policies and expenditure on areas that suffer from marked unemployment problems. While this geographical targeting of national measures may focus directly on job creation by providing firms with employment subsidies in selected distressed areas, in many cases, it aims at promoting economic development in general, through a range of support measures for productive investment, rather than employment in particular.

The Enterprise Zone concept was among the first of this type of policy to be developed. It was initially launched in the United Kingdom in the early 1980s to stimulate property development as well as industrial and commercial investment in selected areas by the removal or reduction of certain fiscal burdens, principally local taxes and taxes on capital investment,

and by the streamlining of administrative procedures and the reform of certain statutory controls such as planning regulations. These incentives were not be available outside the Zones and the designation was time-limited. The concept has then been taken up in a number of other OECD countries, including the United States and several European countries.

The basic idea of such programmes is that local employment can be stimulated through the provision of tax breaks and other subsidies to the creation of firms and jobs. Some studies show that indeed a number of jobs may have been created in Enterprise Zones in the United Kingdom and the United States. However, there are some doubts as to the net employment effect of such policies, for several reasons:

- Some of the new jobs would have been created, even in the absence of the schemes (so-called deadweight effects);
- some firms that have moved into the Enterprise Zones were in fact coming from neighbouring areas (geographic displacement), thereby leading to limited net gains for the local labour market as a whole; and
- there are cases where the new jobs (truly) created have been filled by workers coming from other areas.

The bottom line is that, unless Enterprise Zones address the underlying causes of economic stagnation, it is difficult that they will help improve prospects in a significant manner. For instance, limited infrastructure facilities and poor local government services – all important factors which may often explain local economic problems – are not addressed through the creation of Enterprise Zones.

Decentralisation of employment programmes

Several countries have moved towards a more decentralised setting of employment policies. Although such a move has often responded to socio-political considerations, the view that a more decentralised approach would help reduce regional disparities has also played a role. Greater decentralisation in the management of employment programmes may be part of a strategy to enhance overall policy effectiveness, which may thus improve employment outcomes in all regions. In addition, decentralisation of employment policies may help design programmes tailored to local requirements of depressed areas, and thus instil greater economic dynamism and job creation in those locations.

Various options are available:

- In a few OECD countries, design and implementation of policies are fully devolved to regional authorities. Some federal countries provide example of this form of decentralisation (Belgium, Canada, Mexico, Switzerland and the United-States) and so do Italy and Spain (see Giguère, 2003; OECD, 2003, p. 15). Some of these countries have recently devolved some responsibilities in an asymmetric way, giving more competencies to some of the regions according to their administrative capacity and willingness to endorse responsibility in the field of labour market policy.
- Trade unions and employer organisations may also play a role in shaping employment programmes at the regional level. In Austria and Denmark, for example, regional concerns are integrated into a single decision-making authority comprising representatives of business, trade unions and government. Those regional boards are responsible for designing or implementing programmes at the regional level, following guidelines or within a policy framework established at the national level.

- According to OECD (2001), local partnerships may stimulate the take-up rate of central government programmes, while also tailoring implementation to local requirements.

It is difficult to gauge what approach works best and under what circumstances. There are few evaluations in this area. Nevertheless, it seems that funding arrangements can play a role in shaping the effectiveness of decentralisation of employment programmes. Indeed, the main funding source for active labour market programmes and unemployment benefits is usually a central authority. Thus, for public accountability, regional policy outcomes need to be reported to the central authority. Even in the case of full devolution of policy-making competencies, regional and central authorities have to agree on an accountability framework that necessarily sets objectives for regional employment policies.

Canada provides an interesting case in point of the dilemma between accountability and flexibility in policy management that a central funding of regional initiatives may pose. To achieve this, Canada has created an accountability framework that provides for the establishment of results targets based on regional and local labour market needs and priorities (see Box 2.5).

Funding-for-results arrangements, though useful, have sometimes raised concerns about possible mismatch between the responsibilities devolved to lower levels of government and the level of funds being transferred. Indeed, the size of the employment challenge may be greater in some regions than in others and it is therefore necessary to adapt funding arrangements accordingly.

Box 2.5. **Decentralisation of employment policy in Canada**

In 1996, the federal government gave provinces the opportunity to become responsible for the design and delivery of actives measures for Employment-Insurance (EI) recipients through Labour Market Development Agreements, while reserving the authority to determine the overall funding level and client eligibility (see Rymes, 2003). Not all provinces were interested in this proposal and consequently, two quite distinct types of agreements emerged: full-transfer within the federal funding and client eligibility constraints, and co-management under which the provinces play a significant role in planning of active labour market measures while the responsibility for actual delivery of programmes is left to the federal government. The federal proposal, on which the LMDAs are based, requires provinces to meet seven policy objectives, which require that active measure must:

- Be result-based.
- Incorporate an evaluation of outcomes.
- Promote cooperation and partnership with labour market partners.
- Involve local-decision making.
- Eliminate unnecessary overlap and duplication.
- Encourage individual to take personal responsibility for finding employment.
- Ensure service to public in their official language, where there is significant demand.

Given these federal requirements, agreements negotiated contain mechanisms to monitor the extent to which the objectives are met, regardless of whether an agreement is full-transfer or co-management. All agreements contain annual numerical target for EI claimants served and savings generated to the EI account (resulting from EI claimants returning to work earlier than expected). These targets ensure that the provincial active labour market programmes are result-based in that they reduce the dependency of individual on government assistance.

In short, adapting employment programmes to regional requirements may stimulate local initiatives and enhance policy effectiveness. However such an approach should be conducted within a common framework agreed between central and regional authorities. Moreover, funding arrangements should be outcome-oriented while also taking into account regional disparities in the size of the adjustment challenge. This is an area where more evaluations are needed.

Conclusions

The chapter shows that there is likely to be a regional dimension to employment problems observed in many OECD countries. The fact that regional disparities persist – and, more significantly, that high-unemployment regions coexist with regions where there is near full-employment – is a matter of policy concern. Such a situation suggests that the job creation process could be constrained to some extent by regional factors.

However, in order to better assess the precise nature of the policy response, more research needs to be carried out on the underlying factors at work. In particular, the relative role of demand-side barriers (*e.g.* when wages do not reflect productivity differentials) *versus* supply constraints like poor local infrastructure or local governance problems, deserved further scrutiny. Moreover, many the factors that have been suggested as possible remedies to regional imbalances interact with each other, and this needs to be taken into account. For instance, there are links between wage adjustments, geographic migration and housing prices that need to be considered as part of a "general equilibrium" framework – unfortunately this cannot be performed at the moment due to lack of data by region on earnings, housing prices as well as other relevant indicators.

Finally, there may be links between internal migration (the purpose of the chapter) and international immigration. Indeed, in the face of labour shortages in dynamic regions, international immigration can be a substitute for internal migration.

Notes

1. Of course, it is equally possible that actual regional patterns reflect a combination of country-wide and region-specific factors, requiring action on both counts.
2. Similarly, unemployment rates tend to be lower in regions with high employment rates than in those with low employment rates. Indeed, the correlation between the employment rate and the unemployment rate at the regional level is generally strong and significant, in excess of –0.8 in a majority of countries (see Annex Table 2.A2.1 in OECD, 2005c).
3. Evolution of regional inequalities is measured by the change in the Theil index. The Theil measure of inequalities is a weighted average of relative regional outcomes, which is qualitatively very similar to a weighted coefficient of variation (for instance, when calculating a Theil index and a weighted coefficient of variation for each country, the cross-country correlation between these two indices of regional dispersion is positive and very strong). It is equal to zero when all regional outcomes are identical and then increases with regional disparities. In addition, the Theil measure of inequalities makes it possible to decompose overall regional disparities into disparities between countries and disparities within countries.

   Let us consider a broad geographic zone Z that contains n regions (denoted by i = 1 to n), which in turn are included in k countries (denoted by j = 1 to k). The Theil index of regional disparities in employment rates, across the broad geographic zone Z as a whole, is given by:

$$T = \sum_{i=1}^{n} \frac{P_i}{P} \times \ln\left(\frac{ER}{ER_i}\right) = \underbrace{\sum_{j=1}^{k} \frac{P_j}{P} \times \ln\left(\frac{ER}{ER_j}\right)}_{\text{between-country disparities}} + \underbrace{\sum_{j=1}^{k} \frac{P_j}{P} \times T_j}_{\text{average within-country disparities}} \quad \text{With} \quad T_j = \sum_{i=1}^{n} \frac{P_i}{P_j} \times \ln\left(\frac{ER_j}{ER_i}\right)$$

where ER, ER_j and ERi_i are, respectively, the average employment rate in the broad zone Z, the country j and the region i. P, P_j and P_i denote, respectively, the working-age population in the broad zone Z, the country j, and the region i. T_j is the Theil index of regional disparities in employment rates for the country j. The index for regional disparities in unemployment rates is obtained by simply replacing employment rates by unemployment rates in the previous formulae, and the working-age population by the labour force.

4. And even when the employment rate of an individual region is positively related to that of its non-neighbouring regions in the same country, the correlation tends to be less strong than with its neighbouring regions. For individual country results see Annex Table 2.A2.3 in OECD (2005c).

5. Belgium and New Zealand are the main exceptions to this general picture: at least over the past decade, demographic changes seem to have acted in both countries as the main source of regional disparities in employment rates. For Greece, results are mainly driven by the Attiki region, which represents more than one-third of the Greek working-age population, and where employment rate remained in 2003 slightly below the national average despite a relatively strong employment growth over the past decade.

6. In all other countries, the average unemployment rate of regions that ended up in 2003 with employment rates lower than the national average is often 20% higher than that of regions with relatively high employment rates, while in most cases, the average participation rate is less than 10% lower – see the two final columns in Table 2.3.

7. In the review of literature by Elhorst (2003, Table 3), the effects of employment shares in manufacturing or market services on regional unemployment rates vary from one study to another, being either positive or negative.

8. For instance, Clark (1998) attempts to quantify the roles of national, regional- and industry-specific shocks on regional employment growth in the United States. The analysis is conducted over the period 1947-90, for nine census regions and eight one-digit industries. It shows that as much as 40% of the variance of employment growth may be attributed to its region-specific component. In comparison, industry mix would account for only 20% of the variance, the remaining being ascribed to the national business-cycle component (see also Meunier and Mignolet, 1995 or Toulemonde, 2001, for Belgium; Rissman, 1999, for the United-States; Mitchell and Carlson, 2005, for Australia).

9. The age structure accounts for about 10 to 20% of the difference in employment rate performance between low- and better-performing regions in France, the Netherlands, Norway and Sweden, and 30 to 40% in Ireland and Korea. See Annex Table 2.A2.4 in OECD (2005c).

10. There are also negative externalities associated with agglomeration, in particular congestion effects, that are limiting its progression. For example, higher land and property prices have led some manufacturing firms to leave larger cities and relocate their activities in areas with lower real estate prices.

11. International migration flows are not taken into account.

12. For European countries, migration rates are computed from cross-section EULFS data (Annex Table 2.A1.2) based on a retrospective question where individuals are selected on the basis of place of residence; and the sampling method is such that there should be no selection bias *vis-à-vis* migration. By contrast, using such data may be problematic to conduct a longitudinal analysis.

13. Data on internal migration at regional level 2 are not available for Norway, but a recent report on regional labour mobility using more disagreggated figures (*i.e.* smaller regions) concludes that internal migration contributed positively to net job growth over the 1990s, although with decreasing importance towards the end of the period (Stambøl, 2005).

14. See for example Verkade and Vermeulen (2004) for the Netherlands. Between 1998 and 2003, commuting rates increased by about 3.2 percentage points in the Netherlands (Level 1), 0.2 percentage points in Spain (Level 1), 0.6 percentage points in France (Level 2), and 1.2 percentage points in Germany.

15. This is not the case for the United States, but commuting flows at the state levels have little relevance given the large size of states. Commuting rates are much higher at a finer regional level. For example, Shields and Swenson (2000) find that commuting rates at the county level was as high as 30% in Pennsylvania.

16. Although it obviously depends on the size of regions, commuting across regional boundaries is likely to imply relatively long commuting time.

17. The Netherlands is an exception: van Leuvensteijn and Koning (2000 and 2004) find that home-ownership reduces the probability of becoming unemployed. Yet this could reflect the importance of rental subsidies and the social rental sector, which implies that the income loss associated with losing one's job and thus the incentive to find a new one quickly is much higher for owners than for renters.

18. Another structural factor underlying differences in the level of owner occupation across countries is access to mortgage markets. Efficient housing finance systems, as available in Canada, Denmark, Finland, Ireland, the United Kingdom and the United States, lower the cost of borrowing and, *ceteris paribus*, make it easier for households to buy a house. However, the link between mortgage markets development and access to ownership is not always straightforward. In Italy and Spain, for example, sizeable intergenerational transfers have allowed households to overcome the relatively limited lack of development of mortgage markets and the ensuing borrowing constraints households are facing (see Guiso and Japelli, 1998; and Chiuri and Japelli, 2001). Yet, the depth of mortgage markets influences the age profile of homeownership, allowing young household to access ownership.

19. See OECD (2004b) for an illustration in the Netherlands' case.

20. Glaeser and Shapiro (2002) outline two aspects of this investment. First, a home's value is tied to the strength of the community, which provides owners with incentives to act and vote for things which make their community more attractive. Second, they face incentives to take better care of their home than renters.

21. It is not clear, however, whether empirical evidence in this area really captures the benefits of home ownership rather than other characteristics of the households.

22. See, for example, Hubert (2003) and Laferrère (2005).

23. In Denmark, the liberalisation has even been limited to specific segments of the new rental stock.

24. French "notaires" provide a good example: the profession is closed to competition, and they charge for their compulsory intervention about 0.8% of the value of the real estate transaction.

25. See *The Economist*, 3 September 1998. Data refer to non-tax transaction costs only, but taxes on housing transactions are low in the United Kingdom. Australia (New South Wales) also ranks low, but stamp duties are higher (3%; see Flatau *et al.*, 2004). Data for 1993 reproduced in MacLennan *et al.* (1999) indicate that transaction costs are very high in France and Spain, lower but still significant in Germany, Italy and the United States, and much lower in the United Kingdom.

26. Oswald (1999) also emphasizes a number of "indirect" effects. Areas with high home-ownership rates tend to have greater planning laws and restrictions on land development (since owners want to protect the value of their property), discouraging business start-ups; they also have greater congestion due to owners commuting further than renters, increasing the cost of taking up a job.

27. This is not the case in the United States, where social housing rents are indexed to income levels.

28. They nevertheless form part of the tax/transfer wedge and may thus contribute to inactivity traps. For single persons moving from inactivity to full-time work at a wage level equal to 67% of the average production worker (APW), the marginal effective tax rate on housing benefits is almost 30% in Germany, Ireland, Slovak Republic, Sweden, and Switzerland. For a one earner couple (at 67% of the APW) with two children, it is close to 30% in Sweden, Switzerland and Ireland. See Chapter 3 of this issue of the *Employment Outlook*.

29. See *www.cohesionsociale.gouv.fr/pop_up_pcs.html*.

30. The project is called "Housing Employment and Mobility Services". It was announced in April 2004, to be implemented in early 2005.

31. Day and Winer (2001) find that the variations in eligibility conditions in the different Canadian provinces between the mid-1970s and the mid-1990s have not induced substantial changes in migration patterns, or, in other words, have not generated fiscally-induced migration. However, it is likely that the existence of such differences has played a role in slowing down outward migration from regions with declining activity (*e.g.* Newfoundland with the closure of the cod fisheries), thus slowing down structural adjustment.

32. Most beneficiaries declared that they would have applied for the job regardless of whether or not the travel to interview support was available. The evaluation was led in 2000. See *www.dwp.gov.uk/jad/2001/esr93sum.pdf*.

ANNEX 2.A1

Sources and Definitions of Data on Regional Labour Markets

1. Definition of regional units

Table 2.A1.1 provides information on the type, population, area and population density of the territorial units used in the analysis. Table 2.A2.7 (see OECD, 2005c) lists the names of all the territorial units in each country.

2. Detailed country notes

Australia, Canada, Japan, Korea and the United States

Data are presented by states and territories for Australia, by Provinces for Canada (the Northwest Territories, Nunavut and Yukon are not included in the analysis because data are not sufficiently robust) and by states for the United States at Level 1. For Japan and Korea, data refer to administrative regions (respectively Prefectures and Provinces and Cities) at Level 2.

European Union countries

Data are presented by NUTS 1 and NUTS 2 territorial units according to the Nomenclature of Territorial Units for Statistics used by Eurostat. Eurostat (1999) also calls NUTS 2 regions "Basic Regions" and describes them as "the appropriate level for analysing regional-national problems, whereas "NUTS 1 regions (major socio-economic regions grouping together basic regions) should be used for analysing regional Community issues such as the effect of economic integration on areas at the next level down from national areas".

For France, the Départements d'Outre Mer (DOM) are not included in the analyses. For Finland, Åland is excluded. For Italy the two autonomous regions of Trento and Bolzano have been grouped in a single region. In Spain, Ceuta and Melilla and Canarias are excluded. For Portugal, Açores and Madeira are excluded.

In the United Kingdom, the reorganisation of local government during 1995-98 is reflected in a completely new NUTS classification as from 1995. The main change is that the county and district levels are replaced by "unitary areas" in some parts of the country. This has resulted in some modifications at NUTS 1 and 2 levels. It has not been possible to link the time series relating to the old classification to the new one and, therefore, data are available only starting from 1995. Minor administrative changes have also occurred in

Table 2.A1.1. **Characteristics of the territorial units used for analysis**[a]

	LEVEL 1									
	Type	Number of regions	Average pop. (1 000)	Min. pop. (1 000)	Max. pop. (1 000)	Average area (km^2)	Min. area (km^2)	Max. area (km^2)	Average density	Min. density	Max. density
Australia	States and territories	8	1 983	143	5 341	962 673	2 352	2 531 000	17.7	0.1	108.3
Austria	Gruppen von Bundesländern	3	1 791	1 152	2 271	27 953	23 554	34 384	65.8	44.5	96.4
Belgium	Gwesten/Régions	3	2 264	654	3 952	10 173	161	16 844	1 492.2	129.7	4 054.4
Canada	Provinces	10	2 525	113	9 784	547 084	5 684	1 357 743	7.0	1.2	19.9
Czech Republic	–	1	7 167	–	–	78 860	–	–	90.9	–	–
Denmark	–	1	3 548	–	–	43 094	–	–	82.3	–	–
Finland	–	2	1 733	17	3 448	152 265	1 527	303 003	11.3	11.2	11.4
France	Zones économiques d'aménagement du territoire	8	4 736	2 663	7 453	67 996	12 012	145 645	146.7	36.0	620.4
Germany	Länder	16	3 418	432	11 834	22 314	404	70 548	455.8	52.5	2 713.7
Greece	Groups of development regions	4	1 682	655	2 631	32 906	3 808	56 457	197.7	26.3	691.0
Hungary	–	3	2 278	1 935	2 791	31 010	6 918	49 497	131.2	56.4	279.7
Ireland	–	2	1 342	700	1 983	35 137	33 276	36 997	37.3	21.0	53.6
Italy	Gruppi di regioni	5	7 739	4 446	10 239	60 267	49 793	73 275	127.5	89.3	176.7
Japan	Regions	9	11 832	1 032	33 896	40 679	5 803	83 452	331.9	57.6	1 054.5
Korea	–	1	36 345	–	–	99 601	–	–	364.9	–	–
Mexico	States	32	1 986	304	9 357	61 227	1 525	245 962	179.7	4.1	3 895.6
Netherlands	Landsdelen	4	2 735	1 134	5 119	8 468	7 093	9 741	324.4	135.8	588.9
New Zealand	–	1	3 028	–	–	41 166	–	–	73.6	–	–
Norway	–	1	3 234	–	–	260 374	–	–	12.4	–	–
Poland	–	1	26 041	–	–	312 685	–	–	83.3	–	–
Portugal	Continente	1	6 705	–	–	88 797	–	–	75.5	–	–
Slovak Republic	–	1	3 733	–	–	49 035	–	–	76.1	–	–
Spain	Agrupación de comunidades autónomas	6	4 402	2 751	7 737	82 925	7 995	215 025	128.4	16.0	462.8
Sweden	–	1	5 817	–	–	410 934	–	–	14.2	–	–
Switzerland	–	1	4 944	–	–	41 284	–	–	119.8	–	–
Turkey	Statistical regions	7	6 987	3 845	13 512	96 863	62 120	159 510	74.4	39.6	116.2
United Kingdom	Government Office Regions + Wales, Scotland, Northern Ireland	12	3 268	1 107	5 321	20 318	1 584	78 132	435.4	43.0	3 251.9
United States	States	51	3 121	279	19 866	179 591	159	1 477 268	79.8	0.2	2 096.1

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Table 2.A1.1. **Characteristics of the territorial units used for analysis**[a] *(cont.)*

	LEVEL 2										
	Type	Number of regions	Average pop. (1 000)	Min. pop. (1 000)	Max. pop. (1 000)	Average area (km^2)	Min. area (km^2)	Max. area (km^2)	Average density	Min. density	Max. density
Australia	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .
Austria	Bundesländer	9	597	183	1 067	9 318	415	19 173	334.3	36.0	2 571.7
Belgium	Provincies/Provinces	11	617	161	1 092	2 774	161	4 440	567.5	36.3	4 054.4
Canada	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .
Czech Republic	Groups of Kraje	8	896	789	1 144	9 858	496	17 616	286.8	46.8	1 663.2
Finland	Suuralueet (excl. Aaland)	5	693	17	1 737	60 906	1 527	133 580	15.6	3.1	42.5
France	Régions	22	1 722	110	7 453	24 726	8 280	45 348	88.3	12.6	620.4
Germany	Regierungsbezirke	36	1 519	356	3 413	9 917	404	29 477	303.8	52.5	2 713.7
Greece	Periferies	13	517	118	2 631	10 125	2 307	18 811	83.4	17.7	691.0
Hungary	Tervezesi-Statistikai Regio	7	976	667	1 935	13 290	6 918	18 314	89.5	47.1	279.7
Ireland	Regions	2	1 342	700	1 983	35 137	33 276	36 997	37.3	21.0	53.6
Italy	Regioni	20	1 935	81	6 274	14 756	3 263	25 703	119.7	25.0	284.2
Japan	Prefectures	47	2 266	517	10 104	7 790	1 861	83 452	547.8	57.6	4 806.7
Korea	Cities and provinces	15	2 423	396	8 036	6 570	501	19 025	1 821.3	71.6	13 273.2
Mexico	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .
Netherlands	Provincies	12	912	244	2 329	2 823	1 363	4 983	328.3	119.0	812.3
New Zealand	Regional council areas	12	252	74	909	3 412	1 264	6 952	109.3	14.0	558.3
Norway	Landsdeler	7	421	234	673	43 750	5 014	107 327	27.5	2.8	134.1
Poland	Wojewodztwa	16	1 628	633	3 221	19 543	9 412	35 598	88.3	39.3	258.3
Portugal	Commissões de coordenação regional	5	1 341	267	2 532	17 759	2 575	31 199	193.8	15.7	727.4
Slovak Republic	Zoskupenia krajov	4	933	445	1 307	12 259	2 053	16 243	106.9	57.4	216.6
Spain	Comunidades autónomas	16	1 651	182	5 052	31 095	5 014	94 193	93.6	14.2	462.8
Sweden	Riksområden	8	727	246	1 224	51 367	6 490	154 312	42.8	2.2	188.5
Switzerland	Grossregionen/Grandes régions/Grandi regioni	7	863	261	1 393	5 898	1 729	11 521	227.1	74.0	610.8
Turkey	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .
United Kingdom	Counties, inner and outer London; groups of unitary authorities or Local Enterprise Company areas	37	1 060	299	3 068	6 590	321	39 777	531.6	9.0	6 497.5
United States	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .

. . Data not available.
– Not applicable.
a) Data correspond to the total population aged 15-64 in 2003, except for Australia, Canada, New Zealand and Turkey (total population aged 15 or more in 2003), for Japan and Korea (total population aged 15 or more in 2000) and for Norway (total population aged 16-74 in 2003).

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Finland, Ireland, eastern Germany and Sweden, but in these cases it has been possible to link the time-series information.

Denmark and Luxembourg have no territorial breakdown at both Level 1 and 2; Ireland has no breakdown at Level 1.

New Zealand

No territorial breakdown at Level 1 is examined. Level 2 territorial units are represented by 12 Regional Council Areas. The Areas are defined according to a range of criteria relating to the location of regional communities, water catchments, natural resource management, land use planning and environmental matters. For the purposes of this chapter, some Regional Council Areas have been amalgamated because of small sample size.

Turkey

The territorial breakdown corresponds to the statistical regions available in the Turkish Labour Force Survey at Level 1. The statistical regions are not hierarchical because the boundaries of Provinces are not necessarily constrained to Statistical regions.

Table 2.A1.2. **Data sources and definitions**

	Regional labour force		Regional GDP	
	Source	Definition	Source	Definition
Australia	Australian Bureau of Statistics (ABS), Labour Force Survey.	All people aged 15 and over by place of residence.	Australian Bureau of Statistics (ABS).	Gross State Product, chain volume measures (Reference year for chain volume measures is 2001-02). Chain volumes measures are derived indirectly by calculating a deflator from the expenditure components of the State series concerned.
Canada	CANSIM, Labour Force Survey.	All people aged 15-64 by place of residence. Brekdown by gender only.	CANSIM, provincial economic accounts.	Provincial Gross Domestic Product, constant prices 1997 (expenditure-based).
Japan	Population Census.	All people aged 15 and over by place of residence.	Department of National Accounts, Economic and Social Research Institute, Cabinet Office.	Gross Prefectural Domestic Product, by expenditure, at factor cost.
Korea	Monthly economically active population survey.	All people aged 15 and over by place of residence.	Korean National Statistical Office, Statistical DB KOSIS.	Gross Regional Domestic Product at constant prices in 1995 and 2000 chained.
Mexico	Data based on the Encuesta Nacional de Empleo.	All people aged 15-64 by place of residence.	INEGI. Sistema de Cuentas Nacionales de México.	Producto Interno Bruto por Entidad Federativa, 1993 constant prices.
New Zealand	June quarters of the Household Labour Force Survey.	All people aged 15 and over by place of residence.	–	–
Norway	Labour Force Survey.	All people aged 16-74 by place of residence.	Statistics Norway; National accounts by county.	Regional Gross Domestic Product (GDPR) at current prices.
Switzerland	Population Census.	All people aged 15 and over by place of residence.	–	–
Turkey	Household Labour Force Survey.	All people aged 15 and over by place of residence	SIS	Gross Domestic Product by Regions and Province at 1987 constant price
United States	Current Population Survey.	All people aged 15-64 by place of residence.	Bureau of Economic Analysis (BEA).	Chained (1996) dollar series are calculated as the product of the chain-type quantity index and the 1996 current-dollar value of the corresponding series, divided by 100.
Austria, Belgium, the Czech Republic, Denmark, Finland, France, Germany, Greece, Hungary, Ireland, Italy, the Netherlands, Poland, Portugal, the Slovak Republic, Spain, Sweden and the United Kingdom	European Union Labour Force Survey.	All people aged 15-64 by place of residence.	REGIO Databank of Eurostat, Eurostat European System of Integrated economic Account (ESA79 and ESA95).	GDP at market prices is the final result of the production activity of resident producer units.

Table 2.A1.2. **Data sources and definitions** *(cont.)*

	Internal migrations		Commuting	
	Source	Definition	Source	Definition
Australia	Australian Bureau of Statistics (ABS), Census of Population and Housing.	Number of persons (all ages) who have changed their place of usual residence by moving into a given state or territory or the number who have changed their place of usual residence by moving out of that state or territory.	–	–
Canada	CANSIM, Population census.	Interprovincial Migration is the movement from one province to another involving a permanent change in residence. Data refer to persons aged 15-64.	–	–
Italy	Data collected from the Population Register Offices.	Registrations and deregistrations by interegional change of residence by region. Data refer to the total population.	–	–
Japan	Internal Migration Survey.	In-migrants from and Out-migrants to Other Prefectures for persons aged 5 and over.	Population census.	Employed aged 15 and over working in a different Prefecture.
New Zealand	Population census.	Persons aged 15 and over who have changed their place of usual Residence over five Years.	–	–
Switzerland	Statistique de l'état annuel de la population (ESPOP).	Internal migrations by canton for persons aged 15-64.	Federal population census.	Employed persons aged 15 and over by category of commuting.
United States	Current Population Survey, March (Demographic Supplement).	All people aged 15-64 by current place of residence and place of residence one year before.	Population census; Journey to Work and Place of Work.	Employed people aged 16 and over by current place of residence and current place of work.
Austria, Belgium, the Czech Republic, Denmark, Finland, France, Germany, Greece, Hungary, Ireland, Italy (commuting only), the Netherlands, Poland, Portugal, the Slovak Republic, Spain, Sweden and the United Kingdom	European Union Labour Force Survey.	All people aged 15-64 by current place of residence and place of residence one year before.	European Union Labour Force Survey.	All people aged 15-64 by current place of residence and current place of work.

Table 2.A1.2. **Data sources and definitions** *(cont.)*

	Employment by industry	
	Source	Definition
Australia	Australian Bureau of Statistics (ABS).	Employed persons aged 15 and over by state, dissemination region by one-digit ANZSIC Division of ABS (Agriculture, forestry and fishing; Mining; Construction; Manufacturing; Electricity, gas and water supply; Transport and storage; Communication services; Wholesale trade; Retail trade; Accommodation, cafes and restaurants; Finance and insurance; Property and business services; Cultural and recreational services; Education; Health and community services; Personal and other services; Government administration and defence).
Canada	CANSIM, Labour Force Survey.	Employed persons aged 15-64 by Province according to the one-digit Canadian Standard Industry Classification System (Forestry, logging and support; Mining and oil and gas extraction; Construction; Manufacturing; Utilities; Transportation and warehousing; Wholesale trade; Retail trade; Accommodation and food services; Finance and insurance; Real estate and rental and leasing; Arts, entertainment and recreation; Educational services; Health care and social assistance; Other services (except public administration); Public administration; Administrative and support, waste management and remediation services; Information and cultural industries; Management of companies and enterprises; Professional, scientific and technical services).
Japan	Population census.	Employed persons aged 15 and over by place of residence and for the 13 major groups of the Standard Industrial Classification (Agriculture; Forestry; Fisheries; Mining; Construction; Manufacturing; Electricity, gas, heat supply and water; Transport and communications; Wholesale and retail trade, and eating and drinking place; Financing and insurance; Real estate; Service; Government not elsewhere classified).
Korea	NSO, Census on basic characteristics of establishments .	Employed persons aged 15 and over by place of work and industry (Agriculture and forestry; Fishing; Mining and quarrying; Construction; Manufacturing; Electricity, gas and water supply; Transport; Post and telecommunications; Wholesale and retail trade; Hotels and restaurants; Financial institutions and insurance; Real estate and renting and leasing; Business activities; Recreational, cultural and sporting activities; Education; Health and social work; Other community, repair and personal service activities; Public administration and defence; Compulsory social security).
New Zealand	Quarterly Employment Survey.	Employed persons aged 15 and over by place of work according to one-digit ANZSIC (Agriculture, forestry and fishing; Mining; Construction; Manufacturing; Electricity, gas and water supply; Transport and storage; Communication services; Wholesale trade; Retail trade; Accommodation, cafes and restaurants; Finance and insurance; Property and business services; Cultural and recreational services; Education; Health and community services; Personal and other services; Government administration and defence).
Norway	Labour Forec Sample Survey.	Employed persons aged 16-74 by place of work and industry (Operation of fish hatcheries and fish farms; Electricity, gas, steam and hot water supply; Extraction of crude petroleum and natural gas, etc.; Manufactoring and mining; Construction; Wholesale trade and hotels and restaurants; Transport, storage and telecommunications; Financial intermediation; Real estate activities; Public administration and defence).
Turkey	Household Labour Force Survey.	Employed persons aged 15 and over by place of residence by industry (Agriculture, forestry, hunting and fishing; Mining and quarrying; Construction; Manufacturing; Electricity, gas and water; Transportation, communication and storage; Wholesale and retail trade, restaurants and hotels; Finance, insurance, real estate and business services; Community, social and personal services).
United States	Current Population Survey.	Employed persons aged 15-64 by place of residence and by one-digit NAICS (Agriculture; Mining; Construction; Manufacturing; Transportation; Communications; Utilities and sanitary services; Wholesale trade; Retail trade; Finance, insurance, and real estate; Private households; Business, auto and repair services; Personal services, excluding private households; Entertainment and recreation services; Hospitals; Medical services, exc. hospitals; Educational services; Social services; Other professional services; Forestry and fisheries; Public administration).
Austria, Belgium, the Czech Republic, Denmark, Finland, France, Germany, Greece, Hungary, Ireland, Italy, the Netherlands, Poland, Portugal, the Slovak Republic, Spain, Sweden and the United Kingdom	European Union Labour Force Survey.	Employed people aged 15-64 by place of residence by industry of the one-digit NACE Rev 1. (Agriculture, hunting and forestry; Fishing; Mining and quarrying; Manufacturing; Electricity, gas and water supply; Construction; Wholesale and retail trade, repair of motor vehicles, motorcycles and personal and household goods; Hotels and restaurants; Transport, storage and communication; Financial intermediation; Real estate, renting and business activities; Public administration and defence, compulsory social security; Education; Health and social work; Other community, social and personal service activities; Private households with employed persons; Extra-territorial organisations and bodies).

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Chapter 3

Increasing Financial Incentives to Work: The Role of In-work Benefits

Ensuring that the provision of welfare benefits is consistent with work incentives has become a major policy priority in many OECD countries. One way to achieve this is through the introduction of in-work benefits and, more generally, tax-benefit reforms aiming at making work pay vis-à-vis *benefit receipt. To what extent do measures that raise the financial incentives to work increase employment chances of unemployed and inactive individuals? How to ensure that in-work benefits do not end up creating low-pay traps? Under what conditions are in-work benefits cost-effective? How should they be complemented with other policies, like active labour market programmes and minimum wages, and how prominently should they figure in a job strategy?*

Introduction

Over the past few years there has been much discussion in many OECD countries of how to put into place benefit systems that provide adequate income protection to those individuals and families that are not able to support themselves financially, while also maintaining work incentives. There has also been debate on how to improve incentives for individuals in part-time or low-paid work to increase their hours of work or to invest in training that would increase their chances of getting higher-paid jobs. Improving these incentives and facilitating the return to self-sufficiency of benefit recipients is important because the risk of long-term poverty is much higher for jobless individuals on benefits than for continuously employed people. Moreover, the cost of safety nets to budget-constrained governments reinforces the need to help people – who can – get back into work.

Lower out-of-work benefits would improve the gap between labour incomes and unemployment or inactivity benefits, but would do so at the cost of an increased risk of poverty for those families and individuals who are not working. Therefore, the challenge is often to design benefits in a way that they facilitate the return to self-sufficiency of recipients – rather than simply cutting the level of benefits. A strategy that pursues poverty reduction as well as promoting the return to employment would indeed maximize social welfare.

The importance of policies that allow the pursuit of this balanced approach was highlighted in the OECD Jobs Strategy which recognised that "in most OECD countries, a satisfactory level of individual or family income are deeply rooted values", hence the need to "consider how to remove disincentives (to economic growth) without harming the degree of social protection that it is each society's wish to provide". Since the OECD Jobs Strategy recommendations were first issued in 1994, governments have increasingly introduced in-work benefits aimed at encouraging self-sufficiency through work. In-work benefits are welfare schemes designed to provide income supplement to needy families or individuals on the condition that they work. They are a specific type of make-work-pay policies – the other one being the reduction in social security contributions, an issue not treated in this chapter.

The impact of tax and benefit systems on financial incentives to work was previously addressed in OECD (2004a). This chapter attempts to go a step forward by drawing the link between such financial incentives and actual employment outcomes. Furthermore, in addition to documenting those programmes that OECD governments have put in place to make work pay (OECD, 2003), it contains a more thorough analysis of specific design features to ensure that in-work benefits are effective. Finally, the chapter acknowledges the importance of improving financial incentives to work as a component of a more comprehensive employment strategy including affordable childcare structures and effective active labour market policies. A suitably-set minimum wage is also an option which can be considered in order to ensure that in-work benefits fulfil their objective of supporting labour market participation.

Section 1 looks at how taxes and benefits shape work incentives. It also analyses the possible links between financial incentives and *a)* re-employment probabilities for unemployed or inactive individuals; and *b)* the probability that part-timers move to full-time

work. Section 2 focuses on how in-work benefits are used across OECD countries and shows how the various programmes influence the financial returns to work. Section 3 discusses design issues and interactions with other labour market policy tools. Finally, the chapter considers the relevance of these findings for the reassessment of the OECD Jobs Strategy.

Main findings

- Financial incentives to work are often relatively weak for single parents and one-earner families with children on welfare. Because of the structure of tax and benefit systems in most OECD countries, these groups tend to face reduced incentives upon their return to work after a period of unemployment or inactivity. In addition, for those low-income individuals who have a job, working longer hours or earning higher wages often entails little additional net income. Disincentives are also particularly strong for unemployed individuals with low potential earnings, especially if they face the prospect of returning to work at a salary lower than the one earned in their previous job.
- Financial incentives to work are found to play a role in labour market transitions. In line with other studies, the analysis conducted for the purposes of the chapter finds moderate labour market effects of marginal effective tax rates (a comprehensive measure of the extent to which work is financially rewarding). Indeed, a reduction of marginal effective tax rates by 20% (which is what some of the most ambitious reforms have tried to achieve) implies a rise in the probability of moving from unemployment to employment by nearly 10%, *i.e.* from 45% to 49%. The strongest effects are found for the unemployed with a working partner, whose re-employment probability would increase by seven percentage points, from 51% to nearly 58%. The evidence on transitions from inactivity to work is more mixed. Significant effects are found for single women only: for this group, the probability to move from inactivity to work would increase by almost 13%. Finally, the reduction in marginal effective tax rates is also found to encourage transitions from part-time to full-time work or promote moves to higher-paid jobs, especially for second earners in couples without children. These findings require further scrutiny based on refined empirical techniques. They suggest, however, that measures that raise financial incentives to work are one tool to increase labour supply.
- Financial incentives to work can be improved by either cutting welfare benefit levels, or introducing in-work benefits while leaving benefit levels unchanged. A policy of no welfare would be the best solution to maximize labour supply, if equity issues were not a concern. Indeed, in-work benefits have a positive effect on incentives at low income levels; but as they are withdrawn, they tend to affect the financial returns to work at higher income ranges. Nevertheless, distributional issues are a primary concern when designing policies to help people return to self-sufficiency through work and, in this context, studies show that in-work benefits can maximize social welfare
- In-work benefit programmes have recently been introduced by several OECD governments as a means of raising the financial returns to working. These programmes vary widely in terms of characteristics such as the generosity and the income level and rate at which benefits are withdrawn. In this respect, only in-work benefit programmes that have a sufficiently large impact on financial incentives to work are likely to translate into potentially significant increases in employment rates. When in-work benefit levels are very low, they are unlikely to have much impact on employment outcomes. On the

other hand, generosity has to be accompanied by narrow targeting in order to channel help to the neediest families and keep programme costs within reasonable limits.

- In-work benefits should be designed to reduce deadweight losses, arising from the fact that some beneficiaries would have found a job (or increased work effort), even in the absence of the scheme. Well-designed targeting, as well as conditions on the number of hours-worked to become eligible are effective responses to this concern.
- The level of in-work benefits and phasing-out rates (*i.e.* the speed at which benefits are withdrawn as incomes rise) should be set depending on the objective that governments want to achieve. If the main objective is that of getting individuals into work, a moderate benefit withdrawn at relatively low rates may be most appropriate. However, this implies that benefits will continue to be paid at relatively high levels of income, creating some disincentive effects higher up in the earnings distribution. As a result, a government which is more concerned about the incentives for career advancement or longer working hours of those who are already in work would chose higher benefit levels and a faster phasing-out rate. In addition, by putting a time limit to the receipt of in-work benefits, there may be an incentive for recipients to become fully self-sufficient.
- In-work benefits are most effective when the scheme is made widely known to the target group and administrative procedures to receive in-work benefits are not excessively bureaucratic. The system should also be responsive to changes in family needs. In this respect, integration with the tax system and payment through the wage package could be an improvement for recipients, and a cost-saving solution for governments.
- In-work benefits should not be seen in isolation but rather as one component of a comprehensive strategy to help the transition from welfare to work. The provision of childcare subsidies would be an appropriate accompanying policy, particularly for single parents and spouses with children. In addition, under certain conditions, a minimum wage, set at an appropriate level, can be one of the options to prevent employers from pocketing the earnings subsidy introduced by these programmes. And, effective active labour market policies are necessary to help people find jobs. The precise nature and impact of these policy interactions will be further examined as part of the reassessment of the OECD Jobs Strategy.

1. Financial incentives to work and their impact on employment transitions

Quantifying the combined effects of taxes and benefits on the financial incentives to obtain employment, work longer hours, or move to higher-paid jobs is a very complex task. Measures based solely on average taxes and social security contributions – such as tax wedges – present a partial picture of the difference between *gross* and *net* income. A more dynamic framework is needed in order to understand how changes in gross earnings translate into changes in net (*i.e.* take-home) pay for certain groups. For example, benefit withdrawal rules – which arise from the fact that benefits are usually means-tested and are reduced once income passes a certain threshold – can have a significant impact on the financial attractiveness of low-paid jobs by reducing the part of any employment income that adds to total family income. Hence, the interactions between the tax and benefit systems must be taken into account in any cross-country comparisons of the financial incentives to work.

A measure of marginal taxation that accounts for benefit withdrawals has been constructed since 2001 by OECD (see OECD, 2004a; and Carone *et al.*, 2004). Marginal effective tax rates (METRs) measure how much of a given change in gross earnings, is taxed away through income tax, social security contributions and benefit withdrawals.[1] The

benefits that are taken into account in available estimates of METRs include social assistance, unemployment, housing, family and in-work benefits.[2]

A. A picture of financial incentives to work across countries and family types

Given the complexity of tax and benefit systems, and the fact that benefit entitlement rules may change depending on the pre-employment status of the recipient, it is useful to calculate the impact of tax and benefit systems on the incentives to move *a)* from unemployment to work; *b)* from inactivity to work; and *c)* from low-wage employment to higher wage employment. Box 3.1, adapted from Carone *et al*. (2004), describes the logic behind these measures in more detail.

Box 3.1. **A taxonomy of benefit traps**

The "*low-wage trap*" *(or "poverty trap")* is related to the financial consequences of increasing working hours (or moving into higher-paid employment) for those already in low-paid work. The "trap" refers to a situation where an increase in gross earnings fails to translate into a net income increase that is felt by the individual to be a sufficient return for the additional effort. The combination of income taxes, social security contributions and benefits withdrawal may "tax away" all or a large part of any wage gain. The influence of taxes will be more relevant for earners of higher wages (and low-wage earners with high-wage spouses in joint tax systems). Yet, due to the withdrawal of income-tested benefits and the operation of earnings thresholds for the payment of employee social security contributions, the part of any wage increases that are taxed away at low earnings is often much higher than at average and high income levels.

The term "*unemployment trap*" is frequently used to refer to a situation where benefits paid to the unemployed and their families are high relative to net income from work. While the judgment whether work "pays" is to some extent subjective and depends on many factors, tax-benefit systems will play an important role. Unemployment benefit systems provide income security during unemployment and contribute to a more efficient match between workers and jobs. Yet, at the same time, out-of-work benefits can discourage job search and put upward pressure on wage levels.

The "*inactivity trap*" is a situation similar to the unemployment trap except that it applies to people of working-age not receiving any unemployment benefits. For these individuals, a situation where employment is judged not to "pay" may be brought about by minimum income or other income-related benefits which would be lost upon taking up paid work. However, the tax system may also have an important deterrent effect, which can be particularly relevant for partners or spouses of working individuals: if their incomes are taxed jointly, any potential earnings of the currently "inactive" partner may be taxed at relatively high rates, and may thus reduce the net gain from work. Together, benefits and taxes can effectively create a wage floor below which a transition into employment does not bring any financial gain to the household in the short term.

Tax-benefit instruments may have different effects on the various types of "traps". For instance, typical employment-conditional benefit schemes reduce the likelihood of "unemployment" or "inactivity traps". However, they also tend to increase marginal tax rates at relatively low earnings levels, due to the phasing out of in-work benefits. In terms of their potential effect on labour supply, these instruments therefore trade off higher participation against lower working hours of certain groups already in work. Given such trade-offs, it is essential to monitor the financial consequences of both participation and working hours' decisions.

Assessing the size of the three benefit traps identified in Box 3.1, should help identify countries and demographic groups which are most subject to reduced financial incentives to work, *i.e.* high METRs. These indicators should also shed light on the extent to which benefit withdrawals affect METRs. These issues are addressed in the rest of this section.

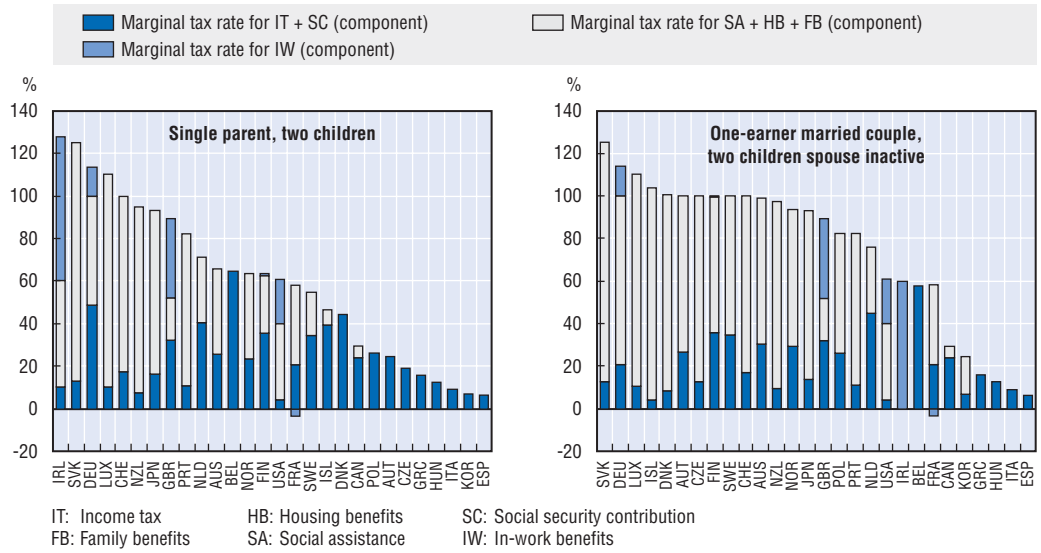
Single parents and one-earner families are sometimes subject to low-wage traps…

First, an indicator of low-wage traps is considered. Chart 3.1 shows METRs for six different household types, where the reference individual faces a rise in gross earnings of 10% (from 50% of the average production wage to 55%). Two striking facts emerge. First, two-earner couples – with or without children – face the lowest METRs (see Chart 3.A1.1). In most countries, they are able to retain more than 60% of the increase in gross earnings. This is mainly due to the fact that two-earner couples typically receive low (if any) welfare benefits in the first instance, and thus the impact of benefit withdrawal resulting from higher earnings is small. Indeed, in most cases, METRs for two-earner couples are determined by personal income taxes and social security contributions alone. Except for some countries – notably Finland, Luxembourg, the Netherlands and the United Kingdom – this is also true for single individuals with no children.

Second, the effect of benefit withdrawal rules, and their interaction with taxes, can be significant for single parents and one-earner families. It is often the phasing out of social assistance, as well as family and housing benefits that brings METRs close to 100%, particularly for families with one earner and two dependent children. In countries where in-work benefits exist, these benefits appear to raise METRs further. In fact, while playing a major role to make work pay for those who are not employed, in-work benefits are also a disincentive to increase work effort for those who are close to the phasing-out range.[3]

Chart 3.1. **How much of a 10% wage increase is taxed away?**

Low-wage trap indicator: decomposition of the marginal effective tax rate (increase from 50 to 55% of the APW), 2002



Note: The chart shows how much of a given rise in earnings is taken away in the form of higher tax and lower welfare benefits. For example, a value of 100 for the indicator shows that a 10% wage increase leads to no additional net income.

Source: OECD tax-benefits models.

Statlink: *http://dx.doi.org/10.1787/870085564702*

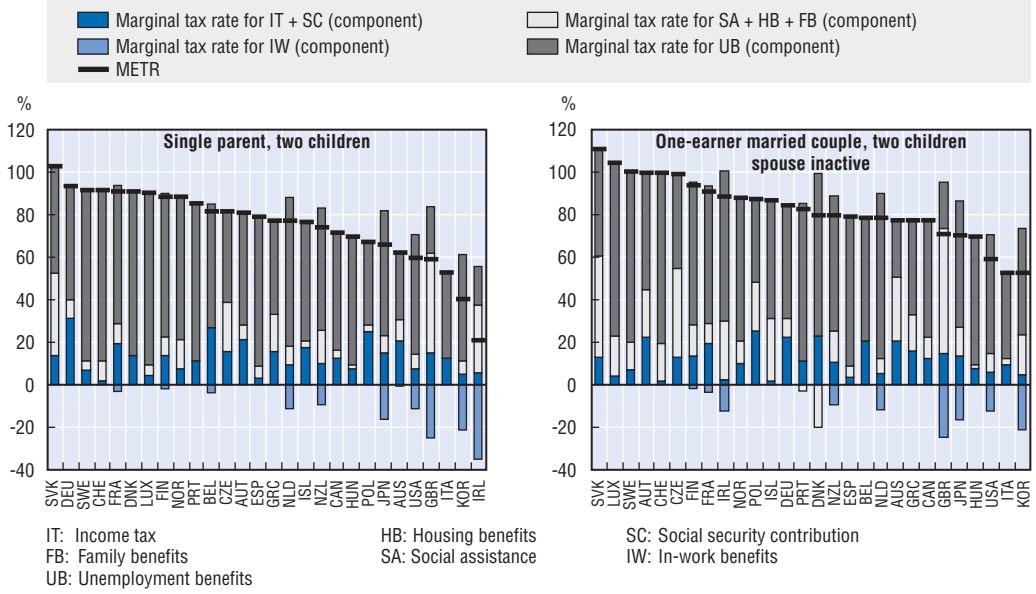
High METRs may also discourage the move from part-time to full-time employment. Annex Chart 3.A1.2 shows that this is particularly the case for one-earner families with two children in Finland, the Slovak Republic, and the United Kingdom, where METRs can exceed 80%. In addition, the tax and benefit systems in Australia, Ireland, New Zealand and the United Kingdom tend to provide single parents with low financial incentives to move to full-time work. For instance, in the United Kingdom, in-work benefits are paid starting from 15 hours worked per week and are gradually withdrawn as income exceeds a certain threshold. In other countries, high METRs are mostly due to the complete withdrawal of social assistance when income exceeds a certain threshold.

... and, when affected by unemployment or inactivity, many find it financially uninteresting to go back to work

As is well known, the level of unemployment benefits (and their withdrawal upon return to employment) tends to reduce the financial incentives to return to work. In particular for couples with two children and only one potential earner – the unemployed individual – the implicit tax rate on accepting a job offer at the same salary as before unemployment (set at 67% of APW in the chart)[4] is very high, in most cases exceeding 80% (see Chart 3.2). This appears to be due not only to the withdrawal of unemployment benefits but also to the phasing out of additional social assistance to which this household type may be entitled to. A very similar situation can be observed for single parents and one-earner childless couples, although METRs tend to be slightly lower than is the case with unemployment benefit recipients. Other groups, although still facing high METRs, are still

Chart 3.2. **Is work financially attractive compared with unemployment and other non-employment benefits?**

Unemployment trap indicator: decomposition of the METR moving from unemployment to full-time work at wage level = 67% APW (wage before unemployment = 67% APW), 2002



Note: The chart shows how much of the wage earned following a move to work from unemployment is taken away in the form of taxes and lower welfare benefits. For example, a value of 100 for the indicator shows that moving from unemployment to work leads to no additional net income. A value bigger than 100 indicates that net earnings in work are less than total out-of-work benefits.

Source: OECD tax-benefits models.

Statlink: *http://dx.doi.org/10.1787/857677552175*

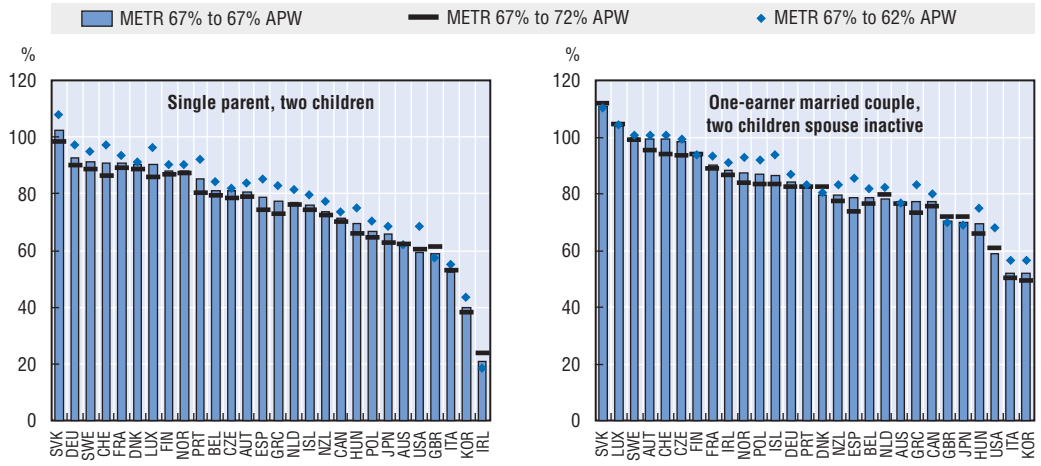
financially better off when moving from unemployment to employment (see Annex Chart 3.A1.3). This derives from the fact that, in most countries, they are not entitled to social assistance when out of work and are, therefore, not affected by benefit withdrawal once they return to employment.[5]

In-work benefits play a double-edge role. While they may reduce incentives to work longer hours or earn more for those individuals already in work, they add to the attractiveness of returning to work for those who are unemployed or inactive. This is particularly true for families with children who are most often the target of government initiatives (Chart 3.2).

The transition from unemployment to work becomes even less financially attractive when the new job pays less than the salary earned before unemployment. This is due to the fact that, in many countries, unemployment benefits are set as a per cent of the last salary. On the other hand, as Chart 3.3 shows, METRs decrease as the post-unemployment wage rises.[6] This suggests that activation policies that help individuals get better quality jobs, *e.g.* by providing training that increases their skill level, will help make work more financially attractive to the unemployed.

Chart 3.3. **Reduced earnings prospects after unemployment may make work less attractive**

METRs when moving back to work at wage levels = 67%, 72% and 62% APW, with previous earnings = 67% APW, 2002



Note: The chart shows how much of the wage earned following a move to work from unemployment is taken away in the form of taxes and lower welfare benefits, for different levels of re-employment earnings.

Source: OECD tax-benefits models.

Statlink: *http://dx.doi.org/10.1787/565886074178*

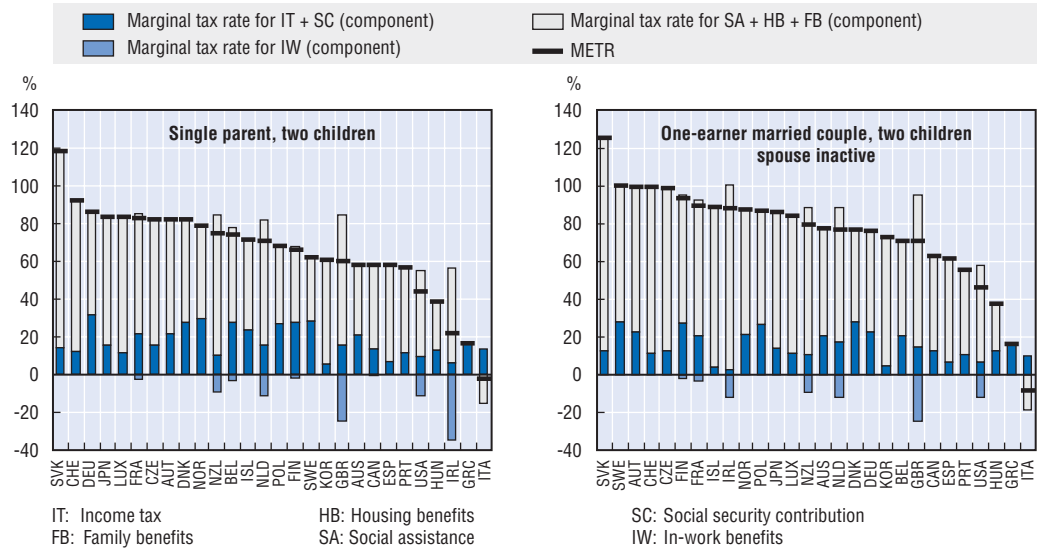
Single parents and workless households may be subject to inactivity traps

A similar picture emerges when METRs are calculated for transitions from inactivity to work (Chart 3.4 and Chart 3.A1.4).[7]

For single parents and spouses in couples with children and a working partner, the first step into the labour market may be part-time work. Chart 3.5 shows the effect of tax and benefit systems on the financial incentives of going back to employment on a half-time job. With the exception of Denmark, there appears to be no particular disincentive effect

Chart 3.4. **Is work financially attractive for inactive people?**

Inactivity trap indicator: decomposition of the marginal effective tax rate when moving from inactivity to full-time work at wage level = 67 % of APW, 2002



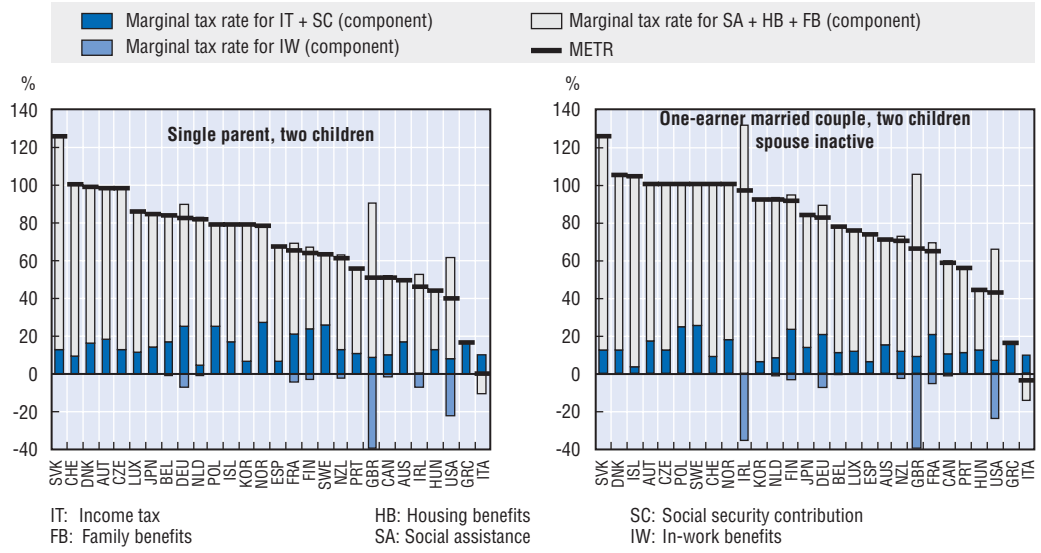
Note: The chart shows how much of the wage earned following a move to work from inactivity is taken away in the form of taxes and lower welfare benefits. For example, a value of 100 for the indicator shows that moving from inactivity to work leads to no additional net income. A value bigger than 100 indicates that net earnings in work are less than total out-of-work benefits.

Source: OECD tax-benefits models.

Statlink: *http://dx.doi.org/10.1787/483810121604*

Chart 3.5. **Do inactive individuals have an incentive to move to part-time work?**

Decomposition of the marginal effective tax rate when moving from inactivity to a half-time job (20 hours a week) at a wage level = 50% APW, 2002



Note: The chart shows how much of the wage earned following a move to part-time work from inactivity is taken away in the form of taxes and lower welfare benefits.

Source: OECD tax-benefits models.

Statlink: *http://dx.doi.org/10.1787/417543224612*

for the spouse whose partner is already working to take up a part-time job (see also Box 3.2). However, METRs are very high for single parents and members of workless households who would like to take up part-time work. In fact, the implicit tax rates are almost identical to an inactive individual obtaining full-time employment.

Box 3.2. **Tax/benefit systems may contribute to explain work polarisation**

The increase in the share of workless households has been worrying researchers and governments, because of its potential impact on rising income inequality and child poverty. Gregg and Wadsworth (1996) show that, between 1983 and 1994, the rate of workless households had increased in six of the seven European countries they study – Belgium, France, Italy, Germany, Spain, the United Kingdom – and had decreased only in the Netherlands. Also, in four of the countries where the workless household rate increased, it did so in an environment of rising employment. Callister (2001) shows a similar trend towards polarization for New Zealand.

Tax/benefit systems may create disincentives for workless households to obtain employment, while on the contrary encouraging labour market participation of second earners in one-earner families. As the table below shows, in a family where nobody works, the financial incentives for the first earner to enter the labour force are very weak (Column 1). On the other hand, once one of the two is working, the other spouse is only marginally penalized when leaving inactivity for employment (Column 2). The difference between Columns 1 and 2 in the table is almost always positive. The only exceptions are Denmark – because of the loss of social assistance when the spouse enters employment – and Italy where, because of a weak welfare system, METRs are very low for the transition from inactivity to work of the spouse.

This observation is supported by some recent studies. For instance, Gregg and Wadsworth (2004) find that the decline of one-earner households and the rise in both work-rich and work-poor families is not entirely accounted for by changes in household structure or by the characteristics associated with individual joblessness, and conclude indeed that such trends may be related to the interactions between tax/benefit systems and work incentives.

In addition, in households where one person is already in work, it is financially more interesting for the non-working spouse to enter employment than for the partner who is already working to work more. Comparing Column 2 with Column 3 in the table sheds some light on the extent to which a couple will have a tax-benefit incentive to become a dual-earner family or remain a single-earner family. Taking a family with two children where the only earner works for 67% of the average production wage, Column 2 shows the METR faced by the household when the second adult decides to enter employment at 33% of the average production wage. Column 3 shows the METR which arises when the same total income – 100% of APW earnings – is achieved by an increase in-work effort of the adult that was already employed. With the exception of Denmark, the difference is generally positive although in some cases rather small, showing that it is financially more rewarding for the second earner to enter employment than for the first to work harder.

The effect of *joint versus separate* tax regimes appears to go in the expected direction. With the exception of Luxembourg and Portugal, in countries where taxation of income is joint – *i.e.* the incomes of the two earners are added to determine the total taxable family income – the difference between first and second earners' taxation is rather small. On the other hand, in countries with systems of separate taxation of income, a second earner generally faces lower METRs than a primary earner. Notable exceptions are Germany, Iceland, Ireland, Japan, Korea and the Netherlands.

Box 3.2. **Tax/benefit systems may contribute to explain work polarisation** *(cont.)*

Comparisons of marginal effective tax rates of first and second earners, 2002[a]

	Type of taxation system, 2002	One earner moving from inactivity to 67% APW[a]	First earner at 67% of APW, second earner moving from inactivity to 33% of APW[a]	One earner moving from 67% to 100% of APW[a]	Non-working *versus* two-earner household	One-earner *versus* two-earner household
		(1)	(2)	(3)	(4) [(1) – (2)]	(5) [(3) – (2)]
Australia	Separate	0.69	0.63	0.66	0.06	0.03
Austria	Separate	0.99	0.21	0.41	0.78	0.20
Belgium	Separate	0.71	0.44	0.51	0.27	0.07
Canada	Separate	0.54	0.53	0.65	0.01	0.12
Czech Rep.	Separate	0.99	0.31	0.37	0.68	0.07
Denmark	Separate	0.94	0.89	0.61	0.05	–0.28
Finland	Separate	0.94	0.50	0.77	0.43	0.27
France	Joint	0.89	0.36	0.43	0.53	0.07
Germany	Joint	0.76	0.54	0.54	0.22	0.00
Greece	Separate	0.16	0.16	0.17	0.00	0.01
Hungary	Separate	0.38	0.18	0.37	0.20	0.19
Iceland	Separate	0.89	0.45	0.45	0.43	–0.01
Ireland	Optional/Joint	0.88	0.34	0.42	0.54	0.09
Italy	Separate	–0.08	0.38	0.52	–0.46	0.15
Japan	Separate	0.86	0.53	0.52	0.33	–0.01
Korea	Separate	0.75	0.07	0.11	0.68	0.05
Luxembourg	Joint	0.84	0.62	0.62	0.22	0.00
Netherlands	Separate	0.88	0.42	0.41	0.46	–0.01
New Zealand	Separate	0.77	0.56	0.62	0.21	0.06
Norway	Optional	0.87	0.27	0.36	0.61	0.09
Poland	Optional	0.87	0.65	0.68	0.22	0.03
Portugal	Joint	0.55	0.51	0.52	0.05	0.01
Slovak Republic	Separate	1.25	0.83	0.89	0.43	0.06
Spain	Separate/Joint	0.62	0.16	0.19	0.45	0.03
Sweden	Separate	1.00	0.34	0.47	0.66	0.13
Switzerland	Joint	0.99	0.14	0.22	0.86	0.08
United Kingdom	Separate	0.72	0.67	0.77	0.05	0.10
United States	Optional/joint	0.46	0.52	0.52	–0.06	0.00

a) The values reported in the table show how much of the additional income in taxed away by the combination of taxes, social security contributions and benefit withdrawals.

Source: OECD tax-benefits models.

Overall, the analysis above suggests some priorities for programmes to make work pay. First, policies should be targeted on lone parents with children and one-earner couples (with or without children) with low earnings' prospects. These groups often have weak financial incentives to return to employment after a period of inactivity or unemployment. They also tend to be at risk of in-work poverty. Second, policies that help unemployed individuals obtain employment with a salary as high as, or higher than, the salary they earned before unemployment, such as effective job-search assistance and training, would

help increase financial incentives to work for this group.[8] More generally, tax-benefit reform and active labour market policies need to focus attention on groups with low earnings' potential, notably older workers and the low-skilled.

B. Financial incentives to work and labour market outcomes

The extent to which tax and benefit systems affect labour market behaviour is difficult to predict. It is possible to quantify the impact of these systems on financial incentives to work (proxied by METRs). But how individuals respond to METRs depends in part on their preferences as well as on other dynamic considerations. These are crucial questions for determining the effect of METRs on labour market transitions (see Box 3.3 for more on this issue).

Box 3.3. **The impact of financial incentives on labour supply decisions: income and substitution effects**

The impact of financial incentives on labour supply decisions is a vital consideration when designing policy. In other words, the way METRs affect employment outcomes depends largely on individual preferences. In a static context, an individual with *reasonable* preferences would not choose hours of work for which the METR is equal to or greater than 100%. On the other hand, how much of the extra earnings an individual is willing to see taxed away by the government depends on the balance between income and substitution effects.

In fact, the two effects tend to go in different directions. For instance, when taxes are reduced (or benefits increased), disposable income increases and people may be more likely to be content with their situation, and so less inclined, for example, to seek to increase their earnings. This is the income effect. On the other hand, the reduction in taxes would increase the price of leisure as people would gain more than before for each hour worked. This is the substitution effect and it would make individuals want to work more. Only when the substitution effect dominates the income effect will a reduction in taxes bring about an increase in-work effort.

The size of the income and substitution effects depends on individuals' preferences and needs to be estimated empirically based on individuals' responses to past tax and benefit changes. Brewer *et al.* (2003) shows that, in the United Kingdom, the greater the number of children, the greater the preference for income relative to hours of work. In addition, higher levels of education are found to be associated with a lower valuation of income with respect to hours of work (meaning that an hour of work leads to less disutility for parents with high levels of education compared to those with low levels of education). As far as age is concerned, results differ between couples and lone parents. In couples, preferences for income at the cost of higher hours worked decrease with the age of both mother and father. For lone mothers, the effect of age on the preference for income is not well determined, but studies do find that individuals who are aged above average have a greater preference for hours of work (see also MaCurdy, 1992).

Other researchers have looked at differences in the preferences for work over leisure using a different approach. Laroque and Salanié (2000) estimate the wage at which non-working married women in France would be open to accept a job (reservation wage). They find that the financial return required to work tends to increase with the number of children. The reservation wage is also found to increase with age, but it appears to be unaffected by education. Overall, these concepts represent a useful benchmark of what one should expect to find when trying to estimate the impact of marginal tax rates on labour market behaviour of different socio-demographic groups and family types.

In addition, career possibilities in the prospective job need to be taken into account – *i.e.* a more dynamic analysis, going beyond static comparisons of METRs, is needed. For example, if benefits are about to expire, the same job that is financially uninteresting now, will offer a considerably higher return in the near future. Or, it is possible that unemployment benefit rules imply a reduction or withdrawal of benefits if the job offer is rejected – a key issue which is also ignored in available measures of METRs. Also, a low-paid entry job may represent a stepping stone into employment and raise expectations of getting a better job in the future. Finally, social security contributions (a key component of METRs) might be regarded by workers as deferred income against future services provided by the state. These factors are likely to play an important role in limiting the effect that high METRs, as measured, have on employment transitions.

Studying the impact of METRs on labour market performance presents several difficulties. The most severe limitation derives from the fact that most of the value added of this all-inclusive measure of implicit taxation is lost when it is averaged across socio-demographic groups. For instance, the calculation of a METR for a country as a whole would result in a measure that is no different from the standard tax-wedge. This is because, at average wages, taxes and social security contributions would make up most of the marginal tax rate. Hence, Chart 3.6 focuses on unemployment and inactivity rates for the low-skilled, one of the groups most likely to face low incentives to work. The cross-country correlation between, on the one hand, unemployment and inactivity rates of low-skilled workers, and the METR associated with 67% of APW on the other, turns out generally to be positive but rather weak. The same weak relationship holds when looking at some demographic groups separately (not shown in the chart).

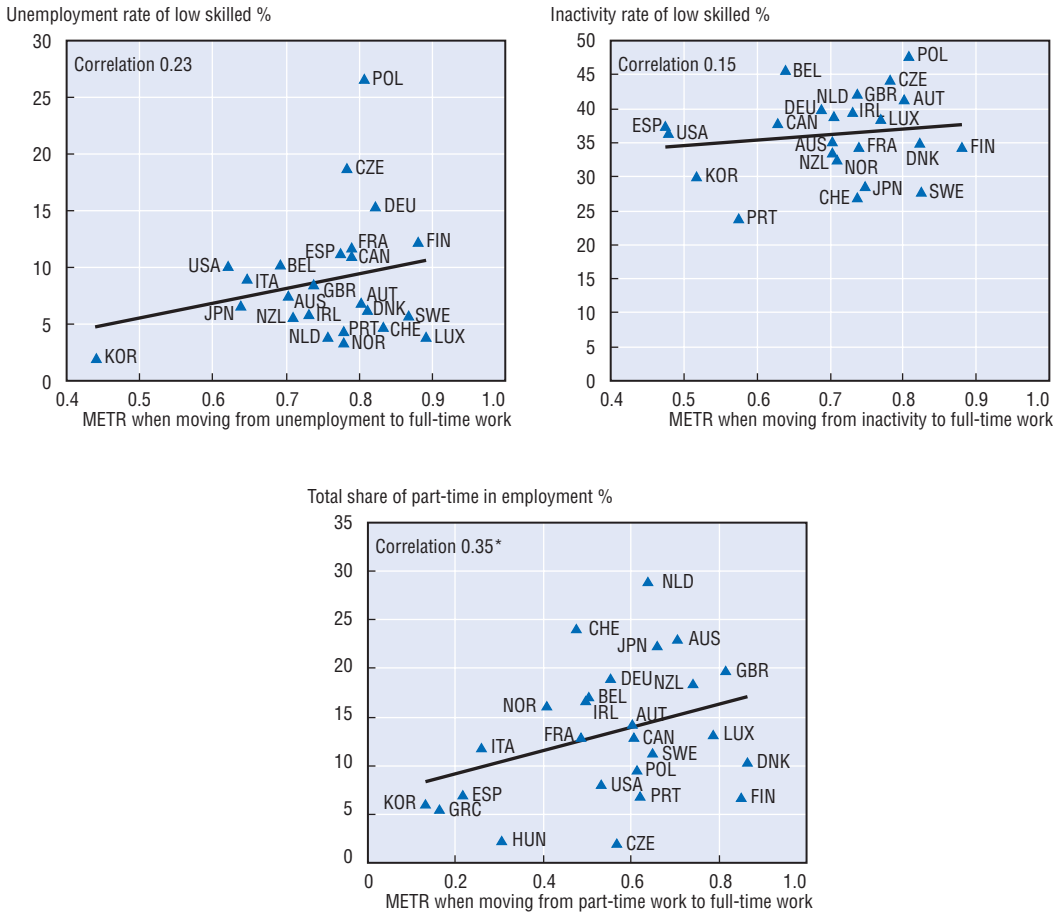
Overall, these weak relationships point to the need for a more detailed assessment of the possible links between financial incentives and employment outcomes. This can be achieved using micro-data, where the METR faced by each individual can be related to his/her labour market behaviour.

Panel A of Table 3.1 provides econometric estimates of the extent to which METRs influence the probability of transition from unemployment to employment, in several OECD countries.[9] The dependant variable accounts for all transitions from unemployment to employment during the survey year (2001). In order to attribute an METR to each unemployed individual, a two-stage procedure is used. First, potential hourly earnings after unemployment are predicted by variables identifying region of residence, age, education, marital status and employment status of the spouse. An attempt is made to correct for the selection bias resulting from the fact that wages are only observed for individuals who are working: a variable capturing previous experiences of unemployment is also included. Hence, potential earnings of currently unemployed individuals are predicted by taking into account past unemployment experience of those currently employed.[10] Separate earnings' regressions are run for men and women and for different countries of residence. With the value of potential earnings attributed to each unemployed individual and using household characteristics, a value of the METR can be calculated for each individual.[11]

The analysis takes into account gender and family structure in order to test whether the effect of METRs is different across socio-demographic groups. Panels B and C of Table 3.1 present similar analyses for transitions from inactivity to employment and from part-time to full-time work, with a special focus on women who are more likely than men

Chart 3.6. **METRs and the labour market status of low-skilled individuals, 2002**[a]

Persons aged 25 to 64 years



* statistically significant at 10% level.

a) METR for a one-earner couple with two children moving from unemployment to full-time work at wage level = 100% APW (wage before unemployment = 100% APW).

Source: OECD tax-benefits models.

Statlink: *http://dx.doi.org/10.1787/283704754338*

to be looking after the family but willing to go back to work at some point, or to be working part-time in order to reconcile work and family life. Potential earnings for inactive women are predicted in the same way as for the unemployed while for part-time to full-time transitions, hourly earnings are assumed to remain unchanged.[12]

A rise of 1% in the METR faced by unemployed individuals increases their probability of exiting unemployment by 0.5%. This may appear rather small but, as already noted, policy reforms have often reduced METRs by 10 to 30 percentage points for lone parents and by 10 to 20 percentage points for one-earner couples. Indeed, taking the population as a whole, a reduction of METRs by 20% would imply a rise in the probability of moving from unemployment to employment by about 10%, *i.e.* from 45% to 49%.[13] Looking at differences across demographic groups, financial considerations appear to be more relevant for individuals with a working spouse when deciding to leave unemployment for work.

As far as transitions from inactivity to employment are concerned (Table 3.1, Panel B), METRs appear to be relevant only for single women, for which the estimated elasticity is

Table 3.1. **What is the impact of METRs on employment outcomes?**

	All	Women	Single	Single with children	One-earner couple	One-earner couple with children	Two-earner couple	Two-earner couple with children
	Panel A. METRs and transitions out of unemployment, 2001							
	All 25-64, European countries[a] and the United States[b]							
METR	–0.48 ***	–0.45 ***	–0.36 **	–0.23	–0.35 **	–0.27	–0.67 ***	–0.58 ***
Age 25-34	0.01	0.00	–0.01	0.00	0.26 **	–0.05	0.06	–0.02
Age 45-54	–0.11 ***	–0.13 ***	–0.20 ***	–0.19 **	0.08	0.02	–0.13 **	–0.05
Age 55-64	–0.33 ***	–0.28 ***	–0.32 ***	–0.34 *	–0.14 *	–0.36 ***	–0.33 ***	–0.20
Medium skill	–0.12 ***	–0.11 ***	–0.13 **	–0.17 *	–0.06	–0.22 **	–0.11 *	–0.05
Low skill	–0.11 ***	–0.13 ***	–0.13 **	–0.23 **	–0.04	–0.19 *	–0.13 **	–0.03
Female	–0.11 ***		–0.01	0.05	–0.08 **	–0.29 ***	–0.09 **	–0.11 **
Married	–0.04	–0.14 ***						
Spouse working	0.11 ***	0.18						
With children	0.02	–0.03						
Observed probability	0.45	0.43	0.44	0.44	0.23	0.52	0.51	0.54
Predicted probability	0.45	0.42	0.44	0.44	0.20	0.52	0.51	0.54
	Panel B. METRs and transitions out of inactivity, 2001							
	Women looking after the family 25-54, European countries[a] and the United States[c, d]							
METR	0.09 *		–0.63 *	–0.05	0.04	0.08	0.41 **	0.16 **
Age 25-34	0.08 ***		0.51 **	0.14 *		0.14 *	0.10	0.07 ***
Age 45-54	–0.09 ***		–0.23 *	–0.08	–0.02	0.00	–0.05	–0.09 ***
Medium skill	–0.12 ***		–0.18	–0.03	–0.03	–0.01	–0.09 *	–0.14 ***
Low skill	–0.22 ***		–0.13	–0.22 **	–0.06	–0.15 *	–0.20 ***	–0.23 ***
Married	–0.20 ***							
Spouse working	0.06 **							
With children	–0.01							
Observed probability	0.22		0.27	0.34	0.04	0.19	0.16	0.23
Predicted probability	0.20		0.21	0.33	0.04	0.17	0.14	0.22
	Panel C. METRs and transitions from part-time to full-time, 2001							
	All 25-64, European countries[a, e]							
METR	–0.12 **	–0.17 ***	0.09	–0.21	0.07	0.06	–0.38 ***	–0.13
Age 25-34	0.05 **	0.02	0.13	–0.12	–0.06	0.15	0.11 **	0.03
Age 45-54	–0.03	–0.02	0.08	–0.16 **	–0.17 *	0.00	–0.04	0.00
Age 55-64	–0.10 ***	–0.10 ***	–0.05		–0.36 ***	–0.14	–0.09 **	0.04
Medium skill	–0.01	–0.03 *	0.17 ***	0.01	–0.08	0.13	–0.05 *	0.00
Low skill	0.02	–0.01	0.13 *	0.03	–0.02	0.31 ***	–0.04	0.01
Female	–0.13 ***		–0.02		–0.13 **	–0.20 ***	–0.14 ***	–0.12 ***
Married	0.02	–0.01						
Spouse working	–0.06 ***	–0.06 **						
With children	–0.04 **	–0.04 ***						
Observed probability	0.16	0.14	0.20	0.19	0.20	0.27	0.16	0.14
Predicted probability	0.16	0.14	0.19	0.17	0.17	0.24	0.14	0.14

Notes on next page.

Table 3.1. **What is the impact of METRs on employment outcomes?** *(cont.)*

*, **, *** statistically significant at 10%, 5% and 1% levels, respectively.
a) Austria, Belgium, Denmark, Finland, France, Germany, Greece, Ireland, Italy, Portugal, Spain, United Kingdom.
b) Maximum likelihood probit estimates of the probability of moving from unemployment to employment between 2000 and 2001. All transitions over the year preceding the survey are accounted for. Estimation procedure includes two steps: first hourly potential earnings are estimated for each unemployed individual in a regression including the following explanatory variables: region of residence, age, education, marital status, employment status of the spouse. A dummy capturing previous experiences of unemployment is also included in an attempt to correct for selection bias. Separate earnings regressions are run for men and women and for different countries of residence. To predict potential earnings for unemployed individuals waiting to return to work, the dummy capturing previous unemployment experience is set to one. In the second step, METRs are calculated for each unemployed individual assuming equal earnings before and after unemployment. The coefficients can be interpreted as the change in the probability of transition given an infinitesimal change in each independent and continuous variables and given a discrete change in dummy variables (from 0 to 1).
c) See note b for estimation methodology with the only difference that to control for selection bias a dummy capturing previous spells of inactivity is included.
d) For the United States, all inactive women 25-54 are taken into account.
e) Maximum likelihood probit estimates of the probability of moving from part-time to full-time between 2000 and 2001. METRs are attributed to each part-time worker assuming he/she would move to a full-time job paying the same hourly earnings. The coefficients can be interpreted as the change in the probability of transition given an infinitesimal change in each independent and continuous variables and given a discrete change in dummy variables (from 0 to 1).
Source: European Community Household Panel, Eurostat; Panel Study of Income Dynamics.

rather high, at about 0.6%. These results have to be taken with care as the decision to return to work after a period of inactivity is likely to stem from a series of considerations that the variables included in the regression do not capture properly. Part-time to full-time work transitions (Table 3.1, Panel C) are mostly affected by financial incentives for the second earner in a couple with no children.

As mentioned above, one limitation of the analysis conducted here is that it fails to capture the quality of the prospective job, such as its likely stability and duration and the career prospects it may offer. In fact, METRs do not incorporate the possible impact of future income on decisions to move to employment or stay on benefits today. Indeed, as already noted, they fail to account for the fact that a job may be considered a stepping stone into the labour market and may provide future career and wage advancement prospects despite its possible immediate financial unattractiveness.[14] In addition, it could be argued that the various components of the METRs may have separate and different effects on the probability of transition from non-employment to work or from part-time to full-time work.

Finally, the regressions fail to account for the overall institutional setting in the countries included. For instance, METRs are likely to interact with active labour market policies (ALMPs) and government-provided childcare. Indeed, ALMPs are designed to help the transition between unemployment and work and often include work-related training and job-search courses. By helping improve skills and job matching, ALMPs can contribute to increasing the post-unemployment salary thus reducing the METR. This makes them an ideal complementary policy to help individuals return to self-sufficiency. Government expenditure on childcare is also likely to play a very important role as childcare costs influence the employment decisions of parents.[15] Nevertheless, estimation results are suggestive and broadly in line with the findings from other studies.

Overall, a good strategy for introducing in-work benefits should involve adequate targeting on the groups that are most likely to be sensitive to changes in financial incentives. In addition, combining this policy with effective re-employment support and activation policies, as well as quality childcare provision may increase its effectiveness.

Table 3.2. **Employment-conditional benefits**[a]

2002

	Name of programme	Type of benefit	Beneficiaries	Maximum benefit		Working hour criterion	Transition criterion	Phase-in rate	Phase-out rate	Earnings when phasing out begins (% of APW)	Approximate maximum earnings when benefit is phased out completely (% of APW)
	[1]	[2]	[3]	National currency [4]	(% of APW) [5]	[6]	[7]	[8]	[9]	[10]	[11]
Australia	Employment entry payment.	Benefit	Unemployed lone parents or long term income support recipients. Eligible once every 12 months.	AUD 104	0.21%	Full time.	Starting employment.	No	No	–	–
Belgium	*Crédit d'impôt.*	Non-wastable tax credit.	Working individuals with low income.	EUR 90	0.29%	No	No	6%	2%	42%	54%
	Complément de garde d'enfant.	Benefit	Long-term unemployed lone parents.	EUR 744	2.43%	At least half-time.	Starting employment.	No	No	–	–
Canada[b]	Ontario start up benefit.	Benefit	Social assistance recipients. Eligible once every 12 months.	CAD 253	0.65%	No	Starting or changing employment, or joining a training programme.	No	No	–	–
	Québec prime au travail.	Non-wastable tax credit.	Working individuals with low income.	Individual: CAD 511 Lone parent with children: CAD 2 190 Couple with children: CAD 2 800	Individual: 1.34% Lone parent with 2 children: 5.63% Couple with 2 children: 7.20%	No	No	–	–	Individual: 38.10% Lone parent with 2 children: 81.30% Couple with 2 children: 110.12%	–
Finland	Earned income allowance.	Income tax allowance.	Working individuals with low income.	EUR 440 in tax savings (EUR 2 140 for the actual tax allowance)	1.6% in tax savings (7.7% of APW for the actual tax allowance)	No	No	6%	1%	46%	270%

Table 3.2. **Employment-conditional benefits**[a] *(cont.)*

2002

	Name of programme	Type of benefit	Beneficiaries	Maximum benefit		Working hour criterion	Transition criterion	Phase-in rate	Phase-out rate	Earnings when phasing out begins (% of APW)	Approximate maximum earnings when benefit is phased out completely (% of APW)
	[1]	[2]	[3]	National currency [4]	(% of APW) [5]	[6]	[7]	[8]	[9]	[10]	[11]
France	*Prime pour l'emploi.*	Non-wastable tax credit.	Working individuals with low income.	Individual: EUR 475 Lone parent with 2 children: EUR 570 Couple with children: EUR 620	Individual: 2.16% Lone parent with 2 children: 2.59% Couple with 2 children: 2.82%	No	No	5.3% 6.3% 6.9%	9%	60%	84% 105% 128%
Germany[c]	*Mainzer Modell.*	Reduction of social security contributions (SSC) and addition to child benefit.	Working individuals/couples with low income; additional amounts for dependent children.	Refund of full amount of employees' SSCs, plus additional benefit of EUR 924 per child.	Without children: 2.42% With 2 children: 7.57%	15 hours per week.	No	No	Without children: 14.7%	Without children: 16% With 2 children: 27%	Without children: 33% With 2 children: 62%
Ireland	Back-to-work allowance (BTWA).	Benefit	Long-term unemployed (over 15 months) aged over 22.	First year: EUR 4 633 Second year: EUR 3 089 Third year: EUR 1 544	First year: 18.19% Second year: 12.12% Third year: 6.06%	No	Starting employment.	No	No	–	–
	Family income supplement (FIS).	Benefit	Working families with children and low earnings.	60% of differece between net family earnings and income limit (20 176 EUR for two children)	32.47% (19 hours at minimum wage)	19 hours per week.	No	No	60%	–	79%
	Continued child dependent payment (CCDP).	Benefit	Long-term unemployed (over 12 months) receiving UI or UA.	EUR 16.8 per week, for 13 weeks only	0.86%	Full-time for at least 4 weeks.	Starting employment.	No	No	–	–
	Part-time job incentive (PTJI).	Benefit	Long-term unemployed previously receiving UA.	Single: EUR 3 920 Couple: EUR 6 604	Single: 15.35% Couple: 25.92%	Part-time.	Starting employment.	No	No	–	–

Table 3.2. **Employment-conditional benefits**[a] *(cont.)*

2002

	Name of programme	Type of benefit	Beneficiaries	Maximum benefit		Working hour criterion	Transition criterion	Phase-in rate	Phase-out rate	Earnings when phasing out begins (%of APW)	Approximate maximum earnings when benefit is phased out completely (% of APW)
	[1]	[2]	[3]	National currency [4]	(% of APW) [5]	[6]	[7]	[8]	[9]	[10]	[11]
Japan	Re-employment allowance.	Benefit	Unemployment benefit recipient.	Lump sum = remaining days of term of benefits × ⅓ × daily unemployment benefit (basic allowance)	11.03% (unemployment spell of 2 months)	20 hours per week.	Starting employment while over ⅓ of benefit duration remains (minimum 45 days).	No	No	–	–
Korea	Early re-employment allowance.	Benefit	Unemployment benefit recipient.	Lump sum of 50% of remaining benefits	14.36% (unemployment spell of 2 months)	20 hours per week.	Starting employment while over 50% of benefit duration remains.	No	No	–	–
Netherlands	Work credit premium.	Tax credit.	Benefit recipients.	First year: EUR 1 361 Second year: EUR 454 Third year: EUR 454	First year: 4.45% Second year: 1.48% Third year: 1.48%	Full-time.	Starting employment.	No	No	–	–
	Combination tax credit.	Tax credit.	Working families with children aged under 12.	EUR 190	0.62%	No	No	No	No	–	–
New Zealand	Family tax credit.	Non-wastable tax credit.	Working non-beneficiary families with children (employees) with low income.	Ensures a minimum net income of NZD 15 080 before other tax credits	Single: 16.78% (at minimum wage, 20 hours) Couple: 6.28% (at minimum wage, 30 hours)	lone parents: 20 hours couple: 30 hours	No	No	100%	–	40%
	Low income earner rebate (LIER).	Non-wastable tax credit.	Working non-beneficiary families (employees) with low income.	NZD 728	1.82%	20 hours per week.	No	No	20%.	NZD 6 240 (16% of APW).	NZD 9 880 (25% of APW).
	Work start grant (WSG).	Benefit	Benefit recipients.	NZD 500	1.25%	Minimum 15 hours per week.	Starting employment.	No	No	–	–

Table 3.2. **Employment-conditional benefits**[a] *(cont.)*

2002

	Name of programme	Type of benefit	Beneficiaries	Maximum benefit		Working hour criterion	Transition criterion	Phase-in rate	Phase-out rate	Earnings when phasing out begins (%of APW)	Approximate maximum earnings when benefit is phased out completely (% of APW)
	[1]	[2]	[3]	National currency [4]	(% of APW) [5]	[6]	[7]	[8]	[9]	[10]	[11]
United Kingdom	Working families tax credit.	Non-wastable tax credit.	Working families with children and low income.	Ensures an income of GBP 6 001 (16 hours) or GBP 6 607 (30 hours) reduced by 55% of the difference between income and GBP 94.5 per week	16 hours: 35.09% (at minimum wage) 30 hours: 29.69% (at minimum wage)	16 hours per week, supplement for working 30 hours per week or more.	No	No	55%	25%	110% (for a family with two children)
United States	Earned income tax credit.	Non-wastable tax credit.	Working families with children and individuals with low income.	Without children: USD 376 With one child: USD 2 506 With 2 children: USD 4 140	Without children: 1.16% With one child: 7.74% With 2 children: 12.79%	No	No	Without children: 7.65% With one child: 34% With 2 children: 40%	Without children: 0.765% With one child: 15.98% With 2 children: 21.06%	Without children: 19.00% With one child: 41.78% With 2 children: 41.78% All values increased by 3.09 pp if couple is married	Without children: 34.18% With one child: 90.23% With 2 children: 102.53% All values increased by 3.09 pp if couple is married

"–" indicates that no information is available or not applicable. Non-general schemes that are specifically targeted towards younger or older age-groups are not shown.

a) All amounts are shown on an annualised basis.

b) Most Canadian provinces have a scheme similar to this; there are no federal programmes. The Prime au Travail in Québec will start in 2005.

c) The Mainzer Modell scheme only existed between March 2002 and March 2003.

Source: OECD (2004), *Benefits and Wages: OECD Indicators*, Paris.

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2. Increasing financial incentives to work with in-work benefits

Financial incentives to work can be improved by either cutting welfare benefit levels or introducing in-work benefits while leaving benefits unchanged. Concerns about equity have made many countries hesitant about pursuing the former option. Instead, many OECD governments have turned to in-work benefits as the principal way of reducing METRs. Table 3.2 summarises the characteristics of the existing programmes in 2002 across OECD countries, highlighting differences in targeting, conditionality rules, level of benefits, and withdrawal patterns (*i.e.* the pace at which in-work benefits are reduced as income rises). All values are expressed in per cent of APW earnings to make comparisons across countries and programmes more meaningful.

Out of the 12 countries that have introduced some sort of in-work benefits, eight have special provisions for individuals who start work after a period of unemployment or inactivity. In all cases, the payment comes in the form of a lump-sum, although the criteria of entitlement vary across countries. In Australia, Belgium and Ireland,[16] entitlement is restricted to long-term unemployed individuals. In Canada, the Netherlands and New Zealand, all benefit recipients who find a job are entitled to an employment-conditional benefit. With the exception of Canada, hours work requirements accompany the bonus payments: transition to full-time employment is required in Australia and Ireland, and part-time work – generally more than 15 hours – is a condition in the remaining countries. Chart 3.7 shows how these payments change the net earnings of a one-earner couple with two children where one member of the household moves from unemployment to work.[17]

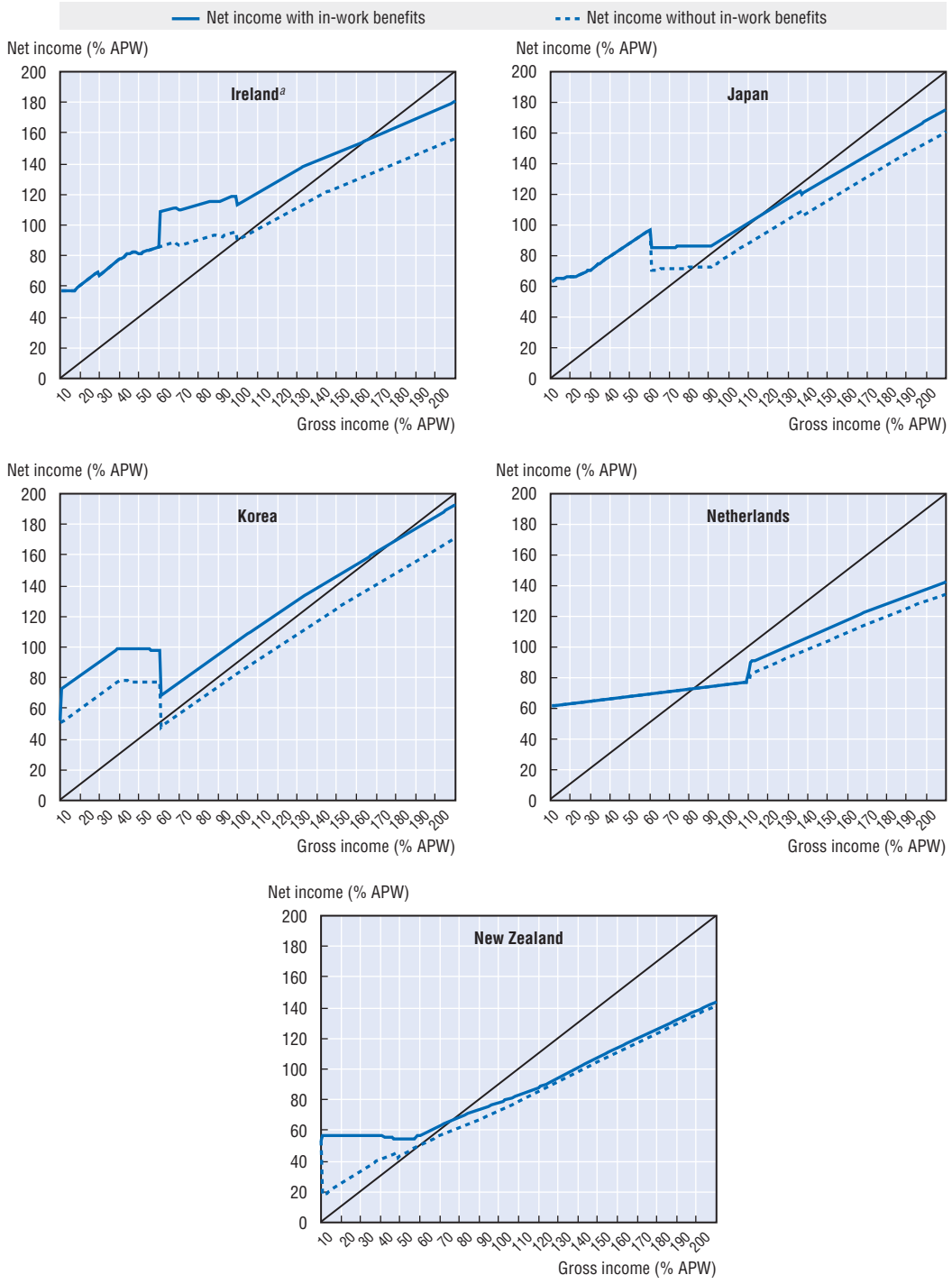
In Japan and Korea unemployed people who get a job rapidly are rewarded with a bonus calculated as a proportion of the amount of their unemployment insurance benefit entitlement that has not been used. On the other hand, in Ireland and the Netherlands, in addition to a payment at re-entry, two further payments of decreasing amounts are made to reward those who are still employed in each of the two following years. In New Zealand, the payment is means-tested and this explains why it is not available to individuals who return to work earnings at more than 110% of average earnings. What emerges from the chart is that when in-work benefits are paid in the form of lump-sum payments, they cannot overcome the negative incentives introduced by the withdrawal of welfare benefits. In Japan, for instance, an unemployed person faces the same prospective earnings in a job that pays 60% of average earnings as in a job that pays 85% of the average earnings, reducing the incentives to work more hours or to upgrade one's competencies in order to move to a better-paid job.

In addition to programmes aimed at increasing the financial incentives to work *vis-à-vis* recipiency of unemployment or inactivity benefits, most countries in Table 3.2 have programmes to help working individuals with low income. In Belgium, Canada, Finland, France and the United States, individuals without children are entitled to an income supplement, although the benefit generally includes more generous payments for families with children. On the other hand, Ireland, the Netherlands, New Zealand and the United Kingdom specifically target families with children, reflecting the policy aim of reducing child poverty.

Benefit levels vary widely across programmes.[18] The United Kingdom's Working Family Tax Credit has the most generous payouts, and can reach up to 30 to 35% of average earnings for families with children and low income. The Irish Family Income Supplement

Chart 3.7. **Effects of in-work benefits on unemployment traps, 2002**

One-earner couple with two children



a) Refer to a single couple with two children.

Source: OECD tax-benefits models.

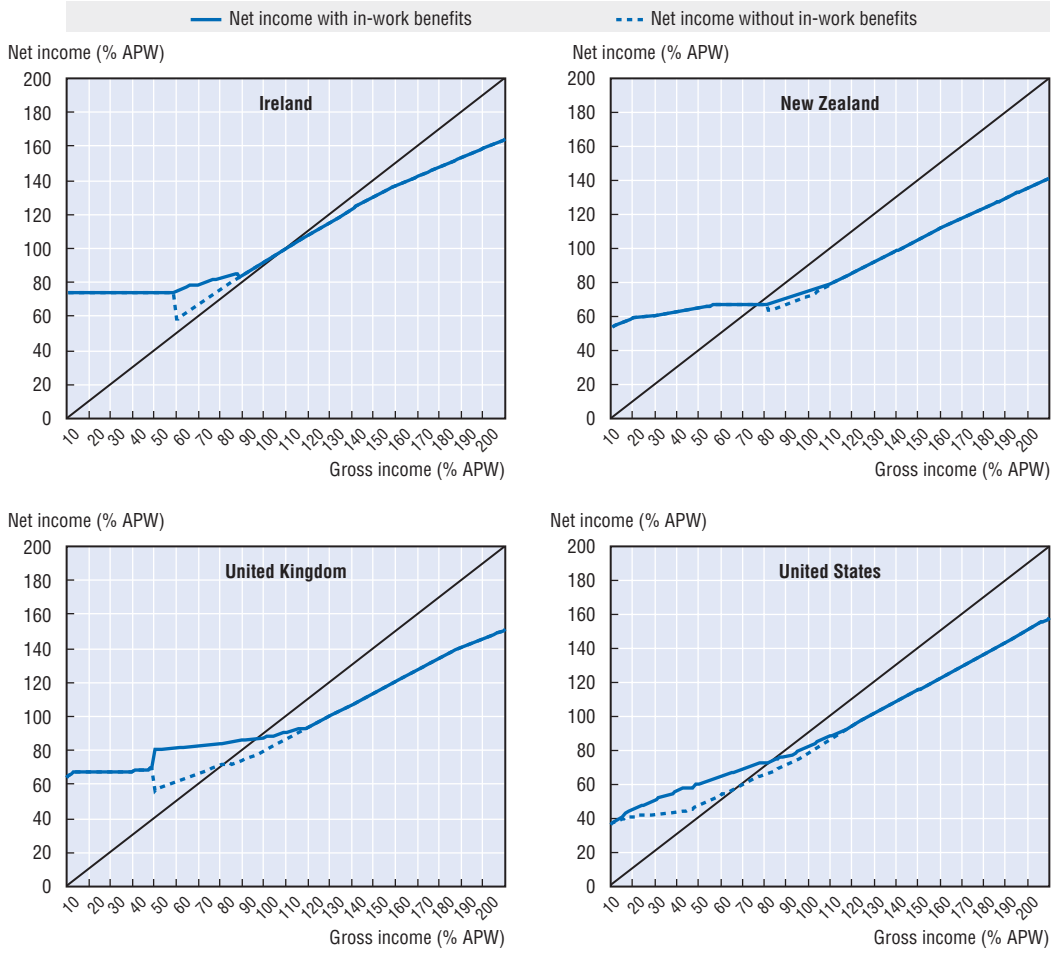
Statlink: *http://dx.doi.org/10.1787/084411702375*

programme is also rather generous, paying 32.5% of APW to working families with children. Lone parents in New Zealand receive an income supplement that can reach the equivalent of 17% of the average wage for a worker at the minimum wage. Besides being rather generous, these programmes have similar requirements with respect to working time – *e.g.* the schemes are available to individuals working at least 16 hours in the United Kingdom, 19 hours in Ireland, and 20 hours in New Zealand. In exchange for being rather generous, the benefits are withdrawn at rather high rates, ranging from 55% in the United Kingdom to 100% in New Zealand. The United States system is less generous, with maximum payments of 13% of average earnings to families with two children. However, the benefits are withdrawn more slowly, at a rate of 20%. Chart 3.8 shows net earnings of a one-earner family with two children, with and without in-work benefits, in these countries.

Except for the Netherlands and New Zealand, countries have not introduced special programmes to make work more financially attractive to inactive individuals. The Dutch "Work Credit Premium" and the smaller New Zealand "Work Start Grant" are the only re-employment bonuses extended to previously inactive individuals. In the other countries,

Chart 3.8. **Effects of in-work benefits on low-wage traps, 2002**

One-earner couple with two children



Source: OECD tax-benefits models.

Statlink: *http://dx.doi.org/10.1787/175472763811*

it is in-work benefits for low-income working families that help reduce inactivity traps. This is in line with the findings of the previous section that targeting inactive individuals may not be so rewarding. Indeed, except for single women, the inactive do not appear to respond significantly to financial motives.

Overall, in the countries where the schemes are available to a wide range of groups, the level of benefits tends to be much lower than in countries where the schemes are more targeted. For instance, Belgium, Finland and France provide refundable tax-credits to all working individuals with low income, but the maximum amount of benefit paid out is rather small – below 2.6% of average earnings. In general, a more targeted approach, despite helping a smaller number of individuals, tends to be more effective in encouraging the return to self-sufficiently. This may be associated to the fact that, given budget constraints, when programmes are more closely targeted, the level of benefits can be higher.

3. Key design features of in-work benefits

Several OECD countries have set out to reform their tax and benefit systems in order to improve financial incentives to work, without sacrificing the poverty-reduction goal of welfare programmes. And empirical evidence presented above suggests that such policies may indeed improve job prospects, at least for certain groups. In-work benefits have emerged as a key tool in this regard. Theoretical work and empirical evaluations are crucial in understanding the specific design features of in-work benefits that help improve work incentives, while at the same time limiting the budget costs. The purpose of this section is to present the main findings of these studies.

A. Ensuring that in-work benefit policies work and are cost-effective

In-work benefits can help reconcile welfare programmes with work incentives

Whatever way they are designed, welfare systems will always tend to reduce work incentives, to the extent that welfare benefits depend one way or another on income levels. No doubt, employment-conditional programs can enhance work incentives *with respect to* welfare programmes. However, as seen earlier in this chapter, while employment-conditional programmes reduce METRs for those moving from welfare to work, their withdrawal range, reduces incentives to earn higher wages or work longer hours: work disincentives are shifted to a higher income range but do not disappear. Indeed, the only way of eliminating such disincentives would be to eliminate welfare altogether. This would reduce METRs for individuals taking up employment and make the introduction of in-work benefits unnecessary.

However, the policy goal is not just to enhance labour supply, but also to take distributional considerations into account. For example, society may value increases in the labour supply of those initially on welfare rolls – typically the most disadvantaged and those with the lowest skills – more than labour supply reductions at higher income levels brought about by employment-conditional programs. Indeed, the desirability of any welfare reform, as well as the choice of some minimum income level, requires knowledge of the income distribution, the elasticity of labour supply to tax-benefit changes, and the identification of a particular welfare function – *i.e.* how much society values equity and poverty reduction.

The optimal tax literature has shown that the combination of in-work benefits and a minimum out-of-work income (see Box 3.4) can be a welfare-maximizing tool for society,

Box 3.4. **Negative income taxes and work incentives**

Employment-conditional benefits have their origin in the 1960s, when Friedman (1962) proposed to reform the United States welfare system by introducing a negative income tax (NIT). His proposal came at a time when policy makers were starting to realise that traditional welfare programmes created disincentives to work.

The chart below shows how NIT would change net income with respect to both traditional welfare and no welfare. In the absence of welfare, as hours increase, net income would increase along the AB line. With traditional welfare, individuals without income would get a benefit of size BC and this would be reduced 1 for 1 as income increases – creating the flat line CD – until the point where no benefit is left and net earnings move along AD. Obviously, individuals face no incentive to work more along CD, as their net earnings do not rise with hours worked. By withdrawing benefits by less than the increase in gross income, the NIT would reduce these disincentives along the new net earnings schedule CEA.

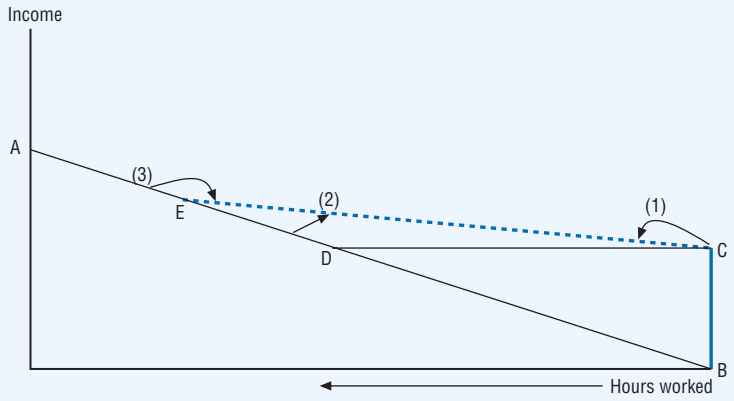
Along with improved work incentives, compared with traditional welfare programmes, a NIT would present some other advantages. First, it would provide support to poor families only on the basis of their income and not on the basis of other characteristics supposed to proxy need, *i.e.* old age and single-parent status. Second, it would provide cash rather than in-kind benefits. Third, it would simplify the welfare system as a whole by replacing the multitude of programmes that deal with poverty and redistribution. This, in turn, should save on administrative costs (see Moffitt, 2003 and 2004).

As far as incentives are concerned, in the presence of a NIT, total income would increase with wages but less than proportionally because benefits would be withdrawn by a per cent of the rise in earned income. Hence, a NIT would constitute an improvement over traditional welfare support (schedule CDA) but would still be second best to a trade-off *vis-à-vis* no welfare (AB line). In other words, if equity issues did not matter at all for social welfare, no welfare would be best solution.

In addition, while some people may be encouraged to work more in the presence of a NIT (movement indicated by arrow 1), for others incentives would go in the opposite direction making them *windfall beneficiaries*. Some will be able to achieve higher net earnings with less work effort (2) and others may choose to reduce their effort and accept a smaller reduction in income than in the absence of the NIT (3). As a result, the total effect of a NIT on labour supply is far from certain, and it would depend on the income distribution in the country.

Despite several experiments conducted in the United States and Canada (see Widerquist, 2005; and Levine *et al.*, 2004, for a review), the NIT has never been implemented in the form that Friedman envisaged. In particular, critics have pointed to the likelihood that several individuals would become windfall beneficiaries of the programme, thereby increasing total costs well beyond feasibility.

The negative income tax and windfall beneficiaries



even when the labour supply disincentives for those already in employment are taken into account. Thus, Mirrlees (1971) assumes that the overall utility is just the sum of individuals' utilities, and that marginal utilities decline with income. This set up implies that redistribution to the poor improves social welfare although this benefit must be balanced against the costs arising from work disincentives and consequent reductions in output. According to this study, an in-work benefit with close to zero withdrawal rates would be optimal, implying that the utility gains at the bottom end of the income distribution are greater than the utility losses at higher incomes. Fortin *et al.* (1993) reach similar conclusions by incorporating preference for income equality in the social welfare function.

Overall, these studies suggest that the elimination of welfare benefits as a way to increase financial incentives to work does not maximize well-being. In addition, they confirm that, within the context of modern benefit systems, in-work benefits may be a welfare-maximizing policy tool as they can contribute to achieving the right balance between poverty alleviation and work incentives.

The big issue is how to combine welfare benefits and in-work benefits in a way which both *a)* reduces the inevitable work disincentives associated with such systems; and *b)* keeps the overall budget costs within reasonable limits. The following paragraphs discuss how this can be achieved and the various trade-offs involved.

Benefit level and withdrawal rate: a difficult choice

The issue of how large an in-work benefit should be and at what rate it should be withdrawn is crucial and at the same time very difficult to address. In-work benefits should be large enough to create a sizeable difference between welfare income and work income, but their optimal level would depend on factors such as levels of income support relative to wage rates of the less skilled, the minimum wage and the costs of working (which include transport, childcare, etc.). In addition, as governments tend to be budget-constrained, the overall cost of the programme would influence the size of in-work benefits and the expected welfare gains.

Overall, the optimal benefit levels and phasing-out rates have been shown to depend on where most of the labour supply effect is likely to come from: an increase in labour market participation *versus* an increase in hours worked. In this respect, Saez (2002) shows that when most of the effect is observed in terms of labour market participation – *i.e.* going from non-employment to work – the optimal transfer programme should resemble the Earned Income Tax Credit of the United States (see Box 3.5), with a small guaranteed income and low benefit withdrawal rates. On the other hand, when most of the effect is expected to be in terms of changes in hours worked, rather than in participation decisions, the best choice would be a programme with high guaranteed income and a high phasing out rate.[19] However, Saez's model does not consider the additional cost of long-term unemployment, in terms of loss of skills. If this was introduced in the social welfare function, it would be likely to reinforce the superiority of programmes with relatively low guaranteed income and low withdrawal rates.[20]

The role of time-limits to in-work benefits

Another design feature that may have desirable properties is the use of time limits to the receipt of in-work benefits. The introduction of time limits to the provision of in-work benefits may help attenuate some of the drawbacks of the system in terms of possible

Box 3.5. **The success of the US Earned Income Tax Credit in getting people into work**

The Earned Income Tax Credit (EITC) began in 1975 as a modest programme aimed at offsetting the social security payroll tax for low-income families with children. The generosity of the EITC was increased in the tax acts of 1986, 1990, and 1993. The contrasts between the EITC and traditional welfare benefits are many. First, the EITC is provided through the tax system rather than the welfare system. Second, eligibility for the EITC is available to *all* low-income families with children, irrespective of marital status. Third, receipt of the credit requires positive family earnings. Consequently, the EITC creates positive incentives to work for single parents. However, because the credit is based on family income, it can create adverse incentives to work among married couples and in the phase-out range.

Several studies have found relatively strong results on participation of single parents (see Eissa and Liebman, 1996). The expansion of the EITC and other tax changes may have led to a reduction in the tax liability of single mothers by USD 1 331, on average (1996 dollars), and employment rates may have increased as a result of the measures from 73 to 75.8%. There is also some evidence of a very small negative effect on hours for those in work. Liebman (1998) and Meyer and Rosenbaum (1999) use a similar approach to examine the impact of all three of the EITC reforms. The estimated behavioral responses are very similar in magnitude to those found by Eissa and Liebman (1996). According to estimates by Grogger (2003), the increased generosity of the scheme during the 1990s helped reduce the number of entrants into the welfare system over the same period. More precisely, the author finds that each percentage-point increase in the credit rate reduced initial entry by 3.2%.

As the EITC has been heralded as a major policy success, it is interesting to look at the features that may have contributed to it. First, in-work benefits in the United States tend to generate larger financial incentives to work than similar, sometimes more generous, programmes. In fact, the EITC is not counted as income for the calculation of any other transfer programme, so the household sees the full gain of the in-work benefit, suggesting that the interaction between in-work benefits and other means-tested benefits is of central.

Second, in the United States, in-work benefits were expanded at a time when the out-of-work benefits were being reduced, particularly for single parents. Thus, the increase in incentives to work through the EITC was strengthened by the decline in the generosity of out-of-work benefits.

Third, the low withdrawal rate reduces the disincentive effects that typically arise at the higher end of the earnings distribution, although it does this at the cost of increasing the public finance burden of the scheme. There is, as noted above, little evidence that working hours have been much reduced among those already in employment in order to take advantage of in-work benefits.

financial disincentives to move up the wage ladder. Moreover, time limits tend to lower the public finance cost of an in-work benefit as opposed to a more open-ended benefit scheme.

The appropriate design of time limits depends on the expected wage progression for programme participants and the incentives for wage progression created by the time-limited system itself. With no time limit, tax-credit systems can provide a strong negative incentive for wage progression and human capital investment, reducing the chance of

longer-run self-sufficiency. This depends largely on the relative importance of the return to work experience, which occurs automatically once a job is found, in comparison with the return to human capital investment, which requires effort by the individual. Indeed, evidence of steep wage progression among low-skilled workers is rare. Most studies suggest that wage progression is likely to be no more than 3-4% per year at best (see Gladden and Taber, 2000). This is further supported by the work by Card *et al.* (2001) on wage growth among the recipients of the Canadian Self-Sufficiency Project (SSP) experiment (see Box 3.6). These results suggest that a relatively short time limit (*e.g.* up to 6-12 months) is unlikely to provide time for wage progression to result in self-sufficiency and could be counterproductive. At the end of the subsidy, either workers will leave to accept lower income, or give up their jobs, or move into some other make-work-pay programme. For example, the EITC is used by many as a way of working themselves off time-limited earnings supplements in Temporary Assistance for Needy Families programme (TANF).

Targeting of in-work benefit programs

Targeting of in-work benefits may help make programmes more effective while also limiting windfall beneficiaries, by restricting entitlement. Among others, Akerlof (1978), Parsons (1996), Besley and Coates (1992),[21] all suggest some targeting mechanism whereby individuals are assumed to be needy because of some individual or family characteristics, *e.g.* low-education, single-motherhood and poor health, are some examples.[22] Targeting, however, has been subject to criticism. First, it may be viewed as inequitable, since a person who never enters welfare is penalised relative to one who decides to go on welfare for some time and then returns to work. Secondly, targeting could limit the scope for achieving an anti-poverty objective by limiting the programme's availability. Finally, targeting can only partly screen out windfall beneficiaries. In fact, some of the individuals who are not working at the time when eligibility is assessed would have found work even in the absence of the programme. For instance, Lin *et al.* (1998) show that 15% of individuals who had been on welfare long enough to quality for the SSP supplement of Canada, would have found a job even in the absence of the benefit.

As seen in Table 3.5, the group most often targeted is that of long-term welfare recipients. Since most individuals who have spent some time on welfare benefits are likely to remain on welfare in the near future, there are very few windfall beneficiaries of the programme. Moreover, anyone who wants to become eligible for the earnings supplement has to enter welfare and remain on for a full year (see Card and Hyslop, 2005 for more on the effectiveness of this requirement as an entry barrier to welfare).

Another common targeting criterion is that of family structure. In several countries, the presence of children and single parenthood are qualifying criteria to receive in-work benefits. Not only does this choice appear appropriate in the context of targeting – single-parenthood seems to be an appropriate proxy of need – but it also often responds to the explicit government objective of reducing child poverty. While it has been argued that targeting a particular family-type may introduce incentives to change family structure,[23] only small effects of this type have been observed.

In addition to targeting by type of individual and labour market experience, several existing programmes also target by individual earnings or family income. Targeting family income has the advantage of identifying poor families but often carries with it stigma effects and can create adverse family labour supply incentives (see Box 3.2 above). Targeting by earnings has the advantage of identifying low-earners and the low-skilled, but

Box 3.6. **Are time limits to the provision of in-work benefits effective? The experiences of the Temporary Assistance for Needy Families in the United States and the Canadian Self-Sufficiency Project**

TANF provides monthly cash benefits to very low-income families based on eligibility standards set by the states. Unlike its predecessor, Aid to Families with Dependent Children, TANF is not an entitlement programme, *i.e.* eligible families are not guaranteed benefits. One of the main goals of TANF is to help the transition of recipients to employment, so that cash benefits are no longer necessary. Recipient families must fulfill work requirements, and there is a time limit on benefits.

Several studies have been conducted on the role played by time limits in the TANF. Indeed, many believe that time limits played a key role in generating the large welfare caseload declines in the second half of the 1990s. Since few families actually reached a time limit, these effects must have been anticipatory, *i.e.* people must have left welfare more quickly in order to avoid using up months of eligibility. In this respect, Moffitt and Pavetti (2000) show that anticipatory effects depend on discount rates and liquidity constraints, (*i.e.* the relative value that people place on short-term *versus* long-term gains) and their perception of alternatives to welfare. Random assignment studies conducted in seven US states find positive effects on employment and earnings at the end of the first year of programme participation, but they are unable to isolate the specific role that time limits played in generating the positive effect.

Few studies have looked at the specific effect of time limits. Grogger* (2000) shows that in 1998, welfare use among female-headed families would have been 14 to 16% higher in the absence of time limits.

The SSP, an experimental welfare reform begun in the mid-1990s in two Canadian provinces, offers another illustration of how time limits operate. Under SSP, an earnings subsidy was provided for up to three years to long-term recipients who left welfare and entered full-time work. The subsidy reduced welfare participation and raised employment: within 15 months, the employment rate of single mothers who were offered the supplement was 10-15 percentage points higher than the employment rate of a randomly-assigned control group (Lin *et al.*, 1998).

Despite initial findings that most employment resulting from SSP was stable (Michalopoulos *et al.*, 2000), the end-of project report showed more mixed outcomes. Most people who responded to the supplement offer would not have worked otherwise and might therefore have been expected to lose their full-time jobs relatively quickly. In general, this did not happen. For every three people who worked full time because of the supplement offer, two people stayed employed for at least a year. However, although SSP encouraged a group of less-skilled people to go to work, recent studies show that it appears to have had no long run effect on wages and little or no long run effect on welfare participation. In this respect, Card *et al.* (2005) find that wages grew as much for people who worked because of the supplement offer as for the generally more-skilled people who would have worked without the supplement offer. On the other hand, the program might have had some motivational effects on participants. Indeed, Gottshalk (2005) found that welfare recipients who work more hours induced by earnings supplements feel more control over their lives. This could potentially leave welfare recipients to be optimistic about their chances of succeeding in the labour market.

Box 3.6. **Are time limits to the provision of in-work benefits effective? The experiences of the Temporary Assistance for Needy Families in the United States and the Canadian Self-Sufficiency Project** *(cont.)*

Although a full picture of the effect of this time-limited programme will only be available when post-programme evaluation is complete, these preliminary findings are suggestive. An increase in wages sufficient to make work pay better than welfare, even after the supplement is no longer available, might deter people from reapplying for welfare and result in long-term effects from the supplement offer.

* The study is based on the United States Current Population Survey to test a theoretical model that predicts that families with the youngest children should be more responsive to time limits than other groups. The study relies on two sources of variation in the data to identify the effects of time limits and to distinguish the effects of time limits from the effects of other welfare reform provisions. First, time limits were implemented at different times in different states. Second, many states first implemented a welfare reform programme that did not include time limits, and added time limits later on.

it can create a disincentive to work longer hours or increase work effort. In this respect, an interesting proposal for in-work tax credits based on the *hourly* wage has been put forward by MaCurdy and McIntyre (2004) (see Box 3.7).

Hours limits

Restricting eligibility to those working full-time is another way of reducing the number of windfall beneficiaries in a financial incentive scheme. Indeed, this could limit the risk that individuals who would otherwise work full-time shift to part-time in order to receive the benefit.

However, imposing full-time employment as an eligibility requirement may limit the job possibilities for those on welfare who can only take a part-time job. For instance, for mothers with small children, and single mothers more specifically, a requirement of full-time work may reduce considerably the number of programme participants unless childcare costs are also subsidised.

The experience with the Working Family Tax Credit (WFTC) in the United Kingdom is interesting in this respect. The old Family Credit (FC) programme imposed a 24 hours-per-week condition but this was reduced to 16 hours when it was replaced by the WFTC. Research has shown that this has encouraged a significant fraction of inactive single parents into work (Blundell and Haynes, 2001). As expected, it has also reduced the number of hours worked by many single parents in employment. To limit the latter effect, in 1995 the government introduced a bonus paid in addition to the WFTC to those working full-time (30 hours per week). In comparison, EITC of the United States has no minimum-hours condition and some have argued for hourly wage-based credits to address the adverse hours and effort incentives (see Box 3.7).

Assessment period, changes in entitlement and payment arrangements

Most of the design issues considered up to now relate to making the system cost-efficient while getting individuals into work. However, the administrative features of the system *vis-à-vis* recipients are also very important as they influence take-up rates and therefore the effectiveness of the programme.

Box 3.7. **Reform ideas: wage-based tax credits**

MaCurdy and McIntyre (2004) have made interesting proposals of redesigns for the EITC, so as to improve both work incentives and targeting to working-poor families.

The novel idea underlying these proposals involves making the EITC benefit schedule dependent on family's hourly wages as well as earnings. In contrast, the existing EITC system pays benefits merely according to the level of a family's annual earnings, without regard to whether these earnings come about from a large number of hours worked at low wages or a much smaller number of hours worked at higher wages. Paying benefits based solely on a family's earnings means that some families receiving support have relatively high wages but work only part-time. These beneficiaries are not the primary targets of the income-support policy, and their participation in the programme discourages them from moving to full-time work.

The authors consider two redesigns of the current system:

- The wage-based EITC assigns a benefit schedule to a family based on its hourly wages with income supplements paid out at a fixed rate for each hour worked until full-time employment. At full-time, the family would receive the same level of benefits provided under the existing EITC. After reaching full-time, EITC benefits would phase-out at the same rate as the current EITC policy.
- The wage-subsidy EITC pays benefits to make up the difference between a family's wage and a prescribed set level. Once in full-time employment, the same rules as the current EITC would apply. This wage-subsidy EITC operates as if a minimum-wage law were passed with the law applying only to low-income families with children.

Both the wage-based and wage-subsidy alternatives to the EITC overcome the work disincentives present in the existing EITC and improve the targeting of benefits to families supported by low-wage jobs. The wage-based EITC would essentially raise net hourly wages above their non-EITC values for all families supported by jobs paying a very low hourly wage for all hours worked up to the equivalent of one full-time worker, with the benefit rate declining as a family's market wage rises. The wage-subsidy EITC would increase the net hourly wages for all families supported by jobs paying below the prescribed level up to the minimum-wage threshold; this higher wage would apply to all hours worked up to full-time. Consequently, both of these redesigns of the EITC would make work effort more attractive until the family reaches full-time work.

The wage-subsidy EITC would perform best in targeting benefits to the lowest-wage working poor. By construction, practically all benefits would go to these families. The wage-based EITC would focus more benefits to families supported by the lowest-wage jobs than does the current earnings-based EITC, but only marginally so.

The wage-subsidy EITC would also perform better than an increase in the federal minimum wage. Indeed, in the case of a wage-subsidy EITC, only those low-wage workers in low-income families with children would receive the increase in the hourly wage. And, for those workers receiving the wage increase under both the wage subsidy and a minimum-wage increase, the authors show that the wage-subsidy EITC would offer greater work incentives because families would not pay income or payroll taxes on the wage-subsidy EITC, while they would on their minimum-wage earnings.

Overall, the policy implications of the two redesign proposals are interesting. Such modifications appear not only to have the potential of enhancing work incentives of participants, but are also likely to improve the targeting of benefits to families with children supported by low-wage workers. In addition, the wage-subsidy EITC would dominate increasing the minimum wage as an effective antipoverty policy.

The intervals at which income is assessed for eligibility and to determine benefit amounts are very important. Intervals of one year are probably ideal from the administrative point of view, as they reduce the cost of assessment as well as allowing the administering offices to check income information against income-tax files. However, this arrangement would require greater potential responsiveness within a year to changes in family circumstances – *i.e.* significant falls in family income or changes in household's composition such as the birth of a child.[24] Since greater responsiveness may involve more contact with the tax-benefit offices for some families, a key issue will be how to combine this responsiveness with a system which is not too costly and is transparent with respect to potential beneficiaries.

The nature, method and frequency of payment are related and important aspects in the design of in-work benefits. In several countries, in-work benefits take the form of tax credits, moving away from the idea of a benefit paid by social security offices towards a system where eligibility determination and payments fall within the competence of the tax offices. This could turn out to be rather cost-effective if, as some countries have envisaged it – notably, the United Kingdom (HM Treasury, 2000) – tax offices could, one day, use data collected from employers to assess credit awards and eliminate the need for many families to provide such information directly every year. In addition, payment of the credit via the tax system may increase take-up rates by reducing the potential stigma associated with claiming in-work support. The use of the tax system may also facilitate payment through the wage package, therefore increasing the frequency of payments over the year. While this would likely have favourable effects in terms of matching more closely family needs than an end-of-year payment, it would increase the administrative burden on employers. Box 3.8 provides more background on this issue based on the experience with WFTC.

The issue of multiple welfare programmes

One final administrative issue that may influence both administrative costs and take-up rates is the co-existence of several programmes at once for the same potential beneficiaries. Not only does this increase administrative costs, but it has a series of implications for both recipients and the government that are worth mentioning.

The presence of several programmes, when managed by different authorities, increases the burden of the system on the recipients themselves, as they may have to travel to different offices to establish eligibility and to comply with each programme's requirement. There is evidence that the participation of eligible individuals tends to decline as programmes multiply (Zedlewski and Brauner, 1999). Both high individual and administrative costs could be reduced by the introduction of a single welfare office, establishing the eligibility for multiple programmes and dispensing benefits. An additional problem brought about by the presence of several different welfare programmes is that it makes the identification of the overall marginal tax rate faced by an individual more difficult.

Some countries have been sensitive to this issue and have been trying to simplify the system of in-work benefits. For example, the United Kingdom has recently reformed its child tax-credit scheme so that it is paid together with the basic WFTC benefit. The objective was indeed that of improving coordination among different components of the welfare system, promoting transparency in the marginal effective tax rates faced by individuals, and simplifying claiming procedures.

Box 3.8. **Pros and cons of paying tax credits thought the wage package: evidence from the WFTC**

In the United Kingdom, since 2000, families have been able to receive Working Family Tax Credit payments with their monthly wage, via the PAYE system which ensures that workers receive their wages net of income tax and social security contributions. Research conducted since then has highlighted several pros and cons of this way of paying the benefit.

When originally envisaged, the general view was that payment through the wage package would have several potential advantages (HM Treasury, 2000). First, it would reduce the stigma associated with claiming in-work support. Secondly, it was likely to prove more acceptable than social security benefits to taxpayers. Finally, it would reinforce the distinction between the rewards of work and remaining on welfare.

In fact, evidence that the positive work incentives of WFTC would be strengthened by paying it through the wage packet turned out to be rather weak. Brewer and Shepherd (2004) pointed to the experience with the Family Credit, the predecessor of WFTC, during which no evidence was found that recipients disliked receiving payments directly through the social security route. Besides, the authors show that, in the United States, where families can chose the payment method, only a tiny minority of EITC recipients elect to receive it through the wage packet, rather than as a one-off lump-sum annual payment.

Among other drawbacks, academics have pointed to the evidence that mothers are generally more likely to spend resources on children than fathers (Goode *et al.*, 1998), while paying WFTC through the wage packet would leave non-working mothers in couples worse off as individuals.

Most importantly, paying WFTC via the pay packet represented an addition to employers' administrative burden. Indeed, after WFTC was introduced, there was evidence of some illegal behaviour by employers who would fire employees who tried to claim WFTC (Wheatley, 2001). And, around 18 months after the policy started, a quarter of those entitled to WFTC who received it through the pay packet said that this had caused them some difficulty with their employers (see McKay, 2003).

Overall, the United Kingdom government has heeded these findings and, in 2002, has modified payment procedures to ease the burden on employers (Inland Revenue, 2002). However, it seems that the experiment of paying in-work support through employers will be abolished altogether from 2005, five years after it began (see HM Treasury, 2004).

B. Policy complementarities

In several ways the analysis conducted up to now points to the need for a comprehensive labour market strategy to facilitate entry or return to employment. Directly increasing the financial incentives to find work via the introduction of in-work benefits is important but other policy tools can help support the role of employment-conditional payments. For instance, Chart 3.3 showed that returning to work at a wage higher than before job loss reduces financial disincentives to work, pointing to the role that active labour market policies (ALMPs) can play by effectively providing job-search support, counselling, and re-training.[25] In a similar way, the implementation of work requirements points to the potentially important role of effective public employment services. Besides, the introduction of a requirement of full-time work for eligibility for in-work benefits requires the provision and financing of reliable childcare structures. This is equally important in efforts to help individuals exit in-work poverty by moving from part-time to

Box 3.9. **Welfare reform in New Zealand: the Working for Families package**

The Working for Families package (WFF) in New Zealand was passed on 26 April 2004. By 2007 the package will provide around NZD 1.1 billion a year in extra financial and in-work assistance to families with dependent children. In addition, some of the changes introduced by the package will also affect people without children – notably, assistance for housing costs.

The WFF package is designed to achieve several objectives in assisting families with dependent children, which includes ensuring that people who work are better off as a result of their effort.

The changes will be implemented over three years, starting from July 2004 and continuing through April 2007. The main components of WFF are the following:

- Family Income Assistance improvements.
- Work Payment for families in-work initiative.
- Childcare Assistance improvements.
- Accommodation Supplement initiatives.
- Invalid's benefit changes.
- Special benefit changes.
- Consequential changes to other social assistance.

In addition, the approach adopted for delivery of the package also involves greater coordination between the welfare and tax authorities.

According to estimates from the New Zealand government, the package is expected to benefit 300 000 families and is expected to have a significant impact on child poverty and poverty alleviation. However, despite moving in the right direction, the reform does appear to have some shortcomings. First, the package does little to lower the tax rates facing second earners in couple families, giving them limited incentive to work or search for a job. In this respect, OECD (2004b) suggests that a stronger Childcare Subsidy programme – linking hours worked with financial support for parents – could address this issue.

Secondly, for sole parents, financial incentives to get a job could be strengthened through lower basic payment rates and higher employment-conditional payments. Enhanced case-management was introduced in 2004 to strengthen employment support for sole parents on benefit.

full-time employment. Finally, to prevent any risk that employers might take advantage of the employment subsidy introduced by in-work benefits through downward adjustments in wages, an appropriately set minimum wage policy might be needed. The Working for Families programme of New Zealand provides an interesting recent example of comprehensive reform (Box 3.9).

Financial incentive policies and childcare benefits

Paying for childcare can be a significant in-work cost for single parents who work but also for second earners with young children. Several papers have looked at the effect of childcare costs on the labour supply of single mothers or married women, mostly focusing on the experience of the United States where the welfare reform of the mid-90s triggered

the introduction in several states of childcare subsidies.[26] For instance, Connelly (1992) and Averett *et al.* (1997) show that women's labour supply responds to the *effective* wage – *i.e.* the wage net of child-care costs and of childcare subsidies – rather than to the gross wage. Averett *et al.* (1997) find that a 1% reduction in the effective wage (*e.g.* through greater subsidisation of child-care) would raise women's labour supply by 1%. The effect is found to be even larger for single mothers.[27] In addition, Lemke (2000) shows that the quality and stability of childcare have much larger effects on the probability of work than do its costs. In this respect, Berger and Black (1992) show that the introduction of childcare subsidies have had a positive effect on the quality of childcare. As for the experience of other countries, Powell (1997) investigates the impact of childcare costs on the labour supply of married women with children in Canada. She estimated the "direct childcare cost elasticity measure for hours of work" to be approximately –0.32, suggesting that increases in the cost of childcare have adverse impacts on the labour supply decisions of married Canadian women.

While participation effects have been shown to be large, the impact of childcare subsidies on hours worked appears to be much less important, as shown by Berger and Black (1992) and Lemke *et al.* (2000). Instead, availability of early education systems, such as full-day kindergarten, seems to be much more relevant in women's decisions regarding work.

Overall, high-quality subsidised childcare appears to be an essential component of an overall strategy to raise women's incentives to work and a necessary complement to in-work benefits (Box 3.10). Once more, targeting of needy families is essential to ensure that deadweight losses – through windfall beneficiaries – are limited and to deal with the public finance aspects of childcare benefits.

Minimum wages as a complement to in-work benefits

There are several reasons to think that a coherent strategy for promoting work and reducing poverty should combine in-work benefits with a minimum wage set at a moderate level.

In-work benefits have several advantages over a minimum wage as an instrument to tackle poverty. They can be targeted on low-income households, their level can vary depending on family circumstances, and they do not raise the direct cost of low-wage employment to employers. Attempting to use minimum wages alone to generate an adequate in-work income that is responsive to the needs of varying family structures is problematic.[28] Since the overlap between low-wage jobs and family poverty is not all that large in many countries (see OECD, 1998), a minimum wage is not a very effective anti-poverty instrument on its own. In most cases, it is inferior to an appropriately designed in-work benefit. In addition, it would affect job prospects for low-productivity workers, particularly the young.

However, by improving the returns to work, in-work benefits make low-paid jobs more attractive to the unemployed and inactive. In the absence of a minimum wage, there would be an increased risk that some employers would try to take advantage of this additional labour supply by lowering wages (under assumptions of employer monopsony). In this context, an appropriately-set minimum wage would establish a floor for wages and ensure that low-income workers enjoy the full benefit of the in-work support. Indeed, it is noticeable that countries such as Ireland, New Zealand, the United Kingdom and the United States all have legal minimum wages as a complement to their in-work benefits.

Box 3.10. **Childcare provisions as part of an overall make-work-pay policy framework**

In *Canada*, the National Child Benefit (NCB) supplement plays an important role in increasing financial incentives to work. The NCB Supplement is the Government of Canada's contribution to the federal/provincial/territorial National Child Benefit initiative, which aims at preventing and reducing child poverty and promotes attachment to the workforce by ensuring families are better off working. In most jurisdictions in Canada, the NCB operates in a way similar to an in-work benefit for certain transitions from social assistance to the labour market. Individuals with children receiving provincial/territorial Social Assistance (SA) have their SA benefits reduced by an amount equivalent to the NCB Supplement while employed individuals with children receive the NCB Supplement depending on their income. In addition, provinces and territories reinvest their SA savings into new or enhanced measures for low-income families with children, which can further support parents in making the transition from SA to work.

The Netherlands, another country with employment-conditional programmes, replaced the income-dependent benefits for childcare with a childcare tax credit in 2004.

Adding to its in-work benefit programmes, *New Zealand* has recently introduced new childcare provisions aimed at assisting parents into work. The maximum number of hours qualifying for the income-related Childcare Subsidy (payable to the childcare provider) and Out-of-School Care and Recreation (OSCAR) subsidy was increased from 30 to 37 hours per week. On the supply side, additional funding was provided to improve the number and quality of OSCAR providers so that lack of access to childcare is less of an impediment to beneficiaries and low-income workers entering and/or remaining in the paid workforce. Further increases of benefit amounts and income disregards are planned for 2005 as part of the Working for Families reform package. Access to the New Employment Transition Grant, previously only available to sole parents, was extended to married people with a dependent child or children. For six months following the cancellation of the benefit to enter employment, the grant provides assistance to people who are required to take unpaid leave due to personal illness, illness of their partner or their child, or as a result of a breakdown in their childcare arrangements.

In the *United Kingdom*, the Working Family Tax Credit contains a generous childcare component, whereby families are entitled to a tax credit of 70% of childcare costs up to some limit depending on the number of children.

The choice of the "appropriate" level of the minimum wage depends in part on the shape of the earnings and skills distribution, and will therefore change across countries. This is further complicated by the need to choose a minimum wage that is compatible with a given amount of in-work benefits. An example of combination of these two policy tools is provided by the United Kingdom where the minimum wage was re-introduced to accompany the package of make-work-pay reforms that include the WFTC and New Deal programmes.[29]

Tax credits and active labour market policies

The effectiveness of in-work benefits is likely to be strengthened when they are combined with well-designed ALMPs. Blank *et al.* (1999) find evidence that the provision of job coaching and case management services enhanced the labour market impact of both

the Self-Sufficiency Project in Canada[30] and the Minnesota Family Investment Program in the United States (see also OECD, 2003).

More generally, while in-work benefits require individuals to work, sometimes full-time, finding a job after a period of unemployment may not be easy, especially in a context of rapidly changing skill requirements. Effective ALMPs can help ensure that those who are out of work are kept in contact with the labour market and do not drift into long-term unemployment.

Hence, combining in-work benefits and effective ALMPs can prove a winning strategy. ALMPs would improve an individual's prospects for sustainable employment. At the same time, an employment-conditional benefit could increase the financial benefits of work, improving the incentive to take, and then to stay in, work. The combined impact of these two policies is likely to be greater than that of any one of them taken in isolation. In this respect, the United Kingdom has been pursuing a comprehensive strategy to help people move from welfare to work. This includes in-work programmes to ensure that work pays – the WFTC – and increased emphasis on active labour market policies to help individuals regain self-sufficiency through employment – the New Deal programmes.

C. Cost considerations

When assessing the effectiveness of in-work benefits, it is essential to also take into account the cost of the programmes for the public purse. This is important because in-work benefits do not come cheap, and the taxes and contributions needed in order to fund the programmes may in turn affect employment outcomes in various ways. For instance, in the United Kingdom, the WFTC is estimated to cost GBP 5 billion – about 0.6% of GDP – and, in the case of the EITC of the United States, costs have reached about USD 33 million, or 0.33% of GDP (OECD, 2003). Of course, these costs are outweighed, at least in part, by lower welfare payments resulting from the fact that certain job-seekers will find a job as a result of the scheme.[31]

Nevertheless, by designing in-work benefits along the lines outlined above, it is possible to both increase employment (and thus broaden the tax base) and limit the budgetary repercussions of the schemes. In particular, narrow targeting may help reduce costs in two ways. First, more directly, it reduces the number of intended beneficiaries of the programme by focusing aid on the on the neediest groups. Secondly, it reduces the number of windfall beneficiaries. For instance, focusing on individuals who have spent a certain time on welfare reduces the likelihood that people who are not in need may try to become eligible for the benefits. Requirements related to working hours may also help in restricting eligibility. A programme designed to focus on a relatively small number of needy individuals could be generous while keeping the overall public finance costs under control.

The financial costs involved with in-work benefit reforms must also be forecast as accurately as possible. In this respect, analysis of take-up rates is very important (see Hernanz *et al.*, 2004). Low or declining rates of take-up of benefits – welfare and in-work – may reduce the capacity to anticipate the financial costs of reforms, as well as reducing the probability that welfare programmes attain their goals, thus leading to unjustified disparities of treatment among eligible individuals.

Conclusions

Based on the findings of this chapter, several observations are in order with respect to the OECD Jobs Strategy. The chapter shows that in-work benefits, if well-designed, can help improve employment outcomes. However the schemes can be costly and, more generally, they are not a panacea. Indeed, one important finding of the chapter is that in-work benefits work best when combined with other policy instruments to improve labour market participation. For instance, increasing labour force participation of single parents is not just an issue of making work pay: childcare support also needs to be made available. Likewise, effective ALMPs, by promoting job-search and enhancing skills, can provide a useful complement to in-work benefits. Finally, there is a risk that employers may pocket part of the financial gain introduced by in-work benefits, by reducing salaries. One way of preventing this would be to have an appropriately-set minimum wage that accompanies in-work benefits.

Further analysis is needed before specific recommendations can be issued, particularly in terms of policy packages. For instance, more work is necessary to assess the interactions between in-work benefits and minimum wages. In addition, demand-side aspects not addressed in this chapter are also likely to play a crucial role in determining the effectiveness of in-work benefit programmes and the role played by minimum wages. Finally, more analysis of the costs and benefits of the existing programmes across OECD countries is also necessary before recommendations can be issued as to whether these policies are cost effective. These are issues which will be addressed as part of the next stages of the reassessment of the OECD Jobs Strategy.

Notes

1. Technically, the METR is defined as $(1 - \Delta ne/\Delta ge)$ where Δne is equal to the change in net earnings, and Δge is the change in gross earnings experienced by the household. In other words, it compares total income out of work (the sum of all benefits to which a certain individual or family would be entitled while out of work) with income in work (the sum of gross earnings and all benefits to which the individual or family would be entitled while in work, *i.e.* earnings disregards or in-work benefits.
2. Indeed, despite being a useful tool for the analysis of the impact of tax and benefit rules on financial incentives to work, METRs suffer from some limitations due to the complexity of tax and benefit systems and the difficulty of incorporating these complexities in a single indicator. Some of these limitations are described in more detail on line at: *www.oecd.org/els/employmentoutlook* (OECD, 2005).
3. Note that in Ireland the METR for a person in a one-earner household with two children who sees his/her earnings rise by 10% is fully determined by in-work benefit withdrawals. In fact, at 50% of APW earnings, no income taxes or social security contributions are payable and the only benefits received are *a)* family benefits, which remain constant as earnings rise – and, therefore, do not contribute to the METR – and *b)* family income support benefits, for which eligibility starts at 19 hours of work per week and which decline gradually as earnings increase.
4. The left panel of Chart 1 (OECD, 2005) shows that 67% of APW is a reasonable assumption. Approximately 23% of individuals in the 19 OECD countries shown in the chart work for less than 67% of the APW earnings in their country, with the highest share in Hungary, Poland, and Italy and the lowest in the Czech Republic, Switzerland and Belgium. In addition, the right panel of Chart 1 (OECD, 2005) shows, for the countries for which this information is available, that a large share of those earning less than 67% of the APW level are working full-time at hourly wages below APW level.
5. Note that in Denmark, social assistance reduces the METR. This is due to the way social assistance is paid.

6. This is not the case in all countries. For example, in the United Kingdom, single parents and families with children are better off going back to work with a salary that is lower than the pre-unemployment salary. This comes from the combination of unemployment benefits that do not depend on pre-unemployment earnings and in-work benefits that decrease with wages. It is also the result of a policy aimed at reducing child poverty by helping parents back to work (*e.g.* by paying them childcare benefits).
7. In Italy, very low METRs are mostly explained by a very weak welfare system for inactive individuals. The sole benefits available – family benefits – are only paid to working families and unemployed individuals.
8. Chapter 2 in this edition of the *Employment Outlook* shows that active labour market policies, if well designed, can be effective in raising employment prospects for job-seekers.
9. The countries in question are: Austria, Belgium, Denmark, Finland, France, Germany, Greece, Ireland, Italy, Portugal, Spain, United Kingdom and the United States.
10. Other techniques could have been used to deal with the selection problem, like using instrumental variables or Heckman two-step models, but data limitations made this impossible.
11. Additional assumptions include: *a)* individuals were earning the same as their potential earnings before the unemployment spell; and *b)* METRs calculated for families with two children are used whenever children are present. Assumption *a)* may lead the METRs attributed to each individual to be lower than the true ones, as it is likely that unemployed individuals suffer a wage loss following unemployment. On the other hand, assumption *b)* would lead imputed METRs to be either overestimated or underestimated, depending on the number of children: true METRs would likely be lower for those having only one child and higher for those having more than two children.
12. Gurgand and Margolis (2005) for France, Schneider *et al.* (2000) and Schneider and Uhlendorff (2004) for Germany, conduct a similar exercise, using the ratio of net in-work income to welfare as a proxy for financial incentives. In both studies, potential earnings' regressions are used to attribute a value of the ratio to each individual. Gurgand and Margolis (2005) look at the effect of this ratio on the probability of being employed and find that financial incentives play a weak role on labour supply decisions of individuals on welfare. On the other hand, Schneider and Uhlendorff (2004) find that the ratio of income from work to welfare benefits increases the probability of leaving social welfare, even when demand factors are controlled for.
13. Using the data from the first column of Table 3.1 Panel A, this is calculated starting from the observed mean of 45% and adding a 4.3 percentage points rise ($45^* - 0.2^* - 0.48 = +4.3$).
14. OECD (2003, Chapter 2) showed that, more often than not, unskilled individuals tend to have very low labour market attachment and this may reduce the incentives of taking up a job. Indeed, the chapter found that low-paid employment often alternates with non-employment, particularly for the low skilled. Another study conducted by Kapsalis and Tourigny (2004) for Canada found that more than 60% of all transitions from inactivity to employment involved a transition to a non-standard job (self-employment, part-time permanent employment, or temporary full and part-time employment). This points to the importance of policies that not only help individuals go back to work, but also provide them with the necessary tools to gain a stable position in the labour market.
15. METRs used here do not include childcare benefits. See Barber and Immervoll (2004) on preliminary work to include childcare benefits in METRs.
16. In the case of Ireland, individuals are entitled to the "Back-to-Work Allowance" only after spells of unemployment ranging between 15 and 22 months, depending on age and family status.
17. Some of the programmes presented in Table 3.2 provide very small payments and only marginally increase net earnings. They are not taken into account in the charts.
18. See OECD (2003, Chapter 3), for a more detailed description of individual programmes.
19. Indeed, the price for extending generosity at lower earnings, without increasing withdrawal rates, would be a higher implicit tax rate further up the income distribution (an example of this is the working family tax credit in the United Kingdom).
20. The Saez model lacks a number of important features of present-day financial incentive programmes, such as the focus on household income, rather than individual income, and targeting. As a result, the model would be more consistent with the experience of some European countries such as France, than with the design of programmes in anglo-saxon countries. However, it can still be considered applicable within groups with the same characteristics.

21. The models have in common the assumption that there is some unobservable ability upon which the government would prefer to base transfers in a first-best world but cannot – for example productivity – so the second-best solution involves targeting. In the end, if the screening mechanism is sufficiently accurate, the social welfare gains from giving benefits to the targeted needy can outweigh the losses from the denial of benefits to those who are truly needy but who do not possess the correct characteristics, and hence go untargeted. The risk remains that individuals may try to change their characteristics in order to become eligible to benefits. However, since there is a cost to changing one's characteristics – divorce, single motherhood – a targeting system would still be optimal if few people change categories to benefit from targeting.

22. The idea that targeting is a more efficient redistribution tool than alternative universal programs such as a basic income guarantee and the NIT has been challenged by some. For papers that show that providing universal payments does not necessarily reduce economic efficiency, see Bryan (2005) and Pressman (2005).

23. The theoretical literature on models of family structure generally supports the proposition that offering benefits to only one family type will increase the number of families of that type. One exception is if welfare is viewed as social insurance against the event of divorce. In such a model, provision of insurance should actually encourage getting married.

24. This raises the related issue of how far the credits should reflect less dramatic increases and falls in income.

25. Job-search support can help reduce the duration of unemployment spells and this in turn would limit human-capital losses associated with long spells of unemployment. It may also improve the match between workers and jobs, thus increasing job stability and wage progression. Effective job training, on the other hand, is likely to play a more direct role in increasing the wage that the unemployed can demand on the labour market.

26. For a survey of childcare subsidy programmes, see Blau (2000).

27. Kimmel (1995) focuses on single mothers and finds that free child care would imply that the employment probability for this group would more than double.

28. For example, Gregg (1999) estimated that, in the United Kingdom, it would require a minimum wage of between GBP 5 and GBP 5.70 for one full-time worker in a couple to generate an income of half the average household income. A minimum wage set at this level could well have adverse consequences for the employment of low-skilled workers, particularly the young.

29. Its level was set at 44% of average earnings, and the same worker would get an additional 30% of average earnings as part of the WFTC if she/he is working at least 30 hours, bringing her/him barely above the relative poverty-line.

30. In the 18-months report on the SSP, Lin *et al.* (1998) show that participants themselves were pointing to the importance of these support services. In fact, when asked "If you could change one thing about the SSP to make it a better program for you, what would it be?", 12% of those who did not take up the income supplement suggested that SSP should add a job placement service.

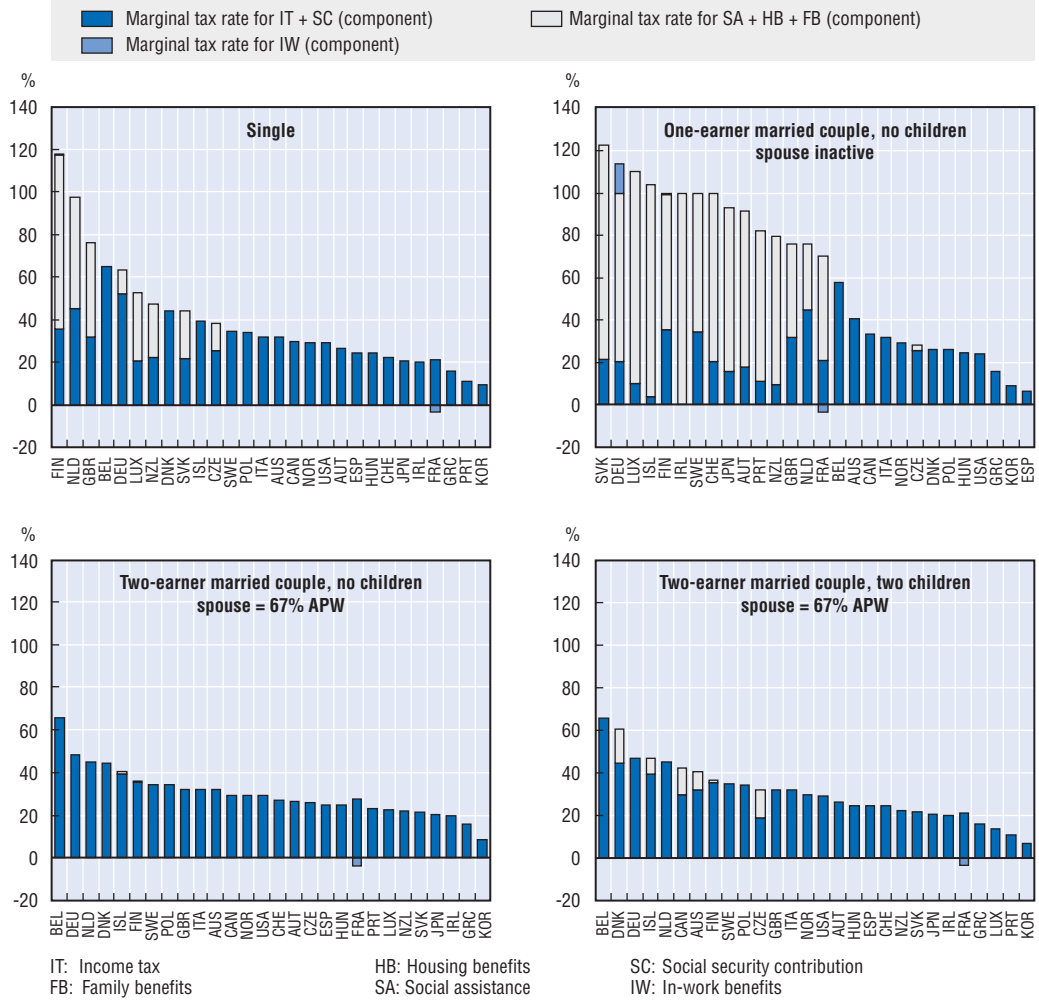
31. Moreover, even if there was a net negative effect on public finances, it would lead to somewhat higher taxes across a large number of non-beneficiary households – and it is unclear whether this would, on its own, have much impact on labour market participation.

ANNEX 3.A1

Supplementary Material on Marginal Effective Tax Rates

Chart 3.A1.1. **Low-wage trap indicator, 2002**

Decomposition of the marginal effective tax rate (increase from 50 to 55 % of the APW)



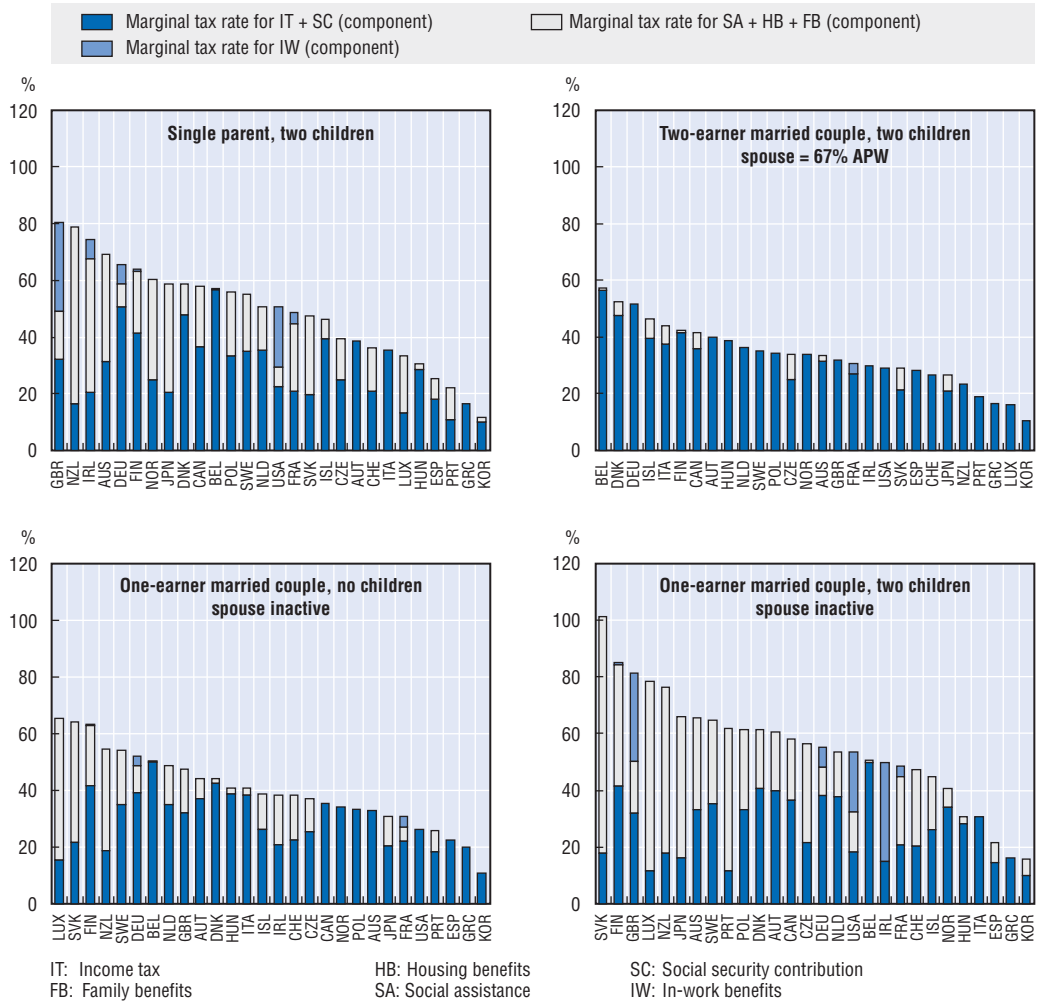
Note: The chart shows how much of a given rise in earnings is taken away in the form of higher tax and lower welfare benefits. For example, a value of 100 for the indicator shows that a 10% wage increase leads to no additional net income.

Source: OECD tax-benefits models.

Statlink: *http://dx.doi.org/10.1787/422076235135*

Chart 3.A1.2. **METRs associated with the transition from part-time to full-time, 2002**[a]

Decomposition of the marginal effective tax rate when moving from a part-time job (20 hours a week) at a wage level = 50% APW to a full-time job (40 hours a week) at a wage level = 100% APW



a) Part-time is defined as earnings at 50% of APW earnings and full-time as earnings at 100% of APW earnings.

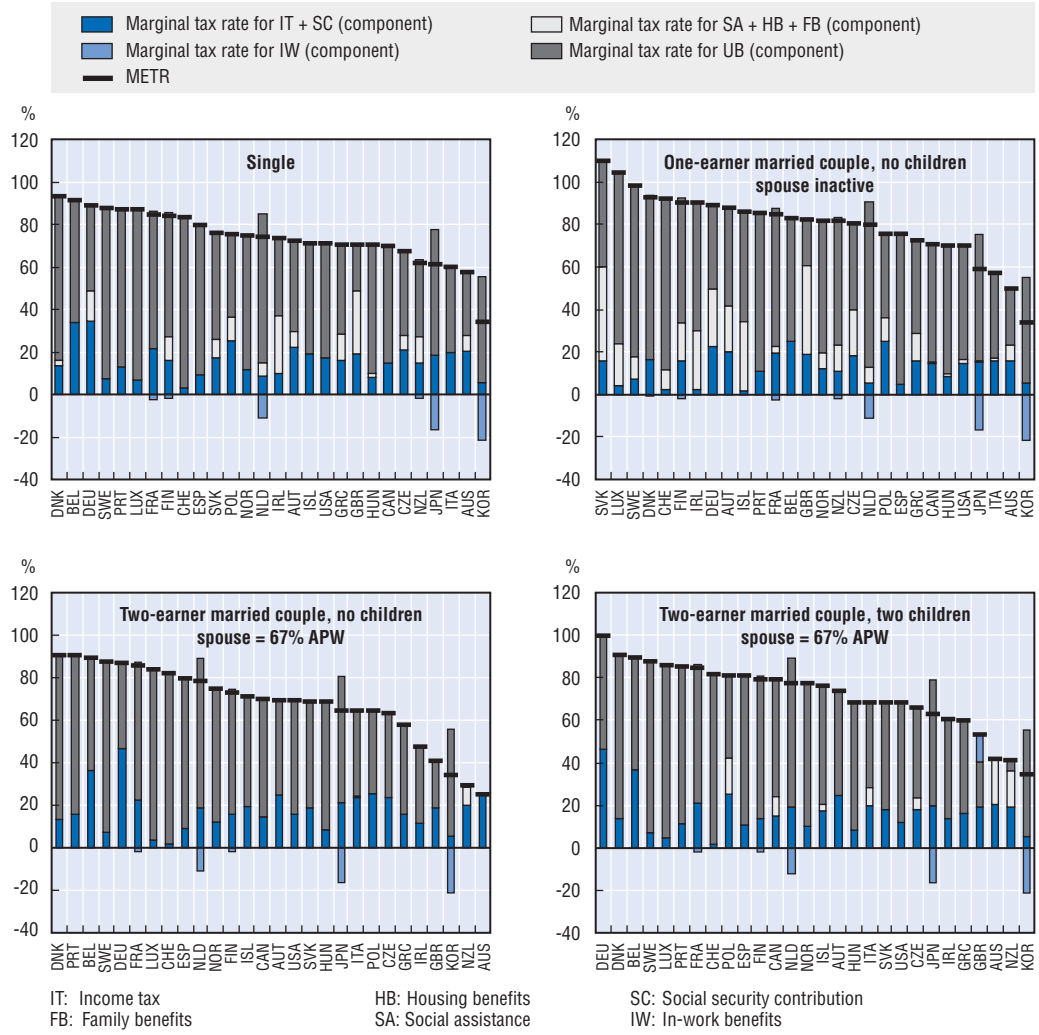
Note: The chart shows how much of the wage rise following a move from part-time to full-time employment is taken away in the form of higher taxes and lower welfare benefits. For example, a value of 100 for the indicator shows that moving from earning 50% of APW to 100% of APW leads to no additional net income.

Source: OECD tax-benefits models.

Statlink: *http://dx.doi.org/10.1787/611428571535*

Chart 3.A1.3. **Unemployment trap indicator, 2002**

Decomposition of the METR moving from unemployment to full-time work at wage level = 67% APW
(wage before unemployment = 67% APW)



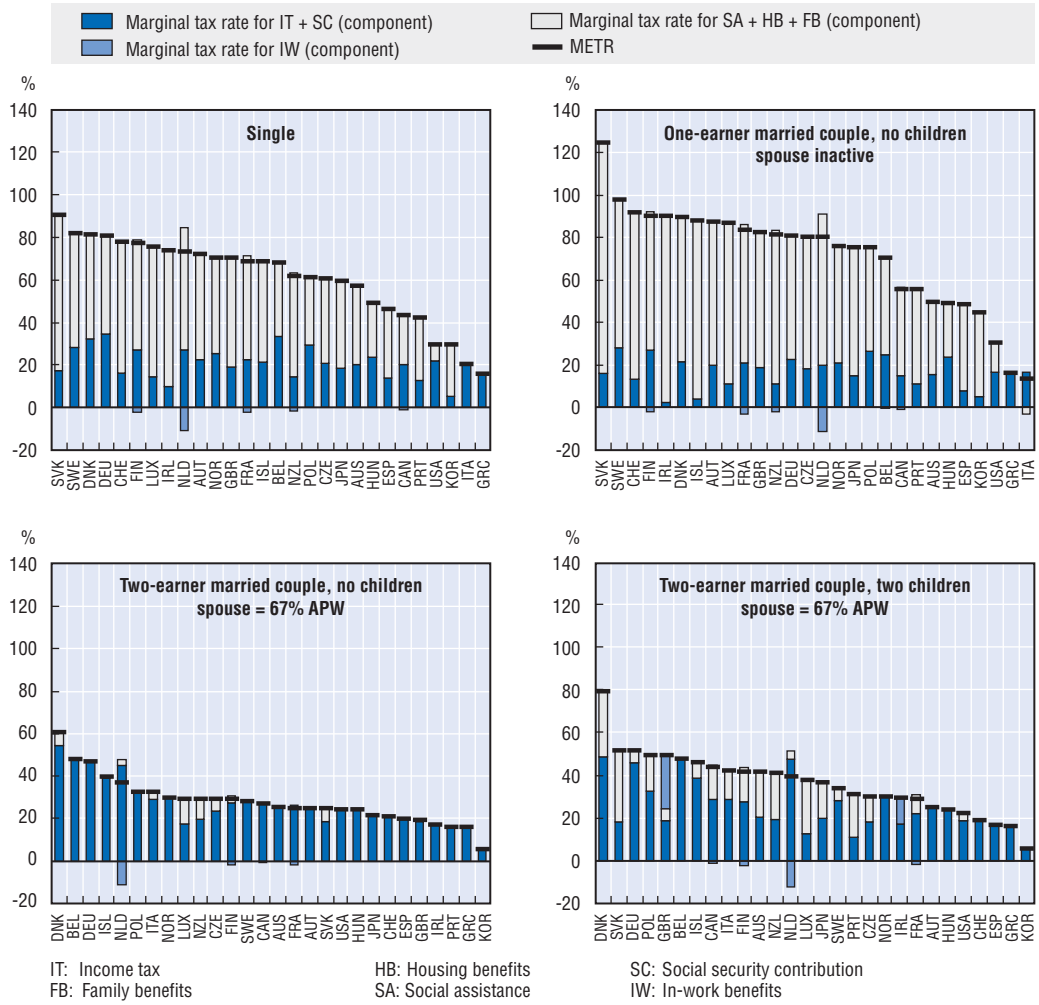
Note: The chart shows how much of the wage earned following a move to work from unemployment is taken away in the form of taxes and lower welfare benefits. For example, a value of 100 for the indicator shows that moving from unemployment to work leads to no additional net income. A value bigger than 100 indicates that net earnings in work are less than total out-of-work benefits.

Source: OECD tax-benefits models.

Statlink: *http://dx.doi.org/10.1787/371224750524*

Chart 3.A1.4. **Inactivity trap indicator, 2002**

Decomposition of the marginal effective tax rate when moving from inactivity to full-time work at wage level = 67% of APW



Note: The chart shows how much of the wage earned following a move to work from inactivity is taken away in the form of taxes and lower welfare benefits. For example, a value of 100 for the indicator shows that moving from inactivity to work leads to no additional net income. A value bigger than 100 indicates that net earnings in work are less than total out-of-work benefits.

Source: OECD tax-benefits models.

Statlink: *http://dx.doi.org/10.1787/482672861521*

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Chapter 4

Labour Market Programmes and Activation Strategies: Evaluating the Impacts

Do active labour market programmes really improve labour market performance? Activation programmes reduce the number of people on benefits directly through the impact of their services on the programme participants, but also indirectly because some benefit recipients prefer to leave unemployment instead of complying with programme requirements. Intensive employment services and training programmes may have relatively favourable impacts on labour force participation and promote earnings progression, although these impacts often appear two or more years after individuals have participated in the programmes. Programmes can have displacement effects when participants find jobs to the detriment of non-participants thus reducing net job gains, but programmes can also have positive labour demand and multiplier effects.

Introduction

The OECD has long advocated active labour market policies (ALMPs) and regularly reaffirms this recommendation, as for example in the 1994 OECD Jobs Study. Welfare reform legislation in the United States in 1996 and the Luxembourg Employment Guidelines adopted by the EU in 1997 were key events defining the vision of active labour market policy based on *activation* principles, when benefit recipients are expected to look actively for work or participate in a programme to promote their job prospects – the so-called "mutual obligations" approach. In the United States, a large fall in caseloads occurred following welfare reform embodying these principles. Within the EU, the actual implementation of activation principles has been variable and so have been the outcomes: unemployment has fallen in some countries but has persisted at high levels in others.

The purpose of this chapter is to examine the impact of activation strategies and other ALMPs on employment outcomes, primarily based on the findings of evaluation studies of a wide range of programmes.[1] Section 1 outlines general considerations about the impact of activation and other programmes. Section 2 provides two initial examples of how microeconomic policies affect labour market outcomes. Section 3 summarizes evidence about the *size* of the impact of active programmes. Section 4 looks at the nature or quality of impact, in particular examining the possibility that certain policies may achieve long-term increases in earnings in addition to cuts in benefit caseloads.

Main findings

- **The *de facto* cut in benefit entitlements that is implicit in the "stick" element of activation programmes should be set at a moderate level.** Activation programmes sharply increase the total amount of employment services that are delivered to job-seekers. Some individuals respond by dropping their benefit claim rather than comply with participation requirements. But to allow this *sorting* effect to arise, employment services need to ensure that requirements are *moderate*, *i.e.* they should not be equivalent to blanket denial of benefit entitlement. In general, in the absence of effective activation programmes, benefit schemes for the long-term unemployed become unsustainable or excessively costly in the long term.
- **Effective activation strategies can have a significant impact on aggregate unemployment.** Welfare caseloads in the United States and unemployment benefit recipiency rates in Denmark, Ireland, the Netherlands and the United Kingdom have fallen by more than half from earlier peaks. Australia and New Zealand have recently experienced 25% to 30% falls over a shorter period. These improvements seem to be closely related to the introduction of activation programmes. Importantly, better job prospects for clients who receive activation services do not seem to come at the expense of other job-seekers, *i.e.* there is little evidence of net "substitution" or "displacement" effects.
- **Initial successes in reducing unemployment can start a "virtuous circle".** Falling numbers of benefit recipients will create room for intensified support for those who

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remain unemployed and for further policy reforms which intensify the activation strategy.

- **Microeconomic evidence provides information on what works.** *Job-search assistance* or "*work-first*" *strategies* often have a large impact and their cost is relatively low. *Long-term labour market programmes*, such as training and job creation measures, often have little or negative short-term effect on outcomes. However, *compulsory participation* in long-term programmes may have a "motivation" effect, encouraging people to find work before programme participation starts. *Intensive employment services, individual case management* and *mixed strategies with selective referrals to long-term labour market programmes* tend to have the largest impacts.
- **The time profile and the outcomes variables that are influenced differ between programmes.** "Work-first" programmes have a large employment impact in the short term which fades in later years. By contrast, favourable impacts for participants in SSP Plus in Canada, the Restart programme in the United Kingdom, and some training programmes have appeared only after about two years. "Work-first" programmes in some cases cause a reduction in entry wage rates, and in the longer term cause a long-term reduction in benefit recipiency with a relatively smaller positive impact on employment rates. "Mixed" strategies and intensive employment services have impacts on employment or total earnings that approximately parallel and sometimes exceed what would be expected, given their impact on benefit caseloads.
- **Impact can vary sharply between apparently similar programmes.** The context and detailed content of programmes can be important determinants of their impact. Moreover, increased spending on certain functions of public employment services (PES) may face declining returns, especially if other (complementary) types of input are not also increased.

1. General ideas about different programmes and their impact

A. The nature of impact from activation programmes

"Activation" programmes differ from free public employment services in that participation is *obligatory* for relevant target groups. Key examples of activation programmes are requirements on unemployed people to attend intensive interviews with employment counsellors, to apply for job vacancies as directed by employment counsellors, to independently search for job vacancies and apply for jobs, to accept offers of suitable work, to participate in the formulation of an individual action plan and to participate in training or job-creation programmes. The main target groups for activation programmes are recipients (or claimants) of income-replacement benefits which are conditional on availability for work. This includes most recipients of unemployment benefits.[2] Comparable availability-for-work conditions often apply to lone-parent and social assistance benefits. Participation in employment services can also be made obligatory for disability beneficiaries, but the services involved are relatively specific.[3]

A practical rationale for activation programmes is that they can have a large impact on employment and unemployment outcomes in environments where benefit entitlements are of long or indefinite duration. Two more theoretical considerations are relevant when considering how the impacts achieved in this way can increase social welfare.

Activation programmes promote job search...

First, activation requirements increase levels of participation in employment services, thus making participants' job search more effective and/or enhancing their skills.[4] As compared to arrangements which only *motivate* job search (such as cutting benefit levels), a *direct* job-search obligation allows the same outcomes to be achieved with a higher level of social protection.[5] This argument applies across the whole range of measures – interviews, participation in training, etc. – that the unemployed person perceives as having costs, but which also contribute effectively to bringing him or her closer to employment. It is also arguable that some unemployed people have limited prior experience with employment services such as placement, counselling and training and in the absence of regulations may fail to take up services from which they would benefit.

... and ensure that benefits are only provided to the most needy

Second, given the "disutility" involved in complying with activation requirements, some potential claimants do not initiate a benefit claim, or people on benefits enter work or drop their claim earlier than they would otherwise have done. If the government is unable to devise programmes that are directly productive – in the sense that participation increases participants' job-finding chances or employability – activation programmes may be thought of as "workfare", a job-creation or work-experience programme that pays unemployment benefits or an equivalent wage level but without delivering further services.[6]

"Workfare" can improve social welfare when the need for income varies across individuals in ways that the government is unable to measure directly. But in order to increase social welfare (more than can be achieved simply by varying benefit entitlement parameters), workfare requirements must be only moderately strict – they must not be so strict that they deter all benefit claims (Box 4.1). From an operational point of view, the strictness of workfare requirements (*e.g.* hours of work required in order to qualify for benefit, or an equivalent hourly wage) needs to be specified in the legal entitlement and eligibility conditions for benefits (or equivalent rules need to be implemented administratively).

Evaluation studies that assess whether, or to what extent, workfare requirements result in hardship or destitution can help in setting the strictness of workfare requirements appropriately. However, such evaluation studies will almost by definition be occasional, because if hardship or destitution outcomes could be measured accurately and at low cost for all individuals, the government would use such information to target benefits directly where they are most needed, instead of imposing workfare requirements.

B. Administrative capacity and benefit levels influence the need for activation

If all unemployed people are offered a place on a job-creation programme which must be accepted or benefit is lost, the benefit system becomes equivalent to a programme of public works, probably one which pays somewhat below-market wage rates in order to ensure that the demand for places can be satisfied.[7]

In less-developed countries, where the administration lacks meaningful records of family needs and incomes, public works programmes are indeed frequently the best instrument for delivering poverty relief to needy families while at the same time avoiding payments to individuals or families who have alternative sources of income. By contrast, countries with good administrative capacity have records that can help distinguish

Box 4.1. **Activation strategies and workfare**

There can be a case for workfare if there is heterogeneity in the benefit caseload. Individual situations probably vary along a continuum, but the general argument applies when there are just two groups:

A. The unemployed who have a relatively high marginal utility of income (probably because they have little alternative source of income) but are unable to find work, *i.e.* those who are involuntarily unemployed.

B. The unemployed who have a relatively low marginal utility of income (they may have income from assets or other family members, or be engaged in legal domestic production or illegal undeclared work, etc.) and are "voluntarily" unemployed, *i.e.* they could find work, but for them the difference between the net wage and benefit levels is not large enough to cover the disutility of work.

Workfare requirements *de facto* eliminate the benefit option for group B which is voluntarily unemployed: its members will not enter workfare, since this has the same disutility as market work, but pays less. At the same time, workfare requirements maintain a minimum level of social protection for those who most need it, the individuals in group A. Workfare can increase social welfare through better targeting of benefits (targeting benefits where the marginal utility of income is highest) and increased output in the economy (output by group B members who enter work). These gains need to be balanced against the welfare costs, which are the disutility of workfare participation for group A members and the costs of administering the workfare programme. These costs are both proportional to the size of group A, so a workfare programme will tend to have net benefits if group A is small relative to group B.

A conventional cost-benefit calculation, which considers whether benefit savings and (tax receipts on) the earnings gains generated by a programme exceed its cost, will also evaluate the "workfare" programme favourably if it has a relatively large *motivation effect* (exits from benefit by members of group B) and relatively low *actual participation rate* (by members of group A). So cost-benefit calculations that incorporate programme impacts through motivation effects are useful as a guide to programme selection, even when some programmes have a "workfare" character imposing disutility costs (whose size is not exactly known) on their participants.

However, a programme with harsh workfare requirements might deter *all* benefit claims, in many cases leading to entry to employment, while at the same time costing nothing to implement because it has no participants. A cost-benefit calculation would evaluate this programme positively because it generates benefit savings and employment gains at no cost to the public purse. But assuming that the original benefit entitlement increased social welfare as compared to absence of benefit, this cost-benefit calculation must be misleading. It does not take into account the fact that very harsh workfare requirements, like the absence of benefit entitlement, leave some people destitute (with near-zero income and a very low level of utility). To ensure that a workfare programme which passes a conventional cost-benefit test will also probably be social-welfare-enhancing, there need to be limits on its harshness so that it achieves sorting between groups A and B, rather than deterrence of all claims.

Most OECD countries' activation strategies in principle aim not to use workfare – all programmes are intended to have "employment service" functions. However, referrals to activation programmes do empirically speaking have a deterrent effect, causing some individuals to drop their benefit claim, so it is appropriate to consider at a theoretical level that activation strategies deliver a mix of employment services and workfare.

between individuals who risk destitution in the absence of benefit and those who have alternative sources of income (from their own work and assets, or other family members, for example). Their employment services are able (through, for example, intensive contact between claimants and employment counsellors) to directly detect voluntary unemployment. This administrative capacity makes it possible to deliver benefits where they are needed at less cost or more effectively than can be done by only providing places on a public works programme. Countries with good administrative capacities, such as Denmark and Sweden, often have been able to afford relatively high benefit replacement rates. However, with high benefit replacement rates administrative capacity tends to nevertheless become overstretched, so that some voluntary unemployment still arises. Then workfare programmes can again have a role in labour market policy.

C. Activation policies, effective labour supply and job creation: a virtuous circle?

In the long term, labour demand responds to increases in effective labour supply.[8] Experiencing higher effective labour supply, employers may reduce the wages they offer or they may pay the same wages but enjoy increased productivity – either way the profitability of new hires is increased and this motivates employers to create more vacancies. In the shorter term, these mechanisms may not be fully effective so that programme participants will displace non-participants,[9] but, if programmes achieve a sustained increase in effective labour supply, their displacement effects can be expected to fade over time.

Although some factors such as displacement are expected to offset the programme impacts that are achieved at the microeconomic level, other factors work in the opposite direction. For instance, there may be a multiplier mechanism: initial successes in reducing the number of benefit recipients create room for intensified support for those who remain unemployed, contributing to a virtuous circle of declining unemployment.[10] There is also some evidence to suggest that "social interaction" effects are important influences on unemployment rates, so that reductions in unemployment among programme participants are likely to be influencing unemployment rates among non-participants in the same direction.[11] Overall, it should not be assumed that programme impacts at the macroeconomic level will be smaller than impacts at the local and microeconomic level: instead, this issue should be assessed in the light of detailed microeconomic evaluation evidence and macroeconomic experience.

2. Two examples of the impact of policies on labour market outcomes

The impact of active labour market programmes (ALMPs) on labour market outcomes can be documented in various ways. In some cases there is a clear correlation between the introduction of new activation strategies and changes in aggregate labour market outcomes. Impacts can also be evaluated by comparing labour market outcomes between participants (*i.e.* individuals who participated in active programmes) and non-participants. And evaluations can be based on comparisons between labour market developments in areas where new measures are implemented (on a "pilot" basis) and developments in other areas. This section sets the scene with two country examples of the impact of policies on labour market outcomes.

A. Activation programmes in 2003 in New Zealand

Countries that have been sometimes cited as labour market success stories – or perhaps even "job miracles" – of the 1990s include Austria, Denmark, Ireland, the

Netherlands, the United Kingdom and (for welfare reform) the United States. The story-line in these cases is that outcomes improved sharply due to a certain number of labour market policy reforms (although different analysts may emphasise different reforms).[12] More recently, Australia and New Zealand have been added to the list of possible success stories.

In 1998, New Zealand integrated benefit administration and employment services into a single agency (Work and Income) and introduced a system of internal performance monitoring, and authorities stepped up research into the impact of ALMPs (see Chapter 5 for further details). Then in 2003, New Zealand implemented a range of activation programmes:

- **WRK4U** (Work for You) seminars for potential new claimants of benefits, which reinforce the message that work is available and should be considered ahead of benefit payments. These seminars were implemented early in 2003 in selected areas of the country. By late 2003, benefit applications had fallen by 10 to 20% in these areas relative to others and the programme was extended to the rest of the country.[13]
- An **increase in staffing**, announced in May 2003, was expected to reduce caseloads from around 220 to 160 unemployed per case manager (OECD, 2004b).
- The **Jobs Jolt** initiative, announced in August 2003, included under the general heading of "clear and strong expectations" a threat to cut benefits for jobless people who move to remote areas with little prospects for paid work (a list of such areas has been established); a requirement on those who lose potential jobs through a positive drugs test to undergo drug and alcohol education; and streamlining and automation of operational systems used to contact and potentially sanction clients who breach work-test obligations. Among other programmes relating to unemployed beneficiaries were contracting of specialists to work on a one-on-one basis with people who have been without work for eight or more years; a programme to give the long-term jobless training linked to industries with labour and skill shortages; employment coaching for skilled and work-ready jobless people; and a requirement on unemployed people aged 55-59 to be active and available for work (*The Jobs Letter*, August 2003; *www.jobsletter.org.nz*).

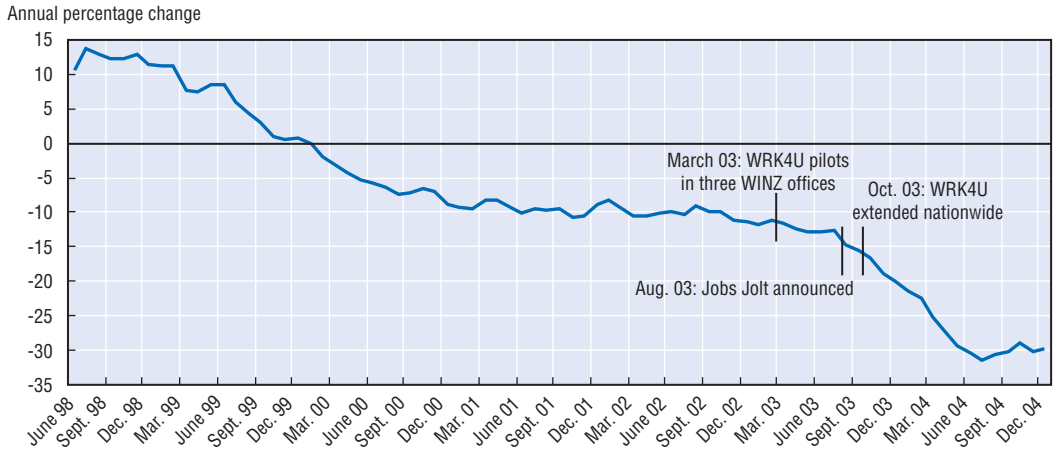
Since 2000, the total number of benefit recipients in New Zealand had been falling slowly (by up to 10% a year) but the fall accelerated through 2003 and 2004: by August 2004, the total had fallen more than 30% compared with one year earlier (Chart 4.1). Given the coincidence of timing, it seems reasonable to conclude that much of the latter large fall can be attributed to the activation programmes.

B. Motivation effects of benefits in France

Motivation effects arise when benefit recipients step up job-search efforts (or drop their benefit claims) as the time approaches when benefit levels fall or participation in a programme becomes compulsory. Such effects are well-documented in studies of limited-duration unemployment insurance benefits. Chart 4.2 shows this for individuals in France in years around 1990 who were entitled to 14 months of benefit at a wage-related rate, after which benefits fell to a low (non-wage-related) level. The income reduction after 14 months of unemployment was larger for individuals with high prior earnings. As the chart shows, the pattern of re-employment rates was strongly shaped by benefit entitlements: re-employment rates increased significantly during the three months before benefit exhaustion, especially for benefit recipients with high prior earnings.[14]

Insofar as activation requirements are partly equivalent to the elimination of benefit entitlements for individuals who are able to find market work, they will have motivation

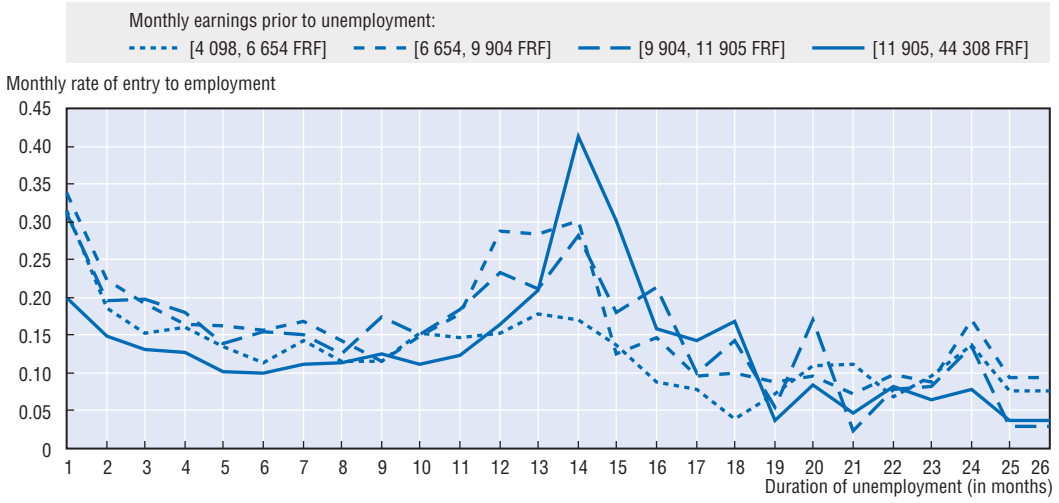
Chart 4.1. **Annual percentage change in the number of jobseekers on unemployment benefit, New Zealand, 1997-2004**



WRK4U: Work for You
WINZ: Work and Income New Zealand

Source: Unemployment Benefit Caseload data supplied by the Department of Labour, Strategy Group, New Zealand.
Statlink: *http://dx.doi.org/10.1787/045162142031*

Chart 4.2. **Monthly rate of entry to employment by duration of unemployment and for four levels of former earnings for people entitled to 14 months of unemployment benefits, France, 1986-1992**



a) The line labelled [4 098, 6 654 FRF] reports statistics for individuals who earned between 4 098 and 6 654 FRF per month prior to entry to unemployment, and similarly for other earnings ranges shown.

Source: Dormont, B., D. Fougère and A. Prieto (2001), "L'effet de l'allocation unique dégressive sur la reprise d'emploi", *Économie et Statistique*, No. 343, pp. 3-28 (*www.insee.fr/fr/ppp/collections.htm*).
Statlink: *http://dx.doi.org/10.1787/506045587316*

effects similar to those shown in Chart 4.2. However, the motivation effects of programme participation requirements will typically be more diffuse (*i.e.* not concentrated at a particular duration of unemployment so much as the motivation effects of UI exhaustion) because the timing of programme participation requirements is itself diffuse.[15] This means that the motivation effects are more difficult to identify statistically in this case, but they

probably are still present, and need to be taken into account in order to understand evidence about programme impacts.

3. The size of programme impacts

This section examines evidence about the *size* of the impact from different *types* of ALMPs. Impacts on benefit caseloads are often mentioned because these can be compared with movements in caseloads at the macroeconomic level.[16] Findings often appear to be valid across a reasonably wide range of jobseeker characteristics. In particular, *impacts* on outcomes (such as the increase in employment rates caused by a programme) are often equally favourable for more disadvantaged groups (Box 4.2).

A. Job-search assistance and case management

Job-search assistance and case management can facilitate and promote transitions from welfare to work. They can take several forms.

Initial registration for placement and job-search monitoring are often effective…

As mentioned above, New Zealand's WRK4U information seminars for potential new claimants reduced inflows to benefits in pilot areas by 10% to 20%. Another intervention used in certain states of the United States is a requirement for proof of job search prior to the benefit claim.[17]

Box 4.2. **How does the impact of ALMPs vary across groups of jobseekers?**

It could be argued that ALMPs will be most effective for groups that are easy to place in the labour market. However, impacts are not necessarily greatest for the latter because many of them will rapidly re-enter employment even without assistance. Michalopolous and Schwartz (2001) conclude that JOBS programmes for welfare recipients in the United States have helped reduce caseloads among disadvantaged groups at least as much as for less-disadvantaged groups. The impacts of these programmes on re-employment earnings have been somewhat less consistent, but job-search assistance has been especially helpful in terms of re-employment earnings for disadvantaged groups. Bloom *et al.* (2003) similarly conclude, from their pooled regression analysis of experimental findings (see Box 4.3 below), that impacts "are not consistently larger or smaller for clients that are likely to be easier or harder to employ". Maré (2002) reports for New Zealand that there is "surprisingly little variation in estimated impacts for different subgroups… Broadly speaking, interventions that are relatively effective for one group of jobseekers are also relatively effective for other jobseekers".

Findings that participation in some training courses reduces employment and earnings in the short run but increases employment and earnings after two or three years have been reported (see below) for German unemployed workers, US welfare recipients and US displaced workers – three groups with quite different labour market characteristics and histories, and different benefit entitlements.

In some cases, however, patterns of impact do differ across labour market groups. Estimated impacts quite often differ between men and women: US surveys of training programmes found the most consistently positive results for adult women (Martin and Grubb, 2001), while the Restart experiment in the United Kingdom (Dolton and O'Niell, 2002) found a large long-term impact of the Restart interview conducted after six months of unemployment for men but not for women (see note 21).

Once on benefits, the frequency of contacts with employers may be important. In the United States, the Maryland Work Unemployment Insurance Work Search Demonstration in 1994 examined the impact of *i)* dropping the usual requirement for regular reporting of job-search contacts, *ii)* telling benefit claimants that their reported contacts would be verified with the employer, and *iii)* increasing the number of required employer contacts from two to four per week. The last two experiments reduced the average duration of benefit spells by about one week, or some 10%, compared with outcomes of the first experiment (Benus *et al.*, 1997, as summarized in OECD, 2000). Australia's Job Seeker Diary, in which job applications are listed, has had a similar impact.[18]

In addition to monitoring job search, some countries require participation, at a certain point in a spell on benefits, in job-search training courses of up to several weeks' duration. In Finland, job-search assistance courses lasting at least five days increased employment probabilities by 4 percentage points on average, with relatively greater impact for individuals who have less education (Tuomala, 2000).[19] In Austria, a job-search training programme (training for eight days spread over six weeks) was estimated to reduce the remaining duration of the unemployment spell by about one third (Weber and Hofer, 2004). According to multiple further studies, much of the impact from job-search training courses arises from motivation effects, *i.e.* some of the individuals who have been referred to a course drop their benefit claim rather than attend the training.[20]

... as are intensive interviews and individual action plans

Dolton and O'Niell (2002) report findings for compulsory Restart interviews conducted in the United Kingdom in 1989. These interviews, which lasted about 20 minutes, were conducted after six months of unemployment. They reduced the male unemployment rate five years later by 6 percentage points (a 15% to 20% reduction in the actual numbers unemployed), as compared to a control group for whom participation in the first six-monthly interview took place six months later.[21]

Interviews are also central to the process of setting up "individual action plans". A prominent example is Ireland's "Employment Action Plan" process. Around 2000, participants had on average five contacts with their case officer (whereas other EU countries have often used just one or two interviews to set up written agreements with jobseekers), and around a quarter of those who attended interviews were referred to training or education programmes (see: *www.fas.ie/FAS_Review/SF.html*; OECD, 2003a, Box 4.8). High proportions of participants exited from benefit. In two areas where all those who were already unemployed for six months or more were referred (in other areas, only those who crossed the six-month duration threshold over a six-month period were engaged, but not the stock of long-term unemployed), total unemployment fell, over the next 20 months, by a quarter or more relative to unemployment in surrounding areas (Corcoran, 2002; see also O'Connell, 2002).

France's Personalised Action Plan for a New Start toward Employment (*Service personnalisé pour un nouveau départ vers l'emploi*, SPNDE), introduced in 1999, involved interviews with youth after six months of unemployment and with adults after 12 months of unemployment. About 20% of those interviewed were referred to training or social support, 25% were referred to personalised job-search assistance and the remainder to general job-search assistance programmes (such as a job-search training course), with a second interview to take place two months later. Estimates suggest that this programme had only a modest impact on longer-term exits from unemployment and social assistance (RMI) benefits.[22, 23]

But job-search support requires adequate staff resources in employment services

The frequency of intensive interviews is constrained by staff caseloads – the ratio of clients to employment counselling staff. Many researchers and practitioners view staff caseloads as a critical constraint on PES performance. Some studies have confirmed this (Box 4.3), although findings have not always been consistent.[24]

A pooled regression analysis of experimental findings for US welfare recipients (Box 4.3), found that work-first approaches had the largest impact on outcomes as measured over two years. A measure of "job-search efficacy" also played a major role in White's study (2004) on the New Deal for Young People in the United Kingdom. Nevertheless, overall evaluations of job-search-oriented policies are not always positive.[25] And as discussed in the next subsection, in longer-term follow-up studies, the performance of training programmes has tended to catch up with that of work-first approaches.

B. Vocational training and subsidised employment programmes

Simplistic evaluations of training and job-creation programmes may be misleading…

Job-search support may not be enough to escape unemployment when jobseekers do not have the skills needed to find jobs or when their potential productivity is low. And for more-employable workers, training may improve the quality of the jobs obtained.

Participants in training and job-creation programmes have less free time for job search than jobseekers who do not participate. During programme participation, job-entry rates tend to fall – the so-called "lock-in" effect. This is illustrated in Chart 4.3. The employment rates of participants in programmes in Switzerland declined, relative to those of matched non-participants, for the first 80 days after entry to the programme. After another 240 days, employment rates for former participants in vocational and "other" training programmes had just caught up with employment rates of matched non-participants. But even after 400 days, employment rates for former participants in job-creation programmes (EP-PU and EP-PR) had not caught up with those of matched non-participants.[26] This pattern of outcomes is commonly found, and it explains why statistical evaluations have often concluded that long-term programmes have little or no positive impact.

The patterns of programme impacts shown in Chart 4.3 for Switzerland are characteristic of evaluation findings from other countries. Impacts differ by type of programme:

- Evaluations of *training* programmes often find a negative or only a small positive impact on participant outcomes for the first one or two years. However, over the past decade a number of long-term follow-up studies have been conducted and it seems that impacts followed over a sufficiently long time period after the training can in some cases become quite strongly positive.[27]
- Evaluations of *hiring subsidies* (*i.e.* private sector subsidised employment programmes) frequently find a positive impact of participation on employment even when "employment" is defined to arise only after a transition to unsubsidised employment. In Chart 4.3, this is illustrated by results for the "temporary job" programme.[28]
- Most evaluations of *public-sector job-creation* programmes find a small or even a negative impact at all times.

In the best of cases, *i.e.* successful training programmes, participation in long-term ALMPs seems to achieve impacts comparable to those arising from successful strategies that focus on job search, placement and individual attention, but only after some years and

Box 4.3. **Pooled regression findings about "what works"**

The table below summarizes findings from random-assignment evaluations of different service strategies implemented by 59 employment offices for welfare recipients throughout the United States. Treatment groups on average had two-year total earnings 18% higher than control groups. But treatment groups at offices where the service strategy was one standard deviation above average for "emphasis on quick job entry" and "emphasis on personalized service" had two-year total earnings 42% higher than control groups.

A local unemployment rate one standard deviation above average, or high staff caseloads, could reduce the impact of employment services, but their coefficients were smaller than those of the main service strategy variables. Differences in client characteristics also had relatively little influence on the size of impacts – they were estimated to explain about 16% of the variation in programme impacts across offices, but when implementation-related factors were added, the variance explained jumped to 80%.

How the impact of employment services on total earnings per participant over a two-year period was influenced by programme implementation, rates of participation in programme activities, and the economic environment in the local area[a]

Programme characteristic	Regression coefficient[b] (USD)	Partially standardized regression coefficient[c] (USD)	Standard error (USD)
Programme implementation			
Emphasis on quick job entry	720***	720***	134
Emphasis on personalized service	428***	428***	107
Closeness of monitoring	–197	–197	121
Staff caseload size	–4***	–268***	1
Staff disagreement	124	124	83
Staff/supervisor disagreement	–159*	–159*	96
Programme activities			
Basic education	–16**	–208**	6
Job search assistance	1	12	9
Vocational training	7	71	11
Economic environment			
Unemployment rate	–94***	–291***	30

***,**,* statistically significant at 1%, 5% and 10% level respectively.

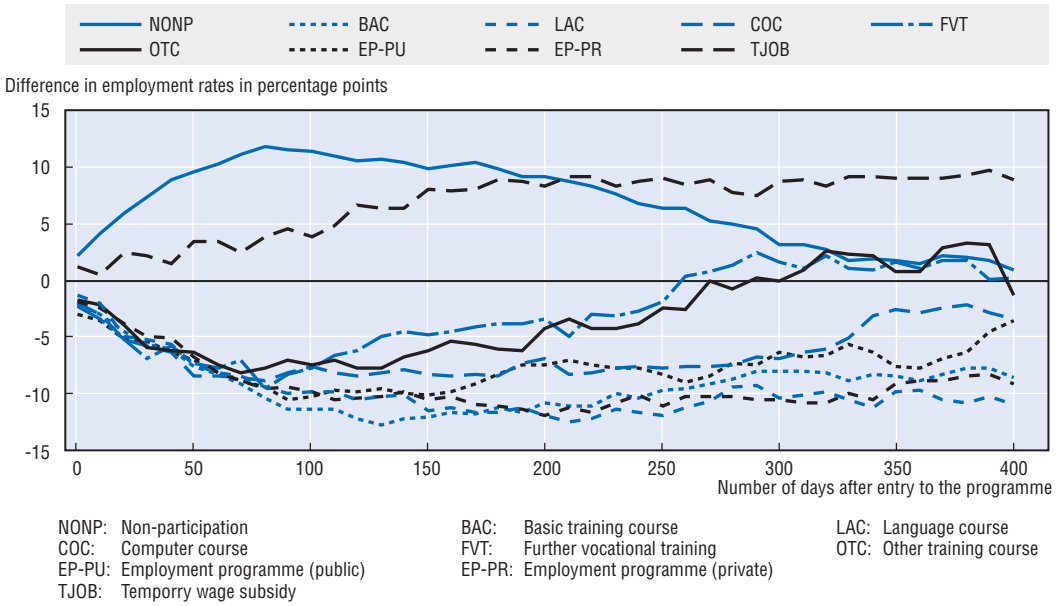
a) Regression based on 69 399 individuals who were in either a treatment group or a control group created by random assignment at one of 59 offices. "Programme implementation" and "Programme activities" variables are measured at the office level. "Programme implementation" variables are based on a questionnaire addressed to staff at each office. "Programme activities" variables refer to the difference between the treatment group and control group percentage rate of participation in the activity. The content of activities was not standardized across offices. The coefficients shown were estimated simultaneously with about 20 further coefficients which controlled for individual characteristics (see source for details).

b) Regression coefficients are reported in 1996 dollars per unit change in each independent variable. The grand mean impact (*i.e.* the estimated impact averaging across all individuals, irrespective of individual characteristics or site, for individuals who were in one of the treatment groups), was USD 879, or 18 per cent of the counterfactual.

c) Partially standardized regression coefficients are reported in 1996 dollars per standard deviation change in each independent variable.

Source: Bloom, H., C. Hill and J. Riccio (2003), "Linking Program Implementation and Effectiveness: Lessons from a Pooled Sample of Welfare-to-Work Experiments", *Journal of Policy Analysis and Management*, Vol. 22, No. 4, pp. 551-575 (*www.mdrc.org/announcement_hp_40.html*).

Chart 4.3. **Composite effects of participation by unemployed people in ALMPs on their relative employment rates, by number of days after entry to the programme, Switzerland, 1998 and 1999**[a]



a) Results based on matching participants in each programme with comparable participants in other programmes and non-participants (who are attributed a hypothetical programme starting date from the sample distribution of actual programme starting dates). The impacts relate to programme starts and outcomes in 1998 and 1999, but the data set also includes 10 year individual labour market histories which were used for matching.

Source: Gerfin, M. and M. Lechner (2002), "A Microeconometric Evaluation of the Active Labour Market Policy in Switzerland", *Economic Journal*, Vol. 112, No. 482, pp. 854-893, and Internet Appendix (*www.siaw.unisg.ch/lechner/gl_ej*).

Statlink: *http://dx.doi.org/10.1787/268248482430*

at greater cost. But as Section 4 discusses, when earnings as well as employment and unemployment outcomes are considered, the case for training and education programmes might be strengthened further.

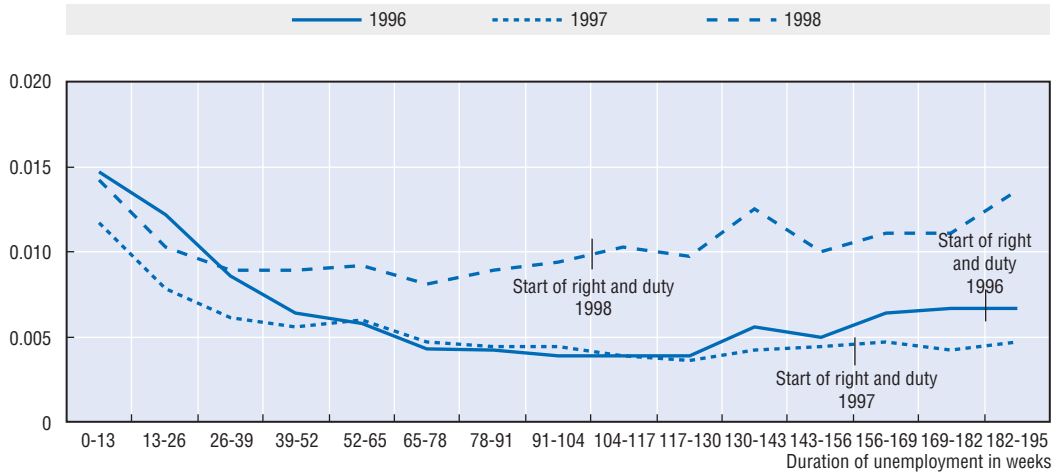
... and motivation effects (when jobseekers find jobs before getting into programmes) can be strong

In some countries and in some circumstances, referrals to long-term training and job-creation programmes can become compulsory. In contrast to the usual situation for job-search training courses, a final referral is not usually a "surprise" to the individual since in employment counselling the possibility of referral to a longer-term programme would often be discussed in advance, and general rules prescribing participation at a particular duration threshold are widely known.

In Denmark, the obligation to participate in labour market programmes applied to all unemployed people after four years of unemployment starting in 1994, after three years of unemployment starting July 1996 and after two years of unemployment starting in January 1998. As Chart 4.4 shows, monthly rates of entry to employment tend to stop falling and then begin to rise about six months before participation in programmes is scheduled to become compulsory.[29] Geerdsen (2003) similarly shows that the impact of compulsory referrals to programmes arises well before the time when the participation obligation becomes finally effective.[30]

Chart 4.4. **Changes in patterns of transition from benefit to employment as rules concerning referrals to labour market programmes were changed in Denmark, 1996 to 1998**

Weekly rates of transition to employment or ordinary education by duration of unemployment, with statistical adjustment for unobserved heterogeneity[a]



a) With correction only for observed heterogeneity, transition rates for a standard person (30 to 49 years old) at long benefit durations were about half those shown here (*i.e.* about 0.005 per week in 1998).

Source: AM (Danish Ministry of Labour) (2000), *Effects of Danish Employability Enhancement Programmes*, Copenhagen (*www.bm.dk/english/* – documents – order publications).

Statlink: *http://dx.doi.org/10.1787/026017646200*

Given that there are more unemployed people at short durations of unemployment than at long durations, an obligation to participate in a programme late in the unemployment spell can have an impact that is out of proportion to its actual participant numbers. Activation strategies in Australia and the United Kingdom have made participation in employment programmes (Work for the Dole in Australia; employment options in New Deal for 25 Plus in the United Kingdom) compulsory in principle for the long-term unemployed who engage in no other activities, but actual participation rates in the programmes remain quite low. This means that these programmes are quite cheap, yet may still be having a large impact. Activation strategies in Nordic countries involve higher rates of participation in long-term labour market programmes, making them much more expensive and perhaps also increasing "lock-in" effects.

It is important to keep motivation effects in mind, even when it is difficult to estimate their size precisely. Equation specifications which do not model motivation effects correctly when they are present are mis-specified, and are liable to give biased estimates of the impact of programmes on their participants (Box 4.4).

More generally, there is some evidence that benefit caseloads respond to "news" about a change in the labour market policy regime, even before the individuals concerned have directly experienced any change. For example, in Ireland in 1996 the beneficiary total started reacting to extensive media coverage of a statistical survey that had suggested a high incidence of fraudulent benefit claims, apparently before concrete anti-fraud measures were implemented (OECD, 1998, p. 147); Carling *et al.* (2001) emphasise that benefit cuts in Sweden in 1996 affected behaviour several months before they were actually implemented. As described by Mead (2004), a significant part of the impact from US welfare

Box 4.4. **Biases in estimating programme impact when motivation effects are ignored**

In contexts where motivation effects operate (*i.e.* where hazard rates to employment are affected by *future* obligations to participate in a programme), conventional methods for estimating the impact of programmes on their *actual* participants may give biased results.

Conventional methods compare the hazard rate of participants – during programme participation and in the months or years following programme participation – with the hazard rate of (otherwise comparable) non-participants, who constitute a "control" group. But in a policy environment like Denmark's, hazard rates for this control group are increased by the ongoing "threat" of referral to a programme: hazard notes for participants are less affected because they are in any case low (the "lock-in" effect). After programme participation has ended, the "threat" effect may still be greater for control groups than it is for (ex) participants, because unemployed people who have not previously participated in a programme will tend to be prioritised for future participation in a programme. In other words, ex-programme participants can *de facto* receive benefits on a relatively passive basis in the first few months after their participation has ended and this might lead to an overly-negative impression about the impact of the programme in which they have recently participated.

Random-assignment experiments could give biased estimates for similar reasons, especially if they are not implemented keeping the "control" group carefully separate from the services delivered to the "treatment" group. Owing to limited knowledge or limited rationality, control group members may expect to be referred to the same type of services as the treatment group: indeed, programmes which are successful at the experimental stage quite often are in fact applied to control group members, in the longer term. Through motivation effects, the "treatment" in a random-assignment experiment may (partly) affect behaviour also for the control group. As Bloom and Michalopoulos (2001) note, "a random assignment study may underestimate the impact of a reform that generates effects by changing community-wide views about welfare because it is impossible to insulate the control group from such changes".

In most places, this chapter refers in the conventional way to differences between outcomes for experimental treatment groups and control groups as "impacts". One justification for this is that (because motivation effects usually influence the control group in the same direction as the treatment group), impacts reported this way are probably moderately well correlated with the (unknown) true impacts. Nevertheless, the likely biases should always be kept in mind.

reform on caseloads arose just from intensive national or state-level debate and press reports that delivered a new message, even before the new policies were enacted.

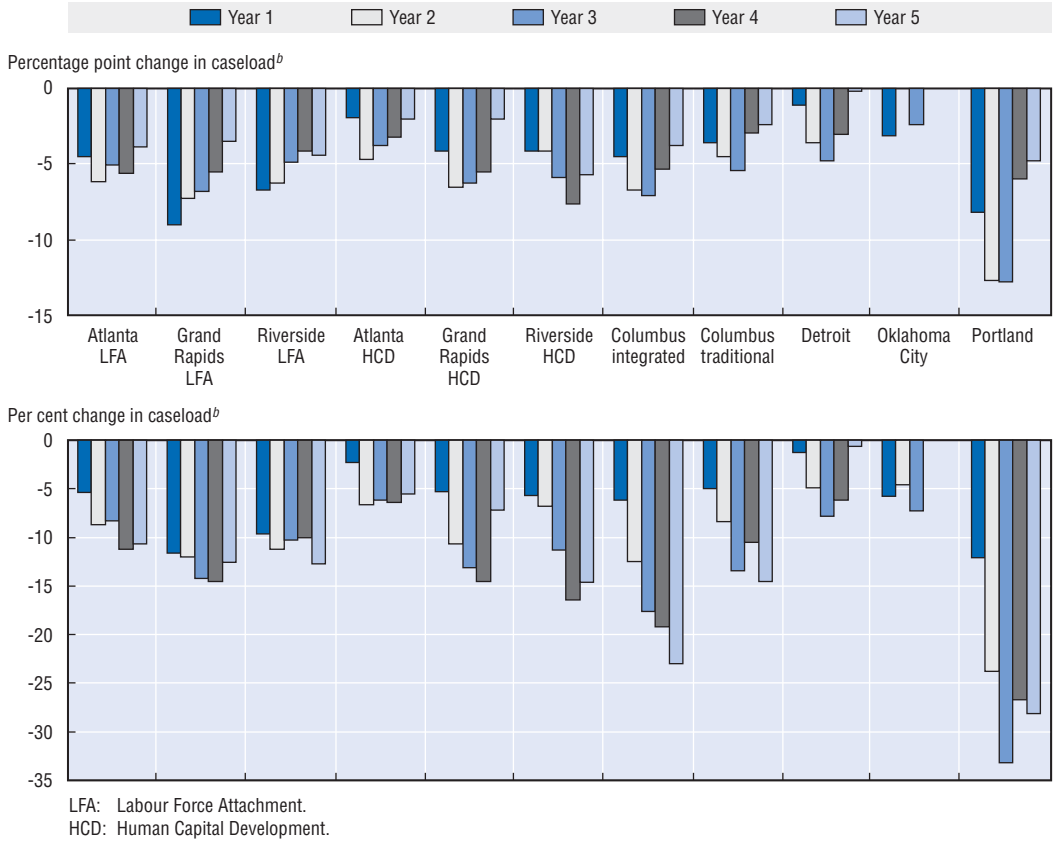
C. Strategies combining job search and programme participation as a package hold promise

In practice, employment services often offer a combination of job-search support and participation in training or other long-term ALMPs. Such "mixed" strategies allow case managers to present training or similar options to clients along with possible opportunities for regular employment, and to select the most effective instruments for each client. These strategies may be particularly effective. Strategies as a whole are not often evaluated, perhaps because most countries only operate one main strategy and there is no counterfactual. But when "mixed" strategies are evaluated, their reported impacts will

incorporate the motivation effects from the long-term ALMP component, insofar as these effects arise within the period of experimental participation in the strategy.

In the US National Evaluation of Welfare to Work Strategies (NEWWS) in the mid-1990s, some of the "strategies" were in fact limited to using just one main instrument (training), but the most successful strategy was the "mixed" strategy in Portland (Chart 4.5). A key to the success of this programme was the close collaboration between welfare officers and staff from employment services and an emphasis on employment as the goal, although more disadvantaged clients could be enrolled in education or training activities. Staff "emphasised ways to solve problems related to nonparticipation" but "did, however, ultimately sanction noncompliant individuals". Also "Portland also employed full-time job developers

Chart 4.5. **Absolute and relative impacts on welfare caseloads by year after random assignment to employment services, United States, mid-1990s**[a]



LFA: Labour Force Attachment.
HCD: Human Capital Development.

a) Titles refer to the location of different programmes within the National Evaluation of Welfare to Work Strategies (NEWWS). "Labor Force Attachment" programmes emphasised quick entry to employment and "Human Capital Development" programmes required participation in education or training. Other than the last three, programmes were rated as using high or very high sanctioning. (See the source for more details of programme characteristics.) Random assignment to a treatment group or a control group took place from 1991 to 1994.

b) Percentage point change in caseload is the percentage of the treatment group still receiving welfare, less the percentage of the control group still receiving welfare. Per cent change in caseload is treatment group caseload still receiving welfare as a percentage of the control group caseload still receiving welfare (each relative to sample size, and less 100%). Data refer to the last quarter of each year.

Source: Hamilton, G., S. Freedman, L. Gennetian, C. Michalopoulos, J. Walter, D. Adams-Ciardullo, A. Gassman-Pines, S. McGroder, M. Zaslow, S. Ahluwalia, and J. Brooks, with E. Small and B. Ricchetti (2001), *How Effective Are Different Welfare-to-Work Approaches? Five-Year Adult and Child Impacts for Eleven Programs,* Manpower Demonstration Research Corporation (*http://aspe.hhs.gov/hsp/NEWWS/*).

Statlink: *http://dx.doi.org/10.1787/000054804122*

to work with participants once they began actively looking for a job though, unlike other developers in work-focused programs in this evaluation, they encouraged participants to seek "good' jobs, that is, higher-paying jobs with benefits" (Hamilton *et al*., 2001).

These findings support the view that benefit administration and placement services should be closely co-ordinated (though not necessary integrated) and that case management should be relatively intensive and use mixed strategies.

D. Impacts on flows into unemployment

Impact estimates such as those from the NEWWS only include motivation effects that reduce the average *duration* of spells for the existing caseload. However, in a full-scale implementation such strategies will plausibly also have motivation effects on initial *entries* to the caseload – motivating some people to retain an existing job or find a new one without applying for benefit, or just not apply for benefit. Grogger *et al*. (2003) track monthly rates of entry to welfare and exit from welfare through to 2001 to show that in California declining entries were more important, as a proximate cause of falls in the welfare caseload, than rising exits. Acs *et al*. (2003) conclude that "changes in welfare policy, expansions of the EITC, and attendant shifts in attitudes toward work and welfare likely play an important role in these trends". This US experience suggests that the total impact of activation measures on caseloads could have been about twice the impact measured in programme evaluations – given that the latter at most measure programme impacts on the duration of spells that have already started, not impacts on entries.

"Work-first" strategies sometimes cause people to take jobs of lower quality (see below), but there is little evidence that they reduce re-employment spell durations. This (negative) finding is reported by Black *et al*. (2003) in relation to job-search training in Kansas and by UK studies of at least four different programmes – the Restart programme, Jobseeker's Allowance, and New Deals for Young People and for the Long-term Unemployed.[31] Employment-focused programmes within the NEWWS in most cases *increased* the proportion of all job entries for which the first employment spell lasted four or more quarters.[32] This finding is hard to explain except in terms of motivation effects.[33] From a sociological point of view: "… the activation test and associated workfare programs are not only disciplining welfare recipients, they also serve the purpose of deterring dissatisfied workers from leaving their jobs" (Marston *et al*., 2004, citing Bedder, 2000). So although evidence from other countries is quite limited, it is possible that motivation effects which reduce unemployment durations are matched by similar-sized motivation effects that reduce entries to unemployment, as in the United States.

E. Assessing overall impacts of activation strategies

Impacts at the microeconomic level can account for large changes in aggregate caseloads

Cyclical factors influence unemployment rates independently of the impact of activation strategies. Therefore, when looking at aggregate unemployment outcomes, the focus should be on how benefit recipiency rates have changed on a cyclically-adjusted basis, for example comparing years around 2000 with years around 1990 (two peaks of the cycle), or years around 2003 with years around 1993 (two troughs of the cycle).[34] In the United States, some observers in the late 1990s feared that the decline in welfare rolls would be reversed in the next recession: several econometric studies using aggregate data had estimated that much of the caseload decline was due to the strong economy.[35]

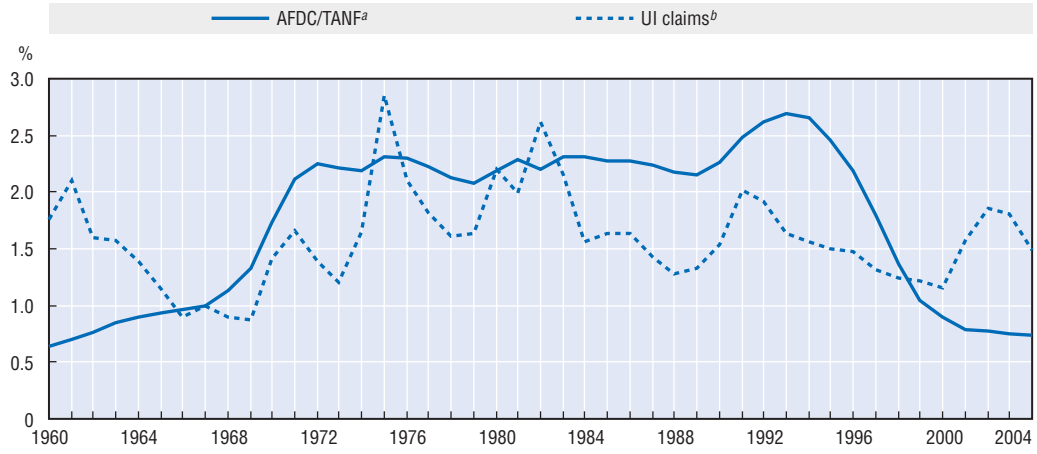
However, at the depth of the most recent recession the adult caseload on welfare remained about three time lower than it was in 1994 (Chart 4.6). Cyclical factors may have had a temporary impact accelerating the declines in the late 1990s and slowing the declines in the early 2000s, but structural factors have played a key role.[36] These include welfare reform, "making work pay" programmes (particularly the Earned Income Tax Credit – see Chapter 3 of this publication), and restrictions on benefit entitlements (time limits, and in some cases "diversion" strategies which might be interpreted as *de facto* restrictions on entitlement[37]). Of these, welfare reform may have been the most important factor: for example, workfare-type programmes (in Wisconsin) were able to reduce caseloads by 90% but there are probably no examples of financial incentives having such a large impact.[38] In this interpretation, the 1993-2003 fall in caseloads can be thought of as the product of three falls of 30% (0.7*0.7*0.7 = 0.34): the microeconomic impact of activation programmes on caseload durations;[39] the microeconomic impact of the same programmes on entries which was approximately equal in size; and the microeconomic impact (no doubt affecting both durations and entries) of financial and entitlement variables.

In the United Kingdom, unemployment benefit caseloads by the early 2000s were down by about two-thirds from peak levels. Microeconomic evaluations suggested a long-term impact on male benefit recipiency rates of 15% from the first Restart interview (conducted after six months of unemployment, from 1986 onwards: see above) and probably at least as much from Jobseeker's Allowance (JSA) legislation (1996).[40] Several other initiatives plausibly had similar effects.[41]

In Australia, DEWR (2003) reported that commencement in Intensive Assistance (the standard programme for disadvantaged or long-term unemployed) had a net impact on the

Chart 4.6. **Adults on welfare and persons on unemployment insurance, United States, 1960-2004**

Percentage of population aged 15-64



a) Calendar-year number of average adult AFDC/TANF recipients. Data include recipients in Separate State Programs (SSPs) from 2000 onwards.

b) 52-week average of weekly continued UI claims.

Source: For AFDC/TANF: 1960 and 1961 extrapolated using AFDC caseload data in *Social Security Statistics*; 1962-1969 estimated from *http://aspe.hhs.gov/hsp/indicators04/appa-tanf.htm*, Table 1 (data for financial years); 1970-2002, *ibid.*, Table 2 (data for calendar years); 2003 and 2004, extrapolated based on *www.ncsl.org/statefed/welfare/caseloadwatch.htm*. For UI weekly claims: before 1967, estimated from Bassi and McMurrer (1997), figures for IU/TU: from 1967 onwards: *www.workforcesecurity.doleta.gov/unemploy/claims.asp*.

Statlink: *http://dx.doi.org/10.1787/827177141747*

employment rates of participants (12 or 16 months later) of only one percentage point in the case of those who commenced in April 2000. However, this increased to about 6 percentage points for those who commenced in mid-2001 (with 32% of participants entering employment by November 2002, compared with 26% in the comparison group). The impact of the other main Job Network service, Job Search Training for shorter-term unemployed, also increased. The total number of three-month employment outcomes achieved by Job Network clients nearly doubled between 2002 and 2004,[42] so it seems likely that net impact of Job Network services continued to increase as the performance management framework took hold (see Chapter 5). Total benefit recipient numbers in Australia have fallen by nearly a quarter over the three years to end 2004. Again, it seems that the increasing impact of labour market programmes at the microeconomic level may be able to account for much of the improvement in aggregate outcomes.

At a given point in time, both cyclical and labour market factors affect outcomes. However, structural factors appear to be most important in determining the volume of long-term unemployment or dependency on social assistance benefits.[43] Cyclical factors (or the collapse of an asset bubble, for example) have a stronger influence on fluctuations in short-term unemployment.

But there are cases where activation strategies fail

Some researchers have concluded that programmes generally have little impact. In Australia, Douglas (2002) states: "Be realistic – even the most effective interventions do not have a big impact" and Kinnear *et al.* (2003) state: "Evaluations have found that after several years both program and control groups have similar numbers in employment, similar incomes, and similar numbers on welfare, suggesting that job-search programs may not have (measurable) long-term advantages." Even some relatively detailed literature reviews (for example de Koning, 2001) have arrived at similarly negative conclusions.

Such negative findings are not necessarily justified. NEWWS evaluations found that percentage impacts on caseloads (the variable that determines a programme's impact on the aggregate caseloads, assuming that rates of entry to benefit are unaffected) do not fade after several years (Chart 4.5). Historically, US evaluations of large-scale social programmes in the 1960s found disappointingly small impacts, but in the 1980s and the 1990s larger impacts were measured experimentally, and then the impact of actual implementation tended to exceed what had been measured. One explanation for such apparent contrasts is that large impacts arise because refined versions of the most successful programmes are implemented, producing an impact greater than the average impact of programmes that were implemented historically. Nevertheless, in some cases evaluations find that activation programmes have almost no impact. This subsection considers – somewhat speculatively – why apparently-similar programmes might be quite successful in some cases, and yet fail in others.

Failure may reflect unbalanced development of public employment services…

According to one model of PES offices, PES output can be modelled as a "production function" with multiple inputs. This implies declining returns as any single input is increased.[44] In some cases (where inputs are complements), an increase in the level of a second input can revive the marginal productivity of a first input. For example, the enforcement of availability for work is complementary with placement services. Without enforcement, the offer of services after a while satisfies demand, and further increases in

the service offer have little additional impact. Conversely, attempts at enforcement which lack a basis in placement services will have limited effectiveness. In line with this analysis, relatively large impacts from early activation measures have been reported where there was previously no effective enforcement of benefit conditionality (*e.g.* the United Kingdom before 1986 and Ireland before 1996).

The impact of a new programme may increase at first as the administration gains experience and optimises details of implementation, but impact may later decline:

- The first jobseekers referred may have the impression that they have been specially picked out, creating motivation effect (perhaps a "threat" effect or "encouragement" effect) which fades as the programme becomes regular.
- Participants may increasingly be repeat or serial attenders, *i.e.* individuals for whom this type of intervention has already been unsuccessful.
- When a programme has been implemented for a while, it may need to become more loosely targeted in order to maintain its participant numbers.
- Other partly similar programmes (substitutes) may be introduced.

One solution when declining returns are encountered is to move onto more intensive programmes. In the 1990s, the United Kingdom dropped some light and voluntary programmes (*e.g.* Job Clubs) which had previously been successful. This might be related to the increased job-search content of the regular regime (such as fortnightly "active signing" interviews, introduced in 1996) which was by then implemented for all jobseekers. By the end of the decade, more intensive programmes (New Deals) had become the new cutting edge of the labour market policy strategy.

If the production function model of PES output is relevant, no recommendation in favour of increasing one particular input can be stable. If a broad consensus emerges in favour of a particular input x, input x will be expanded, its effectiveness will decline, and experience will start to show that another policy y has higher marginal productivity. Since it is hardly possible to empirically model the full PES production function in detail once and for all (its characteristics will vary with locality and client group, for example), PES governance through impact evaluation findings will face problems of instability and limited transferability of the lessons learned. This suggests that, although attempts at modelling the production function more completely should continue, they need to be complemented with continuous and localised evaluation. One solution is a quasi-market (see below) where jobseeker outcomes are systematically used to evaluate providers and poor-performing providers are systematically driven out of the market.[45]

... PES governance problems,...

A labour market programme may have little impact because it is not effectively implemented. This might be the case for intensive case management if there is no obligation to attend, or for an individual action plan if the supply of training or job creation places is too low or not earmarked for action plan participants.

... weakness of motivation effects, or...

In recent years microeconomic studies of the influence of unemployment benefit levels and UI durations have become available from an increasing number of countries. Some recent estimates suggest an elasticity of benefit durations with respect to the level of benefits even above the top of the 0.2 to 0.9 range identified from the literature by

Layard *et al.* (1991).[46] This may be because the recent studies use actual policy changes or "natural experiments" as the source of exogenous variation in benefit entitlement conditions,[47] and because some of them are from countries with a relatively high replacement rate (an increase in replacement rate from 0.8 to 1.0 might increase unemployment proportionately more than an increase from 0.08 to 0.10).

High benefit elasticities are evidence that, despite administrative monitoring of availability and job search, jobseekers still have room for manoeuvre in deciding how actively and effectively they seek work. This may mean that, where replacement rates are high, activation programmes need to be relatively intensive before they have a major impact.

... barriers to job creation

Countries with overly strict employment protection tend to have lower employment rates, but there is no clear direct link with unemployment rates (OECD, 2004a, Chart 2.5). Comparing outcomes through time, Denmark, Ireland and the United Kingdom, three countries with low or moderately-strict employment protection legislation, have low unemployment rates now, but they had high unemployment rates in the 1980s: "flexicurity" is only a successful formula when its social protection is associated with an effective active labour market policy. Conversely, some countries with relatively strict employment protection have been able to keep unemployment low for long periods with active programmes.[48]

Once unemployment is high, certain labour market regulations probably slow down the job-entry and job-creation processes, slowing the impact of activation programmes and reducing the apparent reward/effort ratio. Although employment will eventually adjust to an increase in effective labour supply, some labour market rigidities can make it more difficult for labour supply to become "effective". For example, if labour market institutions discriminate against part-time work, people seeking part-time work may not be part of the effective labour supply.

4. Long-term impacts on employment and earnings

So far, this chapter has focused on the impact of activation strategies on benefit dependency and employment. However, these policies can also help improve the match between jobseekers and available jobs, while also possibly improving career prospects – and thus the productivity and earnings of placed jobseekers. This would promote job stability, reducing the risk that, once in work, "activated" individuals go back to unemployment benefits or leave the labour market.

Strategies should try to ensure that "activated" individuals do not quickly lose their jobs or drop out of the labour market...

Measures that achieve transitions from benefits to employment do not necessarily indicate a positive longer-term impact on employment rates. Van Ours and Vodopivec (2004) estimate (for a reference case, *i.e.* 30-year-old males in Slovenia) that a shortening of the maximum duration of unemployment benefit from 12 months to six months increased the employment rate at six months by 9 percentage points (from 49% to 58%), as well as increasing the not-in-the-labour-force rate by 9 percentage points. However, as little as six months later the impact on the employment rate had become much smaller (3 percentage points) and for female beneficiaries it was negative (–4 percentage points).

In the United States, NEWWS evaluations found short-term impacts of various strategies on employment rates that average about 60% to 70% of impacts on welfare recipiency rates. In leaver studies (interviews of mothers shortly after they have left welfare), about the same proportion of leavers report that they are in employment. In aggregate statistics, the increase between 1993 and 2001 in the number of single mothers employed was slightly over half the decrease in the number of single mothers receiving welfare. Overall, several types of evidence for the United States point to the conclusion that the proportion of welfare leavers who are employed is about 60% (OECD, 2003a).[49]

Microeconomic impact estimates suggest that substantive employment services often have a large positive impact on employment as compared to their impact on benefit caseloads – *i.e.* they help keep individuals in the labour market – and increase earnings:

- US impact evaluations often do not report employment directly (in terms of the weekly or monthly average employment rate) or average earnings (per hour or per week worked).[50] However, all NEWWS sites were still showing some reduction (albeit often not statistically significant, taken individually) in welfare recipiency rates among participants in the fifth year after entry to the programme, but only the most successful sites (Riverside, Portland and to a lesser extent Columbus) still had a clearly positive impact on "per cent employed in a year" and "total earnings in a year".[51]
- UK evaluations show a similar pattern. Lissenburgh (2001), evaluating the impact of the New Deal for the Long-term Unemployed Pilots found "evidence of a large Gateway effect during the first quarter of the evaluation period, with Gateway only entrants [*i.e.* those who left benefits before entering any intensive activity] leaving JSA [*i.e.* unemployment benefit] to an extent that is 31.5 percentage points greater than their comparators. About half of this effect is due to exits for unsubsidised employment, but exits to economic inactivity and unknown destinations account for almost all of the other half". By contrast, participation in intensive activities had a positive impact on exits to employment and no impact on exits to inactivity.
- In Canada, a critical difference emerged in the long term between regular SSP, which provided an income supplement for three years to welfare recipients who entered full-time work, and SSP Plus which provided the same bonus but also offered intensive support and individual counselling (including advice – *e.g.* about child-care and transportation – after participants found jobs). In the months shortly before and after the termination of the three-year income supplement offered by regular SSP its impact on the rate of full-time employment declined rapidly, becoming zero in the fifth year after random assignment. By contrast, the impact of SSP Plus on full-time employment stayed high at about 6 percentage points through to the last period of data collection (year 5, quarter 2). As compared with regular SSP, SSP Plus reduced welfare recipiency rates in year 5 by 8.8 percentage points (42.9% *vs.* 51.7%), and increased employment rates (first two quarters) by 5.8 percentage points (52.3% *vs.* 46.5%), but increased earnings by 22% (CAD 7 037 *vs.* CAD 5 777) (Michalopoulos *et al.*, 2002).[52]

There is also some evidence that participation in training, after an initial "lock-in" period, can leave rates of benefit receipt unchanged yet have a positive impact on employment rates. In Germany, Lechner *et al.* (2004) report that in Germany a "very intensive full-time programme with a duration of typically two years, called retraining, which qualifies for a different profession than the one currently held" has a positive impact on employment rates of its participants (as compared with other training programmes as

well as compared with non-participation) starting about three years after programme commencement. In total, over the seven years after programme commencement, the cumulated duration of benefit receipt is increased by about 10 months but the cumulated duration of employment also rises slightly. Jacobson *et al.* (2004) report similar findings for displaced workers who participated in vocational training at community colleges in Washington State. They observe that positive impacts on quarterly total earnings, following participation in the equivalent of two or three quarters of full-time training, typically first appear two or three quarters after training has ended. Positive impacts were only found for training in quantitative and technical subjects, so the evidence suggests that certain kinds of training have a positive long-run impact, and probably not that all training has a positive impact.

... and to promote wage progression

The long-term unemployed and disadvantaged programme participants usually enter work at relatively low wages. Earlier entry to work and greater employment stability probably result in some increase in wages, but for those who stay in the same job, progress is usually slow (about 2% per year, for former US welfare recipients[53]). Experimental programmes which offer in-work support to promote greater employment stability and faster wage progression are now underway in the United Kingdom and the United States (see *www.mdrc.org* – barriers to employment). However, the earlier Post-Employment Services Demonstration (PESD) in four US states found little impact[54] (see 1998 summaries at *http://peerta.acf.hhs.gov/taevents/chron.htm*). Poppe *et al.* (2003) provide a recent review with a "welfare-to-work" perspective on traditional programmes such as career planning and training:

> "Workforce intermediaries often make two critical mistakes. The first is encouraging people to take "any job' quickly, rather than think strategically about how a particular job placement can help individuals move along a career path. The second common mistake is providing technical training that does not carry credit or articulate towards a degree or certificate… it is important that what [people] begin during preemployment services can be continued after placement and that it all build towards a recognized credential, such as a degree or certificate…"

Challenges facing plans to use training for wage progression are that many people find that participation in training is incompatible with full-time work, and that education and training tend to have less impact than "work-first" programmes for individuals who have an initially low level of educational attainment (a finding noted by, for example, Bloom and Michalopoulos, 2001). After a return to work it is hard to maintain high levels of participation in case-management services, since people are busy with other things and there is no direct legal obligation or benefit incentive for them to participate. So there is also a case for relatively traditional PES approaches which focus on delivering high-quality employment services during the spell of compensated unemployment, even if this sometimes prolongs the initial spell out of work. To allow a fair comparative assessment of different strategies, it is clearly essential to track participants' employment and earnings outcomes for a number of years.

Conclusions

Individual labour market programmes quite frequently have evaluated impacts of about 15% on benefit caseloads. In one sense the record is held by Portland's welfare-to-work programme in the United States, where the experimental treatment group had total

numbers remaining on benefit about 30% lower than the control group from the third year onwards. Large impacts only exceptionally arise directly from participation in long-term programmes (*e.g.* training or job-creation), but they can arise from packages that combine employment service interventions with potential compulsory referral to longer-term programmes for certain subgroups or for all who continue to be unemployed for long periods (*e.g.* the Danish "active period of benefits" and the UK New Deals).

In an historical perspective, the most effective labour market policy reforms have involved a succession of policy changes, perhaps several which have an evaluated caseload impact of 15% and one or two more whose impact is not known directly (*e.g.* change in legislation or sanctions regime, restructuring of PES operations) but are considered to be of similar importance. Taking the latter as well as the former into account, some well-known activation strategies might have been expected to reduce caseloads by a factor of two or three which is approximately what actually happened. This suggests that successive policy changes can have a cumulative effect and that there are not important "hidden" offsets (due to displacement effects, or the fact that ALMPs do not directly increase aggregate demand) to the "visible" microeconomic impact of programmes. Alternatively, factors such as displacement may partly offset the impacts that arise at microeconomic level while these factors themselves are counterbalanced by the multiplier effects mentioned in Section 1.C above. Either way, a general conclusion is that aggregate impacts can be large if programmes with a large microeconomic impact are devised, their good performance is identified and their implementation is generalized, which are the general principles of performance management analysed further in Chapter 5.

Although the motivation effects from activation strategies tend to be important for reducing aggregate caseloads, the microeconomic evidence suggests that this is not the only channel of impact from ALMPs. Examples such as New Zealand's WRK4U and Canada's SSP Plus programmes suggest that some voluntary programmes delivering counselling, assistance and job-search training can have a large impact. Some long-term vocational training programmes deliver net benefits when outcomes are followed up for two or more years. In the case of obligatory programmes, alongside the evidence of motivation effects arising from the obligation to participate, there is evidence of perhaps smaller but longer-term impacts attributable to enhancements of job-search skills or employability delivered by programme participation. A general conclusion is that the performance management framework for active labour market programmes needs to set up a kind of "level playing field" – one which values activation strategies and programmes that are not of an activation nature, and will examine benefit caseload reductions as well as increases in employment and earnings. Again, these principles are analysed further in Chapter 5.

Notes

1. This chapter continues a history of OECD reviews of evaluations of what works, for whom and why, in active labour market programmes (OECD, 1991; Fay, 1996; Martin and Grubb, 2001) and more general reviews of active labour market policies and the public employment service (OECD, 2001a and a series of country reviews, most recently OECD, 2001b).
2. Unemployment benefits are sometimes paid to older workers without an availability-for-work requirement, although several OECD countries have recently abolished or begun abolishing these exemptions – see OECD country reviews on older workers entitled *Ageing and Employment Policies* for further details. Exemptions may also apply for workers on temporary lay-off, and during short-term sickness.

3. OECD (2003a, Chapter 4) examined relationships between caseload trends for unemployment benefits and other working-age income-replacement benefits. In general terms, measures that reduce unemployment benefit caseloads tend to result in some individuals transferring to other (inactive) benefits, but also success in reducing unemployment makes it politically easier and operationally more useful to restrict access to early retirement benefits, disability benefits or other benefits, for individuals who still have significant work capacity.

4. PES counsellors need to judge accurately which kind of activity will be most effective for each client, which may involve offering the client a choice of activities while at the same time telling him or her that inactivity is not an option – a tension that illustrates the need for skilled employment counselling, and is characteristic of modern activation strategies.

5. For some unemployed, given the costs of job search, it is not worth searching for a job, even though it would be worth accepting a job offer that arrived without search effort. In this case, when an obligation to search is enforced, at the time a job offer arrives the search costs are sunk costs and the job will be accepted.

6. Job-creation programmes often pay their participants a supplement above the usual unemployment benefit level. Some economists advocate a "Job Guarantee" for the long-term unemployed, which may differ from "workfare" in that the income support level corresponds to the minimum wage rather than benefit, or perhaps that the job is permanent. Mitchell and Wray (2004) give references to a number of papers that advocate or that criticise the Job Guarantee. Evaluations often find that job-creation programmes have a positive impact on job-finding chances for some months after participation in them has ended, but this is not large enough to offset the negative impact (lock-in effect) that arises during participation.

7. For a public works programme to provide effective social protection against destitution, places on it must be kept open. A "workfare" programme must similarly keep places open for it to be effective in deterring voluntary unemployment.

8. "Since 1850 the British labour force has grown by 240% and the number of jobs has grown by, guess what, 240%" notes Layard (2001), who also presents a cross-country comparison of labour supply growth against employment growth.

9. However, even in the short term there is little direct empirical evidence for displacement effects from training or activation measures. Calmfors (1994) claims that studies indicate large substitution effects from counselling and job-search assistance measures, but does not give specific references. Dahlberg and Forslund (1999) estimate, using panel data for 260 Swedish municipalities, that training programmes have small (not statistically significant) displacement effects whereas relief work (*i.e.* job creation) and other subsidised work (workplace induction, trainee replacement, and work experience) schemes have long-run displacement effects of about 65%. In another study focusing explicitly on wider labour market effects, Hasluck *et al.* (2003) found that the Employment Zones (EZ) programme, which mainly provides intensified employment counselling, increased monthly outflow rates by about 1 percentage point for its target group, with no evidence of any reduction in monthly outflow rates among unemployed clients outside the EZ target group in the same local areas. De Boer (2003) finds that New Zealand's WRK4U scheme, which increased the take-up of work by potential claimants before the start of a benefit spell, did not reduce outflow rates for existing UB clients. The displacement effects of other measures, such as hiring subsidies which do not increase effective labour supply, by contrast might be expected to persist indefinitely (*e.g.* shifting the structure of employment away from the industries that do not qualify, or reducing hazard rates out of short-term unemployment if only long-term unemployed qualify).

10. The intensification of the activation strategy in Denmark during the 1990s took place by progressively advancing the start of the "activation period" (during which unemployed people had to participate in an employment or training programme 75% of the time) as described in Section 3.B. In the United Kingdom, it was probably only possible to implement "fortnightly signing" (in 1996) and the succession of New Deal programmes (from 1998 onwards) because caseloads had already fallen substantially. In the United States, as welfare caseloads fell some states developed a broader range of employment services which helped to place the hard-to-place and keep people in work after placement.

11. To a considerable extent, people do what they see their neighbours, friends and family doing, so when a microeconomic programme influences the behaviour of its participants, unemployment outcomes for non-participants are influenced in the same direction. Examining the impact of a change in unemployment benefit entitlements which directly affected some groups but not others in Austria, Lalive (2003) concluded that "there are strong indirect effects on the entitled, strong positive spillovers on the non-entitled, and… social interactions are about as important as the

direct effects of the policy change." A number of studies have documented this type of effect, described in terms of "neighbourhood effects", "network effects", "external habit formation" and "ethnic enclaves".

12. Studies citing different selections of countries as examples of (successful) reforms include Barrell and Genre (1999) and Auer (2000); also many studies have analysed a particular (notably the Dutch or Danish) "jobs miracle". OECD (2003a, Table 4.3) provides a single-page listing of what are thought to have been significant labour market policy reforms in Denmark, Ireland, the Netherlands and the United Kingdom.

13. Participation in WRK4U seminars is voluntary, so these seminars do not qualify to be called an activation programme strictly as defined in this chapter. However, these seminars emphasize that obligations will be associated with benefit receipt. As of March 2004, more than half of the 23 500 people who had attended a WRK4U seminar had decided that they did not require an Unemployment Benefit (report by kiwinews.co.nz, 3 March 2004). De Boer (2003) reports findings from the pilot implementation of WRK4U, which was called Jump Start.

14. The fact that increases in job-entry rates in Chart 4.2 do not occur only at 14 months, but also during several months before and after this, indicates that individuals are prepared to lose up to several months of benefit (when entering a job before 14 months) or live for several months at the lower rate of benefit (when entering a job after 14 months) in order to find a better job match; but relatively few find it worthwhile taking a job a year earlier or a year later. This suggests that gains from potential improvements in job-match quality are comparable to the costs of delaying entry to employment for a few months, but not usually for a year. Therefore, public policy should seek to nearly eliminate unemployment spells of such long duration. By contrast, short search-unemployment spells can be productive. Employment services which permit a better immediate job match, but also make job-search more productive and thus permit a better job match later, will not necessarily shorten the duration of these spells. The positive impact from such services may instead take the form of greater employment stability and higher earnings.

15. Occasionally, in situations where participation in labour market programmes becomes obligatory at a relatively well-defined point in the unemployment spell, researchers can observe impacts on hazard rates similar to those that arise from benefit exhaustion (see Lissenburgh, 2001, for the UK New Deal for the Long-term Unemployed; Geerdsen, 2002, for activation in Denmark).

16. Impacts on employment are analysed further in Section 4. Benefit recipiency is not an informative outcome for individuals who have exhausted time-limited benefits, and in this case researchers usually focus on employment as the main outcome variable (*e.g.* Cockx and Ries, 2004). Microeconomic studies do not usually report impacts on unemployment as defined and measured in labour force surveys.

17. Ashenfelter *et al.* (2005) find that additional verification of reported job-search contacts by UI claimants prior to the first benefit payment reduced the rate of qualification for benefits by about 8% in one state but had little impact in three others. Also in the United States, "diversion" strategies – which seek to reduce the number of entrants to the ongoing benefit caseload – are often described as significant element in state welfare-to-work strategies. Nathan and Gais (1999, p.22) reported that about half the sites they examined required new applicants to conduct some sort of initial and often independent search for work. Two-thirds of the sites reviewed families for "diversion" assistance, which can be a lump-sum cash payment or loan in exchange for waiving eligibility for cash benefits for some time, such as six months.

18. In 1997, Australia's requirement on jobseekers to list eight job applications per fortnight in a Job Seeker Diary (JSD) over the first three months of their spell reduced the average duration of benefit spells by 0.9 fortnights (about 7%), an average impact similar to that reported in Maryland. However the impact varied from 1.5 fortnights in the quartile of regions with the lowest unemployment rates to 0.5 fortnights in the quartile with the highest unemployment rates (Borland and Tseng, 2004). When unemployment is high, many applications are made only to meet formal job-search requirements, so their real effectiveness may decline.

19. A small experimental study of job clubs (with 1 015 participants and controls) also found that job-club participants were more often employed and less often unemployed than the controls (Malmberg-Heimonen and Vuori, 2000, summary in English by Raïsanaen, 2003).

20. Experiments in Charleston, New Jersey, Washington and Wisconsin in the 1980s, summarized by Meyer (1995), involved in certain variants both work-search assistance (delivered through one or two intensive interviews or more frequent contacts with the Employment Service) and attendance at job-search training courses (varying in duration from one three-hour session to five half-day sessions). In these variants, impacts on average weeks of benefits received ranged from 0.5 to

0.8 weeks (roughly 5% reductions, as compared to the control group average of 15 weeks). The detailed report from the Washington experiment, which examined the timing of the impacts on hazard rates, suggested that "the shorter durations of UI receipt are due to the costs of appearing at the UI office". In other cases there was no clear evidence concerning the relative impact from individual assistance *versus* job-search workshops, or concerning motivation effects *versus* a direct impact from services. In the Maryland UI Work Search Demonstration, one treatment "where claimants were required (usually in the third to fifth week of their claim) to participate in a four day job-search training workshop reduced the average duration of UI payments by 0.6 week (about 5%). The overall impact came largely through a 28% increase in the hazard rate (*i.e.* the proportion of people whose status changes over a given time period) of out of UI for the two weeks immediately preceding the date of the scheduled workshop: the hazard rate during the workshop period itself fell, and evidence concerning the period after the workshop was mixed" (summary in OECD, 2000). Black *et al.* (2003) report outcomes from an experiment in Kentucky where some claimants were on a random-assignment basis sent a letter notifying them of an obligation to attend re-employment services (job-search training and preparation courses, in three-quarters of the cases) usually in the third or fourth week of their unemployment spell. This treatment reduced average weeks of UI receipt by about 2.2 weeks (probably about 15%) and "much (but not all) of the effect results from a sharp increase in early exits from UI in the experimental treatment group compared to the experimental control group", *i.e.* from exits before attending the re-employment services. In Australia, DEWRSB (2001) estimated, using statistically-constructed controls, that the "compliance" effect accounted for most of the total impact on off-benefit outcomes of Job Search Training (JST), a programme to which unemployed people could be referred at unemployment durations of three months or more: the relatively large size of the "compliance" effect was related to the fact that many more people were referred to the training than actually attended it.

21. One explanation for the large size of impact from Restart interviews is that, for some participants, the interviews acted as a stepping stone to further services, such as Jobclubs and Employment Training. Another factor might have been the relative novelty of Restart, since prior to 1996 there were few obligatory interventions in the unemployment spell in the United Kingdom. The lesser long-term impact for women appeared to arise because "motivation" effects led to labour force withdrawal more often that it did for ment who mainly entered employment, and because the offer of further services was less helpful for potential part-time workers.

22. A statistical model, with controls for a number of individual charactistics, estimated quite large impacts on the probability of exit from jobseeker status over the next four months, +6 to +9 percentage points for adult long-term UI and social assistance (RMI) beneficiaries (but not significant for long-term unemployed youths), but many of those who exited from jobseeker status soon returned. Nevertheless, for adults referral to SPNDE reduced the probability that individuals would still be jobseekers four months later by 3 percentage points (about 6%)(Micheau *et al.*, 2001).

23. After 2001, France replaced the SPNDE by the PAPND which involves drawing up a Personalised Action Plan (PAP) for each unemployed person early in the unemployment spell, followed by at least one interview every six months. Owing to the universal coverage of the new scheme and the fact that benefit entitlements were reformed at the same time (the replacement rate is now constant rather than declining with unemployment duration), it has been difficult to evaluate the impact of this new arrangement by either microeconomic or macroeconomic methods (Peer Review Programme, 2004a).

24. In the Netherlands, a treatment which consisted of giving more counsellor time to jobseekers (which was used in a variety of ways, notably to more thoroughly check reported job search, to provide additional assistance *e.g.* with writing job application letters, and to acquire vacancies from local sources and advertise these in the waiting room) increased the job application rate for workers whose previous job had been permanent by 30% but reduced the success rate per job application, so that the impact on the job-finding rate was smaller (11%, and not statistically significant). And for workers whose previous job had been temporary, the treatment reduced the job-finding rate by 50%: this result arose because "people in the treatment group who last had a temporary job are assisted and stimulated in their attempts to find a permanent job… temporary jobs are usually found more quickly than permanent positions" (Gorter and Kalb, 1996). An experiment in California where some welfare case managers were given half the caseloads of others found that those with smaller caseloads did not achieve greater impact (Freedman *et al.*, 1994).

25. In Finland, a 1998 policy reform introduced interviews at fixed intervals, individual action plans and job-search courses/job clubs. Aho *et al.* (2000), on the basis of follow-up surveys, found that the individual action plans and more clearly the job-search courses facilitated job-search activity, and that the reforms seemed to be quite successful if evaluated in terms of the satisfaction of the job-seekers. However, the new services had not led to higher rates of employment. Instead,

participants more often entered long-term ALMPs. The researchers concluded that unemployment was largely structural, so increasing activation programmes did not much help in solving the problem. Raïsanen (2003) presents some interpretation of why "after the recession, in the boom years of the late 1990s, effectiveness [of labour market programmes] did not improve significantly", while also citing some positive evaluation findings (see note 19) and recent improvements in labour market policy.

26. Another evaluation using Swiss data (Lalive *et al.*, 2000) estimated that for women the lock-in effects of employment and training programmes (except language training) were compensated by fairly strong positive employment gains after the end of programme participation.

27. Friedlander and Burtless (1995) analysed some of the first US five-year follow-up studies, concluding that only higher-cost educational programmes enabled welfare recipients to stay off welfare. Hotz *et al.* (2000), using data which follow up outcomes for participants in Californian random-assignment experiments over nine years, report that "the early superiority of the Riverside program with its stress on job-search assistance rather than basic skills training is lessened over time. In later years the programs in countries such as Alameda and Los Angeles [which engaged about two-thirds of participants in basic education or vocational training] are doing as well as, or even slightly better, than Riverside". Dyke *et al.* (2005) report similar findings for participation in intensive training within welfare-to-work programmes in Missouri and North Carolina. In some other studies, even in the longer term training does not reduce benefit receipt and yet positive impacts on employment and earnings emerge (see Section 4).

28. In Chart 4.3, the most favourable outcomes shown (for participants in a temporary wage subsidy) and the least favourable (for participants in language courses) might reflect selection biases that can arise in non-experimental data (see Chapter 5, Box 5.2 for further discussion).

29. AM (2000, p. 115) stresses that "… a significant increase in the transition rate for people who have been in the unemployment benefit system for two to three years is observed in 1998… It is precisely this group which was covered by the advance which took place in [the] course of 1998".

30. Rosholm and Svarer (2004) use another method to estimate "motivation" effects. First, using a rich empirical data set, they estimate for each individual the probability of entry to an ALMP conditional on personal characteristics and duration of the unemployment spell. Then they use this probability as an explanatory variable (the so-called "threat effect") in a second equation for the hazard rate out of unemployment. They estimate that the "threat effect" arising from the Danish suite of programmes over 1998-2002 reduced average unemployment durations for men by an average of three weeks (a reduction of 8%). Actual participation in programmes affected duration by smaller amounts (positive or negative, depending on the programme). Movements in the Rosholm-Svarer "threat" variable will be quite trended and thus it may be difficult to accurately separate its impact from that of other trended variables such as duration dependence (the phenomenon of declines in hazard rates with duration of the unemployment spell). Changes through time (change in patterns of hazard rates compared with changes in the activation regime) arguably identify the impact more convincingly. But the Rosholm-Svarer approach is particularly interesting at the conceptual level, as a way of modelling the motivation effects from programme participation obligations (see Box 4.4).

31. Dolton and O'Niell (2002) found that re-employment durations were not significantly different for the Restart treatment group. For the New Deal for Young People (NDYP), Blundell *et al.* (2001) estimated that impacts on exits to "sustained" jobs were comparable to impact on exits to all jobs with little evidence of any net "spill-over" (substitution) effects. McVicar and Podivinsky (2003) report that "*Relative* re-entry rates [to unemployment] for those of the target and comparison age groups having previously experienced a six months or more spell of unemployment have changed little since the introduction of NDYP". Lissenburgh (2001) concludes, based on a matched comparison group evaluation of pilots of the New Deal for Long-term Unemployed, that "Pilot entrants had lower levels of job satisfaction than their comparators" and yet "once the programme had enabled participants to leave unemployment, they tended not to return".

32. Riverside LFA was a slight exception (it increased entries into jobs lasting four or more quarters by 4 percentage points but also increased entries into jobs that lasted less than three quarters by 7 percentage points, so the share of the latter in all job entries increased), but this was the most "work-first" of the programmes, urging participants to take any job, no matter how casual or low paid (Freedman, 2000).

33. Hamilton *et al.* (2001) appeal to motivation effects to explain how one NEWWS programme (Grand Rapids LFA) had a negative impact on both benefit receipt and employment five years later. They suggest that this programme encouraged certain individuals to enter employment but then stay

off assistance after they lost the job, even though they remained eligible, "a pattern that may reflect the national climate in the aftermath of the federal welfare legislation of 1996".

34. Several factors make it difficult to estimate the impact of ALMPs on the level of unemployment in cross-country regressions: *a)* the dependent variable would have to be labour-force-survey unemployment rates (which are measured comparably, but are often weak proxies for the target group of active or passive labour market programmes) or unemployment beneficiary rates (which are also a function of country-specific entitlement rules for unemployment, social assistance and perhaps other benefits); *b)* the explanatory variables would need to include indicators for the effectiveness of several types of "active" policies (*e.g.* benefit eligibility criteria, regular PES interventions, longer-term ALMPs); and *c)* in a country where unemployment has stayed low for many years, the case for restraint in relation to benefit levels, wage inflation, etc., may lose political support until eventually unemployment rises despite a relatively effective system of labour market programmes.

35. According to Bell (2001), the research community had not convincingly demonstrated the impact of welfare reform and there was substantial agreement among scientific studies, nine of which he summarises, that falls in unemployment in the 1990s were the main cause of falls in welfare caseloads. Findings that policy variables had little impact appear to arise in time-series econometric estimates because the welfare caseload has been a long distributed lag function of reform measures. Reasons for the long lag are: *a)* reforms in the short run affect rates of flows off and onto benefit, and, since the welfare caseload has a long average spell duration, it only changes slowly; *b)* reforms were partly implemented before they were legislated, and behaviour starts responding to media information, word of mouth and rumours even before reforms are implemented; *c)* even after reforms are legislated, years may pass before the administration is implementing them effectively. In data terms, policy changes are discrete events: the archetypal data item for welfare reform would be a dummy for 1996 welfare reform (PRWORA) legislation that jumps from 0 to 1 in 1996. Any simple regression with no lag structure will therefore estimate a near-zero coefficient on welfare reform and attribute the caseload decline to other trended variables in the equation (in data up to 2000, an unemployment variable could play this role). For a regression to be correctly specified, the PRWORA dummy would need to have a lag ranging from about year –4 to year +15 (see OECD, 2003a, Chapter 4, for background evidence on this point). In practice, the choice is then between a regression that specifies a highly flexible lag structure, when coefficient estimates may be unbiased but are statistically insignificant, and a regression that imposes a simple lag structure, which gives a biased estimate of long-run coefficients. The underlying problem is that without *a priori* knowledge of the lag structures, time-series data alone have little information content.

36. Since TANF is essentially an unemployment benefit (*i.e.* a benefit that is conditional on availability for work), the TANF caseload should be more cyclical than the AFDC caseload was. But in a counterfactual case of no welfare reform, it seems likely that AFDC caseloads would not have changed much.

37. Since there is now no federal entitlement to welfare, the concept of benefit entitlement can now only refer to state practices. Owing to administrative flexibility in the application of time limits (permitted by exemptions and other factors), few cases have arisen where families without other income lose all benefits. The threat of time limits may have had more impact on caseloads than their actual implementation. Some experts see a risk that diversion programmes result in poor families receiving too little or even false information about their potential eligibility for food stamps and Medicaid (Gais, 2000).

38. Grogger (2003) estimates using data for federal and state EITC rates that from 1993 to 1999 welfare reform (waivers and TANF) reduced caseloads by 8.5% and financial incentives (benefits and EITC) reduced caseloads by 7.9%, almost as much. But in this study, the independent variables together explain less than a third of the 1993-99 fall in welfare caseloads.

39. Many US states have not implemented employment strategies as sophisticated as Portland's strategy, which reduced caseloads by 30% (on the basis of treatment compared to control group outcomes). However, the full impact of actual implementations was no doubt greater than the average impact reported in NEWWS experiments. Actual implementations were generally "work-first", playing down the human capital development programmes which had lesser impact in the experiments. As argued elsewhere, estimated impacts probably understate full impacts, because in the experiments reforms also influenced control group behaviour to some extent. Another issue is that in experiments, impacts on the actual rate of participation in employment services were quite limited. On average across NEWWS and 23 other US evaluations conducted from 1983 to 1996, about 31% of control group members participated in a "programme activity" as compared with 54% of treatment group members, *i.e.* the treatment group actually received more

services than the control group in only about one quarter of cases (Greenberg *et al.*, 2003, Table 2). Full-scale implementations may have a larger impact on service delivery, since after a while participation in employment services becomes standard procedure. Mead (1998) sets out several such mechanisms for impacts on aggregate caseloads to exceed impacts reported in random-assignment experiments.

40. JSA legislation, among other things, made benefit conditional on fortnightly in-person attendance at a short interview. Smith *et al.* (2000) report that JSA legislation increased the hazard rate off benefit by 11%, after controls for the effects of the improving economy. However, they also report that the hazard rate back onto benefit after leaving it was 26% higher before JSA legislation. Although no estimate with controls for the improving economy is cited, JSA legislation was probably at least partially responsible. The total impact of JSA legislation on caseloads would reflect the sum of impacts through these two routes.

41. Among other UK programmes were the Restart interviews from 12 months onwards (whose impact is not covered by the random-assignment experiments reported by Dolton and O'Niell), the introduction of a range of low-cost labour market programmes (job-search training courses, Work Trials, One-to-One, etc. with evaluated impacts, but generally applying to only a small proportion of the unemployed), the "stricter benefit regime" with an increase in sanctions in the early 1990s, and the New Deals introduced after 1996.

42. In Australia the number of long-term job outcomes (employment for more than three months claimed by employment service providers in relation to JST and IA and their equivalents in the third Job Network contract period) has nearly doubled since 2002 (from 96 000 in 2002-03 to an expected 180 000 in 2004-05), suggesting that programme impacts have increased (although research publications that estimate outcomes for a plausible control group are not yet available). For benefit recipiency data, see the *Monthly Profile of Labour Market and Related Payments* at *www.workplace.gov.au*.

43. Social assistance caseloads in six countries (OECD, 2003a, Chart 4.6) have responded very little to the economic cycle in some cases and fairly strongly in others, but even in the latter case structural factors seem to be important (a year's caseload depends more on which decade it is in than on which year of the decade it is in).

44. Calmfors (1994) lists several reasons for expecting declining returns to scale for various types of labour market programme. Raïsanen (2003) cites a research finding that the effectiveness of training programmes is higher in Southern Finland, where their volume is lower than in the North and participants have not so often already participated in previous programmes.

45. A well-managed quasi-market will measure the *relative* impact of different providers on jobseeker outcomes. The impact of providers, as compared to a counterfactual of no service provision, is irrelevant for good governance (unless zero service provision is a serious policy option). The quasi-market approach leaves still much scope for research as the government needs to document the service package used by different providers so as to assess externalities, measure impacts on outcomes for which providers are not rewarded, etc.

46. Recent studies of the impact of benefit entitlements include Carling *et al.* (2001) and Bennmarker *et al.* (2004) for Sweden, Roed and Zhang (2003) for Norway, Van Ours and Vodopivec (2004) for Slovenia, Cockx and Ries (2004) for Belgium and Lalive and Zweimuller (2004) for Austria. Roed and Zhang use a very large sample of data where quirks of an administrative nature generate variation in entitlements, and Cockx and Ries examine hazard rates to employment around the time of benefit exhaustion (evidence conceptually similar to that shown in Chart 4.2 here); the four other studies estimate benefit impacts based on comparing outcomes before and after benefit entitlement rules were changed. The Norwegian study estimates an elasticity of the (off-benefit) hazard rate with respect to benefit level of –0.95 for men and –0.35 for women, the first Swedish study estimates an elasticity of –1.6, the Slovenian study implies an elasticity of –1 or larger: and the second Swedish study implies an elasticity of unemployment duration with respect to the replacement rate of 0.6. A longer duration of benefit entitlement was estimated to increase actual unemployment durations by a third in Slovenia and by a half in Austria (here UI entitlement increased from 30 to 209 weeks: given that Austria has indefinite UA benefits the change examined may have resembled a permanent increase in benefit level). The Belgian study found that the employment rates, in a sample of family dependants with an ongoing entitlement to benefit, averaged about 4% while entitlement continued, and rose to 16% soon after impending future exhaustion of benefit entitlement (in the Belgian system, this was usually "news" to the individual concerned) was notified and to 25% by 14 months after exhaustion.

47. Individual variation in the level of benefits actually received is not a good source of variation for estimating behavioural impact: for example, when comparing two otherwise-identical individuals

of whom the first is receiving benefit and the second is not, it may be that the first is not sufficiently available for work and has lower benefits – but also lower job-finding chances – for this reason.

48. In Sweden over 1965 to 1975 huge wage compression occurred and benefit replacement rates were high for low-paid workers, but active policies were in place and unemployment was kept low until the end of the 1980s.

49. In recession (from 2000 to 2003) lone parents in the United States lost in absolute terms about one-quarter of the employment rate gains achieved in the 1990s (Sherman *et al*., 2004). But employment rates of other groups in the labour market also fell, so lone parent employment rates fell only slightly in relative to other labour market groups.

50. US evaluations usually use data from quarterly social insurance contribution records, which only report whether an individual has been employed during each quarter and total earnings in the quarter.

51. "… most programs continued to significantly reduce welfare receipt at the end of year 5. This result is somewhat surprising, given that few programs increased employment and earnings above control group levels in year 5. This pattern is especially striking for Grand Rapids LFA, which decreased receipt below the control group by 3 percentage points at the end of year 5, but led to a similar *reduction* in percentage employed during that year" (Hamilton *et al*., 2001). According to Michalopoulos (2004, p. 20), "the employment-focused mixed-activity programs stand out. They generated the largest effects on earnings among the most disadvantaged, but reduced welfare payments by less than they increased earnings. In contrast, the job-search-first programs reduced welfare payments by more than they increased earnings."

52. The impact of additional employment services in SSP Plus arose only from the third year onwards, but in the longer term these services apparently increased total earnings more than the in-work benefits of regular SSP. Card and Hyslop (2005) conclude that "Despite the extra work effort engendered by the program's incentives, SSP had no long-run impact on wages and little or no long-run effect on welfare participation". Foley (2004) suggests that SSP motivated mothers to enter full-time jobs within a year in order to qualify for the subsidy, but these gains were not sustained, so employment services are needed in order to improve job-match quality.

53. More specifically, Poppe *et al*. (2003) cite findings that – for former welfare recipients and for individuals who had persistently low earnings initially – the coefficient on work experience for those who stay with the same job is 2% per year after controlling for other observed characteristics. Loeb and Corcoran (2001) however estimate that wages of young women grew on average by about 7% for each year of full-time work experience, with little evidence that returns – measured this way – were lower for former welfare recipients than for others. In their perspective, policies which achieve continuous employment in full-time jobs will thereby also achieve wage progression.

54. Typical support services that were made available at the PESD sites included encouragement, counseling, referrals, help with car repairs, some rental assistance, promotion of EITC, and employer mediation (see the 1998 summaries at *http://peerta.acf.hhs.gov/taevents/chron.htm*).

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OECD Employment Outlook

Chapter 5

Public Employment Services: Managing Performance

How can the Public Employment Service (PES) assess the impact of its labour market programmes and use this information to manage them better? PES data systems need to allow identification of the "output" of labour market programmes in terms of their impact on off-benefit, employment and earnings outcomes. Impacts should be valued using the formula (B + tW) where B is benefit payments saved, t is the tax rate on earnings and W is total earnings, i.e. *the product of months employed and the monthly wage rate, with these outcomes measured for up to five years after the start of programme participation. In quasi-market systems, employment service providers must be given broad-ranging responsibility for clearly-defined groups of clients, and institutional arrangements must prevent "gaming" (artificial manipulation of outcome measures) and "creaming" (provider failure to enrol disadvantaged clients) and must protect individual entitlement to benefits. These underlying principles can be adapted to manage performance in traditional PES arrangements. Outcome measurement and the evaluation of programme impacts may seem to be relatively technical concerns, but they have already played an important role in the history of labour market policy in several OECD countries.*

Introduction

Chapter 4 examined the impact of active labour market programmes (ALMPs). This chapter asks how the Public Employment Service (PES) can assess the impact of its labour market programmes and use this information to manage them better. In general terms, PES institutions and data systems need to allow identification of the "output" of labour market programmes, in terms of reducing unemployment and increasing employment and earnings, and use this information to replace less effective programmes with more effective ones. The chapter sets out preconditions for successful market-driven provision of publicly-financed employment services. These preconditions are often also relevant, although they may be relaxed or adapted in some respects, for the performance management of public services.

Section 1 surveys historical evidence that impact evaluation can be a driving force in the management of the PES and the results it obtains. Section 2 sets out some general principles for performance management. Section 3 considers *i*) quasi-market arrangements where the government defines output measures and financing conditions for the delivery of public employment services by competing independent organisations, and *ii*) the application of performance management principles within a more traditional PES organisation.

Main findings

- **The governance structure for employment services is a major determinant of success.** For example, the PES must manage the referral of jobseekers to external labour market programmes so that the PES can measure "motivation" effects that arise before clients enter programmes and the employment outcomes that arise after exit from programmes. External service providers need to have broad-ranging responsibility for services delivered to clearly-defined groups of clients, so that the impact of their services on client outcomes can be reliably measured.
- **Labour market authorities should track off-benefit, employment and earnings outcomes for programme participants for about five years.** PES management often takes benefit caseload decline or short-term post-programme employment rates as a measure of success, because these are the most visible and easily-measured outcomes. However, it is also important to assess which programmes have genuinely beneficial long-term impact.
- **Outcomes can be assessed in terms of a "B + tW" formula.** To a first approximation, programmes should be evaluated in terms of their impact on (B + tW), where B is the benefit payments saved, t is the tax rate and W is total participant earnings (the product of employment rate and wage rate). When impacts are measured over long periods, the earnings component in this formula can be relatively large. Effective performance management with outcomes valued according to the (B + tW) formula would not only reduce total unemployment but also increase the delivery of substantive employment

services which improve long-term employment and earnings outcomes. It would improve government's net financial balance, because the (B + tW) criterion means that programmes are selected when the benefit savings and increased tax receipts that they generate exceed their cost.

- **Measures of outcomes and impacts must be hard to "game".** When employment services are subcontracted, government agencies should assess outcomes from employment services in terms of the number of their clients who remain on benefits and/or who are in employment according to official data sources, not data reported by the service providers themselves. Countries could consider using tax and social security data records to track employment and earnings outcomes at low cost, subject to arrangements to prevent access to individual-level data.
- **"Creaming" (*i.e.* selection by service providers of which clients to serve) should be prevented.** Government should manage referrals to service providers and ensure that employment outcomes are measured for *all* persons referred to a provider. The measurement of employment outcomes this way creates no incentive for providers to divert their less-easily-employable clients to other service providers or to other welfare benefits.
- **Government should protect individual entitlement to benefit.** Service providers need to be able to report evidence of lack of availability for work or refusal to participate in a labour market programme, but at the same time government needs to ensure that valid benefit entitlements are protected.
- **Providers or services that have little impact on jobseeker outcomes should be systematically reformed and where necessary replaced**. Although this is an obvious recommendation, it may be difficult to implement in practice because in centralised systems staff resist restructuring and in decentralised systems the actors that currently receive financing tend to oppose change.
- **This framework is broadly applicable.** The broad framework here is applicable to management of a quasi-market for employment services but also to the performance management of local employment offices within a public system. For individuals who have no benefit entitlement, or in developing countries where informal sector employment is widespread, the measurement of employment outcomes in terms of earnings that appear in tax or social security records would reward employment services for bringing their clients into formal employment.

1. Historical experiences with the use of impact evaluation for PES governance

It is generally not possible to observe results from ALMPs directly, which is why it is so important to carry out evaluations of programme impacts. For most other services, approximate but direct measures of output exist. If garbage collection is not done, householders complain. If highway maintenance work is not done properly, contract supervisors notice. But if an ALMP has no impact on outcomes, it has for practical purposes no output and yet this may not be known to any of the actors involved. So a special effort is needed to assess the impact of ALMPs, or to structure PES operations so that impacts on outcomes are rewarded directly.

Despite the potential technical difficulties of using programme evaluations to manage the PES, it can be argued that outcome measurement and impact evaluation have played

an important role in the history of labour market policy in several countries. This subsection briefly summarises this history.

At least since 1986, employment policy in the **United Kingdom** has been managed with close attention to comparative tracking of numbers registered unemployed as a function of the different interventions and services delivered. When the idea of conducting "Restart" interviews with all long-term unemployed was devised late in 1985, the Treasury was only willing to agree to pilot implementations which had to be evaluated before any nationwide extension. Historically, this was a turning point.[1] In 1987, a new organisation (called the Employment Service) was created. From the start this organisation conducted focused evaluations of its operations. In 1990, the Employment Service was given the status of an autonomous agency with an Annual Performance Agreement which defined multiple quantitative targets, starting with the target of 1.65 million placings of unemployed people in 1990/91 (Price, 2000).

A focus upon quantitative evaluation continued through the 1990s. According to the compendium compiled by Greenberg and Shroder (2004), the UK Employment Service undertook about half of all European "social experiments" in the area of labour market policies over this period. This drive in favour of experimentation and evaluation continues with, for example, recent evaluations of the New Deals, Employment Zones for the unemployed and programmes such as "work-focused interviews" for recipients of other benefits.

Occasionally, detailed programmes are implemented nationwide before impact evaluations have provided any clear result or despite existing evidence of limited impact. Some changes, such as computer systems and the 1996 overhaul of benefit legislation, by their nature cannot be tested in advance. Nevertheless, evaluation has been a critical principle behind the long series of operational changes that have helped to reduce registered unemployment from over 3 million in 1986 to well below 1 million now.

In 1981, legislation allowed states in the **United States** to experiment with requiring work in return for welfare. Using random assignment methods, the Manpower Demonstration Research Corporation carefully evaluated 11 of the experiments, and its 1986 report on programmes with strong work requirements found that these "make a difference. They increase employment and earnings of recipients and they reduce welfare dependency". The apparent success of these programmes led to the passage of the Family Support Act of 1988 which established the Job Opportunities and Basic Skills training programme, requiring not merely registration but the participation of welfare mothers in work activities. In the early 1990s, many states were allowed to experiment with their welfare programmes. Soon, a sharp decline in welfare caseloads was under way in some states. This experience helped to structure the federal welfare reform legislation of 1996 (citation from Zellman *et al.*, 1999; see also Council of Economic Advisers, 1997). Subsequently, welfare reform has on the whole reduced welfare caseloads more than expected and not generated as much hardship as critics feared.

In May 1998, most public employment services in **Australia** were replaced by the Job Network, which in the first contract period delivered services through about 300 contracted organisations (OECD, 2001b). Although Job Network providers were rewarded for the number of employment outcomes, lasting at least three months, achieved by their clients (with an additional bonus for outcomes lasting six months), this incentive mechanism in itself had limited impact because the majority of provider income was derived from fees for "commencements" (*i.e.* initial registration of jobseekers with the provider) rather than

placements. In the short term (*i.e.* for the duration of the 1998-2000 contract), a strategy of commencing jobseekers but spending relatively little on further provision of services could be profitable.

In the first (1997) tender round of the new system, contracts were issued to a wide variety of providers, resulting in high variability of performance. Providers first received general (unpublished) advice about their individual placement performance early in 1999. The first "star ratings" with regression adjustments (to reflect differences in jobseeker characteristics and local labour market conditions faced by individual providers, so as to measure impacts rather than gross outcomes) were published in March 2001. These developments progressively made it possible for providers to identify their own good or bad performance and to change strategy, and for government to select providers on the basis of performance. DEWR (2003) reported an increase in the net impact of Job Network services, which it attributed to "the market developing, and in recent times, the introduction of the 'Star Ratings' system which has driven substantial performance improvements". Extensive reforms were announced in 2002 and became operational in the third Job Network contract period which started in July 2003. Overall, recent improvements in both programme impacts and aggregate outcomes (described in Chapter 4) reflect both extensive research that has informed the general strategy, and the increased accuracy and influence of explicit measures of comparative provider performance.

Radical changes of labour market policy in **New Zealand** were implemented in 1998 with the integration of benefit administration and employment services into a single agency, Work and Income, and the introduction of internal targets for placements into stable work (defined as work lasting more than three months). Currently, each client is classified by employment counsellor, local office, region, etc. and performance in terms of numbers of stable employment outcomes is monitored at each of these levels. This reform did not go smoothly at first and in 1998/99, placements were far below target.[2] However, by 2000/01 placements had doubled to well above target (Wallis, 2001) and total unemployment began to decline by about 10% per year. The new organisation's "can-do" philosophy had an increasingly positive influence as the results-oriented management approach stabilized, and the decline in unemployment accelerated with the introduction of a package of activation programmes in 2003 (see Chapter 4, Chart 4.1).

An improvement in the volume and accuracy of evaluations may have been an important background factor for the implementation of effective policies. Although the New Zealand authorities have for at least a decade published impact evaluations of specific labour market programmes, "employment programme evaluation has made considerable progress since 1998, when the evaluations were last reviewed… [a review in 1998] identified the need to develop consistent outcome measures, predefined success criteria for programmes and robust measures of the cost or cost effectiveness of programmes… These were all necessary precursors to being able to generate comparative information" (Johri *et al*., 2004). Dixon (2002) discussed the use of administrative data for evaluation purposes, and Maré (2002) presented estimates for the impact of a range of employment policy interventions.

In 1994, **Denmark** adopted a reform combining active policies with administrative programmes to ensure the implementation of benefit criteria. The reform was not rooted in a culture of programme impact evaluation (it reflected a consensus within the administration and among the social partners in favour of a reform to tackle unemployment, without

much evidence of doubts about the method to use). However, the case that benefit eligibility criteria are important and that the reforms had a substantial impact was advanced through research by the Ministries of Finance and of Labour in the late 1990s (see OECD, 2000, Chapter 4; and OECD, 2002, Chapter 4 for references). More recently, the policy of systematic referral to labour market programmes during the active period of benefits has been relaxed in favour of lighter interventions, still of an activation nature.[3]

In the **Netherlands**, activation principles were implemented through public policy in the 1990s (see OECD, 2003a, Table 4.3). Since 2000, key employment services have been delivered by private providers, which have clients referred to them through a public gateway, as in Australia. However, in contrast to Australia, central government does not manage contracts with providers: contracts for unemployment assistance beneficiaries are managed by municipalities.[4] Related to this, there is little government evaluation of the functioning of the quasi-market arrangements and no national statistical framework for generating comparative ratings of provider impacts on outcomes.[5]

In **Switzerland**, a system for rating of local employment office performance in terms of off-benefit outcomes was implemented in 2000. The publication of these ratings was preceded by detailed research into the determinants of local office placement effectiveness (see OECD, 2001). The ratings helped to improve local employment office performance, driving the registered unemployment rate down. However, cantons with low unemployment rates queried the validity of the ratings and the linking of cantonal funding to the ratings (*bonus-malus*) was suppressed in January 2003 (OECD, 2004b).[6]

In sum, a management culture where outcomes are tracked, programme impacts estimated and less effective programmes are replaced with more effective ones, has historically been a key factor in the development of effective policies in the United Kingdom and the United States since the 1980s and in Australia and New Zealand recently. The Netherlands and Switzerland have developed systems for performance management, but in these countries a division of responsibility between national and local governments makes it relatively difficult to measure impacts achieved by employment services and implement changes on this basis.

2. General principles for performance management

This section sets out further details of how performance management principles should be implemented, highlighting some of the issues and constraints that apply in the field of labour market policies.

A. If the PES is decentralised, funding should be subject to performance management

Unemployment benefits and employment services are often *financed* at national (or some cases, regional, state or provincial) level.[7] However, employment services are actually *implemented* at local level. The national level needs to maintain some control over the local level, because it finances employment services to help limit spending on nationally-financed benefits and employment services at local level do not necessarily see a strong incentive to enforce eligibility criteria against individuals who are voluntarily unemployed. Indeed, local communities may find it advantageous to have national government pay income support even to individuals whose availability for work is limited. The national level also needs to impose consistent reporting standards and ensure that expertise

gathered at national level is used to improve practices at local level. The local level should benefit from national-level services such as standardized information technology, material for use in training courses and research findings about effective placement strategies, and should also be able to work autonomously to adapt its strategy to unique local conditions and to leave room for experimentation. So there are needs for hierarchical control, for local autonomy and for two-way communication. These needs might be met through a traditional PES with performance management or through a quasi-market (discussed further in Section 3).

B. The impact of active programmes should be evaluated by the PES

PES institutions often account directly for much of the substantive spending on ALMPs.[8] They continue to have an important role in cases where employment services are subcontracted and when long-term ALMPs are delivered by non-PES institutions. Independent programme providers are not well placed to assess the overall impact of their own services and the PES needs to manage labour market programmes using the findings from some kind of impact evaluation.

The quantitative measurement of outcomes and programme impacts is a relatively technical activity, as compared to the historical tradition of PES activity and management concerns. However, the environment of active labour market policy is not what it was 40 years ago. Improvements in the level of social protection over the post-war period have increased benefit dependency and costs. Seven European countries now spend more than 1% of GDP on active programmes alone. Such high levels of spending justify great efforts to ensure that spending is well managed. The cost of information systems and research can be easily covered if they are effective. At the same time, improvements in information technology and technical expertise are tending to make more sophisticated evaluation and performance management strategies viable.

Although reported impact evaluations are often technical, this is partly due to a publication bias. Relatively simple evaluations by the PES have often given results which are relevant for operational purposes. For example, the pilot implementations of Restart in the United Kingdom in 1986 (see above), and WRK4U in New Zealand in 2003 (see Chapter 4) gave near-immediate estimates of their impact and the decision to expand these programmes could be made after just a few months of highly positive early results. When employment services are outsourced within a consistent framework, outcomes vary substantially, so it is possible to identify the relative impact of different providers fairly accurately without recourse to very complex statistical analysis (Box 5.1). Even in the context of evaluating programmes through random assignment experiments, findings take the form of differences between pilot group (or treatment group) outcomes and control group outcomes, which are not essentially changed by more complex analysis. In general, although the most sophisticated evaluation techniques are usually only applied by academic researchers, the Public Employment Service should be using some form of evaluation as a management tool. At the same time, when the PES uses its evaluations not only for internal management but also to argue for budget allocations, external oversight and verification is needed.

C. The PES should track employment outcomes and not only benefit caseloads

Government often looks to the Public Employment Service to reduce total unemployment because the unemployed are seen as the main target group for its

Box 5.1. **Variability of outcomes under quasi-market arrangements in Australia and the United Kingdom**

Under quasi-market arrangements, the most important employment services delivered to an unemployed person – particularly the case-management function, which includes job-search counselling and assistance – are delivered by competing private providers. Where competition takes place on a "level playing field", comparisons of client employment outcomes between providers show the impact of more or less effective service provision. Variability of outcomes is greatest in a recently-created market, because by the time the quasi-market has stabilized, relatively poor performers have been eliminated.

In the first tender round of Australia's Job Network, paid outcome rates (paid outcomes were typically entries to employment lasting at least three months), as measured six months and more after individuals had entered Intensive Assistance services (services for disadvantaged jobseekers), varied within a typical region from about 25% for the highest-performing provider to 9% for the lowest-performing provider (OECD, 2001b, note 80). * The providers from the first contract period that were awarded new contracts in the second tender round had average outcome rates nearly 25% above the overall average of providers in the first contract period (OECD, 2001b, p. 188).

In United Kingdom, the long-term unemployed in selected particularly-disadvantaged urban areas are referred to Employment Zone (EZ) providers, which take over responsibility for employment counselling and placement service from the public provider (Jobcentre Plus and New Deal 25 Plus) for six months. Providers are motivated by a payment system that rewards getting clients off benefits and achieving entries to work that last for at least three months. The quantitative evaluation of this programme (Hales *et al.*, 2003) found that approximately 11 months after each person first became eligible for referral, 34% of EZ participants had experienced a spell of paid work compared to 24% in the control group served by the public system.

As these figures suggest, a high-performing employment services provider may well be able to achieve a 50% increase in employment outcomes for relatively disadvantaged groups: this makes performance management on the basis of measured outcomes feasible without the use of very complex techniques.

Experimental evaluations show similar impacts from some high-performing public programmes. In the United Kingdom, evaluations found that Supportive Caseloading (1993), 1-2-1/Workwise (1994-96, for 15 to 24 year-old long-term unemployed) and 1-2-1 for the Very Long Term Unemployed (1996-97) raised employment rates 26 weeks after random assignment from 8% to 22%, from 12% to 18% and from 8% to 14% respectively. In each experiment, the key additional service was several meetings with an individual case manager (Employment Service Research and Evaluation Branch Reports Nos. 95, 109 and 115, which are briefly summarized in Greenberg and Shroder, 2004).

* Out of 29 regions, 6 had a provider in the one-star category (less than 6% outcome rate) and 15 had a provider in the five-star category (more than 25% outcome rate); performance within a given region usually varied across most of this range (DEWRSB, 2000).

services. By contrast, employment rates get less attention, and in any case the PES is unlikely to be credited with improvements in them.[9] However, an exclusive focus on reducing unemployment (or reducing caseloads, in the US welfare system) is dysfunctional. Employment services may already be improving the government's financial balance more through increased tax receipts than through reduced benefit costs. Often, employment services play a role in exposing undeclared work and pushing it back into the declared

economy. However, these outputs are not regularly documented. Long-term tracking of employment and earnings outcomes can bring the additional tax receipts generated by employment services more systematically onto the management radar screen. It can demonstrate that employment services which increase employment and earnings – even if they are typically more expensive than services that only reduce benefit caseloads – generate net benefits for government finances.

In some OECD countries and generally in non-OECD countries, benefit coverage of unemployment is low and a focus on reducing benefit caseloads has little relevance. Objectives such as increasing the "transparency" of the labour market and job-match quality, providing career guidance and vocational training, and promoting formal rather than informal work, are more important. In these circumstances, the impact of employment services cannot be measured in terms of reductions in benefit caseloads, but measurement in terms of impact on employment and earnings outcomes remains relevant.

In most countries, until recently the PES has only been able to track regularly the *benefit* status of programme participants. Statistical information on *employment and earnings* outcomes achieved by programme participants has been limited to what is known from occasional – often very occasional – questionnaire surveys. However, the technical barriers to data matching are now low, and for research and evaluation purposes OECD countries are increasingly matching the government's benefit payment databases to its databases of social security contributions and tax records.[10] This raises issues of confidentiality, because the authorities do not want to publish individual earnings data. Access to employment and earnings data by name needs to be highly restricted, while data released for relatively widespread use (for example, by researchers) is made anonymous. Nevertheless, a secure use of employment and earnings records for monitoring the outcomes from labour market programmes at quite limited cost should be possible:[11] governments will find it relatively difficult to systematically promote objectives such as employment retention and earnings advancement if it remains difficult or expensive at the operational level to know whether such outcomes are occurring. It is possible to track employment and earnings outcomes without using tax records, but even cumbersome procedures may only generate relatively incomplete information.[12]

D. Defining the value of client outcomes: B + tW

Transitions from unemployment to employment are worth approximately (B + tW), where B is (the saving in) benefit payments that results from employment,[13] t the tax rate on earnings and W earnings, a measure which combines months of employment with earnings per month. (B + tW) can be interpreted as a measure of the impact that increased employment has on the government's financial balance:[14] the use of programmes whose impacts on (B + tW) exceed their costs improves the government's net financial balance.[15] (B + tW) is not an exact measure of the benefit from employment services – for example it does not directly incorporate non-wage factors in the quality of job matches or capture how well activation measures achieve sorting of benefit claims (see Chapter 4) – but it seems to be most appropriate measure available operationally.[16] Indicators such as job placements or three-month employment outcomes, which are currently often used,[17] need to be seen as intermediate indicators – accurate only to the extent that programme impacts on them more or less accurately proxy long-term programme impacts on (B + tW). Because the average employment rate for a group of jobseekers who have been referred to

a particular programme typically increases through time, earnings are an increasingly important part of (B + tW) when outcomes are measured over a relatively long period.

E. More institutional conditions

Integrity of benefit and tax administration

When a labour market programme's output is being measured and rewarded in terms of impact on benefit payments and earnings, the integrity of benefit administration needs to be independently monitored and guaranteed. A reduction in benefit costs that results from arbitrary denials of entitlement would not be a useful output: it would be more akin to a form of "gaming" that distorts the outcome measure. Similarly, an increase in declared earnings, as reported in administrative data sources, is not an improvement in outcomes if it results from artificial salary declarations or predatory tax assessment practices.[18]

In a quasi-market system, this principle implies that although providers need to be able to initiate benefit sanctions when a jobseeker does not meet conditions (*e.g.* fails to attend an interview, or refuses suitable work), government needs to manage an independent system of tribunals and higher-level appeal courts that protect the rights of jobseekers who appeal.[19]

Clear allocation of responsibilities

Positive labour market outcomes may reflect many different types of input. However, it is technically difficult to separately measure the impact from many different types of input.[20] Therefore, performance management has to involve allocating responsibility for clients to identifiable units which have relatively long-term responsibility across a substantial range of labour market interventions, rather than splitting responsibility excessively across different programmes, different levels of the hierarchy or different institutions within the PES. When particular units have relatively broad responsibility, they have a large and clear impact on outcomes so that performance management in terms of measures of impact is viable.[21]

This is one reason why PES institutions need to be "integrated". If local employment offices are dependent on practices of a separate local benefit administration in terms of sanctioning jobseekers who fail to attend or if they face erratic variation in the availability of ALMP slots supplied by a third party, only a fraction of local variation in outcomes can be accurately attributed to local employment offices, and then management on the basis of results will not be justified. When employment offices have significant control over the three main functions of the PES, they are able to implement a coherent strategy which has a clearly identifiable impact on these outcomes.[22] Nevertheless in a performance management perspective, complete integration of all functions at the same (perhaps local) level is not desirable. Responsibilities also need to be split between local-level "agents" that implement policies while a higher-level "principal" retains responsibility for important areas such as uniform application of benefit eligibility criteria and consistent procedures for the referral of clients to providers and the measurement of provider outcomes.

Deterministic referral processes

The process for referring jobseekers to programmes whose impacts are to be measured needs to be outside the control of jobseekers and service providers (otherwise estimates of impact are easily falsified by selection biases, called "creaming" if the service

provider does the selection).[23] Referral processes that are deterministic in this sense can be implemented by randomly assigning clients to providers, but they are also implemented by traditional arrangements where jobseekers in each local area can only register with one local employment office. Referral processes that are deterministic can allow jobseekers and programme staff to negotiate over the detailed content of services (*e.g.* the individual's choice of option in the UK New Deal), but not the initial referral (*e.g.* the individual's choice of New Deal provider). Referral processes that are deterministic can also allow providers or programmes to specialise – for example, a provider might specialise in services for older workers laid off from heavy industries, as long as the providers or programmes then accept all clients from that group who are referred.

As well as preventing spurious variation in outcomes due to "creaming", performance measures must adjust gross outcomes for exogenous factors that vary across providers for reasons beyond their control (*e.g.* differences in local client characteristics and labour market conditions). The influence of exogenous factors may be eliminated through random assignment of clients to providers or kept relatively small in other ways (in pilot studies of new programmes, differencing of outcomes between the pilot areas and other areas is often sufficient to control for the influence of exogenous factors). When the influence of exogenous factors is greater, adjustments for it may be made econometrically (*e.g.* using non-experimental matching methods to evaluate programmes, or using a regression-based "star rating" system to evaluate providers as in Australia).

F. Making evaluation continuous

The welfare system in the United States is now heavily decentralised to states and even decentralized within states, and some observers have noted the limitations of a strategy of governance through occasional impact evaluations and dissemination of their findings. In particular, as Chapter 4 has noted, findings about which type of programme is most effective can vary because important features of programmes are difficult to document and because local contexts vary. From a technical point of view this problem might be solved with more data but this approach may not be feasible, as Greenberg *et al.* (2003) recognize: "Although previous multisite evaluations cannot tell us very much about underlying production functions, future evaluations can. But our analysis suggests that success could take more sites – and more heavy-handed control by the federal government – than is feasible." A US state might conclude that, once it has learned the basic lessons of a "work-first" approach, national-level evaluations of labour market programmes do not help much with its more detailed problems of governance. Gais (2000) comments that: "Nothing is *finally* implemented; policies may be created and adapted *all the time*… the dynamic character of these systems suggests that, just as there is no final implementation, there may be no final evaluation. Evaluation, to make sense under the new circumstances, ought to be continuous or at least recurrent and built into the management process at the level where critical decisions are being made."

3. Quasi-market and traditional organisation of employment services

There are several reasons for thinking that quasi-market arrangements can be effective. One is that some local-level administrators know from experience the impact of different measures, and how to use available resources to achieve given objectives. Formal programme evaluation findings do not necessarily provide them with many additional insights.[24] A second reason is that quasi-market arrangements implement a "survival of

the fittest" mechanism. Management teams that have good insight into the potential impact of different programmes can respond appropriately even in a public system. But only a "survival of the fittest" mechanism will systematically generalise a successful strategy even when it is difficult to identify which key feature is making it successful. A third factor is that, conditional on successful prior experiences with this approach, quasi-markets could give good results even where government capacity to manage in the complex field of active labour market policy falls short. For example, in US states that now focus welfare policy on short-term caseload reduction, a quasi-market as described here would help ensure that employment services do "more" than caseload reduction.

Despite these arguments in favour of quasi-markets, experience with them in other fields shows that they can go wrong in various ways. Plausibly quasi-market arrangements will be highly effective if the measurement of outcomes and impacts is implemented quite accurately. Australia's "star ratings" arguably have been measuring provider impacts on sufficiently relevant measures of outcomes sufficiently accurately to achieve reasonable results.[25]

A. Quasi-market organisation

Full quasi-market arrangements

To implement a quasi-market, the Public Employment Service has to be split between a public authority (the "principal", here called the government or the purchaser) which determines individual eligibility for benefits and services, assigns clients to a specific provider, and measures outcomes; and multiple employment service providers or local employment offices (the "agents"), which deliver other employment services. The service providers are given near-complete freedom to choose their procedures and programmes, but the purchaser measures the employment outcomes achieved by their clients and in some way ensures that providers are replaced if their outcomes fall systematically below benchmark levels.[26]

As mentioned above, clients need to be allocated to providers by the purchaser in ways that limit "creaming". If random assignment methods are used to allocate clients across multiple providers operating in the same local labour market, relative outcomes will measure relative impacts directly or after only minor adjustments. In Australia, clients are allowed to choose a provider but not all of them exert a choice, and those who do not are approximately randomly assigned, which reduces the scope for active "creaming" by providers. It may also be possible to operate a quasi-market with only one provider per locality, using regression adjustments to estimate impacts from gross outcome data.[27] However it is not clear whether regression models can measure impacts sufficiently accurately in this case. To minimize problems such as the long-run endogenization of the benchmark,[28] some additional procedures – such as contracting for several localities as a package, so that exogenous factors average out, or occasional rotation of providers so as to allow benchmarking by comparison with the preceding provider – can be imagined, but they may remain too costly or inconvenient.

Employment service providers should be able to finance additional services on the basis of their impact on (B + tW). For example if t is 25%, providers should have an incentive to spend USD 1 on additional employment services if this either reduces benefit payments to clients in later years by USD 1, or increases clients' total earnings in later years by USD 4.[29] "Later years" would need to be at least several years, supposed here to be five years.[30, 31]

One way to implement this arrangement is to actually pay providers the value of client outcomes (B + tW). In this case the benchmark would take the form of a fee per client referred, set at a level that allows providers to make only normal profits.[32] This fee per client would need to be exogenous to individual provider's employment outcomes (so that incentives for spending on employment services are not distorted), but endogenous with respect to average outcomes of all providers in the longer term (to ensure that employment service providers do not enjoy economic rents, or all make losses). In principle the level of this fee could be determined by a bidding/tendering mechanism conducted separately in each locality: this would remove the need for the government to set the level of the benchmark locality by locality.[33] Then entry and exit from the quasi-market could be based only on provider profitability: more efficient providers would enter the market in a new locality by outbidding the incumbent provider(s) (*i.e.* offering to handle a batch of new clients with the same formula for outcomes fees, but for a lower level of the fee per client referred). Providers which were less efficient in getting clients off benefits and into work at reasonable cost through their provision of employment services would not be able to win bids at a price that leaves a profit, and would be driven out of the market.

However, paying providers the full value of client outcomes (B + tW) over five years – relative to benchmark levels which allow only "normal" profits on average – would subject them to high levels of risk. In the case of small providers risk can imply bankruptcies, which impose additional costs on clients and government. A different arrangement would be that the government pays providers a fixed fee per client to cover the cost of employment services (and normal profits) with no further payments related to outcomes, but tracks the values of (B + tW) being achieved by each provider and only renews contracts with the providers that are achieving the best impact. This arrangement eliminates risk (other than non-renewal of the contract) for providers. However, it only generates an optimal level of total spending on employment services if government sets the fixed fee per client at the right level. Also – given that the fee needs to cover the cost of employment services to each client for five years – it allows providers to make profits by providing minimal services for up to five years before being eliminated from the market because of their poor performance. Given these issues, it may be optimal to manage a quasi-market using a mixture of several incentives and safeguards: combining pay-for-results and the principle of selective contract renewal[34] with arrangements for more rapid elimination of providers whose performance is exceptionally poor and regulations that enforce minimum levels of service provision.

To the extent that long-term employment outcomes are measured and rewarded, an important practical issue is to implement an "up-front payment principle". Although the total payments finally received by a provider for a particular set of clients should be ideally based on their unemployment and employment outcomes over a long period following referral (with adjustments only for exogenous factors), advance payments could be made based on all information, within practical limits, that is currently available about the likely final value of these outcomes.[35] In this way, achievements such as placements into stable jobs could be rewarded immediately, subject to penalties which claw back the reward if the job later turns out not to be stable. An accurate system of advances would make it easier for providers to invest "now" in programmes which produce employment and earnings outcomes "later", and would make provider cash flow (excess of outcome payments over operating costs) more useful as a short-term indicator of whether service provision is being successful.

Experience with quasi-market approaches is limited, but the risks include:

- Transaction costs can be high – these are both the costs of contract management for both parties, and costs at the level of individual clients (transfer of clients from the public gateway to the private provider, and continuing interaction between the two in certain circumstances).
- If either poor-quality outcome measures are used or methodologies for determining benchmarks are inadequate, outcomes may be far from optimal.
- Employment service providers may adopt techniques which improve outcomes as measured but not in a substantive sense ("gaming"). However, if benefit and tax records are used as the basis for outcome measurement, "gaming" is unlikely because clients will appeal against unfair reductions in their benefits when they are truly unemployed, and clients will not pay social security contributions or tax if they do not truly have earnings.
- Providers may be able to devise strategies (such as vacancy hoarding) that improve outcomes for their own clients, but impose negative externalities on the clients of other providers.[36] The government needs to detect and ban (or perhaps tax) the use of these strategies.
- The public authority (purchaser) may be faced with a "black box", *i.e.* it may lack knowledge of what providers are doing. This may limit its ability to identify and control "gaming" behaviour or negative externalities (described above), or make it more difficult to identify and disseminate good practice.
- A quasi-market that rewards the achievement of long-run employment outcomes may tend over time to be dominated by a limited number of fairly large organisations which are able to invest and implement complex strategies, each resembling a traditional PES but operating within a market framework. The market may then become oligopolistic, calling for preferential measures to keep the door open for newcomers.

Despite this long list of potential risks, experience in Australia already shows that all of them are reasonably manageable.

A quasi-market within government?

In principle, quasi-market arrangements could function within government. In this case each local employment office would be run as a (virtual) "profit centre" where income is the value (B + tW) of client outcomes (relative to benchmark levels) and outgoings are staff salaries and other employment service costs. Central government would use profits on the (virtual) accounts of these profit centres as its preferred performance measure. However, relatively simple implementations using management-by-results principles for rewarding good performance – *e.g.* giving performance-related pay to successful employment office managers – may be far different from the operation of a true quasi-market. In Australia and the Netherlands, successful providers can be fairly large organisations. Good performance is generated by successful management structures and business strategies, and efficiency gains arise when responsibility for a particular locality is reallocated from a less-successful organisation to a more-successful one.

Limited subcontracting on the basis of tracking of outcomes

Perhaps a more fruitful use of any system that accounts for outcomes at the level of PES local employment offices is to subcontract employment service provision on an

experimental basis in selected areas, as is done in Employment Zones in the United Kingdom. When the government has information systems that can predict levels of off-benefit and employment outcomes at a particular local office – for example, average values of these outcomes over the subsequent two years, for people who have just entered long-term unemployment – it can invite tenders from private providers to provide employment services for this group on more favourable conditions (*i.e.* at lower cost if the same employment outcomes are achieved, or for the same cost if better employment outcomes are achieved). If some private providers agree to operate under these contractual conditions, the government can continue tracking client outcomes after clients have exited from the private provider's services, to check whether the short-term improvements in outcomes they have obtained are sustained in the longer term. As long as a "level playing field" between government and other providers is maintained, this method appears to be a realistic option for the partial or progressive implementation of quasi-markets.

B. Traditional PES organisation and Management by Objectives (MBO)

The Public Employment Service is traditionally a national, hierarchical organisation. This could solve the governance problem using the following principles:

- The PES maintains a national staff ethos. Managers are offered a career with rotation between localities, and potential progression to regional and national management level.
- PES procedures are continuously reviewed and developed through high-quality impact evaluations of existing and potential new programmes. Three main methods are available for evaluating the direct impact of programmes on their participants, each with specific advantages (Box 5.2).
- Best-practice procedures are written into the national "procedures manual". The national staff ethos and incentives for managers promote compliance with the manual.

Conditional on an ongoing commitment to evaluation and the replacement of programmes that have little impact by more effective ones, traditional PES arrangements have some advantages as compared to quasi-market arrangements. They can partly avoid the institutional constraints and transaction costs that arise from the strict separation between the provider and purchaser roles that is needed to operate a quasi-market. They can potentially implement an approach where multiple types of inputs are evaluated, *e.g.* strategies for individual employment counsellors, local office characteristics, and specific procedures such as vacancy display or the offer of vocational guidance: in principle the national PES can act rapidly to exploit evaluation findings at any of these levels, even if it is not clear that the average traditional PES acts rapidly in practice. In a quasi-market the impact of each provider (or each local office of each provider) is evaluated as the basis for managing the market, but detailed provider strategies remain mainly inside a "black box", with a risk that best practices might only spread slowly for that reason.

Public Employment Services in many European countries use "Management by Objectives" (MBO), as described by Mosley *et al.* (2001). Typically, the most important outcome measured is placements (placements into PES job vacancies, as reported by local employment offices without external verification or checks on the duration of the job),[37] and outcome levels are compared to targets which are determined by *ad hoc* methods.[38] Perhaps related to these weaknesses in the implicit system of impact measurement, MBO systems generally do not prescribe specific action by higher levels of management when

Box 5.2. **Three methods for the evaluation of labour market programmes**

Research and controversy over the validity of experimental and non-experimental evaluation methods continues. But the three main evaluation methodologies in use each have characteristic strengths.

Random-assignment experiments

Random-assignment experiments appear to often accurately report the impact of services provided to a treatment group, subject to sensible interpretation of the findings in the presence of phenomena such as "control group crossover" (when members of the control group receive the same services as the treatment group). In the case of training and similar programmes in which only a small percentage of jobseekers participate, motivation effects may be small because programme participation is voluntary, or they may be considered unimportant because the focus is on outcomes only for the individuals who participate. In the case of broad strategies which apply to all or most jobseekers much of the interest is in the impact on aggregate outcomes, the fact that random-assignment experiments do not measure motivation effects arising before random assignment, or those which affect the control group, may be important. Good random-assignment practice will attempt to minimise biases (*e.g.* by screening the control group from the expectation of treatment) and occasionally check their size (for example, using techniques similar to AM, 2000, or reworking the random-assignment design to include control sites as well as control groups at a given site).

Non-experimental estimates

Non-experimental impact estimates have many of the limitations of random-assignment experiments, with the additional risk of selection bias and erratic results when complex estimation techniques are applied with no assurance that the underlying assumptions are valid. But they also have important advantages. It is increasingly possible to cheaply estimate impacts for multiple programmes on a continuous basis. Using large longitudinal databases that combine individual information on outcomes, programme participation, and some personal characteristics, national administrations can generate estimates of programme impact without disruption to their regular operations. This can allow estimation of impact for a wide range of programmes and even tracking of changes in the estimated impact of a given programme, in parallel with tracking of its outcomes.

Non-experimental methods can often identify the most successful programmes because their impacts are large. For example, the large impact of Ireland's Employment Action Plan (Corcoran, 2002) would be hard to miss by any estimation method. Similarly (as noted in Box 5.1) for highly disadvantaged groups of unemployed which are achieving less than 10% employment rates a certain number of months later, it would not be unusual to find that the most successful programmes double this employment rate. Non-experimental estimates with participants and non-participants matched on just a few criteria (*e.g.* age, sex, duration on benefit, and education) can then give approximately correct estimates of impact.

However, selection bias is often an important issue. Non-experimental methods can probably never give a meaningful estimate of the impact of programmes that involve entry to a private-sector workplace. In a situation with no hiring subsidy, hiring is a stochastic event (*i.e.* an event that is not entirely explained by other exogenous or predetermined variables) that has a positive impact on the individual's subsequent employment history. If we imagine a hiring subsidy that is paid automatically during the first few months of any employment spell that follows unemployment, its "participants" will have a relatively favourable subsequent employment history (after controlling for individual characteristics, etc.) even when the rate of subsidy is zero. The participants in any kind of hiring subsidy or

Box 5.2. **Three methods for the evaluation of labour market programmes** *(cont.)*

on-the-job training programme have already covered part of the distance to a regular job – having found a workplace within commuting distance, and identified an employer who expects to be able to work with them. A meaningful estimate of impact can be obtained from experiments where the *offer* of a subsidy is randomised, which has been done occasionally with a finding of modest or even negative impact (Burtless, 1985; Galasso *et al*., 2002). But this gives an estimate of impact on the population that is given entitlement to the subsidy, not on the individuals that are actually hired with the subsidy. Similarly, in Chapter 4, Chart 4.3, outcomes for language courses are particularly poor. But selection into this programme probably occurs on the basis of factors such as client choice (perhaps some individuals want language training more than a job) or lack of fluency which is observed by employment counsellors but is absent from the researcher's data set.

Selection biases will tend to bias downwards estimates of impact for programmes that are targeted on barriers to employment. This could cause a systematic tendency for programmes for the disadvantaged to be dropped even when they in reality have as much impact as other programmes. This makes it particularly important from a policy point of view to avoid this type of bias. In the short term, the plausibility of non-experimental estimates needs to be assessed on a judgmental and case-by-case basis (see for example reflections by Jacobson *et al*., 2004, on the validity of their results). In the longer term, the research agenda needs to include random-assignment experiments or perhaps pilot studies that can characterise the typical size of the selection biases that affect non-experimental estimates.

Non-experimental regression techniques can also model outcomes at the level of local PES offices. Subject to data availability, a regression of PES office outcomes on local office strategies and exogenous economic environment variables generates estimates for the impact of different strategies (information that is used in a hierarchical model of PES management), as well as the additional impact achieved by individual offices for reasons that are not identified (additional information that is used in a quasi-market model of PES management).

Pilot studies

When the government experiments systematically at local office level to identify the impact of programmes – for example, implementing individual action plans after six months of unemployment in some offices but after twelve months in others – it is conducting a pilot study.

In some literature, pilot studies would be described as a particular type of random-assignment experiment ("cluster randomization"). However in an employment policy context, often formal randomization is not necessary. Experimental implementation of a policy change in just a few local offices (chosen to be approximately representative) is often sufficient to estimate impacts. Key outcomes such as the average duration of unemployment spells at one local office relative to the regional average are typically quite stable through time. If outcomes at pilot offices improve soon after the pilot programme is implemented, that can be evidence of impact at a high level of statistical significance. It seems incorrect to suppose or imply that evidence from pilot studies is less accurate or scientific than evidence from individual-level random-assignment studies.

Random assignment experiments often attempt to report the "absolute" impact of a programme, as compared to a control group that receives no services: this may have advantages when, for example, comparing experimental findings across countries. Pilot studies usually take average existing practice as the "control" situation: this will often be more relevant from an operational point of view.

Box 5.2. **Three methods for the evaluation of labour market programmes** *(cont.)*

Pilot studies at the level of individual employment offices have some other advantages over classic experiments with random assignment at the level of individuals. They can document the impact of office-wide reforms affecting all jobseekers, *e.g.* a switch from notice boards to computer terminals for vacancy display. Externalities at local level which affect the control group in a random-assignment experiment (which may be negative, *e.g.* if increased job-search assistance for the treatment group reduces the number of vacancies available for the control group; or positive, *e.g.* if the new requirements on the treatment group have a spill-over motivation effect on the control group) are internalized when a treatment is implemented at the level of employment offices as a whole. And pilot studies where a training obligation, for example, is implemented in one locality but not another could measure its total impact including motivation effects, not only impacts on those who are directly referred to it or participate in it.

In pilot implementations, outcomes are sometimes tracked for only a few months because the programme is soon implemented more widely. Also, pilot studies tend to be managed directly by the PES, which may explain why they are rarely used to evaluate existing programmes and sometimes are not written up and published. However they are often feasible and offer good prospects for accurate and relatively cheap estimation of impacts.

measured performance is poor. Local employment office managers still have to follow many PES procedural guidelines, even if they in some cases consider them detrimental to their measured performance. MBO systems are partly effective, but they might be made more effective by clarifying the scope for autonomous decision-making by local management, and moving away from *ad hoc* measures of output and towards a public-sector version of measurement techniques that are robust enough to be used in managing a quasi-market.

Conclusions

In most OECD countries, performance management principles are not applied to labour market programmes in a systematic way. Yet without effective performance management, expensive programmes that have no impact can continue to operate indefinitely. Improvements in labour market outcomes are generally available through more systematic implementation of performance management principles.

Given what is known about programme impacts, OECD countries should, where possible, match benefit data with tax data so as to be able to track long-term employment and earnings outcomes from their programmes at low cost, while assuring individual data protection. As long as benefit recipiency is the main outcome regularly tracked by the PES, management is liable to focus on achieving off-benefit outcomes rather than long-term employment and earnings outcomes. This is dysfunctional, insofar as the additional costs of programmes that increase earnings can be offset by increases in tax receipts and social security contributions.

Employment and earnings outcomes from employment services can be measured even in developing countries where there is no unemployment benefit system due to widespread informal employment. Performance management of employment services will then, among other things, ensure that employment services are agents promoting the transition from undeclared to declared work.

Notes

1. Nine pilot implementations of Restart began in January 1986. On the basis of weekly monitoring figures, the pilot evidence in February already suggested that a national scheme would cause roughly 23 000 extra people to leave the unemployment register each month. In March, it was announced that the scheme would be implemented nationally as from July. In January 1987, "rolling Restart", under which the long-term unemployed would be interviewed every six months, was introduced (Price, 2000).

2. As described by Hunn (2000), despite extensive successes the new organisation Work and Income found itself "the object of severe criticism and ridicule around the country… Some of [the criticism] has stemmed from the 'shoot the messenger' syndrome: work-first and benefit reductions are not universally popular. Some of it derives from disagreements during both the design and implementation phases which have yet to be settled". The emphasis on management using Key Performance Indicators (KPIs, in particular, stable employment outcomes) was an issue which "many have raised with the Review Team" and which generated "considerable feeling, amongst staff, purchase and monitoring agencies through to beneficiary advocacy groups… Staff have expressed concern about the strong focus on KPIs in their day to day working lives. There is a view that KPIs do not necessarily reflect the entirety of their workload and that individualising some performance measures makes staff responsible for achieving outcomes outside of their control". Changes to PES institutions cause disruption and uncertainty, and it is not unusual for performance to deteriorate at first after any major reform. During the second and third tendering rounds of Australia's Job Network in 2000 and 2003, management resources within employment service provider organisations were preoccupied with tender preparation, and the total number of placements achieved by Job Network fell sharply for a number of months (see *www.workplace.gov.au* – Job Network – Job Network performance statistics).

3. Between 1994 and 2000, Danish labour market policy evolved mainly in the sense that the maximum period of entitlement to benefit on a passive basis was shortened. In 2001, the Danish PES began to implement activation programmes in a more flexible manner in pilot projects in two regions. In 2003, the so-called "75 per cent activation requirement" was abolished in favour of a "stronger focus on an individual approach in employment programmes with a clear job orientation, focus on the shortest way into employment and the involvement of other actors" (see the National Action Plans for 2003 and 2004 at *www.bm.dk/english/publications*). The new programmes include "interventions in the unemployment spell" as described in OECD (2001a, pp. 41ff).

4. In principle, municipal responsibility for contract management allows experimentation with different methods of contracting (Struyven and Steurs, 2005). However, Australian experience suggests that contract design, evaluation and monitoring is a challenge even for federal governments. Sclar (2000) describes cases where municipalities failed to understand the financial and incentive implications of contractual provisions as well as providers (which are often experienced national organisations), lacked in-house capacity for contract evaluation, or rolled over contracts for many years without effective market testing.

5. Some contracts in the Netherlands now reward outcomes on the basis of "no cure, no pay" (*i.e.* no fixed fee per client, and payments only for client entries to work). Although these contracts create some incentive for service provision, they are used for groups of less-disadvantaged clients, many of whom will enter work even if no employment services are provided. With this type of contract, a strategy of providing no services can still be profitable for providers in the short term, and long-term survival in the market still needs to be determined by accurately measuring comparative impacts, and not only relying on incentives created by the payment system. As regards outcomes of the Dutch system and what is known about them, a recent newspaper article states that for assistance beneficiaries, the aim for quasi-market employment service providers was to re-integrate at least 40% of those who participated in the trajectories by end 2004. However, of the almost 112 000 "trajectories" that were started (in the largest 30 municipalities) from 2000 to July 2004, just below 20% had led to employment (Trouw, 13 January 2005: *www.trouw.nl/nieuwsenachtergronden/artikelen/1105513563971.html*). In Australia, placement performance of the Job Network has improved as the system stabilized, so this may happen also in the Dutch system, but the relative lack of direct measures of provider impact may be problematic. Despite low rates of placement municipalities have recently contained growth in social assistance caseloads through anti-fraud and other measures (probably related to the fact that they increasingly bear the full cost of assistance benefits).

6. Cantons with low unemployment rates did not necessarily get a good rating for the performance of their employment offices. Cantons in Switzerland can influence unemployment rates through their offer of places on labour market programmes: in some cantons the offer of places tends to be

made earlier in the unemployment spell and reduce the number of recipients of unemployment insurance while in others places are offered to social assistance beneficiaries and they generate new entitlements to unemployment insurance. Performance ratings of Swiss PES offices may fairly accurately measure the performance of one employment office relative to another, but it is doubtful whether they can measure the average performance of cantonal employment offices separately from the impact of other cantonal policies.

7. Advantages of national-level financing include the mutualisation of financial risk which may otherwise be excessive *e.g.* for small communities faced with plant closures; ensuring that disadvantaged groups receive support, rather than being banished from the locality; and internalising the benefits of employment services *e.g.* in the case that worker training leads to geographical mobility. However there is also a case for decentralised financing of benefits in order to ensure that decentralised employment services are cost-conscious. OECD (1994) recommended the retention of a local financing element in social assistance and since then Canada, France, the Netherlands and the United States have transferred social assistance costs, at the margin, to subnational levels of government.

8. Although in Table H of the Statistical Annex in this *Employment Outlook* spending on Categories 2 to 7 (training, job-creation and related programmes) exceeds spending on Category 1 (public employment services and administration), more detailed Eurostat statistics show that about 70% of the spending in the Categories 2 to 7 consists of transfers (*e.g.* subsistence allowances for training participants and subsidies paid to employers). In terms of services purchased directly, spending on public employment services and administration in European countries is about the same on average as spending on other active programmes.

9. Employment data get less press attention than unemployment data partly because administrative data on unemployment are available with little lag. Employment data, from surveys or administrative sources, when they appear are comparatively old news. And when aggregate employment rates change, it is more difficult to know whether PES interventions are responsible because many of the employed are not former PES clients. So PES impacts on employment outcomes need to be documented at the microeconomic level.

10. Econometric programme evaluations based on data from matched benefit and contribution records are appearing for increasing numbers of countries besides the United States, where evaluations have now used state-level UI contribution records for many years. All the main UK employment and training schemes are now designated for evaluation this way under the Social Security Administration Act 1992 (*www.dwp.gov.uk/asd/longitudinal_study/ic_longitudinal_study.asp*). In Denmark labour force statistics are largely based on administrative registers (Wismer, 2003), and researchers are able to analyse 15-year and longer records of individual unemployment, employment, training and benefit status (*www.grad-inprowe.dk/Economics/kap5-Social.htm*). Austria's "Data Warehouse" similarly records employment and earnings, subject to the social security contribution ceiling. In a meeting of experts, European countries without such a system felt there were few technical obstacles: cost could be an issue in some of the countries and "The need to overcome any data protection and privacy issues was considered important, particularly when combining data from different administrative sources, but again was not felt to be a major obstacle if the necessary political will existed". (Peer Review Programme, 2004). In the United States, the National Directory of New Hires, which matches benefit payment and UI contribution records at national level (so that entries to employment in another state are not missed) is now the basis for awarding states the High Performance Bonus for TANF (Wiseman, 2004): this may be the first direct operational use of matched benefit and tax records for performance management (uses for fraud control and evaluation are already fairly common). OECD (2004a) discussed trends in data linking, remarking: "One data match which seems to be lacking or sporadic in most countries is a real-time link between the records of social security contributions (paid on behalf of an employee by the employer) and social security benefits paid to the same person." Since 1990, Australia has computer-matched databases on cycles which must be completed within two months (*www.aph.gov.au/library/pubs/bd/1998-99/99bd033.htm*), although people do not have unique social security numbers and ongoing matching here could be more difficult. The United Kingdom recently started such a match which led to 80 914 people being caught for benefit fraud last year (*The Guardian*, 8 March 2005).

11. One can imagine a system whereby a regional manager of the PES or the manager of a labour market programme is able to submit a batch of 50 or more social security numbers to a central authority with a statement of why data are needed, and then access key statistics for benefit recipiency rates and total earnings of the batch on a monthly or quarterly basis, subject to statistical safeguards such as random rounding. Techniques such as random rounding can make it difficult to infer individual data from aggregate statistics even by differencing across batches (in

cases where several batches relating to overlapping groups of individuals are issued). Such an arrangement could make systematic tracking of the outcomes achieved by jobseekers who have participated (or are still participating) in particular programmes relatively cheap.

12. In Australia and the United Kingdom, private service providers have to obtain written confirmation from employers to support their claims for payments for initial hires, and again to support claims for three-month employment outcomes. This method of documentation could be extended, but it is already quite costly (some providers employ staff to work full-time on obtaining this documentation), and arguably is not suitable for reporting earnings; and it seems unlikely that traditional PESs will do long-term tracking for performance management purposes by this method.

13. Benefit payments are often liable to some tax or social security contributions but for simplicity these are not mentioned in the formula (B + tW). B can be thought of as the net level of benefit.

14. (B + tW) can also be interpreted as a measure of the net output arising from employment (*i.e.* the gross output produced, less the disutility of work effort). Grubb (2004) argues as follows: the gain in social welfare when a jobseeker enters work is W – H where W is gross earnings (output) from the job and H is the disutility of hours worked. The jobseeker has an incentive to take such a job if $W(1 - t) - H > B$ where t is the tax rate on earnings and B is the rate of benefit during unemployment. So if jobseekers are involuntarily unemployed (and benefit systems should be managed to ensure that this is the case), $W - H > B + tW$. Therefore the gain in social welfare from an entry to employment is at least equal to (B + tW), which is its net impact on government finances. Note that the condition $W - H > B + tW$ may not typically hold for other types of benefits. Disability benefits, for example, should typically be granted to people for whom the cost (H) of any productive work has become exceptionally high. For this group, although (W – H) may exceed (B + tW) in some cases, this cannot be assumed to be true generally.

15. The (B + tW) criterion is suitable for assessing the value of employment services, but not for example the "making work pay" programmes targeted on low earners discussed in Chapter 3. Reductions in the tax rate t for low earners may be justified for social welfare reasons even when they have a net cost to government (the tax rate t needs to be first set at an optimal level, and then the criterion of impact on (B + tW) can be used to determine real spending on employment services). "Making work pay" measures which involve high marginal effective tax rates for low earners imply a high return to government from employment services that raise earnings in work.

16. The condition for unemployment to be involuntary $W - H > B + tW$ is an inequality and arguably it holds less strongly (and sometimes ceases to hold) at higher levels of B. Also, when a jobseeker finds a job with a higher-than-expected value of W, although this will sometimes be compensation for poor job characteristics (*i.e.* high H), on average it probably brings (W – H) further ahead of (B + tW). These arguments suggest that job placements should be valued with a weight of somewhat less than 1 on B and a weight of somewhat more than t on W. Additional outcomes that might be rewarded under a quasi-market arrangement include: *a)* indicators for likely outcomes beyond the end of the direct measurement window (*e.g.* a bonus if clients upon exit from a five-year follow-up period have acquired professional qualifications or are in a stable and well-paid job); *b)* indicators of jobseeker disutility and other non-benefit costs arising during the unemployment spell, including penalties on providers for initiating benefit sanctions which turn out to be unjustified or create costs in processing appeals; and *c)* penalties for nonrespect of regulations, *e.g.* vacancy hoarding (failure to list job vacancies on the national vacancy database) may be discouraged because it generates negative externalities for the clients of other providers.

17. Contracts with service providers reward entries to employment that last for three months in Australia and the United Kingdom (Employment Zones), six months in the Netherlands, and up to a year (but mainly six months or less) in the United States (contracted-out TANF services)(Grubb, 2004). As long as only such relatively short-term outcomes are being measured, there may be a case for separate financing of investment in certain kinds of training because their long-term impact is thought to be positive, although this case should be checked empirically.

18. If employment service providers are rewarded for earnings outcomes achieved by their clients, they will have a financial interest in increasing the amount of earnings that are declared for the purpose of social security contributions and taxes. Up to a point this incentive is healthy, but there is ample evidence from history and still today (Jenkins and Khadka, 2000) that when tax collection is simply "farmed out" to tax collectors it can become predatory.

19. In the United Kingdom, benefit sanctions are formally decided by Adjudication Officers (who for many years were staff of the social ministry rather than the labour ministry, although these two ministries are currently combined), but on the basis of evidence submitted by an employment counsellor. Getting the appeal system to operate correctly – so that it does provide protection to

claimants, but also does support employment counsellors who correctly impose sanctions – is important for the successful operation of the system of benefit entitlements and activation measures as a whole. One remit for social workers can be to protect and represent groups that may be too weak to defend their benefit entitlements more directly.

20. For example, an individual's positive employment outcome may be attributable to employment counselling received currently, vocational training undertaken three years earlier, legislation which requires particular procedures to be used for job-search monitoring, computer support tools, etc. Some of these inputs are managed at the national level, some at regional level, some at local office manager level and some at individual counsellor level.

21. Another argument for allocating a relatively broad range of responsibilities to employment service providers or programmes is that this allows them to implement "mixed" strategies (combining employment services and longer-term programmes) whose measured impacts are large because they include the motivation effects of referrals to longer-term programmes (see Chapter 4 for discussion of this issue).

22. At the aggregate level (averaging across different local offices), the short-term impact of relatively small adjustments to policy can be evaluated. For example, the United Kingdom has experimentally identified the impact of one additional interview with jobseekers, conducted in the 13th week of unemployment. But in the case of relatively lightweight services (*e.g.* a one-week job-search training course) it must be relatively difficult to accurately distinguish high quality from low quality service providers in terms of long-term impact on employment outcomes.

23. When disadvantaged clients have been definitively allocated to a provider in the sense that the client's employment outcomes will affect the provider's measured performance, "creaming" has been prevented. However, if providers are not sufficiently rewarded or penalized for performance, they may nevertheless choose suboptimal levels of service provision for some clients… a phenomenon described as "parking".

24. Practical knowledge of "what would work" in welfare reform is described by Mead (2004, p. 197). In Wisconsin, "Policymakers believed they could figure out what worked using pilot programs and their own experience, with little formal evaluation… Once the diversion programmes and more radical work tests came on stream starting in 1994, effects on caseloads and work became much clearer. Administrators could perceive them without benefit [of] research, so evaluations seemed even less justified than before".

25. Australia's measure of provider outcomes, as used in calculating "star ratings", is currently based largely on the number of client entries to jobs of at least three months duration with increased weights placed on job entries by the long-term unemployed and very-long-term unemployed (DEWR, 2004). Providers might improve their ratings by delaying their clients' job entries until they have become long-term unemployed or very-long-term unemployed, although monitoring by the employment department shows no evidence of this practice.

26. Benchmark-setting procedures must be as accurate as the procedures that would be used for evaluating the impact (as distinct from the gross outcomes) of labour market programmes: more precisely, actual outcomes minus the benchmark levels must be valid estimates of relative impacts on outcomes.

27. Rubenstein *et al*. (2003) discuss how to use regressions to adjust performance measures.

28. "Endogenization of the benchmark" occurs if a service provider's employment outcomes are regression-adjusted using explanatory variables such as the local unemployment rate, and yet the local unemployment rate is in the long term endogenous with respect to the employment service provider's actions (as it should be, if the employment services are productive). In this case, the method of regression adjustment reduces and potentially eliminates the incentive for providers to actually achieve reductions in the local unemployment rate. It is technically difficult to adequately take into account differences in local labour market conditions without undermining long-term incentives in this way.

29. Note that benefit eligibility conditions in OECD countries allow employment service providers to require participation in public employment services at times when their clients are unemployed (*i.e.* on benefits), but not when they are employed. Payments to employment service providers for increasing their clients' earnings might in principle motivate them to provide employment retention and earnings advancement services during employment. However these payments might also motivate strategies that use the current unemployment spell to deliver earnings-enhancing services, rather than always aiming to shorten its duration.

30. The optimal length of the outcome measurement and provider responsibility period is a matter of judgement. However, the period needs to be more than two years in order to adequately reward providers for delivering various substantive employment services whose employment impact (as documented in Chapter 4) is often zero or negative in the first year, but becomes positive later on. At the same time, if the provider responsibility period is much more than five years, the "market" will begin to resemble one where adults are allocated to a single employment service provider for life. With the period limited to about five years, referrals can be restricted to clients with medium or greater levels of disadvantage (*e.g.* referral when an individual reaches a threshold of six months of unemployment over the last two years), and clients who enter stable employment can eventually be rotated out of the system.

31. The type of quasi-market arrangements described here would need to be introduced progressively. The purchaser at first necessarily uses relatively short-term measures of employment outcomes, and limits risk for providers who cannot know in detail what market conditions they will face.

32. (B + tW) measured over a five-year period is a very large amount of money and it might be imagined that clients could "blackmail" providers, by saying "please pay me a back-to-work bonus or hiring subsidy, or I will remain unemployed for a long time and cost you a lot of money" (or potential employers might do something similar). But successful providers will establish a reputation for never paying hiring subsidies, except in cases where this is genuinely necessary to achieve an employment outcome and by methods that do not lead clients or employers more generally to expect the same subsidy. Such an approach may be most effectively implemented by skilled employment counsellors operating with considerable discretion.

33. Under ideal conditions (absence of collusive bidding and costless availability of relevant information), auction mechanisms are able to set the correct price for items that have a unique set of characteristics.

34. The government may pay providers a fixed fee per client and renew contracts with the providers which achieve the highest values of (B + tW) relative to benchmark values, but also pay providers a fraction υ (*e.g.* half) of the value of (B + tW), relative to benchmark values. This is approximately what Australia now does (although Australia does not use (B + tW) as its measure of outcomes, and performance is measured in terms of gross outcomes relative to benchmarks for purposes of contract renewal, but in terms of unadjusted gross outcomes for purposes of fee payment). This arrangement guarantees that any service that increases (B + tW) by USD 1 at a cost of USD υ or less will be provided, even if the level of the fixed fee per client set by government is suboptimal.

35. For example providers could be allowed to report to government their placements of clients into stable jobs to government and receive an up-front payment corresponding to several months of future employment outcomes (the average number of month that clients stay in these jobs). In the same way, providers which put jobseekers into a training programme that has a record of achieving long-term employment outcomes could qualify for financial advances.

36. At the same time, actions by service providers that reduce unemployment rates among their own clients have positive externalities in terms of motivation effects on individuals who are not or do not become their clients (see Chapter 4 and official evaluations of Intensive Assistance in Australia). So a system that "pays" providers for their impact on outcomes of their own clients may under-reward their actions. Potential positive and negative externalities both need to be kept in mind.

37. Recent "scandals" over placement claims in some European countries (noted by Grubb, 2004) appear to reflect the fact that local employment office staff had incentives to report placements, but with no system of external verification. A simple procedural improvement would be to use New Zealand's system where, when an employment counsellor claims a placement, this is only validated after the client has been off benefits for at least three months.

38. Commonly in MBO systems the target (*i.e.* benchmark) for outcomes next year is set as a slight mark-up on the outcomes in the current year. This endogenizes the benchmark from the point of view of any local office manager who stays in place for more than year, undermining the incentive to improve performance.

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Statistical Annex

Sources and definitions

Most of the statistics shown in these tables can be found as well in two other (paper or electronic) publications or references, as follows:

- the annual edition of *OECD Labour Force Statistics, 1984-2004*;
- the OECD On-Line Labour Force Statistics database that shows both raw data (see URL: *www.oecd.org/scripts/cde/members/LFSDATAAuthenticate.asp*) and derived statistics (*www.oecd.org/scripts/cde/members/LFSINDICATORSAuthenticate.asp*), and allows free access to the data.

These publications, which include information on definitions, notes and sources used by Member countries, include longer time series and more detailed disaggregations by age group, gender, duration of unemployment, etc., than are shown in this annex.

Sources and definitions for data shown in the statistical annex tables are specified at the bottom of each table.

Please note that the data on employment, unemployment and the labour force are not necessarily the same as the series used for analyses and forecasting by the OECD Economics Department and reproduced in Tables 0.2 and 0.3 of the Introduction of this publication.

Interested users can refer to the on-line database, which contains data series describing the labour supply: population, labour force, employment and unemployment disaggregated by gender and age, educational attainment, employment status and sector of activity, participation and unemployment rates, statistics on part-time employment and duration of unemployment. The on-line database contains a number of additional series on labour market results and on features of the institutional and regulatory environment affecting the functioning of labour markets. Among these are the following:

- annual hours of work data for comparisons of trends over time;
- gross earnings by percentile for deriving measures of earnings dispersion for full-time workers by gender;
- gross mean and median earnings of full-time workers by age group and gender;
- statutory minimum wages;
- public expenditure on labour market programmes, number of beneficiaries and inflows into the labour market;
- trade union density rates in OECD member countries.

Conventional signs

. . Data not available

. Decimal point

| Break in series

– Nil or less than half of the last digit used

Note on the statistical treatment of Germany

In this statistical annex, data up to end-1990 are for western Germany; unless otherwise indicated, they are for the whole of Germany from 1991 onwards.

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Table A. **Standardised unemployment rates in 27 OECD countries**

As a percentage of total labour force

	1990	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
Australia	6.7	10.6	9.5	8.2	8.2	8.3	7.7	6.9	6.3	6.8	6.4	6.1	5.5
Austria	. .	4.0	3.8	3.9	4.4	4.4	4.5	4.0	3.7	3.6	4.2	4.3	4.5
Belgium	6.6	8.6	9.8	9.7	9.5	9.2	9.3	8.6	6.9	6.7	7.3	7.9	7.8
Canada	8.2	11.4	10.4	9.6	9.7	9.2	8.4	7.6	6.8	7.2	7.7	7.6	7.2
Czech Republic	. .	4.4	4.3	4.1	3.9	4.8	6.4	8.6	8.7	8.0	7.3	7.8	8.3
Denmark	7.2	9.6	7.7	6.8	6.3	5.3	4.9	4.8	4.4	4.3	4.6	5.6	5.4
Finland	3.2	16.4	16.8	15.2	14.6	12.7	11.4	10.2	9.8	9.1	9.1	9.0	8.9
France	8.5	11.1	11.7	11.1	11.6	11.5	11.1	10.5	9.1	8.4	8.9	9.5	9.7
Germany[a]	4.8	7.7	8.3	8.0	8.6	9.2	8.8	7.9	7.2	7.4	8.2	9.1	9.5
Greece	6.3	8.6	8.9	9.1	9.7	9.6	11.1	12.0	11.3	10.8	10.3	9.7	10.5
Hungary	. .	12.1	11.0	10.4	9.6	9.0	8.4	6.9	6.3	5.6	5.6	5.7	5.9
Ireland	13.4	15.6	14.3	12.3	11.7	9.9	7.5	5.6	4.3	3.9	4.3	4.6	4.5
Italy	8.9	9.8	10.6	11.2	11.2	11.2	11.3	11.0	10.1	9.1	8.6	8.4	8.0
Japan	2.1	2.5	2.9	3.1	3.4	3.4	4.1	4.7	4.7	5.0	5.4	5.3	4.7
Korea	. .	. .	. .	. .	. .	. .	. .	. .	4.4	4.0	3.3	3.6	3.7
Luxembourg	1.6	2.6	3.2	2.9	2.9	2.7	2.7	2.4	2.3	2.1	2.8	3.7	4.2
Netherlands	5.9	6.2	6.8	6.6	6.0	4.9	3.8	3.2	2.8	2.2	2.8	3.7	4.6
New Zealand	7.8	9.5	8.1	6.3	6.1	6.6	7.4	6.8	6.0	5.3	5.2	4.6	3.9
Norway	5.8	6.6	6.0	5.5	4.8	4.0	3.2	3.2	3.4	3.6	3.9	4.5	4.4
Poland	. .	14.0	14.4	13.3	12.3	10.9	10.2	13.4	16.4	18.5	19.8	19.2	18.8
Portugal	4.8	5.6	6.9	7.3	7.3	6.8	5.2	4.5	4.1	4.0	5.0	6.2	6.7
Slovak Republic	. .	. .	13.7	13.1	11.3	11.9	12.6	16.8	18.7	19.4	18.7	17.5	18.0
Spain	13.1	18.6	19.8	18.8	18.1	17.0	15.2	12.8	11.3	10.6	11.3	11.3	10.8
Sweden	1.7	9.0	9.4	8.8	9.6	9.9	8.2	6.7	5.6	4.9	4.9	5.6	6.4
Switzerland		3.9	3.9	3.5	3.9	4.2	3.6	3.0	2.7	2.6	3.2	4.2	4.4
United Kingdom	6.9	10.0	9.2	8.5	8.0	6.9	6.2	5.9	5.4	5.0	5.1	5.0	4.6
United States	5.6	6.9	6.1	5.6	5.4	4.9	4.5	4.2	4.0	4.7	5.8	6.0	5.5
EU-15[b]	8.1	10.0	10.4	10.1	10.1	9.8	9.3	8.5	7.6	7.2	7.6	7.9	8.0
OECD Europe[b]	8.0	10.2	10.5	10.1	10.0	9.6	9.1	8.8	8.3	8.2	8.5	8.8	8.8
Total OECD[b]	6.1	7.8	7.7	7.3	7.2	6.9	6.8	6.6	6.2	6.4	6.9	7.1	6.9

a) For 1990, the data include western Germany; subsequent data concern the whole of Germany.

b) For above countries only.

Note: In so far as possible, the data have been adjusted to ensure comparability over time and to conform to the guidelines of the International Labour Office. All series are benchmarked to labour-force-survey-based estimates. In countries with annual surveys, monthly estimates are obtained by interpolation/extrapolation and by incorporating trends in administrative data, where available. The annual figures are then calculated by averaging the monthly estimates (for both unemployed and the labour force). For countries with monthly or quarterly surveys, the annual estimates are obtained by averaging the monthly or quarterly estimates, respectively. For several countries, the adjustment procedure used is similar to that of the Bureau of Labor Statistics, 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. For a fuller description, please refer to the following URL: *www.oecd.org\std*.

Source: OECD (2005), *Main Economic Indicators,* Paris, May.

Statlink: *http://dx.doi.org/10.1787/134334601045*

Table B. **Employment/population ratios, activity and unemployment rates**[a]

Persons aged 15-64 years (percentages)

	Employment/population ratio						Labour force participation rate						Unemployment rate					
	1990	2000	2001	2002	2003	2004	1990	2000	2001	2002	2003	2004	1990	2000	2001	2002	2003	2004
Australia	67.9	69.2	68.7	69.2	69.3	69.5	73.0	73.6	73.7	73.7	73.6	73.6	7.0	6.0	6.7	6.1	5.8	5.5
Austria	. .	67.9	67.8	68.1	68.2	66.5	. .	71.3	70.7	71.6	71.6	70.2	. .	4.7	4.0	4.9	4.7	5.3
Belgium	54.4 |	60.9	59.7	59.7	59.3	60.5	58.7 |	65.2	63.6	64.1	64.3	65.3	7.3 |	6.6	6.2	6.9	7.7	7.4
Canada	70.3	70.9	70.8	71.4	72.2	72.6	76.6	76.1	76.4	77.4	78.2	78.2	8.2	6.9	7.3	7.7	7.7	7.2
Czech Republic	. .	65.2	65.3	65.7	64.9	64.2	. .	71.6	71.1	70.9	70.4	70.1	. .	8.8	8.2	7.3	7.8	8.4
Denmark	75.4 |	76.4	75.9	76.4	75.1	76.0	82.4 |	80.0	79.2	79.9	79.4	80.2	8.5 |	4.5	4.2	4.3	5.5	5.3
Finland	74.1	67.0	67.7	67.7	67.4	67.2	76.5	74.3	74.6	74.5	74.1	73.8	3.1	9.9	9.2	9.1	9.1	8.9
France	60.8	61.7	62.7	62.9 |	63.2	62.8	67.1	68.8	68.6	69.0 |	69.4	69.5	9.4	10.3	8.6	8.7 |	9.0	9.6
Germany	64.1 |	65.6	65.8	65.3	64.6	65.5	67.4 |	71.1	71.5	71.5	71.3	72.7	4.9 |	7.8	7.9	8.7	9.4	9.9
Greece	54.8 |	55.9	55.6	57.7	58.9	59.6	59.1 |	63.0	62.1	64.2	65.1	66.5	7.2 |	11.3	10.4	10.1	9.5	10.4
Hungary[b]	58.0 |	56.0	56.2	56.2	57.0	56.8	64.4 |	59.9	59.6	59.7	60.6	60.5	10.0 |	6.4	5.7	5.8	5.9	6.1
Iceland[c, d]	79.9	84.6	84.6	82.8	84.1 |	82.8	82.1	86.6	86.6	85.6	87.0 |	85.5	2.7	2.3	2.3	3.2	3.4 |	3.1
Ireland	52.1 |	64.5	65.0	65.0	65.0	65.5	60.1 |	67.4	67.5	67.9	68.0	68.6	13.3 |	4.4	3.7	4.3	4.5	4.4
Italy	52.6	53.9	54.9	55.6	56.2 |	57.4	59.5	60.3	60.7	61.2	61.6 |	62.5	11.5	10.6	9.6	9.1	8.7 |	8.1
Japan	68.6	68.9	68.8	68.2	68.4	68.7	70.1	72.5	72.6	72.3	72.3	72.2	2.2	5.0	5.2	5.6	5.4	4.9
Korea	61.2	61.5	62.1	63.3	63.0	63.6	62.8	64.2	64.7	65.4	65.3	66.0	2.5	4.3	3.9	3.2	3.5	3.6
Luxembourg	59.2 |	62.7	63.0	63.6	62.7	61.6	60.1 |	64.2	64.1	65.3	65.1	64.7	1.6 |	2.4	1.8	2.6	3.7	4.8
Mexico[d]	58.0	60.9	60.1	60.1	59.6	60.8	59.9	62.3	61.5	61.6	61.2	62.8	3.1	2.2	2.2	2.5	2.6	3.1
Netherlands	61.1 |	72.9	74.1	74.5	73.6	73.1	66.2 |	74.9	75.7	76.5	76.4	76.6	7.7 |	2.7	2.1	2.6	3.6	4.7
New Zealand	67.5	70.7	71.8	72.4	72.5	73.5	73.2	75.3	75.9	76.4	76.1	76.6	7.9	6.0	5.4	5.2	4.7	4.0
Norway[c]	73.0 |	77.9	77.5	77.1	75.8	75.6	77.1 |	80.7	80.3	80.3	79.3	79.1	5.4 |	3.5	3.5	4.0	4.5	4.5
Poland[b]	59.9	55.0	53.5	51.7	51.4	51.9	69.4	65.8	65.7	64.8	64.2	64.2	13.6	16.4	18.6	20.3	20.0	19.3
Portugal	67.4 |	68.3	68.6	68.1	67.1	67.8	70.9 |	71.3	71.7	72.0	72.0	72.9	4.9 |	4.2	4.3	5.4	6.8	7.0
Slovak Republic	. .	56.8	56.9	56.9	57.7	57.0	. .	69.9	70.5	69.9	70.0	69.7	. .	18.8	19.3	18.6	17.6	18.2
Spain[c]	51.8	57.4	58.8	59.5	60.7	62.0	61.7	66.7	65.8	67.1	68.5	69.7	16.1	13.9	10.5	11.4	11.4	11.0
Sweden[c]	83.1 |	74.2	75.2	74.9	74.3	73.5	84.7 |	78.9	79.3	79.1	78.9	78.7	1.8 |	5.9	5.1	5.3	5.8	6.6
Switzerland[d]	78.2	78.3	79.1	78.9	77.9	77.4	79.7	80.5	81.2	81.3	81.4	81.0	1.8	2.7	2.5	3.0	4.2	4.4
Turkey	54.5	48.9	47.8	46.7	45.5	46.1	59.4	52.4	52.3	52.3	51.1	51.5	8.2	6.7	8.6	10.6	10.8	10.6
United Kingdom[c]	72.5	72.4	72.8	72.7	72.9 |	72.7	77.8	76.6	76.4	76.6	76.6 |	76.2	6.8	5.6	4.8	5.1	4.9 |	4.7
United States[c]	72.2 |	74.1	73.1	71.9	71.2	71.2	76.5 |	77.2	76.8	76.4	75.8	75.4	5.7 |	4.0	4.8	5.9	6.1	5.6
EU-15[e]	61.6 |	63.7	64.4	64.5 |	64.6 |	65.0	67.3 |	69.5	69.5	69.9 |	70.2 |	70.8	8.4 |	8.4	7.4	7.7 |	8.0 |	8.2
EU-19[e]	61.3 |	62.7	63.1	63.1 |	63.2 |	63.5	67.4 |	69.0	69.0	69.3 |	69.4 |	69.9	9.0 |	9.1	8.5	8.9 |	9.0 |	9.2
OECD Europe[e]	61.0 |	61.4	61.6	61.4 |	61.2 |	61.5	66.8 |	67.2	67.1	67.4 |	67.3 |	67.8	8.7 |	8.7	8.3	8.9 |	9.1 |	9.2
Total OECD[e]	64.9 |	65.7	65.6	65.2 |	64.9 |	65.3	69.3 |	70.1	70.0	70.0 |	69.8 |	70.1	6.4 |	6.2	6.3	6.9 |	7.0 |	6.9

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Table B. **Employment/population ratios, activity and unemployment rates**[a] *(cont.)*

Men aged 15-64 years (percentages)

	Employment/population ratio						Labour force participation rate						Unemployment rate					
	1990	2000	2001	2002	2003	2004	1990	2000	2001	2002	2003	2004	1990	2000	2001	2002	2003	2004
Australia	78.5	76.6	75.9	76.4	76.4	76.4	84.4	81.9	81.6	81.5	81.0	80.8	6.9	6.4	7.0	6.3	5.7	5.4
Austria	. .	76.2	75.9	75.3	75.3	73.0	. .	80.1	79.0	79.4	79.4	77.1	. .	4.8	4.0	5.2	5.1	5.3
Belgium	68.1 |	69.8	68.5	68.1	67.1	67.9	71.3 |	73.8	72.7	72.6	72.6	72.7	4.6 |	5.3	5.7	6.3	7.5	6.7
Canada	77.8	76.1	75.7	75.9	76.4	76.7	84.9	81.9	81.9	82.7	83.1	83.0	8.3	7.0	7.6	8.2	8.1	7.6
Czech Republic	. .	73.6	73.6	74.2	73.4	72.4	. .	79.4	79.0	78.9	78.2	77.9	. .	7.4	6.8	5.9	6.1	7.1
Denmark	80.1 |	80.7	80.2	80.2	79.7	79.9	87.1 |	84.0	83.3	83.8	84.0	84.2	8.0 |	4.0	3.7	4.3	5.2	5.1
Finland	76.7	69.4	70.0	69.2	69.0	68.8	79.6	76.4	76.7	76.2	76.1	75.5	3.6	9.2	8.7	9.1	9.3	8.9
France	71.0	68.8	69.8	69.6 |	69.2	68.8	76.5	75.3	75.1	75.5 |	75.4	75.3	7.2	8.6	7.0	7.8 |	8.2	8.7
Germany	75.7 |	72.9	72.8	71.7	70.4	71.0	79.0 |	78.9	79.0	78.7	78.0	79.1	4.1 |	7.6	7.8	8.8	9.7	10.3
Greece	73.4 |	71.3	70.9	72.5	73.5	74.0	76.8 |	77.1	76.2	77.6	78.3	79.1	4.4 |	7.5	6.9	6.6	6.1	6.5
Hungary[b]	64.0 |	62.7	63.0	62.9	63.4	63.1	71.9 |	67.5	67.2	67.1	67.6	67.2	11.1 |	7.1	6.3	6.2	6.1	6.1
Iceland[c, d]	85.2	88.2	88.0	85.7	86.8 |	86.2	87.3	89.8	90.0	88.9	90.1 |	89.1	2.4	1.8	2.1	3.6	3.7 |	3.3
Ireland	67.5 |	75.6	76.0	74.7	74.5	75.2	77.5 |	79.1	79.0	78.3	78.3	79.1	13.0 |	4.5	3.9	4.7	4.9	5.0
Italy	69.2	68.2	68.7	69.2	69.7 |	69.7	75.1	74.3	74.2	74.5	74.8 |	74.5	7.9	8.2	7.4	7.0	6.8 |	6.4
Japan	81.3	80.9	80.5	79.9	79.8	80.0	83.0	85.2	85.0	84.8	84.6	84.2	2.1	5.1	5.4	5.8	5.7	5.1
Korea	73.9	73.1	73.5	74.9	75.0	75.2	76.2	76.9	76.9	77.7	77.9	78.2	3.0	4.9	4.4	3.6	3.7	3.9
Luxembourg	76.4 |	75.0	74.9	75.5	73.3	72.4	77.4 |	76.4	76.1	77.0	75.5	74.8	1.2 |	1.8	1.6	1.9	3.0	3.3
Mexico[d]	84.1	84.0	83.4	82.6	82.0	82.5	86.4	85.8	85.2	84.7	84.2	85.0	2.6	2.1	2.1	2.5	2.6	3.0
Netherlands	75.2 |	82.1	82.7	82.9	81.2	80.2	79.7 |	83.9	84.2	84.8	84.2	83.9	5.7 |	2.2	1.8	2.3	3.5	4.4
New Zealand	76.5	78.2	79.1	79.8	79.4	80.8	83.4	83.3	83.6	84.1	83.1	83.8	8.3	6.2	5.4	5.1	4.4	3.6
Norway[c]	78.6 |	81.7	81.0	80.2	78.7	78.4	83.4 |	84.8	84.0	83.8	82.8	82.5	5.8 |	3.6	3.6	4.2	5.0	4.9
Poland[b]	66.9	61.2	59.2	57.0	56.7	57.4	76.4	71.7	71.5	70.8	70.2	70.4	12.4	14.6	17.2	19.5	19.3	18.5
Portugal	80.1 |	76.3	76.5	75.7	73.9	74.1	82.8 |	79.0	79.2	79.3	78.5	79.0	3.3 |	3.3	3.4	4.5	5.9	6.2
Slovak Republic	. .	62.2	62.1	62.5	63.4	63.2	. .	76.8	77.4	76.7	76.7	76.5	. .	19.0	19.8	18.6	17.4	17.3
Spain[c]	71.9	72.7	73.8	73.9	74.5	74.9	81.3	80.4	79.8	80.4	81.1	81.6	11.7	9.6	7.5	8.1	8.2	8.2
Sweden[c]	85.2 |	76.2	76.9	76.4	75.7	75.0	86.8 |	81.3	81.4	81.1	80.8	80.7	1.9 |	6.3	5.5	5.7	6.4	7.0
Switzerland[d]	90.0	87.3	87.6	86.2	85.1	84.5	91.1	89.4	89.2	88.7	88.6	88.0	1.2	2.3	1.7	2.9	3.9	4.0
Turkey	76.9	71.7	69.3	66.9	65.9	67.9	83.6	76.9	76.1	75.1	74.0	76.1	8.0	6.8	9.0	11.0	11.0	10.8
United Kingdom[c]	82.1	79.1	79.3	78.9	79.3 |	78.9	88.3	84.3	83.8	83.7	83.9 |	83.1	7.1	6.1	5.3	5.7	5.5 |	5.0
United States[c]	80.7 |	80.6	79.4	78.0	76.9	77.2	85.6 |	83.9	83.4	83.0	82.2	81.9	5.7 |	3.9	4.9	6.0	6.4	5.7
EU-15[e]	74.5 |	73.1	73.5	73.2 |	72.9 |	72.9	79.9 |	78.8	78.6	78.7 |	78.7 |	78.8	6.7 |	7.2	6.5	7.0 |	7.4 |	7.5
EU-19[e]	73.5 |	71.7	71.9	71.4 |	71.2 |	71.2	79.3 |	77.9	77.7	77.7 |	77.7 |	77.7	7.3 |	8.0	7.5	8.1 |	8.4 |	8.5
OECD Europe[e]	74.2 |	72.0	71.8	71.1 |	70.8 |	71.0	80.0 |	78.0	77.7	77.6 |	77.4 |	77.7	7.3 |	7.7	7.6	8.3 |	8.6 |	8.6
Total OECD[e]	77.6 |	76.3	75.9	75.2 |	74.7 |	75.0	82.3 |	81.0	80.7	80.5 |	80.2 |	80.3	5.7 |	5.8	6.0	6.7 |	6.9 |	6.7

Table B. **Employment/population ratios, activity and unemployment rates**[a] *(cont.)*

Women aged 15-64 years (percentages)

	Employment/population ratio						Labour force participation rate						Unemployment rate					
	1990	2000	2001	2002	2003	2004	1990	2000	2001	2002	2003	2004	1990	2000	2001	2002	2003	2004
Australia	57.1	61.8	61.6	62.1	62.2	62.6	61.5	65.4	65.8	66.0	66.1	66.3	7.2	5.5	6.4	5.9	5.9	5.6
Austria	. .	59.7	59.8	61.0	61.2	60.1	. .	62.5	62.3	63.9	63.9	63.5	. .	4.6	4.1	4.6	4.3	5.3
Belgium	40.8 |	51.9	50.7	51.1	51.4	53.0	46.1 |	56.6	54.5	55.4	55.8	57.7	11.5 |	8.3	6.9	7.8	8.0	8.3
Canada	62.7	65.6	65.9	67.0	67.9	68.4	68.3	70.4	70.8	72.1	73.2	73.5	8.2	6.7	6.9	7.2	7.2	6.9
Czech Republic	. .	56.9	57.0	57.1	56.3	56.0	. .	63.7	63.2	62.8	62.5	62.2	. .	10.6	9.9	9.1	9.9	10.0
Denmark	70.6 |	72.1	71.4	72.6	70.5	72.0	77.6 |	75.9	75.0	75.9	74.8	76.1	9.0 |	5.0	4.8	4.4	5.8	5.5
Finland	71.5	64.5	65.4	66.1	65.7	65.5	73.4	72.1	72.5	72.7	72.1	72.0	2.6	10.6	9.7	9.1	8.9	9.0
France	50.9	54.8	55.7	56.4 |	57.3	56.9	58.0	62.5	62.3	62.6 |	63.6	63.7	12.2	12.3	10.5	9.8 |	9.9	10.7
Germany	52.2 |	58.1	58.7	58.8	58.7	59.9	55.5 |	63.3	63.8	64.2	64.5	66.1	6.0 |	8.1	8.0	8.4	8.9	9.4
Greece	37.5 |	41.3	41.2	43.1	44.5	45.5	42.6 |	49.7	48.8	51.0	52.1	54.1	12.0 |	16.9	15.6	15.4	14.5	16.0
Hungary[b]	52.3 |	49.6	49.8	49.8	50.9	50.7	57.3 |	52.6	52.4	52.7	53.9	54.0	8.8 |	5.7	5.0	5.4	5.6	6.1
Iceland[c, d]	74.5	81.0	81.1	79.8	81.2 |	79.4	76.8	83.3	83.1	82.2	83.9 |	81.8	3.0	2.8	2.5	2.9	3.1 |	3.0
Ireland	36.6 |	53.3	54.0	55.2	55.4	55.8	42.6 |	55.7	56.0	57.3	57.6	58.0	14.0 |	4.2	3.5	3.7	3.9	3.7
Italy	36.2	39.6	41.1	42.0	42.7 |	45.2	44.0	46.3	47.3	47.9	48.3 |	50.6	17.7	14.6	13.1	12.3	11.7 |	10.6
Japan	55.8	56.7	57.0	56.5	56.8	57.4	57.1	59.6	60.1	59.7	59.9	60.2	2.3	4.7	5.1	5.4	5.1	4.7
Korea	49.0	50.1	51.0	52.0	51.1	52.2	49.9	51.8	52.7	53.4	52.8	53.9	1.9	3.5	3.2	2.7	3.3	3.3
Luxembourg	41.4 |	50.0	50.8	51.5	52.0	50.6	42.4 |	51.7	52.0	53.5	54.5	54.3	2.5 |	3.2	2.2	3.6	4.6	6.9
Mexico[d]	34.2	40.1	39.4	39.9	39.4	41.3	35.7	41.2	40.4	41.0	40.5	42.8	4.3	2.5	2.4	2.5	2.7	3.5
Netherlands	46.7 |	63.4	65.3	65.9	65.8	65.7	52.4 |	65.7	66.9	67.9	68.4	69.2	10.9 |	3.5	2.5	2.9	3.8	5.0
New Zealand	58.6	63.5	64.8	65.3	65.7	66.5	63.2	67.5	68.4	69.0	69.2	69.6	7.3	5.9	5.3	5.4	5.1	4.5
Norway[c]	67.2 |	74.0	73.8	73.9	72.7	72.7	70.7 |	76.5	76.4	76.7	75.8	75.7	4.9 |	3.2	3.4	3.7	4.0	3.9
Poland[b]	53.1	48.9	47.8	46.4	46.2	46.4	62.6	59.9	59.9	58.9	58.4	58.2	15.1	18.4	20.2	21.2	20.8	20.2
Portugal	55.4 |	60.5	61.0	60.8	60.6	61.7	59.6 |	63.8	64.5	65.0	65.6	67.0	7.0 |	5.2	5.4	6.5	7.7	8.0
Slovak Republic	. .	51.5	51.8	51.4	52.2	50.9	. .	63.2	63.8	63.2	63.5	62.9	. .	18.6	18.8	18.7	17.8	19.1
Spain[c]	31.8	42.0	43.8	44.9	46.8	49.0	42.2	52.9	51.6	53.7	55.7	57.7	24.7	20.6	15.3	16.4	16.0	15.1
Sweden[c]	81.0 |	72.2	73.5	73.4	72.8	71.8	82.5 |	76.4	77.1	77.1	76.8	76.6	1.8 |	5.4	4.7	4.7	5.2	6.2
Switzerland[d]	66.4	69.3	70.6	71.5	70.7	70.3	68.2	71.6	73.2	73.9	74.1	73.9	2.6	3.2	3.5	3.2	4.6	4.8
Turkey	32.9	26.2	26.3	26.6	25.2	24.3	36.0	28.0	28.5	29.5	28.1	27.0	8.7	6.5	7.8	9.8	10.5	10.0
United Kingdom[c]	62.8	65.5	66.1	66.3	66.4 |	66.6	67.3	68.9	69.0	69.3	69.2 |	69.6	6.6	4.8	4.2	4.4	4.1 |	4.3
United States[c]	64.0 |	67.8	67.1	66.1	65.7	65.4	67.8 |	70.7	70.4	70.1	69.7	69.2	5.6 |	4.1	4.7	5.7	5.7	5.5
EU-15[e]	48.7 |	54.3	55.2	55.8 |	56.2 |	57.1	54.7 |	60.3	60.4	61.1 |	61.7 |	62.8	10.9 |	9.9	8.6	8.7 |	8.8 |	9.1
EU-19[e]	49.2 |	53.7	54.4	54.8 |	55.2 |	55.9	55.5 |	60.2	60.3	60.8 |	61.2 |	62.2	11.3 |	10.7	9.7	9.9 |	9.9 |	10.1
OECD Europe[e]	47.8 |	50.7	51.3	51.6 |	51.7 |	52.1	53.6 |	56.5	56.6	57.1 |	57.3 |	57.9	10.8 |	10.2	9.4	9.7 |	9.8 |	9.9
Total OECD[e]	52.5 |	55.3	55.4	55.4 |	55.3 |	55.8	56.6 |	59.4	59.4	59.7 |	59.6 |	60.1	7.3 |	6.9	6.7	7.1 |	7.2 |	7.2

a) Ratios refer to persons aged 15 to 64 years who are in employment or in the labour force divided by the working age population, or in unemployment divided by the labour force.
b) The year 1990 refers to 1992.
c) Refers to persons aged 16 to 64.
d) The year 1990 refers to 1991.
e) For above countries only.

Source: OECD database on Labour Force Statistics (see URLs at the beginning of the Annex). For Austria, Belgium, Denmark, France, Greece, Luxembourg and the Netherlands, data are from the European Union Labour Force Survey.

Statlink: *http://dx.doi.org/10.1787/077514107464*

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Table C. **Employment/population ratios, activity and unemployment rates by selected age groups**

Both sexes (percentages)

		15 to 24					25 to 54					55 to 64				
		1990	2001	2002	2003	2004	1990	2001	2002	2003	2004	1990	2001	2002	2003	2004
Australia	Unemployment rates	13.2	12.9	12.7	11.6	11.7	5.1	5.3	4.8	4.5	4.1	5.4	4.8	3.7	3.9	3.8
	Labour force participation rates	70.4	69.0	68.2	67.7	67.2	79.9	80.6	80.9	80.6	80.5	44.1	48.6	50.0	52.2	53.8
	Employment/population ratios	61.1	60.1	59.6	59.9	59.4	75.8	76.3	77.1	76.9	77.2	41.8	46.3	48.2	50.1	51.8
Austria	Unemployment rates	. .	6.0	7.2	7.5	11.0	. .	3.6	4.4	4.2	4.4	. .	5.6	5.7	6.2	4.5
	Labour force participation rates	. .	54.7	55.7	54.8	56.1	. .	85.2	86.5	87.0	85.4	. .	29.0	29.7	30.8	28.7
	Employment/population ratios	. .	51.4	51.8	50.7	49.9	. .	82.2	82.7	83.4	81.7	. .	27.4	28.0	28.9	27.4
Belgium	Unemployment rates	14.5 |	15.3	15.7	19.0	17.5	6.5 |	5.4	6.2	7.0	6.6	3.6 |	3.0	3.5	1.7	3.6
	Labour force participation rates	35.5 |	33.6	33.8	33.5	34.0	76.7 |	80.9	81.7	81.8	82.8	22.2 |	26.0	26.7	28.5	31.3
	Employment/population ratios	30.4 |	28.5	28.5	27.1	28.1	71.7 |	76.6	76.6	76.1	77.3	21.4 |	25.2	25.8	28.1	30.1
Canada	Unemployment rates	12.4	12.9	13.6	13.7	13.4	7.4	6.2	6.6	6.5	6.0	6.1	5.8	6.3	6.3	5.9
	Labour force participation rates	69.9	64.7	66.6	67.4	67.0	84.2	85.1	85.9	86.4	86.6	49.1	51.2	53.4	56.5	57.4
	Employment/population ratios	61.2	56.4	57.5	58.2	58.1	78.0	79.8	80.3	80.8	81.4	46.1	48.2	50.1	52.9	54.0
Czech Republic	Unemployment rates	. .	16.6	16.0	17.6	20.4	. .	7.2	6.5	7.0	7.3	. .	4.9	4.0	4.4	5.4
	Labour force participation rates	. .	43.2	40.1	38.1	35.8	. .	88.4	88.2	87.8	87.8	. .	39.0	42.5	44.2	45.1
	Employment/population ratios	. .	36.1	33.7	31.4	28.5	. .	82.1	82.5	81.7	81.4	. .	37.1	40.8	42.3	42.6
Denmark	Unemployment rates	11.5 |	8.3	7.1	9.8	7.8	7.9 |	3.5	3.7	5.0	4.7	6.1 |	4.0	4.7	3.9	5.6
	Labour force participation rates	73.5 |	67.2	68.8	65.9	66.4	91.2 |	87.5	88.0	87.8	88.2	57.1 |	58.9	60.1	63.1	65.5
	Employment/population ratios	65.0 |	61.7	64.0	59.4	61.3	84.0 |	84.5	84.7	83.5	84.0	53.6 |	56.5	57.3	60.7	61.8
Finland	Unemployment rates	9.4	19.9	20.7	21.6	20.8	2.0	7.4	7.3	7.3	7.3	2.3	8.9	8.1	7.7	7.3
	Labour force participation rates	57.5	50.4	49.6	49.1	48.1	89.7	88.0	88.1	87.5	87.3	43.8	50.3	52.0	54.1	55.0
	Employment/population ratios	52.2	40.3	39.4	38.5	38.1	87.9	81.5	81.6	81.1	81.0	42.8	45.9	47.8	49.9	51.0
France	Unemployment rates	19.8	18.0	18.9 |	19.0	21.3	7.8	7.7	7.8 |	8.1	8.5	6.5	5.8	5.3 |	5.6	6.3
	Labour force participation rates	44.6	35.8	36.9 |	37.0	37.5	83.8	86.1	86.1 |	86.5	86.6	32.9	32.6	35.6 |	38.3	39.6
	Employment/population ratios	35.7	29.3	29.9 |	30.0	29.5	77.3	79.4	79.4 |	79.5	79.2	30.7	30.7	33.8 |	36.1	37.1
Germany	Unemployment rates	4.5 |	8.3	9.8	10.6	11.7	4.6 |	7.3	8.1	9.1	9.4	7.7 |	11.7	10.8	9.7	11.3
	Labour force participation rates	59.1 |	51.3	49.7	47.4	47.5	77.1 |	85.5	85.8	86.0	87.7	39.8 |	42.9	43.3	43.1	44.2
	Employment/population ratios	56.4 |	47.0	44.8	42.4	41.9	73.6 |	79.3	78.8	78.2	79.5	36.8 |	37.9	38.6	39.0	39.2
Greece	Unemployment rates	23.3 |	28.0	26.1	25.7	26.5	5.1 |	8.8	8.7	8.3	9.1	1.6 |	4.1	3.8	3.1	4.3
	Labour force participation rates	39.4 |	36.2	36.3	35.2	37.3	72.2 |	77.2	78.8	79.7	81.1	41.5 |	39.6	40.5	42.4	41.2
	Employment/population ratios	30.3 |	26.0	26.8	26.2	27.4	68.5 |	70.4	71.9	73.1	73.7	40.8 |	38.0	38.9	41.0	39.4
Hungary[a]	Unemployment rates	18.8 |	11.2	12.6	13.4	15.5	8.8 |	5.1	5.2	5.3	5.5	5.6 |	2.9	3.1	2.8	3.1
	Labour force participation rates	43.6 |	34.6	32.6	30.8	27.9	82.9 |	77.1	77.0	77.8	77.9	24.2 |	24.2	26.4	29.8	32.0
	Employment/population ratios	35.4 |	30.7	28.5	26.7	23.6	75.7 |	73.1	73.0	73.7	73.6	22.9 |	23.5	25.6	29.0	31.1

Table C. **Employment/population ratios, activity and unemployment rates by selected age groups** *(cont.)*

Both sexes (percentages)

		15 to 24					25 to 54					55 to 64				
		1990	2001	2002	2003	2004	1990	2001	2002	2003	2004	1990	2001	2002	2003	2004
Iceland[b, c]	Unemployment rates	4.9	4.8	7.2	8.2 |	8.1	2.2	1.7	2.7	2.5 |	2.0	2.1	2.0	1.4	2.1 |	2.7
	Labour force participation rates	59.5	70.2	64.0	74.2 |	72.1	90.1	92.3	92.5	91.5 |	89.8	87.2	87.3	88.4	85.1 |	84.3
	Employment/population ratios	56.6	66.8	59.4	68.1 |	66.3	88.1	90.7	90.0	89.2 |	88.0	85.4	85.6	87.2	83.3 |	82.0
Ireland	Unemployment rates	17.7 |	6.2	7.7	7.6	8.1	12.5 |	3.2	3.7	3.9	3.9	8.4 |	2.6	2.4	2.4	2.4
	Labour force participation rates	50.3 |	50.1	49.1	49.6	48.8	68.5 |	78.9	79.5	79.1	79.8	42.1 |	47.9	49.2	50.5	50.7
	Employment/population ratios	41.4 |	47.0	45.3	45.8	44.8	60.0 |	76.4	76.6	76.0	76.7	38.6 |	46.6	48.0	49.3	49.5
Italy	Unemployment rates	31.5	27.0	26.3	26.3 |	23.5	7.7	7.9	7.5	7.2 |	6.9	2.3	4.3	4.1	3.8 |	4.1
	Labour force participation rates	43.5	37.6	36.3	35.3 |	35.6	73.9	75.1	75.8	76.3 |	77.5	33.4	29.2	30.1	31.5 |	31.8
	Employment/population ratios	29.8	27.4	26.7	26.0 |	27.2	68.2	69.2	70.1	70.8 |	72.1	32.6	28.0	28.9	30.3 |	30.5
Japan	Unemployment rates	4.3	9.7	10.0	10.2	9.5	1.6	4.4	4.9	4.7	4.4	2.7	5.7	5.8	5.5	4.4
	Labour force participation rates	44.1	46.5	45.6	44.8	44.2	80.9	82.2	82.0	82.1	82.2	64.7	65.8	65.4	65.8	66.0
	Employment/population ratios	42.2	42.0	41.0	40.3	40.0	79.6	78.6	78.0	78.3	78.6	62.9	62.0	61.6	62.1	63.0
Korea	Unemployment rates	7.0	9.7	8.1	9.6	10.0	1.9	3.4	2.8	3.0	3.1	0.8	2.1	1.6	1.9	2.1
	Labour force participation rates	35.0	33.3	34.2	34.0	34.7	74.6	75.1	75.5	75.3	75.7	62.4	59.5	60.4	58.9	59.7
	Employment/population ratios	32.5	30.1	31.5	30.8	31.2	73.2	72.6	73.4	73.1	73.4	61.9	58.3	59.5	57.8	58.5
Luxembourg	Unemployment rates	3.6 |	6.3	7.0	11.5	18.3	1.4 |	1.4	2.4	3.2	4.0	0.6 |	0.3	0.2	1.2	1.6
	Labour force participation rates	44.9 |	34.5	34.7	29.9	26.2	72.8 |	79.8	81.0	81.4	81.9	28.4 |	24.9	27.9	30.4	31.3
	Employment/population ratios	43.3 |	32.3	32.3	26.4	21.4	71.8 |	78.7	79.1	78.8	78.7	28.2 |	24.8	27.9	30.0	30.8
Mexico[c]	Unemployment rates	5.4	4.1	4.9	5.3	6.4	2.2	1.6	1.8	1.9	2.3	1.0	1.0	1.3	1.0	1.2
	Labour force participation rates	52.2	49.7	48.4	47.2	48.3	65.9	68.9	69.6	69.5	71.3	54.6	52.6	53.8	54.4	55.7
	Employment/population ratios	49.3	47.7	46.0	44.7	45.2	64.4	67.8	68.4	68.1	69.6	54.1	52.1	53.1	53.8	55.0
Netherlands	Unemployment rates	11.1 |	4.4	4.6	6.6	8.0	7.2 |	1.7	2.2	3.1	4.0	3.8 |	1.5	2.1	2.2	3.6
	Labour force participation rates	59.6 |	73.6	73.9	73.2	72.0	76.0 |	84.2	84.7	85.1	86.0	30.9 |	39.9	42.9	45.9	46.3
	Employment/population ratios	53.0 |	70.4	70.5	68.4	66.2	70.6 |	82.8	82.9	82.4	82.5	29.7 |	39.3	42.0	44.9	44.6
New Zealand	Unemployment rates	14.1	11.8	11.5	10.2	9.3	6.1	4.1	4.0	3.5	2.9	4.6	3.5	3.2	3.6	2.5
	Labour force participation rates	68.8	63.3	64.0	62.8	62.6	81.2	82.6	82.9	82.7	83.2	43.8	62.9	65.5	66.7	68.9
	Employment/population ratios	59.1	55.8	56.6	56.3	56.8	76.3	79.3	79.6	79.8	80.8	41.8	60.7	63.4	64.3	67.2
Norway[b]	Unemployment rates	11.8 |	10.5	11.5	11.7	11.7	4.3 |	2.6	3.0	3.8	3.8	2.5 |	1.6	1.8	1.4	1.1
	Labour force participation rates	60.5 |	63.1	64.2	62.6	61.6	85.9 |	87.4	87.1	86.2	86.5	63.1 |	68.5	69.7	69.5	68.8
	Employment/population ratios	53.4 |	56.5	56.9	55.3	54.4	82.2 |	85.1	84.4	82.9	83.1	61.5 |	67.4	68.4	68.6	68.0
Poland[a]	Unemployment rates	27.8	41.0	43.9	43.0	40.8	11.9	15.8	17.5	17.3	16.9	7.1	9.7	10.5	11.2	11.6
	Labour force participation rates	44.8	37.4	35.6	34.4	33.9	84.9	82.2	81.8	81.7	82.2	38.1	32.1	31.2	32.2	31.7
	Employment/population ratios	32.3	22.1	20.0	19.6	20.0	74.8	69.3	67.5	67.6	68.3	35.4	29.0	27.9	28.6	28.0

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Table C. **Employment/population ratios, activity and unemployment rates by selected age groups** *(cont.)*

Both sexes (percentages)

		15 to 24					25 to 54					55 to 64				
		1990	2001	2002	2003	2004	1990	2001	2002	2003	2004	1990	2001	2002	2003	2004
Portugal	Unemployment rates	9.6 |	9.4	11.5	14.6	15.3	3.8 |	3.5	4.5	5.7	6.1	2.1 |	3.2	3.7	4.3	5.6
	Labour force participation rates	60.6 |	47.1	47.3	45.0	43.6	81.5 |	85.2	85.4	85.9	86.3	48.0 |	51.7	52.9	53.4	53.2
	Employment/population ratios	54.8 |	42.7	41.9	38.4	36.9	78.4 |	82.2	81.5	81.0	81.1	47.0 |	50.0	50.9	51.1	50.3
Slovak Republic	Unemployment rates	. .	39.1	37.4	33.1	32.7	. .	15.9	15.3	15.1	16.0	. .	12.3	15.3	13.6	15.4
	Labour force participation rates	. .	45.8	43.5	41.2	39.4	. .	88.9	88.6	89.5	88.9	. .	25.4	27.0	28.5	31.7
	Employment/population ratios	. .	27.9	27.2	27.6	26.5	. .	74.8	75.1	76.0	74.7	. .	22.3	22.9	24.6	26.8
Spain[b]	Unemployment rates	30.2	20.8	22.2	22.7	22.0	13.1	9.3	10.2	10.2	9.8	8.0	6.3	7.1	6.9	7.1
	Labour force participation rates	54.9	46.8	47.0	47.6	49.2	70.7	76.5	78.1	79.4	80.6	40.1	41.9	42.7	43.8	44.4
	Employment/population ratios	38.3	37.1	36.6	36.8	38.4	61.4	69.5	70.1	71.3	72.7	36.9	39.2	39.7	40.8	41.3
Sweden[b]	Unemployment rates	4.6	11.8 |	12.9	13.8	17.0	1.3 |	4.1	4.2	4.9	5.5	1.5 |	5.0	4.7	4.8	4.9
	Labour force participation rates	69.3	54.2 |	53.4	52.3	51.5	92.8 |	88.1	87.9	87.8	87.7	70.5 |	70.5	71.7	72.5	73.1
	Employment/population ratios	66.1	47.8 |	46.5	45.1	42.8	91.6 |	84.6	84.2	83.5	82.9	69.5 |	67.0	68.4	69.0	69.5
Switzerland[c]	Unemployment rates	3.2	5.6	5.6	8.5	7.7	1.6	2.1	2.7	3.7	4.0	1.1	1.7	2.0	2.5	3.2
	Labour force participation rates	71.6	67.8	69.3	69.4	67.1	85.9	87.9	88.3	88.1	88.2	63.8	68.2	65.9	67.4	67.3
	Employment/population ratios	69.3	64.0	65.4	63.5	62.0	84.5	86.1	86.0	84.8	84.7	63.1	67.1	64.6	65.7	65.1
Turkey	Unemployment rates	16.0	16.2	19.2	20.5	19.7	5.4	6.7	8.7	8.7	8.7	3.1	2.3	3.5	3.7	3.1
	Labour force participation rates	54.7	42.1	40.9	38.4	39.3	65.1	59.5	59.8	59.1	59.2	44.1	36.8	36.6	34.0	34.1
	Employment/population ratios	45.9	35.3	33.0	30.5	31.6	61.6	55.5	54.6	54.0	54.1	42.7	35.9	35.3	32.7	33.1
United Kingdom[b]	Unemployment rates	10.1	10.5	11.0	11.5 |	10.9	5.8	3.9	4.1	3.8 |	3.6	7.2	3.3	3.5	3.3 |	3.1
	Labour force participation rates	78.0	68.2	68.6	67.6 |	67.4	83.9	83.9	84.0	84.1 |	83.8	53.0	54.0	55.2	57.5 |	58.0
	Employment/population ratios	70.1	61.1	61.0	59.8 |	60.1	79.1	80.7	80.6	80.9 |	80.7	49.2	52.2	53.3	55.5 |	56.2
United States[b]	Unemployment rates	11.2 |	10.6	12.0	12.4	11.8	4.6 |	3.8	4.8	5.0	4.6	3.3 |	3.0	3.9	4.1	3.8
	Labour force participation rates	67.3 |	64.5	63.3	61.6	61.1	83.5 |	83.7	83.3	83.0	82.8	55.9 |	60.4	61.9	62.4	62.3
	Employment/population ratios	59.8 |	57.7	55.7	53.9	53.9	79.7 |	80.5	79.3	78.8	79.0	54.0 |	58.6	59.5	59.9	59.9
EU-15[d]	Unemployment rates	16.3 |	14.0	14.7 |	15.3 |	15.6	6.8 |	6.5	6.9 |	7.2 |	7.3	5.7 |	6.4	6.1 |	5.7 |	6.3
	Labour force participation rates	55.3 |	48.8	48.6 |	47.8 |	48.2	78.7 |	82.4	82.8 |	83.2 |	83.9	40.0 |	41.2	42.5 |	43.9 |	44.6
	Employment/population ratios	46.3 |	42.0	41.5 |	40.5 |	40.7	73.4 |	77.1	77.2 |	77.3 |	77.8	37.8 |	38.6	39.9 |	41.4 |	41.8
EU-19[d]	Unemployment rates	17.2 |	16.7	17.4 |	17.9 |	18.0	7.4 |	7.4	7.8 |	8.1 |	8.2	5.8 |	6.5	6.3 |	6.0 |	6.6
	Labour force participation rates	54.0 |	47.0	46.5 |	45.6 |	45.7	79.5 |	82.5	82.8 |	83.2 |	83.8	39.4 |	40.0	41.2 |	42.6 |	43.3
	Employment/population ratios	44.7 |	39.1	38.4 |	37.4 |	37.5	73.6 |	76.4	76.3 |	76.4 |	76.9	37.1 |	37.4	38.6 |	40.1 |	40.4
OECD Europe[d]	Unemployment rates	16.7 |	16.4	17.4 |	18.0 |	18.0	7.1 |	7.2	7.8 |	8.0 |	8.1	5.4 |	6.0	6.0 |	5.7 |	6.2
	Labour force participation rates	54.4 |	46.5	45.9 |	44.7 |	44.9	78.1 |	79.8	80.1 |	80.2 |	80.7	40.4 |	40.4	41.5 |	42.6 |	43.2
	Employment/population ratios	45.3 |	38.8	37.9 |	36.6 |	36.8	72.6 |	74.1	73.9 |	73.8 |	74.1	38.2 |	38.0	39.0 |	40.2 |	40.5
Total OECD[d]	Unemployment rates	12.3 |	12.2	13.1 |	13.5 |	13.4	5.2 |	5.4	6.0 |	6.1 |	6.0	3.9 |	4.7	4.9 |	4.8 |	4.7
	Labour force participation rates	55.5 |	51.4	50.7 |	49.7 |	49.9	79.2 |	80.2	80.3 |	80.2 |	80.6	49.2 |	50.6	51.7 |	52.6 |	53.1
	Employment/population ratios	48.7 |	45.1	44.1 |	43.0 |	43.2	75.1 |	75.9	75.5 |	75.3 |	75.7	47.3 |	48.2	49.1 |	50.1 |	50.7

Table C. **Employment/population ratios, activity and unemployment rates by selected age groups** *(cont.)*

Men (percentages)

		15 to 24					25 to 54					55 to 64				
		1990	2001	2002	2003	2004	1990	2001	2002	2003	2004	1990	2001	2002	2003	2004
Australia	Unemployment rates	13.9	13.6	13.6	12.0	12.2	4.9	5.6	4.8	4.4	3.9	6.3	5.6	4.8	4.1	4.2
	Labour force participation rates	73.0	70.6	69.6	69.0	68.3	93.1	90.0	90.1	89.3	89.1	63.2	59.9	61.0	63.3	64.4
	Employment/population ratios	62.8	61.0	60.2	60.8	59.9	88.5	85.0	85.8	85.4	85.7	59.2	56.6	58.1	60.7	61.7
Austria	Unemployment rates	. .	6.2	7.7	8.1	11.3	. .	3.4	4.6	4.4	4.3	. .	5.7	6.7	7.3	4.7
	Labour force participation rates	. .	59.3	60.5	59.7	61.2	. .	93.5	93.9	94.3	91.4	. .	40.2	40.8	42.3	38.6
	Employment/population ratios	. .	55.6	55.9	54.9	54.3	. .	90.3	89.6	90.1	87.4	. .	37.9	38.0	39.2	36.8
Belgium	Unemployment rates	10.1 |	14.3	16.0	20.1	15.8	4.0 |	4.8	5.4	6.6	6.0	3.1 |	3.9	3.3	1.8	4.1
	Labour force participation rates	37.0 |	37.2	37.3	38.1	35.8	92.2 |	90.9	91.2	90.4	91.1	35.4 |	36.6	36.3	39.4	41.0
	Employment/population ratios	33.3 |	31.8	31.3	30.4	30.2	88.5 |	86.5	86.2	84.4	85.7	34.3 |	35.1	35.1	38.7	39.3
Canada	Unemployment rates	13.6	14.5	15.3	15.3	14.9	7.2	6.3	6.9	6.6	6.1	6.3	6.0	6.6	6.9	6.1
	Labour force participation rates	72.4	66.1	67.8	68.3	67.9	93.1	91.1	91.5	91.6	91.6	64.0	60.9	63.1	65.3	66.0
	Employment/population ratios	62.6	56.6	57.4	57.9	57.8	86.4	85.3	85.2	85.6	86.0	60.0	57.3	58.9	60.8	62.0
Czech Republic	Unemployment rates	. .	16.0	15.1	16.6	21.1	. .	5.5	4.9	5.0	5.6	. .	4.4	3.5	4.0	4.9
	Labour force participation rates	. .	48.2	44.8	42.1	40.0	. .	95.0	94.9	94.5	94.6	. .	55.0	59.4	59.9	60.1
	Employment/population ratios	. .	40.5	38.0	35.1	31.6	. .	89.7	90.2	89.7	89.2	. .	52.6	57.3	57.5	57.2
Denmark	Unemployment rates	11.4 |	7.3	8.8	10.6	8.5	7.5 |	2.9	3.3	4.4	4.4	5.1 |	4.0	5.0	4.0	5.5
	Labour force participation rates	76.5 |	69.4	70.6	68.1	69.0	94.5 |	91.4	91.7	92.0	91.3	69.1 |	65.6	67.6	70.8	73.3
	Employment/population ratios	67.8 |	64.3	64.4	60.9	63.1	87.4 |	88.8	88.7	88.0	87.3	65.6 |	63.0	64.2	68.0	69.3
Finland	Unemployment rates	10.4	19.6	20.9	21.7	22.2	2.5	6.9	7.4	7.5	7.0	1.8	8.9	8.2	7.9	7.6
	Labour force participation rates	58.1	50.0	48.8	48.5	47.4	92.9	91.0	90.6	90.1	90.0	47.1	51.2	52.6	55.8	55.7
	Employment/population ratios	52.1	40.2	38.6	38.0	36.9	90.6	84.7	84.0	83.3	83.7	46.3	46.7	48.3	51.4	51.5
France	Unemployment rates	16.8	16.0	17.5 |	18.1	20.8	5.7	6.0	6.7 |	7.1	7.4	6.0	5.5	5.9 |	6.2	5.5
	Labour force participation rates	47.7	39.2	41.0 |	40.6	41.4	95.6	94.0	93.9 |	93.7	93.6	39.3	36.9	40.5 |	42.3	44.3
	Employment/population ratios	39.7	32.9	33.9 |	33.2	32.8	90.1	88.3	87.6 |	87.0	86.7	37.0	34.9	38.1 |	39.7	41.9
Germany	Unemployment rates	4.0 |	9.3	11.4	12.3	13.3	3.7 |	7.1	8.2	9.4	9.8	7.0 |	11.1	10.3	9.4	10.9
	Labour force participation rates	61.2 |	54.3	52.3	49.9	52.2	90.2 |	93.5	93.3	93.0	93.3	55.9 |	52.2	52.6	52.0	54.8
	Employment/population ratios	58.7 |	49.3	46.4	43.8	45.3	86.9 |	86.9	85.6	84.2	84.2	52.0 |	46.4	47.2	47.1	48.8
Greece	Unemployment rates	15.1 |	21.0	19.0	18.0	18.7	3.2 |	5.5	5.4	5.2	5.4	1.8 |	4.1	3.5	3.0	4.0
	Labour force participation rates	44.1 |	38.5	39.6	38.9	40.4	94.3 |	94.0	94.3	94.2	94.7	59.5 |	57.0	57.3	60.1	58.7
	Employment/population ratios	37.4 |	30.4	32.1	31.9	32.9	91.3 |	88.8	89.1	89.3	89.6	58.4 |	54.6	55.3	58.3	56.3
Hungary[a]	Unemployment rates	22.0 |	12.2	13.2	13.8	16.2	9.6 |	5.7	5.4	5.5	5.3	5.6 |	3.7	3.9	2.9	3.2
	Labour force participation rates	47.5 |	39.2	36.0	34.4	31.4	89.9 |	84.2	84.3	84.8	85.0	35.3 |	35.4	36.9	39.0	39.7
	Employment/population ratios	37.1 |	34.4	31.2	29.7	26.3	81.3 |	79.4	79.7	80.1	80.5	33.3 |	34.1	35.4	37.9	38.4

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Table C. **Employment/population ratios, activity and unemployment rates by selected age groups** *(cont.)*

Men (percentages)

		15 to 24					25 to 54					55 to 64				
		1990	2001	2002	2003	2004	1990	2001	2002	2003	2004	1990	2001	2002	2003	2004
Iceland[b, c]	Unemployment rates	5.8	5.4	9.7	9.4 |	9.3	1.8	1.3	2.5	2.4 |	1.9	1.0	2.0	1.7	2.9 |	2.9
	Labour force participation rates	60.1	70.3	65.4	75.5 |	71.8	97.0	96.3	96.6	94.8 |	94.2	93.5	92.8	91.5	90.2 |	89.7
	Employment/population ratios	56.6	66.6	59.0	68.5 |	65.1	95.2	95.0	94.2	92.5 |	92.4	92.6	91.0	89.9	87.6 |	87.1
Ireland	Unemployment rates	19.0 |	6.4	8.7	8.6	8.7	12.0 |	3.4	4.1	4.4	4.5	8.5 |	2.6	2.5	2.6	2.9
	Labour force participation rates	53.2 |	55.1	53.1	53.4	52.8	91.8 |	91.8	91.3	90.9	91.7	65.0 |	66.4	66.8	66.5	66.6
	Employment/population ratios	43.1 |	51.5	48.5	48.8	48.2	80.9 |	88.7	87.6	87.0	87.6	59.5 |	64.6	65.1	64.8	64.7
Italy	Unemployment rates	26.2	23.2	22.6	23.0 |	20.7	4.8	5.8	5.6	5.4 |	5.2	2.2	4.4	4.0	3.6 |	4.1
	Labour force participation rates	46.1	42.4	41.4	40.5 |	39.3	94.1	90.7	91.0	91.5 |	91.3	53.0	42.3	42.9	44.4 |	44.0
	Employment/population ratios	34.0	32.6	32.0	31.2 |	31.2	89.6	85.5	86.0	86.5 |	86.5	51.9	40.4	41.2	42.8 |	42.2
Japan	Unemployment rates	4.5	10.7	11.3	11.6	10.6	1.4	4.2	4.7	4.6	4.3	3.4	7.0	7.1	6.7	5.3
	Labour force participation rates	43.4	46.5	46.2	45.2	44.0	97.5	96.9	96.5	96.4	96.2	83.3	83.4	82.8	83.0	82.5
	Employment/population ratios	41.4	41.6	41.0	40.0	39.4	96.2	92.8	92.0	92.0	92.1	80.4	77.5	76.8	77.4	78.1
Korea	Unemployment rates	9.5	12.1	9.9	11.3	11.7	2.5	4.0	3.3	3.3	3.4	1.2	2.9	2.1	2.4	2.6
	Labour force participation rates	28.4	27.6	28.4	28.0	28.6	94.6	91.6	91.7	91.9	91.6	77.2	71.7	73.7	72.6	73.5
	Employment/population ratios	25.7	24.3	25.6	24.8	25.3	92.2	87.9	88.7	88.9	88.4	76.3	69.6	72.1	70.8	71.6
Luxembourg	Unemployment rates	2.7 |	7.1	5.3	10.7	13.7	1.0 |	1.1	1.8	2.6	2.7	0.6 |	0.5	0.3	0.8	1.5
	Labour force participation rates	45.7 |	36.8	38.2	30.3	27.0	95.0 |	94.2	95.0	94.5	95.2	43.2 |	35.5	37.7	39.4	39.1
	Employment/population ratios	44.5 |	34.2	36.1	27.1	23.3	94.0 |	93.2	93.3	92.0	92.5	42.9 |	35.3	37.6	39.1	38.5
Mexico[c]	Unemployment rates	5.2	3.6	4.5	4.9	5.6	1.5	1.6	1.8	2.0	2.3	1.0	1.2	1.7	1.2	1.3
	Labour force participation rates	71.2	66.2	64.4	63.0	64.7	96.8	96.2	96.2	96.2	96.4	85.9	80.4	81.1	81.0	81.5
	Employment/population ratios	67.5	63.8	61.5	59.9	61.0	95.4	94.6	94.5	94.3	94.3	85.1	79.5	79.7	80.0	80.5
Netherlands	Unemployment rates	10.3 |	4.2	4.3	6.7	7.9	4.9 |	1.4	1.9	3.0	3.7	2.8 |	1.7	2.3	2.2	3.9
	Labour force participation rates	60.0 |	74.7	75.1	73.7	72.2	93.4 |	94.0	93.8	93.6	93.7	45.8 |	51.4	56.2	58.7	58.7
	Employment/population ratios	53.8 |	71.5	71.8	68.7	66.5	88.8 |	92.7	92.0	90.7	90.2	44.5 |	50.5	54.9	57.4	56.4
New Zealand	Unemployment rates	14.8	12.1	11.6	10.1	8.7	6.6	4.0	3.8	3.2	2.5	5.0	4.0	3.2	3.4	2.4
	Labour force participation rates	72.7	66.3	66.8	65.4	65.9	93.5	91.3	91.5	91.0	91.6	56.8	74.3	77.3	76.2	78.2
	Employment/population ratios	61.9	58.3	59.1	58.8	60.1	87.4	87.6	88.0	88.1	89.4	54.0	71.3	74.8	73.6	76.4
Norway[b]	Unemployment rates	12.4 |	10.6	12.4	12.7	12.6	4.7 |	2.7	3.2	4.3	4.3	3.0 |	1.7	1.6	1.6	1.5
	Labour force participation rates	63.9 |	64.8	64.7	63.2	61.9	92.3 |	91.4	91.0	89.9	90.1	72.8 |	73.6	74.0	74.7	74.3
	Employment/population ratios	56.0 |	57.9	56.6	55.2	54.1	88.0 |	88.9	88.1	86.0	86.2	70.7 |	72.3	72.8	73.5	73.2
Poland[a]	Unemployment rates	25.9	40.1	43.5	42.1	39.0	10.6	14.2	16.5	16.5	16.0	7.9	10.4	11.2	12.0	12.9
	Labour force participation rates	49.2	40.5	39.1	38.2	37.7	91.5	88.0	87.6	87.4	88.0	48.1	41.5	40.3	41.8	41.3
	Employment/population ratios	36.5	24.2	22.1	22.1	23.0	81.8	75.5	73.1	73.0	74.0	44.3	37.1	35.8	36.8	36.0

Table C. **Employment/population ratios, activity and unemployment rates by selected age groups** *(cont.)*

Men (percentages)

		15 to 24					25 to 54					55 to 64				
		1990	2001	2002	2003	2004	1990	2001	2002	2003	2004	1990	2001	2002	2003	2004
Portugal	Unemployment rates	7.1 |	7.3	9.7	12.6	13.5	2.3 |	2.7	3.5	4.9	5.1	2.2 |	3.2	3.7	4.8	6.0
	Labour force participation rates	66.5 |	52.1	52.3	48.5	47.6	94.3 |	92.7	92.6	92.5	92.2	66.5 |	63.3	63.5	64.7	62.8
	Employment/population ratios	61.8 |	48.3	47.2	42.4	41.2	92.1 |	90.2	89.4	88.0	87.4	65.0 |	61.3	61.2	61.6	59.1
Slovak Republic	Unemployment rates	. .	41.8	38.9	34.3	34.2	. .	16.0	14.9	14.5	14.6	. .	12.6	15.6	14.7	15.6
	Labour force participation rates	. .	50.2	47.7	45.2	43.1	. .	94.0	93.4	94.1	93.7	. .	43.0	46.3	48.1	51.9
	Employment/population ratios	. .	29.2	29.2	29.7	28.4	. .	79.0	79.5	80.5	80.0	. .	37.6	39.1	41.0	43.8
Spain[b]	Unemployment rates	23.2	16.1	18.4	19.4	18.7	9.3	6.3	6.8	6.9	6.9	8.3	5.6	5.9	5.8	6.0
	Labour force participation rates	61.8	52.7	52.4	53.1	54.8	94.4	91.6	92.1	92.4	92.5	62.5	61.4	62.2	62.9	62.7
	Employment/population ratios	47.5	44.2	42.8	42.8	44.5	85.7	85.9	85.8	86.0	86.1	57.3	57.9	58.6	59.3	58.9
Sweden[b]	Unemployment rates	4.8	12.9 |	13.8	14.7	17.8	1.3 |	4.3	4.6	5.3	5.7	1.3 |	5.4	5.3	5.8	5.8
	Labour force participation rates	69.5	54.2 |	53.2	52.0	51.4	94.7 |	90.5	90.2	90.1	90.1	75.5 |	73.5	74.8	75.4	76.0
	Employment/population ratios	66.2	47.2 |	45.8	44.3	42.2	93.5 |	86.6	86.0	85.3	85.0	74.5 |	69.6	70.8	71.1	71.6
Switzerland[c]	Unemployment rates	3.0	5.7	7.2	8.3	8.0	0.8	1.0	2.2	3.4	3.5	1.4	1.8	2.1	2.5	3.1
	Labour force participation rates	72.9	68.6	70.4	70.5	68.2	97.8	96.3	96.0	95.6	95.7	86.4	82.4	78.9	79.7	79.1
	Employment/population ratios	70.7	64.7	65.4	64.7	62.7	97.0	95.3	93.9	92.4	92.3	85.2	81.0	77.3	77.7	76.7
Turkey	Unemployment rates	16.6	17.2	20.3	21.5	20.1	5.2	7.1	9.0	8.9	9.0	4.0	3.1	4.6	5.0	4.1
	Labour force participation rates	71.8	56.3	53.3	50.6	53.1	94.2	88.7	88.2	87.7	89.2	61.3	52.7	50.8	47.1	49.0
	Employment/population ratios	59.9	46.7	42.4	39.7	42.5	89.3	82.4	80.2	79.9	81.1	58.8	51.1	48.5	44.7	47.0
United Kingdom[b]	Unemployment rates	11.1	12.0	12.9	13.2 |	11.8	5.6	4.1	4.4	4.2 |	3.8	8.4	4.3	4.3	4.3 |	3.9
	Labour force participation rates	83.5	72.0	72.3	71.1 |	70.2	94.8	91.3	91.2	91.4 |	91.0	68.1	64.4	65.0	67.9 |	68.0
	Employment/population ratios	74.2	63.4	63.0	61.7 |	61.9	89.5	87.6	87.2	87.6 |	87.5	62.4	61.6	62.1	65.0 |	65.4
United States[b]	Unemployment rates	11.6 |	11.4	12.8	13.4	12.6	4.6 |	3.7	4.8	5.2	4.6	3.8 |	3.3	4.3	4.5	3.9
	Labour force participation rates	71.8 |	67.0	65.5	63.9	63.6	93.4 |	91.3	91.0	90.6	90.5	67.8 |	68.3	69.2	68.7	68.7
	Employment/population ratios	63.5 |	59.4	57.1	55.3	55.5	89.1 |	87.9	86.6	85.9	86.3	65.2 |	66.0	66.3	65.6	66.0
EU-15[d]	Unemployment rates	14.2 |	13.2	14.4 |	15.2 |	15.3	5.2 |	5.4	6.0 |	6.4 |	6.5	5.7 |	6.3	6.1 |	5.8 |	6.2
	Labour force participation rates	58.9 |	52.6	52.4 |	51.4 |	51.8	93.6 |	92.4	92.4 |	92.4 |	92.4	55.4 |	51.9	53.1 |	54.4 |	55.2
	Employment/population ratios	50.5 |	45.6	44.9 |	43.6 |	43.9	88.7 |	87.4	86.9 |	86.5 |	86.4	52.3 |	48.6	49.8 |	51.3 |	51.8
EU-19[d]	Unemployment rates	15.2 |	16.0	17.2 |	17.8 |	17.7	5.8 |	6.3	6.9 |	7.3 |	7.3	5.9 |	6.5	6.4 |	6.1 |	6.6
	Labour force participation rates	57.7 |	50.8	50.3 |	49.2 |	49.4	93.3 |	91.9	91.9 |	91.9 |	91.9	54.3 |	50.9	52.0 |	53.3 |	54.0
	Employment/population ratios	48.9 |	42.6	41.6 |	40.5 |	40.6	87.9 |	86.1	85.5 |	85.2 |	85.1	51.1 |	47.5	48.7 |	50.1 |	50.4
OECD Europe[d]	Unemployment rates	15.2 |	16.0	17.5 |	18.2 |	17.9	5.7 |	6.3	7.1 |	7.4 |	7.5	5.5 |	6.1	6.1 |	5.9 |	6.3
	Labour force participation rates	60.0 |	52.1	51.2 |	49.8 |	50.4	93.5 |	91.6	91.5 |	91.4 |	91.6	55.5 |	51.7	52.5 |	53.5 |	54.2
	Employment/population ratios	50.8 |	43.8	42.2 |	40.8 |	41.4	88.2 |	85.8	85.0 |	84.6 |	84.7	52.5 |	48.6	49.3 |	50.3 |	50.8
Total OECD[d]	Unemployment rates	11.8 |	12.3	13.5 |	13.9 |	13.6	4.4 |	4.9	5.6 |	5.8 |	5.7	4.3 |	5.1	5.4 |	5.2 |	5.0
	Labour force participation rates	60.8 |	56.4	55.6 |	54.4 |	54.8	94.2 |	92.4	92.3 |	92.1 |	92.1	65.0 |	62.8	63.6 |	64.2 |	64.7
	Employment/population ratios	53.7 |	49.5	48.1 |	46.8 |	47.4	90.0 |	87.8	87.1 |	86.7 |	86.9	62.2 |	59.5	60.2 |	60.8 |	61.5

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Table C. **Employment/population ratios, activity and unemployment rates by selected age groups** *(cont.)*

Women (percentages)

		15 to 24					25 to 54					55 to 64				
		1990	2001	2002	2003	2004	1990	2001	2002	2003	2004	1990	2001	2002	2003	2004
Australia	Unemployment rates	12.4	12.2	11.8	11.1	11.1	5.5	5.0	4.8	4.7	4.3	3.0	3.3	1.9	3.5	3.3
	Labour force participation rates	67.7	67.4	66.8	66.3	66.2	66.6	71.4	71.9	72.0	72.0	24.9	37.0	38.8	40.8	43.1
	Employment/population ratios	59.3	59.2	58.9	58.9	58.8	62.9	67.8	68.4	68.6	68.9	24.2	35.7	38.0	39.4	41.7
Austria	Unemployment rates	. .	5.8	6.6	6.8	10.7	. .	3.8	4.3	3.9	4.4	. .	5.2	3.8	4.1	4.1
	Labour force participation rates	. .	50.1	51.0	49.9	51.1	. .	76.9	79.1	79.8	79.4	. .	18.3	19.3	20.0	19.3
	Employment/population ratios	. .	47.2	47.7	46.5	45.6	. .	74.0	75.8	76.7	75.8	. .	17.4	18.6	19.1	18.5
Belgium	Unemployment rates	19.2 |	16.6	15.2	17.5	19.5	10.3 |	6.1	7.2	7.4	7.4	5.0 |	0.9	3.8	1.3	2.8
	Labour force participation rates	34.1 |	30.0	30.2	28.8	32.2	60.8 |	70.7	72.0	73.1	74.3	9.9 |	15.8	17.4	18.0	21.8
	Employment/population ratios	27.5 |	25.0	25.7	23.8	25.9	54.5 |	66.4	66.8	67.7	68.8	9.4 |	15.6	16.7	17.7	21.2
Canada	Unemployment rates	11.0	11.1	11.7	11.9	11.8	7.6	6.0	6.2	6.3	5.9	5.8	5.6	5.8	5.5	5.7
	Labour force participation rates	67.3	63.2	65.3	66.4	66.1	75.4	79.1	80.4	81.1	81.6	34.8	41.8	43.9	47.9	49.0
	Employment/population ratios	59.9	56.2	57.6	58.5	58.4	69.7	74.3	75.4	75.9	76.8	32.8	39.4	41.4	45.3	46.2
Czech Republic	Unemployment rates	. .	17.3	17.3	18.8	19.5	. .	9.1	8.3	9.3	9.3	. .	5.8	4.9	5.2	6.2
	Labour force participation rates	. .	38.0	35.3	34.0	31.5	. .	81.8	81.4	81.0	80.9	. .	24.6	27.3	30.0	31.3
	Employment/population ratios	. .	31.5	29.2	27.6	25.4	. .	74.3	74.6	73.5	73.4	. .	23.2	26.0	28.4	29.4
Denmark	Unemployment rates	11.6 |	9.3	5.2	9.0	7.1	8.4 |	4.1	4.2	5.6	5.1	7.5 |	4.0	4.2	3.8	5.8
	Labour force participation rates	70.4 |	65.0	67.0	63.6	63.9	87.8 |	83.5	84.4	83.6	84.9	45.9 |	51.9	52.1	55.2	57.6
	Employment/population ratios	62.2 |	59.0	63.5	57.9	59.4	80.3 |	80.1	80.8	78.9	80.6	42.4 |	49.8	49.9	53.1	54.2
Finland	Unemployment rates	8.3	20.2	20.5	21.5	19.4	1.5	8.0	7.3	7.0	7.6	2.8	8.8	8.1	7.6	7.0
	Labour force participation rates	56.9	50.8	50.5	49.7	48.7	86.4	85.0	85.4	84.8	84.6	40.8	49.5	51.4	52.4	54.3
	Employment/population ratios	52.2	40.5	40.1	39.0	39.3	85.1	78.2	79.1	78.8	78.1	39.7	45.1	47.3	48.5	50.4
France	Unemployment rates	23.0	20.5	20.8 |	20.1	22.0	10.6	9.7	9.0 |	9.2	9.8	7.2	6.3	4.6 |	5.0	7.1
	Labour force participation rates	41.6	32.3	32.7 |	33.3	33.5	72.2	78.4	78.6 |	79.4	79.8	26.9	28.5	31.0 |	34.5	35.0
	Employment/population ratios	32.0	25.6	25.9 |	26.6	26.1	64.6	70.8	71.5 |	72.1	72.0	25.0	26.7	29.6 |	32.7	32.5
Germany	Unemployment rates	5.0 |	7.1	8.0	8.6	9.7	6.0 |	7.5	8.0	8.8	9.0	9.1 |	12.6	11.7	10.1	12.0
	Labour force participation rates	56.8 |	48.1	47.0	44.9	42.6	63.4 |	77.4	78.1	78.9	82.0	24.7 |	33.6	34.1	34.3	33.8
	Employment/population ratios	54.0 |	44.7	43.2	41.1	38.5	59.6 |	71.6	71.8	72.0	74.6	22.4 |	29.4	30.1	30.9	29.8
Greece	Unemployment rates	32.6 |	35.7	34.7	35.2	35.7	8.6 |	13.5	13.6	12.9	14.4	1.2 |	4.0	4.5	3.5	5.1
	Labour force participation rates	35.3 |	33.9	33.0	31.4	34.1	51.5 |	61.3	63.4	65.1	67.5	24.3 |	23.7	25.3	26.2	25.3
	Employment/population ratios	23.8 |	21.8	21.5	20.3	21.9	47.1 |	53.0	54.8	56.8	57.8	24.0 |	22.7	24.2	25.3	24.0
Hungary[a]	Unemployment rates	15.0 |	10.0	11.9	12.9	14.4	7.8 |	4.5	4.9	5.0	5.6	5.6 |	1.4	1.9	2.7	2.9
	Labour force participation rates	39.7 |	29.9	29.2	27.2	24.3	76.2 |	70.1	69.9	71.0	71.0	15.1 |	15.1	18.0	22.4	25.8
	Employment/population ratios	33.7 |	26.9	25.8	23.7	20.8	70.2 |	67.0	66.5	67.4	67.0	14.3 |	14.9	17.6	21.8	25.0

Table C. **Employment/population ratios, activity and unemployment rates by selected age groups** *(cont.)*

Women (percentages)

		15 to 24					25 to 54					55 to 64				
		1990	2001	2002	2003	2004	1990	2001	2002	2003	2004	1990	2001	2002	2003	2004
Iceland[b, c]	Unemployment rates	3.9	4.3	4.4	7.0 |	6.8	2.6	2.2	2.9	2.5 |	2.0	3.4	1.9	1.0	1.3 |	2.5
	Labour force participation rates	58.8	70.0	62.6	72.8 |	72.5	83.0	88.1	88.3	88.1 |	85.3	81.1	81.7	85.3	80.0 |	78.8
	Employment/population ratios	56.5	67.0	59.8	67.7 |	67.5	80.8	86.2	85.7	85.9 |	83.6	78.3	80.2	84.4	78.9 |	76.9
Ireland	Unemployment rates	16.1 |	5.8	6.5	6.5	7.4	13.5 |	3.0	3.2	3.4	3.1	8.3 |	2.7	2.2	2.0	1.5
	Labour force participation rates	47.3 |	44.9	44.9	45.7	44.6	45.4 |	66.1	67.8	67.4	67.9	19.9 |	29.2	31.4	34.1	34.5
	Employment/population ratios	39.6 |	42.3	41.9	42.7	41.3	39.3 |	64.1	65.6	65.1	65.8	18.2 |	28.4	30.7	33.5	34.0
Italy	Unemployment rates	37.8	32.2	31.4	30.9 |	27.2	12.8	11.1	10.5	10.0 |	9.2	2.6	4.1	4.4	4.3 |	4.0
	Labour force participation rates	40.8	32.6	31.0	29.9 |	31.7	53.9	59.3	60.3	60.9 |	63.6	15.5	16.9	18.1	19.3 |	20.4
	Employment/population ratios	25.4	22.1	21.2	20.6 |	23.1	47.1	52.8	54.0	54.9 |	57.8	15.2	16.2	17.3	18.5 |	19.6
Japan	Unemployment rates	4.1	8.7	8.7	8.7	8.3	2.1	4.7	5.2	4.9	4.5	1.4	3.7	3.6	3.7	3.0
	Labour force participation rates	44.8	46.4	44.8	44.4	44.3	64.2	67.3	67.4	67.7	68.1	47.2	49.2	48.8	49.3	50.1
	Employment/population ratios	43.0	42.4	41.0	40.5	40.6	62.9	64.1	63.9	64.4	65.0	46.5	47.3	47.1	47.5	48.6
Korea	Unemployment rates	5.5	8.1	6.9	8.5	8.9	0.9	2.5	2.0	2.5	2.5	0.3	0.9	0.8	1.1	1.3
	Labour force participation rates	40.7	38.2	39.2	39.4	39.9	54.2	58.2	58.9	58.3	59.5	49.6	48.2	48.0	45.9	46.5
	Employment/population ratios	38.5	35.1	36.5	36.0	36.3	53.7	56.8	57.7	56.8	58.0	49.4	47.8	47.6	45.4	45.9
Luxembourg	Unemployment rates	4.7 |	5.4	9.0	12.4	23.4	2.0 |	1.9	3.2	4.0	5.7	0.6 |	0.0	0.0	2.0	1.9
	Labour force participation rates	44.0 |	32.1	31.2	29.4	25.5	49.7 |	65.0	66.7	68.0	68.5	13.8 |	14.4	18.1	21.3	23.3
	Employment/population ratios	42.0 |	30.3	28.4	25.7	19.5	48.7 |	63.8	64.5	65.3	64.6	13.7 |	14.4	18.1	20.9	22.9
Mexico[c]	Unemployment rates	5.8	5.0	5.6	6.2	7.8	3.8	1.7	1.6	1.8	2.3	1.0	0.5	0.3	0.3	1.0
	Labour force participation rates	34.5	34.3	33.3	31.9	32.7	38.2	45.3	46.5	46.4	49.5	24.4	27.6	29.2	30.1	32.0
	Employment/population ratios	32.5	32.6	31.4	29.9	30.1	36.8	44.6	45.8	45.5	48.3	24.2	27.4	29.1	30.0	31.7
Netherlands	Unemployment rates	11.9 |	4.5	4.8	6.5	8.1	10.9 |	2.1	2.5	3.3	4.4	6.3 |	1.1	1.6	2.0	3.1
	Labour force participation rates	59.2 |	72.4	72.7	72.7	71.8	57.9 |	74.2	75.4	76.5	78.0	16.8 |	28.3	29.4	32.9	33.6
	Employment/population ratios	52.2 |	69.2	69.2	68.0	65.9	51.6 |	72.6	73.5	74.0	74.5	15.8 |	28.0	29.0	32.2	32.5
New Zealand	Unemployment rates	13.2	11.5	11.4	10.4	10.1	5.4	4.1	4.2	3.9	3.3	4.1	2.8	3.3	3.8	2.6
	Labour force participation rates	64.9	60.2	61.0	60.0	59.3	69.2	74.5	74.9	74.9	75.2	30.7	51.8	53.9	57.5	59.6
	Employment/population ratios	56.3	53.3	54.1	53.8	53.3	65.5	71.4	71.7	72.0	72.7	29.4	50.3	52.1	55.3	58.1
Norway[b]	Unemployment rates	11.0 |	10.3	10.5	10.7	10.7	3.9 |	2.5	2.8	3.3	3.3	1.9 |	1.4	1.9	1.2	0.6
	Labour force participation rates	56.9 |	61.3	63.8	62.0	61.3	79.2 |	83.3	82.9	82.3	82.8	53.9 |	63.2	65.3	64.3	63.1
	Employment/population ratios	50.7 |	55.0	57.1	55.4	54.7	76.1 |	81.2	80.6	79.6	80.0	52.8 |	62.3	64.0	63.5	62.7
Poland[a]	Unemployment rates	30.1	42.0	44.4	44.3	43.3	13.5	17.6	18.7	18.3	18.0	6.0	8.7	9.6	10.2	9.5
	Labour force participation rates	40.4	34.4	32.2	30.5	29.9	78.4	76.5	76.1	76.1	76.4	29.6	24.1	23.3	23.9	23.3
	Employment/population ratios	28.2	20.0	17.9	17.0	17.0	67.7	63.1	61.9	62.1	62.7	27.8	22.0	21.1	21.5	21.0
Portugal	Unemployment rates	12.8 |	12.2	13.9	16.9	17.6	5.8 |	4.4	5.6	6.7	7.1	1.8 |	3.2	3.7	3.7	5.1
	Labour force participation rates	54.4 |	42.0	42.2	41.3	39.5	69.4 |	78.1	78.3	79.6	80.6	32.3 |	41.5	43.5	43.5	44.8
	Employment/population ratios	47.5 |	36.9	36.3	34.3	32.5	65.4 |	74.6	74.0	74.2	74.9	31.7 |	40.2	41.9	41.8	42.5

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Table C. **Employment/population ratios, activity and unemployment rates by selected age groups** *(cont.)*

Women (percentages)

		15 to 24					25 to 54					55 to 64				
		1990	2001	2002	2003	2004	1990	2001	2002	2003	2004	1990	2001	2002	2003	2004
Slovak Republic	Unemployment rates	. .	35.7	35.5	31.6	30.8	. .	15.8	15.8	15.7	17.5	. .	11.2	14.4	9.9	15.0
	Labour force participation rates	. .	41.5	39.2	37.1	35.6	. .	83.9	83.9	84.8	84.0	. .	11.0	11.2	12.4	14.8
	Employment/population ratios	. .	26.6	25.3	25.4	24.6	. .	70.7	70.6	71.5	69.3	. .	9.8	9.6	11.2	12.6
Spain[b]	Unemployment rates	39.7	27.0	27.3	27.2	26.4	21.0	13.7	15.1	14.8	13.8	7.1	8.0	9.8	9.3	9.4
	Labour force participation rates	47.7	40.7	41.4	41.9	43.4	46.9	61.2	63.9	66.3	68.3	19.4	23.6	24.4	25.8	27.2
	Employment/population ratios	28.7	29.7	30.1	30.5	32.0	37.1	52.8	54.2	56.5	58.9	18.0	21.8	22.0	23.4	24.6
Sweden[b]	Unemployment rates	4.5	10.7 |	11.9	12.8	16.1	1.2 |	3.8	3.8	4.4	5.2	1.8 |	4.5	4.0	3.8	4.0
	Labour force participation rates	69.1	54.2 |	53.6	52.7	51.6	90.7 |	85.7	85.6	85.4	85.3	65.8 |	67.4	68.7	69.5	70.2
	Employment/population ratios	66.0	48.4 |	47.3	46.0	43.3	89.6 |	82.4	82.4	81.7	80.8	64.7 |	64.3	65.9	66.8	67.4
Switzerland[c]	Unemployment rates	3.4	5.5	3.9	8.7	7.3	2.6	3.4	3.2	4.1	4.6	0.6	1.6	1.9	2.5	3.4
	Labour force participation rates	70.3	66.9	68.1	68.3	66.1	73.7	79.5	80.6	80.5	80.8	43.8	54.5	53.3	55.4	55.7
	Employment/population ratios	67.9	63.2	65.4	62.4	61.2	71.8	76.8	78.0	77.3	77.1	43.5	53.6	52.3	54.0	53.8
Turkey	Unemployment rates	15.0	14.4	17.1	18.9	18.9	5.9	5.5	7.5	8.1	7.5	1.0	0.4	1.2	1.1	0.7
	Labour force participation rates	39.4	28.5	29.0	26.8	26.1	36.0	29.6	30.7	29.8	28.6	26.6	21.5	22.9	21.4	19.8
	Employment/population ratios	33.5	24.4	24.0	21.7	21.1	33.9	28.0	28.4	27.4	26.4	26.4	21.4	22.6	21.2	19.7
United Kingdom[b]	Unemployment rates	9.0	8.7	8.8	9.5 |	9.9	6.0	3.6	3.8	3.3 |	3.4	5.0	1.8	2.3	2.0 |	2.1
	Labour force participation rates	72.4	64.2	64.8	63.9 |	64.6	73.0	76.3	76.7	76.6 |	76.8	38.7	44.0	45.7	47.3 |	48.3
	Employment/population ratios	65.9	58.6	59.0	57.8 |	58.2	68.6	73.6	73.8	74.1 |	74.2	36.7	43.2	44.7	46.4 |	47.3
United States[b]	Unemployment rates	10.7 |	9.6	11.1	11.4	11.0	4.6 |	3.9	4.8	4.8	4.6	2.8 |	2.7	3.5	3.7	3.7
	Labour force participation rates	62.9 |	62.0	61.1	59.2	58.7	74.0 |	76.4	75.9	75.6	75.3	45.2 |	53.2	55.2	56.6	56.3
	Employment/population ratios	56.1 |	56.0	54.3	52.5	52.2	70.6 |	73.4	72.3	72.0	71.8	44.0 |	51.7	53.2	54.5	54.3
EU-15[d]	Unemployment rates	18.8 |	15.0	15.0 |	15.4 |	16.0	9.2 |	7.8	8.0 |	8.1 |	8.3	5.7 |	6.5	6.2 |	5.5 |	6.4
	Labour force participation rates	51.6 |	44.9	44.8 |	44.1 |	44.4	63.7 |	72.3	73.2 |	73.9 |	75.5	25.7 |	31.0	32.3 |	33.8 |	34.5
	Employment/population ratios	41.9 |	38.2	38.1 |	37.3 |	37.3	57.9 |	66.7	67.3 |	67.9 |	69.2	24.3 |	29.0	30.3 |	32.0 |	32.3
EU-19[d]	Unemployment rates	19.6 |	17.6	17.7 |	18.0 |	18.3	9.7 |	8.7	9.0 |	9.1 |	9.2	5.7 |	6.6	6.3 |	5.8 |	6.5
	Labour force participation rates	50.3 |	43.1	42.7 |	41.9 |	41.9	65.5 |	73.0	73.7 |	74.4 |	75.7	25.8 |	29.7	31.0 |	32.5 |	33.1
	Employment/population ratios	40.4 |	35.5	35.1 |	34.3 |	34.2	59.2 |	66.6	67.0 |	67.6 |	68.7	24.3 |	27.8	29.0 |	30.6 |	30.9
OECD Europe[d]	Unemployment rates	18.6 |	16.9	17.3 |	17.8 |	18.1	9.2 |	8.4	8.8 |	8.9 |	9.0	5.1 |	6.0	5.8 |	5.4 |	6.1
	Labour force participation rates	48.9 |	40.7	40.5 |	39.5 |	39.4	62.7 |	68.0	68.6 |	68.9 |	69.8	26.4 |	29.7	31.0 |	32.3 |	32.7
	Employment/population ratios	39.8 |	33.9	33.5 |	32.5 |	32.3	56.9 |	62.3	62.6 |	62.8 |	63.5	25.0 |	28.0	29.2 |	30.6 |	30.7
Total OECD[d]	Unemploment rates	12.8 |	12.0	12.6 |	13.0 |	13.1	6.2 |	6.0	6.4 |	6.5 |	6.4	3.3 |	4.0	4.2 |	4.1 |	4.3
	Labour force participation rates	50.2 |	46.4	45.9 |	44.9 |	44.9	64.3 |	68.2	68.5 |	68.6 |	69.2	34.7 |	39.1	40.4 |	41.7 |	42.2
	Employment/population ratios	43.7 |	40.8	40.1 |	39.1 |	39.0	60.3 |	64.1	64.1 |	64.1 |	64.8	33.5 |	37.5	38.7 |	40.0 |	40.4

a) The year 1990 refers to 1992.
b) Age group 15 to 24 refers to 16 to 24.
c) The year 1990 refers to 1991.
d) For above countries only.

Source: OECD database on Labour Force Statistics (see URLs at the beginning of the Annex). For Austria, Belgium, Denmark, France, Greece, Luxembourg and the Netherlands, data are from the European Union Labour Force Survey.

Statlink: *http://dx.doi.org/10.1787/132811600858*

Table D. **Employment/population ratios, activity and unemployment rates by educational attainment, 2003**

Persons aged 25-64 (percentages)

		Both sexes			Men			Women		
		Less than upper secondary education	Upper secondary education	Tertiary education	Less than upper secondary education	Upper secondary education	Tertiary education	Less than upper secondary education	Upper secondary education	Tertiary education
Australia	Unemployment rates	7.0	4.3	3.0	7.5	3.6	3.2	6.5	5.7	2.8
	Labour force participation rates	65.6	82.3	85.8	78.6	89.8	91.7	56.3	70.2	80.5
	Employment/population ratios	61.0	78.7	83.2	72.7	86.5	88.8	52.6	66.2	78.2
Austria	Unemployment rates	7.9	3.4	2.0	9.0	3.4	2.1	7.0	3.3	1.9
	Labour force participation rates	59.7	78.0	86.7	72.4	84.7	88.7	52.4	70.6	84.0
	Employment/population ratios	55.0	75.4	85.0	65.9	81.8	86.9	48.8	68.3	82.4
Belgium	Unemployment rates	10.7	6.7	3.5	9.6	5.4	3.5	12.5	8.5	3.5
	Labour force participation rates	54.8	78.0	86.7	68.5	86.5	90.5	40.9	69.1	83.0
	Employment/population ratios	48.9	72.8	83.6	61.9	81.8	87.2	35.8	63.2	80.1
Canada	Unemployment rates	10.9	6.5	5.2	10.8	6.5	5.3	11.2	6.6	5.1
	Labour force participation rates	63.5	81.6	86.5	75.2	88.1	90.7	50.9	74.5	82.8
	Employment/population ratios	56.6	76.3	82.0	67.1	82.3	85.8	45.2	69.6	78.5
Czech Republic	Unemployment rates	19.8	6.1	2.0	21.7	4.3	1.8	18.7	8.5	2.3
	Labour force participation rates	54.8	80.2	88.2	66.4	88.0	93.9	49.4	72.0	80.9
	Employment/population ratios	43.9	75.3	86.5	52.0	84.2	92.2	40.2	65.8	79.1
Denmark	Unemployment rates	7.2	4.4	4.7	6.2	3.7	4.4	8.6	5.3	5.0
	Labour force participation rates	65.4	83.6	89.4	76.3	87.4	91.7	55.6	79.2	87.2
	Employment/population ratios	60.7	79.9	85.2	71.6	84.2	87.7	50.9	75.0	82.9
Finland	Unemployment rates	11.1	9.2	4.3	10.7	9.5	4.2	11.6	8.8	4.4
	Labour force participation rates	65.3	80.3	89.0	67.7	82.7	91.2	62.6	77.6	87.2
	Employment/population ratios	58.1	72.9	85.1	60.4	74.8	87.3	55.4	70.8	83.3
France	Unemployment rates	12.1	7.5	6.1	11.0	6.1	5.8	13.5	9.4	6.4
	Labour force participation rates	67.1	82.1	87.2	76.7	87.1	91.5	58.8	76.4	83.4
	Employment/population ratios	59.0	76.0	81.9	68.3	81.9	86.2	50.9	69.2	78.0
Germany	Unemployment rates	18.0	10.2	5.2	21.2	10.5	4.7	14.9	9.9	6.0
	Labour force participation rates	61.2	77.7	87.5	77.6	83.9	90.4	50.7	71.5	83.2
	Employment/population ratios	50.2	69.7	83.0	61.2	75.0	86.1	43.2	64.4	78.2
Greece	Unemployment rates	6.6	9.1	5.6	3.9	5.8	4.0	11.1	13.8	7.6
	Labour force participation rates	61.8	73.7	86.6	82.4	89.3	89.6	43.7	58.7	83.2
	Employment/population ratios	57.7	67.0	81.7	79.1	84.1	86.0	38.8	50.6	76.9
Hungary	Unemployment rates	10.6	4.8	1.4	11.9	4.9	1.3	9.4	4.7	1.5
	Labour force participation rates	41.8	75.0	83.9	50.3	81.9	88.3	36.0	67.5	80.1
	Employment/population ratios	37.4	71.4	82.7	44.3	77.9	87.2	32.7	64.3	78.9

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Table D. **Employment/population ratios, activity and unemployment rates by educational attainment, 2003** *(cont.)*

Persons aged 25-64 (percentages)

		Both sexes			Men			Women		
		Less than upper secondary education	Upper secondary education	Tertiary education	Less than upper secondary education	Upper secondary education	Tertiary education	Less than upper secondary education	Upper secondary education	Tertiary education
Iceland	Unemployment rates	. .	. .	. .	. .	. .	. .	. .	. .	. .
	Labour force participation rates	. .	. .	. .	. .	. .	. .	. .	. .	. .
	Employment/population ratios	. .	. .	. .	. .	. .	. .	. .	. .	. .
Ireland	Unemployment rates	6.3	2.9	2.6	6.7	2.7	2.6	5.2	3.2	2.5
	Labour force participation rates	60.4	77.9	88.3	78.0	91.9	93.7	40.1	65.5	83.1
	Employment/population ratios	56.6	75.6	86.1	72.7	89.4	91.3	38.1	63.5	81.1
Italy	Unemployment rates	. .	. .	. .	. .	. .	. .	. .	. .	. .
	Labour force participation rates	. .	. .	. .	. .	. .	. .	. .	. .	. .
	Employment/population ratios	. .	. .	. .	. .	. .	. .	. .	. .	. .
Japan	Unemployment rates	6.7	5.4	3.7	8.0	5.5	3.5	4.6	5.3	4.1
	Labour force participation rates	71.3	77.8	82.3	86.1	94.2	96.2	56.0	63.1	67.0
	Employment/population ratios	66.7	73.6	79.2	79.4	88.9	92.8	53.4	59.8	64.3
Korea	Unemployment rates	2.1	3.2	3.0	2.7	3.5	3.1	1.6	2.6	2.8
	Labour force participation rates	68.0	71.9	78.7	82.6	89.3	92.6	58.8	53.7	57.6
	Employment/population ratios	66.5	69.6	76.4	80.4	86.2	89.7	57.9	52.3	56.0
Luxembourg	Unemployment rates	3.3	2.6	4.2	3.4	1.6	3.6	3.1	3.9	5.0
	Labour force participation rates	63.2	73.6	86.1	78.0	86.0	91.9	50.4	60.8	78.4
	Employment/population ratios	61.1	71.7	82.6	75.4	84.6	88.5	48.8	58.4	74.5
Mexico	Unemployment rates	1.6	1.9	2.6	1.7	2.2	2.7	1.5	1.7	2.4
	Labour force participation rates	64.3	64.4	84.0	94.0	94.6	93.9	38.4	55.8	71.4
	Employment/population ratios	63.3	63.2	81.8	92.4	92.5	91.4	37.8	54.8	69.6
Netherlands	Unemployment rates	. .	. .	. .	. .	. .	. .	. .	. .	. .
	Labour force participation rates	. .	. .	. .	. .	. .	. .	. .	. .	. .
	Employment/population ratios	. .	. .	. .	. .	. .	. .	. .	. .	. .
New Zealand	Unemployment rates	4.9	2.9	3.5	5.0	2.4	3.3	4.8	3.5	3.7
	Labour force participation rates	66.8	84.0	84.3	78.1	91.8	90.4	56.9	75.1	79.5
	Employment/population ratios	63.5	81.6	81.3	74.2	89.6	87.3	54.2	72.5	76.5
Norway	Unemployment rates	3.9	3.6	2.5	4.2	4.0	2.6	3.4	3.1	2.4
	Labour force participation rates	66.6	82.5	91.1	74.8	86.3	93.8	58.4	78.3	88.6
	Employment/population ratios	64.1	79.6	88.8	71.7	82.9	91.3	56.4	75.9	86.5
Poland	Unemployment rates	25.9	17.8	6.6	26.1	16.3	6.6	25.6	19.7	6.7
	Labour force participation rates	51.6	75.0	88.5	62.1	81.6	91.1	42.9	68.0	86.4
	Employment/population ratios	38.2	61.6	82.6	45.9	68.3	85.1	31.9	54.6	80.6

Table D. **Employment/population ratios, activity and unemployment rates by educational attainment, 2003** *(cont.)*

Persons aged 25-64 (percentages)

		Both sexes			Men			Women		
		Less than upper secondary education	Upper secondary education	Tertiary education	Less than upper secondary education	Upper secondary education	Tertiary education	Less than upper secondary education	Upper secondary education	Tertiary education
Portugal	Unemployment rates	5.7	5.1	4.9	5.0	4.2	4.4	6.7	6.0	5.2
	Labour force participation rates	76.6	85.9	91.8	86.3	87.3	93.6	66.9	84.5	90.6
	Employment/population ratios	72.2	81.6	87.3	81.9	83.7	89.5	62.5	79.4	85.9
Slovak Republic	Unemployment rates	44.9	13.5	3.7	48.2	13.2	3.5	42.3	14.0	3.9
	Labour force participation rates	51.8	82.4	90.4	64.3	88.8	94.0	44.7	75.5	87.0
	Employment/population ratios	28.5	71.2	87.1	33.4	77.1	90.7	25.8	65.0	83.6
Spain	Unemployment rates	11.2	9.5	7.7	7.7	6.0	5.4	17.9	14.3	10.1
	Labour force participation rates	63.7	79.9	88.4	83.7	90.5	92.1	44.0	69.0	84.5
	Employment/population ratios	56.5	72.3	81.6	77.3	85.1	87.1	36.2	59.1	76.0
Sweden	Unemployment rates	6.1	5.2	3.9	5.7	5.5	4.9	6.7	4.8	2.9
	Labour force participation rates	71.9	85.7	89.3	77.8	88.2	90.4	64.6	83.2	88.2
	Employment/population ratios	67.5	81.3	85.8	73.3	83.3	86.0	60.2	79.2	85.7
Switzerland	Unemployment rates	6.1	3.3	2.9	5.2	3.1	2.9	6.8	3.4	3.0
	Labour force participation rates	70.5	82.8	92.3	83.7	91.5	95.7	62.1	75.6	85.7
	Employment/population ratios	66.2	80.1	89.6	79.3	88.7	92.9	57.9	73.0	83.1
Turkey	Unemployment rates	8.8	7.8	6.9	9.5	6.7	5.8	6.3	13.6	9.4
	Labour force participation rates	53.8	66.4	80.4	81.8	86.4	86.3	24.3	30.7	69.9
	Employment/population ratios	49.1	61.1	74.9	74.1	80.6	81.4	22.8	26.5	63.3
United Kingdom	Unemployment rates	6.9	3.9	2.4	8.5	4.1	2.7	4.9	3.5	1.9
	Labour force participation rates	58.0	82.8	90.1	67.6	88.2	92.6	49.7	76.6	87.1
	Employment/population ratios	54.0	79.6	88.0	61.9	84.5	90.1	47.2	73.9	85.5
United States	Unemployment rates	9.9	6.1	3.4	9.5	6.7	3.6	10.6	5.4	3.1
	Labour force participation rates	64.1	78.0	85.1	76.1	84.6	90.5	50.5	71.9	80.0
	Employment/population ratios	57.8	73.3	82.2	68.9	78.9	87.3	45.2	68.0	77.5
EU-15[a]	Unemployment rates	10.9	7.3	4.9	9.7	6.9	4.4	12.5	7.9	5.4
	Labour force participation rates	64.2	80.2	88.3	78.6	86.4	91.4	51.6	73.5	84.8
	Employment/population ratios	57.2	74.3	84.0	70.9	80.5	87.3	45.2	67.7	80.2
EU-19[a]	Unemployment rates	12.0	8.7	4.9	10.8	8.1	4.4	13.5	9.6	5.4
	Labour force participation rates	62.7	79.3	88.2	76.7	85.7	91.4	50.5	72.5	84.8
	Employment/population ratios	55.2	72.4	83.9	68.4	78.8	87.3	43.7	65.6	80.2
OECD Europe[a]	Unemployment rates	11.4	8.5	5.0	10.6	7.8	4.5	12.7	9.4	5.5
	Labour force participation rates	59.7	78.9	87.9	78.3	85.9	91.2	42.7	71.2	84.2
	Employment/population ratios	52.9	72.1	83.6	70.0	79.2	87.1	37.3	64.4	79.5
Total OECD[a]	Unemployment rates	7.9	6.9	3.9	7.5	6.8	3.8	8.4	7.0	4.1
	Labour force participation rates	63.0	78.1	85.2	82.1	86.9	92.0	45.5	69.2	78.1
	Employment/population ratios	58.0	72.7	81.9	75.9	81.0	88.4	41.7	64.4	74.9

a) For above countries only.

Source: OECD (2005), *Education at a Glance – OECD Indicators*, Paris (forthcoming).

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Table E. **Incidence and composition of part-time employment**[a]

Percentages

	Part-time employment as a proportion of total employment									
	Men					Women				
	1990	2001	2002	2003	2004	1990	2001	2002	2003	2004
Australia[b, c]	11.3	15.8	16.3	16.5	16.1	38.5	41.7	41.4	42.2	40.8
Austria	. .	2.7	3.1	3.2	3.7	. .	24.8	26.4	26.1	29.6
Belgium	4.4 |	5.7	6.0	5.9	6.3	28.8 |	32.5	32.4	33.4	34.1
Canada	9.2	10.5	11.0	11.1	10.9	26.8	27.0	27.7	27.9	27.2
Czech Republic	. .	1.6	1.4	1.6	1.5		5.4	4.9	5.3	5.2
Denmark	10.2 |	9.3	10.3	10.5	11.6	29.7 |	21.0	23.0	21.9	24.3
Finland	4.8	7.3	7.5	8.0	7.9	10.6	14.0	14.8	15.0	15.0
France	4.5	5.1	5.2 |	4.7	4.8	22.5	24.4	24.1 |	22.7	23.6
Germany	2.3 |	5.1	5.5	5.9	6.3	29.8 |	35.0	35.3	36.3	37.0
Greece	4.0 |	2.6	2.9	2.9	3.1	11.6 |	8.5	10.0	10.2	10.9
Hungary	. .	1.7	1.7	2.1	2.2	. .	4.0	4.3	5.1	5.1
Iceland[d]	7.5	9.7	10.2	. .	. .	39.7	32.6	31.2	. .	. .
Ireland	4.4 |	7.1	7.1	7.5	6.9	21.2 |	33.4	33.4	34.3	35.1
Italy	4.0 |	5.4	4.9	4.9 |	5.9	18.4 |	23.7	23.5	23.6 |	28.8
Japan[b, e]	9.5	13.7	14.0	14.7	14.2	33.4	41.0	41.2	42.2	41.7
Korea[b]	3.1	5.2	5.4	5.3	5.9	6.5	10.4	10.6	11.2	11.9
Luxembourg	1.6 |	2.0	2.3	1.6	1.7	19.1 |	30.1	28.1	30.0	33.3
Mexico	. .	7.5	7.1	7.0	8.1	. .	25.7	25.6	25.7	27.6
Netherlands	13.4 |	13.8	14.7	14.8	15.1	52.5 |	58.1	58.8	59.6	60.2
New Zealand	7.9	10.9	11.3	10.8	10.7	34.8	36.1	36.1	35.8	35.4
Norway	6.9	9.1	9.2	9.9	10.3	39.8	32.7	33.4	33.4	33.2
Poland	. .	7.4	7.5	7.1	7.5	. .	16.6	16.7	16.8	17.5
Portugal	3.9 |	5.1	5.8	5.9	5.8	12.8 |	14.3	14.5	14.9	14.0
Slovak Republic	. .	1.1 |	1.0	1.3	1.3	. .	2.8 |	2.3	3.6	4.5
Spain	1.4 |	2.6	2.4	2.5	2.6	11.5 |	16.6	16.3	16.5	17.2
Sweden	5.3	7.3	7.5	7.9	8.5	24.5	21.0	20.6	20.6	20.8
Switzerland[c, d]	6.8	8.9	7.8	8.1	8.1	42.6	44.7	45.4	45.8	45.3
Turkey	4.9	3.2	3.8	3.6	3.7	18.8	14.0	13.5	12.3	14.8
United Kingdom	5.3 |	8.3	8.9	9.6	10.0	39.5 |	40.3	40.1	40.1	40.4
United States[f]	8.6 |	8.0	8.0	8.0	8.1	20.2 |	18.0	18.5	18.8	18.8
EU-15[g]	4.3 |	5.9	6.1 |	6.3 |	6.6	27.0 |	30.0	30.0 |	30.1 |	31.2
EU-19[g]	4.3 |	5.8 |	6.0 |	6.1 |	6.4	27.0 |	27.5 |	27.5 |	27.6 |	28.7
OECD Europe[g]	4.5 |	5.5 |	5.8 |	5.9 |	6.1	26.9 |	27.0 |	27.0 |	27.1 |	28.2
Total OECD[g]	5.0 |	5.9 |	7.1 |	7.2 |	7.5	19.7 |	20.6 |	24.6 |	24.9 |	25.4

Table E. **Incidence and composition of part-time employment**[a] *(cont.)*

Percentages

	Part-time employment as a proportion of total employment					Women's share in part-time employment				
	1990	2001	2002	2003	2004	1990	2001	2002	2003	2004
Australia[b, c]	22.6	27.2	27.5	27.9	27.1	70.8	67.8	67.0	67.2	67.1
Austria	. .	12.4	13.6	13.6	15.5	. .	88.0	87.6	87.3	86.9
Belgium	13.5 |	17.0	17.2	17.7	18.3	79.8 |	80.7	80.1	81.0	80.6
Canada	17.0	18.1	18.8	18.9	18.5	69.9	68.9	68.8	68.8	68.8
Czech Republic	. .	3.2	2.9	3.2	3.1	. .	72.0	73.4	71.9	72.9
Denmark	19.2 |	14.7	16.2	15.8	17.5	71.1 |	66.0	66.2	64.2	64.5
Finland	7.6	10.5	11.0	11.3	11.3	67.0	63.4	64.6	63.5	63.5
France	12.2	13.8	13.7 |	12.9	13.4	78.6	79.6	79.5 |	80.2	80.6
Germany	13.4 |	18.3	18.8	19.6	20.1	89.7 |	84.6	83.7	83.3	82.8
Greece	6.7 |	4.9	5.6	5.6	6.0	60.8 |	66.4	67.3	68.3	68.6
Hungary	. .	2.8	2.9	3.5	3.6	. .	68.4	69.9	69.0	67.7
Iceland[d]	22.2	20.4	20.1	. .	. .	81.6	74.5	73.1	. .	. .
Ireland	10.0 |	17.9	18.1	18.8	18.7	70.3 |	76.5	77.1	76.7	78.8
Italy	8.9 |	12.2	11.9	12.0 |	14.9	70.5 |	72.6	74.4	74.7 |	76.1
Japan[b, e]	19.2	24.9	25.1	26.0	25.5	70.5	67.5	67.0	66.7	67.4
Korea[b]	4.5	7.3	7.6	7.7	8.4	58.7	58.8	58.3	59.4	59.0
Luxembourg	7.6 |	13.3	12.6	13.3	14.6	86.6 |	90.7	89.1	92.9	93.0
Mexico	. .	13.7	13.5	13.4	15.1	. .	63.8	65.6	65.7	65.1
Netherlands	28.2 |	33.0	33.9	34.5	35.0	70.4 |	76.3	75.4	76.0	76.0
New Zealand	19.7	22.4	22.6	22.3	22.0	77.4	73.6	72.9	73.7	73.6
Norway	21.8	20.1	20.6	21.0	21.1	82.7	76.0	76.2	75.2	74.1
Poland	. .	11.6	11.7	11.5	12.0	. .	64.7	65.0	66.2	65.7
Portugal	7.6 |	9.2	9.7	10.0	9.6	70.3 |	69.9	67.6	68.2	67.0
Slovak Republic	. .	1.9 |	1.6	2.3	2.7	. .	68.2 |	66.1	69.1	73.0
Spain	4.6 |	7.8	7.6	7.8	8.3	79.2 |	79.0	80.1	80.7	81.0
Sweden	14.5	13.9	13.8	14.1	14.4	81.1	72.7	71.8	70.8	69.5
Switzerland[c, d]	22.1	24.8	24.8	25.1	24.9	82.4	80.1	82.8	82.2	82.1
Turkey	9.2	6.2	6.6	6.0	6.6	62.6	62.6	58.6	56.9	59.4
United Kingdom	20.1 |	22.7	23.0	23.3	24.1	85.1 |	79.8	78.8	77.3	77.8
United States[f]	14.1 |	12.8	13.1	13.2	13.2	68.2	67.5	68.3	68.8	68.3
EU-15[g]	13.3 |	16.2	16.4 |	16.6 |	17.4	80.6 |	79.2	78.8 |	78.5 |	78.6
EU-19[g]	13.3 |	15.1 |	15.3 |	15.5 |	16.2	80.6 |	78.3 |	77.9 |	77.8 |	77.8
OECD Europe[g]	13.2 |	14.5 |	14.7 |	14.8 |	15.5	79.3 |	77.6 |	77.2 |	77.0 |	77.1
Total OECD[g]	11.2 |	12.1 |	14.6 |	14.8 |	15.2	74.1 |	72.4 |	72.3 |	72.3 |	72.2

a) Part-time employment refers to persons who usually work less than 30 hours per week in their main job. Data include only persons declaring usual hours.
b) Data are based on actual hours worked.
c) Part-time employment based on hours worked at all jobs.
d) The year 1990 refers to 1991.
e) Less than 35 hours per week.
f) Data are for wage and salary workers only.
g) For above countries only.

Sources and definitions: OECD database on Labour Force Statistics (see URLs at the beginning of the Annex). For Austria, Belgium, Denmark, France, Germany, Greece, Ireland, Italy, Luxembourg, the Netherlands, Portugal, Spain and the United Kingdom, data are from the European Union Labour Force Survey. See OECD (1997), "Definition of Part-time Work for the Purpose of International Comparisons", Labour Market and Social Policy Occasional Paper No. 22, available on the Internet (*www.oecd.org/els/workingpapers*).

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Table F. **Average annual hours actually worked per person in employment**[a]

	1979	1983	1990	2000	2001	2002	2003	2004
Total employment								
Australia	1 904	1 853	1 866	1 855	1 837	1 824	1 814	1 816
Austria	. .	. .	. .	1 582	1 593	1 563	1 550	. .
Belgium	. .	1 659	1 601	1 545	1 547	1 548	1 542	1 522
Canada	1 800	1 749	1 757	1 768	1 758	1 740	1 733	1 751
Czech Republic	. .	. .	. .	2 092 |	2 000	1 980	1 972	1 986
Denmark	. .	1 597	1 452	1 467	1 495	1 462	1 475	1 454
Finland[b]	. .	1 809	1 763 |	1 721	1 694	1 686	1 669	1 688
Finland[c]	1 870	1 823	1 771	1 750	1 734	1 727	1 718	1 736
France	1 755	1 663	1 610	1 496	1 475	1 437	1 431	1,441
Germany[d]	. .	. .	1 541	1 463	1 450	1 439	1 441	1 443
Western Germany	1 758	1 692	1 566	1 443	1 431	1 421	1 424	1 426
Greece	. .	1 990	1 919	1 926	1 932	1 930	1 936	1 925
Iceland[d]	. .	. .	1 843	1 885	1 847	1 812	. .	. .
Ireland	. .	1 902	1 911	1 688	1 679	1 666	1 646	1 642
Italy	. .	1 677	1 656	1 613	1 601	1 599	1 591	1 585
Japan	2 126	2 095	2 031	1 821	1 809	1 798	1 801	1 789
Mexico[d]	. .	. .	1 822	1 888	1 864	1 888	1 857	1 848
Netherlands	. .	. .	1 456	1 368	1 368	1 338	1 354	1 357
New Zealand	. .	. .	1 820	1 817	1 817	1 816	1 813	1 826
Norway	1 514	1 485	1 432	1 380	1 362	1 345	1 338	1 363
Poland	. .	. .	. .	1 988	1 974	1 979	1 984	1 983
Portugal	. .	. .	1 858	1 691	1 696	1 697	1 678	1 694
Slovak Republic	. .	. .	. .	2 017	2 026 |	1 979	1 931	1 958
Spain	2 022	1 912	1 824	1 815	1 817	1 798	1 800	1 799
Sweden	1 530	1 532	1 561	1 625	1 603	1 580	1 563	1 585
Switzerland[d]	. .	. .	1 648	1 603	1 573	1 555	1 556	. .
United Kingdom	1 815	1 713	1 767	1 701	1 703	1 684	1 672	1 669
United States	1 861	1 851	1 861	1 858	1 836	1 830	1 822	1 824
Dependent employment								
Austria	. .	. .	. .	1 509	1 520	1 493	1 481	. .
Belgium	. .	1 562	1 571	1 432	1 457	1 451	1 449	1 441
Canada	1 764	1 726	1 735	1 754	1 745	1 732	1 726	1 742
Czech Republic	. .	. .	. .	2 018 |	1 922	1 896	1 882	1 900
Denmark	. .	1 523	1 384	1 409	1 447	1 410	1 423	1 406
Finland[b]	. .	. .	1 666 |	1 638	1 616	1 609	1 596	1 622
France	1 642	1 544	1 518	1 426	1 408	1 374	1 346	1,360
Germany[d]	. .	. .	1 473	1 381	1 370	1 362	1 361	1 360
Western Germany	1 687	1 618	1 489	1 356	1 348	1 341	1 341	1 341
Greece	. .	1 766	1 763	1 818	1 826	1 818	1 812	1 803
Hungary	. .	1 829	1 710	1 795	1 766	1 766	1 777	1 806
Iceland[d]	. .	. .	1 777	1 820	1 779	1 740	. .	. .
Ireland	. .	1 702	1 712	1 596	1 598	1 583	1 576	1 570
Italy	. .	1 608	1 581	1 548	1 534	1 533	1 523	1 519
Japan[e]	2 114	2 098	2 052	1 859	1 848	1 837	1 846	1 840
Japan[f]	. .	. .	2 064	1 853	1 836	1 825	1 828	1 816
Korea	. .	2 734	2 514	2 474	2 447	2 410	2 390	2 380
Mexico[d]	. .	. .	1 889	1 935	1 915	1 945	1 908	1 920
Netherlands	1 591	1 530	1 433	1 331	1 330	1 317	1 309	1 312
New Zealand[d]	. .	. .	1 728	1 768	1 761	1 759	1 767	1 801
Poland	. .	. .	. .	1 963	1 957	1 958	1 956	1 957
Portugal	. .	. .	1 770	1 670	1 683	1 686	1 677	1 690
Slovak Republic	. .	. .	. .	1 980	1 993 |	1 950	1 898	1 913
Spain	1 936	1 837	1 762	1 754	1 759	1 743	1 747	1 746
United Kingdom	1 750	1 652	1 704	1 675	1 677	1 661	1 650	1 646
United States	1 843	1 841	1 847	1 843	1 821	1 816	1 808	1 812

Table F. **Average annual hours actually worked per person in employment**[a] *(cont.)*

a) The concept used is the total number of hours worked over the year divided by the average number of people in employment. The data are intended for comparisons of trends over time; they are unsuitable for comparisons of the level of average annual hours of work for a given year, because of differences in their sources. Part-time workers are covered as well as full-time.
b) Data estimated from the Labour Force Survey.
c) Data estimated from national accounts.
d) The year 1990 refers to 1991.
e) Data refer to establishments with 30 or more regular employees.
f) Data refer to establishments with five or more regular employees.

Sources and definitions:

Secretariat estimates for Austria, Belgium, Denmark, Greece, Ireland, Italy, the Netherlands (for total employment only) and Portugal for annual hours worked for the total economy based on the European Labour Force Survey. Estimates of annual working time per employed persons are based on the Spring European Labour Force Survey (EULFS) as the main source of data for various components of working time (overtime, illness, maternity leave, etc.). The data from the EULFS correspond to one single reading in the year, which requires the use of external sources for hours not worked due to public holidays and annual leave. A correction is also made to account for an estimated 50 per cent underreporting, on average, of hours lost due to illness and maternity leave in the EULFS. In sum, the estimates are computed by multiplying usual weekly hours worked by the number of effective weeks worked during the year (taking into account vacation and time not worked due to other reasons). These estimates of annual working time take into account the number of public holidays and annual leave shown in the EIRO (2002) report on "Working Time Developments - 2002" (see *www.eiro.eurofound.ie/2003/03/update/tn0303103u.html*).

Australia: Data supplied by the Australian Bureau of Statistics from the Labour Force Survey. Annual hours are adjusted to take account of public holidays occuring during the reporting period. The method of estimation is consistent with the national accounts.

Canada: Data series, revised back to 1997 following a change in methodology, 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. OECD Secretariat estimates for years 1979 and 1983 are obtained by prolonging the trend of the old annual hours of work series for the period prior to 1997.

Czech Republic: Data supplied by the Czech Statistical Office and based on weekly actual hours worked reported in the quarterly Labour Force Sample Survey. Main meal breaks (one half hour a day) are included until 2000 and are excluded thereafter.

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 the Institut national de la statistique et des études économiques (INSEE) based on a method of estimation consistent with the National Accounts. Secretariat estimates for years 1979 and 1983 are obtained by prolonging the trend of the old annual hours of work series for the period prior to 1990. OECD Secretariat estimates for 2004 based on alternative estimates of annual working time derived from the European Labour Force Survey (see notes for Belgium, Denmark, etc.).

Germany and western Germany: Data supplied by the Institut für Arbeitsmarkt- und Berufsforschung (IAB), calculated within a comprehensive accounting structure, based on establishment survey estimates of weekly hours worked by full-time workers whose hours are not affected by absence, and extended to annual estimates of actual hours by adjusting for a wide range of factors, including public holidays, sickness absence, overtime working, short-time working, bad weather, strikes, part-time working and parental leave. Data series from 1991 onward extend coverage of part-time work with few hours of work. Estimates for unified Germany and western Germany have been revised since 1999.

Hungary: Data for employees supplied by the Hungarian Statistical office. Annual hours estimates based on an establishment survey for manufacturing covering five or more employees.

Iceland: Data provided by Statistics Iceland and based on the Icelandic Labor Force Survey. Annual actual hours worked per person in employment are computed by multiplying daily actual hours worked by annual actual working days net of public holidays and annual vacations. The latter are for a typical work contract by sector of activity.

Italy: OECD Secretariat estimates based on the European Labour Force Survey from 1985 onward (see notes for Belgium, Denmark, etc.). From 1960 to 1985, the trend in data is taken from the series provided by ISTAT and based on a special establishment survey on total employment discontinued in 1985.

Japan: Data for total employment are Secretariat estimates based on data from the Monthly Labour Survey of Establishments, extended to agricultural and government sectors and to the self-employed by means of the Labour Force Survey. Data for dependent employment supplied by Statistics Bureau, Management and Coordination Agency, from the Monthly Labour Survey, referring to all industries excluding agriculture, forest, fisheries and government services. Annual working time estimates for total employment in 2002, 2003 and 2004 are provisional and are calculated based on year-to-year changes in annual working time of employees working in establishments with five or more employees.

Korea : Data for employees supplied by the Ministry of Labour from the Report on monthly labour survey.

Table F. **Average annual hours actually worked per person in employment**[a] *(cont.)*

Mexico: Data supplied by STPS-INEGI from the bi-annual National Survey of Employment, weekly hours worked are annualised based on the assumption of 44 working weeks per year.

Netherlands: Secretariat estimates based on the European Labour Force Survey (see notes for Belgium, Denmark, etc.) from 1987 onward. Data for employees from 1977 onward, 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 employees in the private sector, excluding agriculture and fishing. Estimates for dependent employment in 2004 are Secretariat estimates based on alternative estimates of annual working time derived from the European Labour Force Survey (see notes for Belgium, Denmark, etc.).

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 of weekly actual hours worked for public holidays and other days lost.

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, Labour Force Survey and public sector accounts.

Poland: Data supplied by the Central Statistical Office of Poland and derived from the continuous quarterly labour force survey since 2000. Annual hours actually worked are obtained by dividing total weekly hours at work by average number of people in employment annualised by multiplying by 52 weeks. Data prior to 1999 are based on the quarterly labour force survey with fixed monthly reference weeks. In 1999, the survey was conducted only in the first quarter and in the last quarter, when the continuous survey was introduced, which causes a break in the series prior and after 1999.

Slovak Republic: Data supplied by the Statistical Office of the Slovak Republic and based on the continuous labour force survey with quarterly results. Hours worked cover main meal break until 2001 and are excluded thereafter.

Spain: Series supplied by Instituto Nacional de Estadística and derived mainly from the quarterly Labour Force Survey.

Sweden: Series from 1996 are supplied by Statistics Sweden derived from national accounts data, based on both the Labour Force Survey and establishment surveys.

Switzerland: Data supplied by the 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 then based on supplementary information on annual leave, public holidays and overtime working and are adjusted to be consistent with national accounts concepts.

United Kingdom: Data from 1992 to 2004 supplied by the Office of National Statistics (ONS) and based on weekly actual hours worked from the continuous Labour Force Survey annualised by multiplying by 52 weeks and adjusted to conform to calendar years. Since 1984, data refer to the United Kingdom (including Northern Ireland). 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: Revised historical series supplied by the Bureau of Labor Statistics (BLS), Office of Productivity and Technology (OPT). The annual working hours series are unpublished data expressed on a per job basis. The annual hours series are derived from the Current Employment Statistics (CES) for production and non-supervisory workers in private sector jobs and from the Current Population Survey (CPS) for other workers. The OECD Secretariat converts hours per job series to hours per worker series by multiplying the job-based annual hours of work by (1 + CPS based share of multiple jobholders in total employment).

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Table G. **Incidence of long-term unemployment**[a, b, c, d, e]

As a percentage of total unemployment

	1990		2001		2002		2003		2004	
	6 months and over	12 months and over	6 months and over	12 months and over	6 months and over	12 months and over	6 months and over	12 months and over	6 months and over	12 months and over
Australia	41.0	21.6	38.3	21.2	39.8	22.1	39.7	22.5	36.8	20.7
Austria	. .	. .	36.1	23.3	33.5	19.2	41.0	24.5	41.0	24.5
Belgium	81.4	68.5 |	66.5	51.7	67.3	49.6	64.7	46.3	68.9	49.6
Canada	20.3	7.3	16.8	9.5	18.5	9.6	18.3	10.0	17.7	9.5
Czech Republic	. .	. .	71.3	52.7	70.3	50.7	69.9	49.9	71.6	51.8
Denmark	53.2	29.9 |	38.5	22.2	33.3	19.7	40.9	19.9	45.0	22.6
Finland[f]	32.6	9.2 |	42.2	26.2	41.7	24.4	41.4	24.7	40.8	23.4
France	55.6	38.1	57.2	37.6	53.4	33.8 |	62.0	42.9	61.3	41.6
Germany	64.7	46.8 |	66.2	50.4	64.8	47.9	68.5	50.0	67.6	51.8
Greece	72.0	49.8 |	69.0	52.8	72.4	52.7	74.3	56.3	74.4	54.7
Hungary[g]	46.4	20.4	67.9	46.6	67.4	44.8	65.4	42.2	61.7	45.1
Iceland[f]	13.6	6.7	21.0	12.5	24.8	11.1	21.0	8.1 |	21.3	11.2
Ireland	81.0	66.0 |	50.3	33.1	50.5	29.4	57.0	35.5	55.0	34.3
Italy	85.2	69.8 |	77.4	63.4	75.7	59.2	74.1	58.2 |	65.5	49.7
Japan	39.0	19.1	46.2	26.6	49.0	30.8	50.9	33.5	50.0	33.7
Korea	13.9	2.6	13.0	2.3	13.9	2.5	10.1	0.6	11.6	1.1
Luxembourg[h]	(68.4)	(47.4) |	(44.9)	(28.4)	(46.8)	(27.4)	(42.6)	(24.9)	(45.2)	(22.6)
Mexico	. .	. .	4.1	1.1	5.4	0.9	4.9	1.0	5.1	1.1
Netherlands	63.6	49.3 |	. .	. .	43.2	26.7	49.2	29.2	55.1	32.5
New Zealand	40.2	21.8 |	31.3	16.7	28.6	14.5	27.4	13.5	23.9	11.7
Norway	40.8	20.4 |	16.1	5.5	20.0	6.4	20.6	6.4	25.3	9.2
Poland[g]	62.8	34.7 |	66.1	43.1	70.0	48.4	70.2	49.7	68.7	47.9
Portugal	62.3	44.9 |	58.0	38.1	54.5	35.5	57.8	32.8	65.0	43.2
Slovak Republic	. .	. .	73.4	53.7	77.5	59.8	76.4	61.1	77.0	60.6
Spain	70.2	54.0 |	61.8	44.0	59.2	40.2	59.6	39.8	58.0	37.7
Sweden	22.2	12.1 |	36.7	22.3	36.2	21.0	35.4	17.8	37.3	18.9
Switzerland[f]	27.5	17.0	47.3	29.9	37.4	21.8	47.8	26.3	53.9	33.5
Turkey	72.6	47.0	35.6	21.3	45.5	29.4	39.9	24.4	56.9	39.2
United Kingdom	50.3	34.4 |	43.6	27.8	38.8	23.1	37.3	23.0	38.8	21.4
United States	10.0	5.5 |	11.8	6.1	18.3	8.5	22.0	11.8	21.9	12.7
EU-15[i]	65.3	48.7 |	61.8	45.3	59.0	41.4 |	61.5	43.4 |	60.4	42.4
EU-19[i]	64.4	45.7 |	63.3	45.4	62.0	43.5 |	63.6	45.1 |	62.5	44.1
OECD Europe[i]	64.9	45.5 |	60.1	42.6	59.8	41.6 |	60.6	42.4 |	61.6	43.2
Total OECD[i]	46.3	31.1 |	44.0	29.7	45.0	29.6 |	46.4	31.0 |	47.1	32.0

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Table G. **Incidence of long-term unemployment among men**[a, b, c, d, e] *(cont.)*

As a percentage of male unemployment

	1990		2001		2002		2003		2004	
	6 months and over	12 months and over	6 months and over	12 months and over	6 months and over	12 months and over	6 months and over	12 months and over	6 months and over	12 months and over
Australia	42.6	24.4	39.9	23.8	43.3	25.9	44.1	27.1	39.1	23.1
Austria	. .	. .	34.0	23.7	32.1	16.4	40.6	25.0	40.6	25.0
Belgium	79.5	66.1 |	68.2	52.5	66.6	45.9	63.5	44.8	70.7	50.4
Canada	20.5	8.0	17.8	10.4	19.4	10.3	19.8	11.4	18.9	10.4
Czech Republic	. .	. .	70.0	52.0	69.2	50.3	67.2	47.4	69.2	49.3
Denmark	48.9	27.8 |	39.1	26.2	30.3	17.2	43.6	21.8	47.4	22.5
Finland[f]	36.8	9.7 |	45.0	30.0	44.8	27.3	45.3	27.7	43.7	25.3
France	53.2	35.5	56.9	37.6	52.5	32.2 |	61.7	43.0	61.2	41.5
Germany	65.2	49.1 |	64.0	48.4	63.4	46.0	67.2	48.3	65.7	50.5
Greece	61.8	39.9 |	61.8	47.0	68.1	47.4	70.2	48.9	67.1	47.1
Hungary[g]	47.1	20.9	69.9	48.2	69.2	47.0	66.0	42.2	62.6	47.0
Iceland[f]	5.1	1.3	17.2	11.2	19.4	9.5	20.4	8.2 |	16.2	8.8
Ireland	84.3	71.1 |	57.9	40.8	57.8	36.1	62.2	41.2	61.7	40.8
Italy	84.1	68.6 |	76.1	63.7	74.0	58.2	73.1	57.5 |	63.8	47.3
Japan	47.6	26.2	53.2	32.1	54.5	36.2	56.9	38.9	56.1	40.2
Korea	16.0	3.3	15.4	2.9	16.3	3.1	12.6	0.7	13.6	1.5
Luxembourg[h]	(80.0)	(60.0) |	(53.3)	(32.8)	(39.3)	(28.6)	(50.0)	(33.2)	(46.0)	(24.1)
Mexico	. .	. .	4.3	1.1	5.5	1.2	5.1	1.1	5.8	1.1
Netherlands	65.6	55.2 |	. .	. .	39.5	26.9	49.9	30.1	58.3	35.9
New Zealand	44.9	25.6 |	34.4	19.6	32.0	17.2	30.4	15.6	26.8	13.7
Norway	37.9	19.0 |	18.5	6.8	23.1	8.3	23.3	7.1	28.2	10.7
Poland[g]	60.2	33.3 |	62.7	39.9	67.4	45.1	69.3	48.6	67.9	46.9
Portugal	56.3	38.2 |	53.8	35.7	52.3	34.7	56.2	31.3	64.7	43.8
Slovak Republic	. .	. .	71.6	52.1	76.6	58.5	76.0	60.2	76.5	60.8
Spain	63.2	45.6 |	56.0	37.9	52.9	34.3	54.5	34.3	53.8	33.2
Sweden	22.2	12.3 |	39.0	24.2	38.9	23.1	38.4	19.6	39.7	20.9
Switzerland[f]	28.8	15.9	38.8	20.6	37.3	19.5	42.9	21.6	50.2	31.5
Turkey	71.2	44.9	31.9	18.2	43.5	27.0	36.3	22.1	55.0	37.0
United Kingdom	56.8	41.8 |	48.6	33.0	43.8	26.9	40.8	26.5	43.0	25.0
United States	12.1	7.0 |	12.1	6.4	18.9	8.9	23.1	12.5	23.0	13.7
EU-15[i]	63.5	47.0 |	60.3	44.4	57.3	39.5 |	60.2	42.0 |	59.4	41.5
EU-19[i]	62.4	43.9 |	61.5	44.1	60.3	41.5 |	62.4	43.8 |	61.5	43.2
OECD Europe[i]	63.2	43.8 |	56.8	40.0	57.2	38.9 |	58.1	40.1 |	60.2	42.0
Total OECD[i]	45.1	29.9 |	42.5	28.4	44.1	28.5 |	45.6	30.2 |	47.0	31.9

Table G. **Incidence of long-term unemployment among women**[a, b, c, d, e] *(cont.)*

As a percentage of female unemployment

	1990		2001		2002		2003		2004	
	6 months and over	12 months and over	6 months and over	12 months and over	6 months and over	12 months and over	6 months and over	12 months and over	6 months and over	12 months and over
Australia	38.8	17.8	36.2	17.7	35.2	17.1	34.5	17.0	34.1	17.8
Austria	. .	. .	38.8	22.9	35.5	23.3	41.6	23.9	41.6	23.9
Belgium	82.5	70.0 |	64.5	50.8	68.0	53.6	66.2	48.2	67.0	48.8
Canada	19.9	6.2	15.4	8.2	17.3	8.7	16.4	8.2	16.3	8.3
Czech Republic	. .	. .	72.5	35.5	71.2	51.1	72.1	51.9	73.8	54.1
Denmark	57.7	32.0 |	38.0	18.8	36.7	22.4	38.1	17.9	42.5	22.7
Finland[f]	26.3	8.4 |	39.6	22.6	38.3	21.2	37.0	21.4	37.8	21.4
France	57.5	40.0	57.5	37.6	54.3	35.2 |	62.3	42.8	61.3	41.8
Germany	64.2	44.5 |	68.9	52.9	66.7	50.3	70.3	52.3	70.3	53.7
Greece	78.2	55.9 |	73.7	56.6	75.2	56.1	76.9	60.9	78.7	59.2
Hungary[g]	45.3	19.8	64.8	44.1	64.9	41.7	64.6	42.2	60.7	42.8
Iceland[f]	21.1	11.5	24.7	13.8	32.6	13.3	21.8	7.8 |	26.9	14.0
Ireland	75.0	56.8 |	38.6	21.3	38.1	18.0	48.1	25.9	42.7	22.3
Italy	86.0	70.7 |	78.5	63.1	77.2	60.1	74.9	58.9 |	67.0	52.0
Japan	26.3	8.8	35.7	18.3	40.3	22.4	40.8	24.6	40.2	23.1
Korea	8.8	0.9	8.3	1.2	9.3	1.2	6.1	0.3	8.2	0.6
Luxembourg[h]	(55.6)	(33.3) |	(35.8)	(23.7)	(52.6)	(26.5)	(35.9)	(17.4)	(44.7)	(21.6)
Mexico	. .	. .	3.9	1.0	5.1	0.4	4.5	0.8	4.1	1.1
Netherlands	62.0	44.6 |	. .	. .	47.0	26.4	48.4	28.1	51.7	28.8
New Zealand	33.2	16.1 |	27.5	13.3	24.8	11.6	24.3	11.3	21.3	9.9
Norway	45.0	22.5 |	13.3	3.9	16.0	3.9	16.8	5.4	21.3	7.0
Poland[g]	65.2	36.0 |	69.5	46.2	72.8	52.0	71.1	50.8	69.5	49.0
Portugal	66.4	49.4 |	61.0	39.9	56.4	36.2	59.1	34.1	65.2	42.6
Slovak Republic	. .	. .	75.6	55.7	78.7	61.2	76.7	62.1	77.6	60.3
Spain	76.5	61.5 |	66.1	48.6	63.8	44.5	63.4	43.9	61.1	41.1
Sweden	22.2	11.8 |	33.8	20.0	32.7	18.2	31.4	15.3	34.2	16.4
Switzerland[f]	26.6	17.8	52.3	35.5	37.4	24.4	52.8	31.1	57.5	35.5
Turkey	75.6	51.2	47.1	31.1	51.5	36.5	50.0	30.9	62.5	45.6
United Kingdom	40.8	23.7 |	35.7	19.5	30.8	17.1	31.4	17.1	33.0	16.4
United States	7.3	3.7 |	11.5	5.8	17.6	8.1	20.7	11.0	20.5	11.4
EU-15[i]	67.0	50.2 |	63.2	46.2	60.8	43.4 |	62.9	44.8 |	61.4	43.3
EU-19[i]	66.2	47.3 |	65.0	46.6	63.8	45.7 |	64.9	46.5 |	63.5	45.0
OECD Europe[i]	66.5	47.3 |	63.8	45.6	62.7	44.8 |	63.6	45.1 |	63.2	44.8
Total OECD[i]	47.6	32.5 |	45.8	31.2	46.2	31.0 |	47.3	32.0 |	47.3	32.0

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Table G. **Incidence of long-term unemployment among women**[a, b, c, d, e] *(cont.)*
As a percentage of female unemployment

a) While data from labour force surveys make international comparisons easier, compared to a mixture of survey and registration data, they are not perfect. Questionnaire wording and design, survey timing, differences across countries in the age groups covered, and other reasons mean that care is required in interpreting cross-country differences in levels.
b) The duration of unemployment database maintained by the Secretariat is composed of detailed duration categories disaggregated by age and sex. All totals are derived by adding each component. Thus, the total for men is derived by adding the number of unemployed men by each duration and age group category. Since published data are usually rounded to the nearest thousand, this method sometimes results in slight differences between the percentages shown here and those that would be obtained using the available published figures.
c) Data are averages of monthly figures for Canada, Sweden and the United States, averages of quarterly figures for the Czech Republic, Hungary, Norway, New Zealand, Poland, the Slovak Republic and Spain, averages of semi annual figures for Turkey until 1999 and quarterly averages since 2000. The reference period for the remaining countries is as follows (among EU countries it occasionally varies from year to year): Australia, August; Austria, March; Belgium, April; Denmark, April-May; Finland, autumn prior to 1995, spring between 1995 and 1998, and averages of monthly figures since 1999; France, March and since 2003 all weeks of the first quarter; Germany, April; Greece, March-July; Iceland, April; Ireland, May; Italy, April and since 2004 all weeks of the second quarter; Japan, February; Luxembourg, April and since 2003 all weeks of the year; Mexico, April; the Netherlands, March-June; Portugal, February-April; Switzerland, second quarter; and the United Kingdom, March-May.
d) Data refer to persons aged 15 and over in Australia, Austria, Belgium, Canada, the Czech Republic, Denmark, France, Germany, Greece, Ireland, Italy, Japan, Luxembourg, Mexico, the Netherlands, New Zealand, Poland, Portugal, the Slovak Republic, Switzerland and Turkey; and aged 16 and over in Iceland, Spain, the United Kingdom and the United States. Data for Finland refer to persons aged 15-64 (excluding unemployment pensioners). Data for Hungary refer to persons aged 15-74, for Norway to persons aged 16-74 and for Sweden to persons aged 16-64.
e) Persons for whom no duration of unemployment was specified are excluded.
f) The year 1990 refers to 1991.
g) The year 1990 refers to 1992.
h) Data in brackets are based on small sample sizes and, therefore, must be treated with care.
i) For above countries only.

Source: OECD database on Labour Force Statistics (see URLs at the beginning of the Annex).

Statlink: *http://dx.doi.org/10.1787/868358475777*

Table H. **Public expenditure and participant inflows* in labour market programmes in OECD countries****

Programme categories and sub-categories	Australia[c]						Austria				Belgium				Canada[f]			
	Public expenditure as a percentage of GDP			Participant inflows as a percentage of the labour force			Public expenditure as a percentage of GDP		Participant inflows as a percentage of the labour force		Public expenditure as a percentage of GDP		Participant inflows as a percentage of the labour force		Public expenditure as a percentage of GDP		Participant inflows as a percentage of the labour force	
	2001-02	2002-03	2003-04	2001-02	2002-03	2003-04	2002	2003	2002	2003	2002	2003	2002	2003	2002-03	2003-04	2002-03	2003-04
1. PES and administration[a]	**0.20**	**0.18**	**0.19**				**0.15**	**0.17**			**0.21**	**0.23**			**0.18**	**0.17**		
of which: 1.1. Placement and related services[a]	0.11	0.10	0.12				0.06	0.06			0.03	0.03			0.03[g]	0.03[g]		
1.2. Benefit administration[a]	0.03	0.03	0.03				0.02[e]	0.02[e]			. .	0.06			0.05	0.05		
2. Training	**0.04**	**0.04**	**0.03**	**0.88**	**0.96**	**0.94**	**0.24**	**0.30**	**12.30**	**14.36**	**0.18**	**0.18**	**. .**	**. .**	**0.13**	**0.12**	**1.15**	**1.11**
2.1. Institutional training	0.02	0.02	0.02	0.52	0.58	0.60	0.19	0.24	10.24	12.45	0.18	0.17	. .	. .	0.11	0.10	0.76	0.75
2.2. Workplace training	–	–	–	0.18	0.26	0.23	0.01	0.01	1.62	1.37	–	–	. .	–	0.01	0.01	0.09	0.04
2.3. Integrated training	–	–	–	0.18	0.12	0.12	–	–	–	–	–	–	–	–	–	–	–	–
2.4. Special support for apprenticeship	0.02	0.01	0.01	–	–	–	0.02	0.02	0.29	0.36	–	–	. .	. .	0.01	0.01	0.31	0.31
4. Employment incentives[b]	0.01	0.01	0.01	0.08	. .	. .	**0.06**	**0.06**	**1.58**	**1.59**	**0.16**	**0.22**	**. .**	**. .**	**–**	**–**	**0.15**	**0.14**
4.1. Recruitment incentives	0.01	0.01	0.01	0.08	. .	. .	0.04	0.04	0.80	0.83	0.10	0.15	. .	. .	–	–	0.15	0.14
4.2. Employment maintenance incentives	–	–	–	–	–	–	0.02	0.02	0.78	0.75	–	–	–	–	–	–	–	–
5. Integration of the disabled	**0.05**	**0.05**	**0.05**	**0.83**	**0.91**	**0.92**	**0.07**	**0.06**	**0.90**	**0.75**	**0.12**	**0.12**	**. .**	**. .**	**0.02**	**0.02**	**. .**	**. .**
5.1. Regular employment	0.02	0.02	0.02	0.42	0.45	0.45	0.03	0.03	0.53	0.59	. .	. .	. .	. .	–	–	–	–
5.2. Sheltered employment	0.02	0.02	0.02	0.18	0.19	0.19	0.01	0.01	0.12	0.07	. .	. .	. .	. .	–	–	0.02	0.03
5.3. Other rehabilitation and training	0.01	0.02	0.02	0.17	0.23	0.24	0.02	0.01	0.26	0.09	–	–	0.01	0.01	0.02	0.02	. .	. .
6. Direct job creation	**0.08**	**0.09**	**0.09**	**1.19**	**1.25**	**1.42**	**0.04**	**0.04**	**0.25**	**0.23**	**0.43**	**0.49**	**. .**	**–**	**0.02**	**0.02**	**0.06**	**0.06**
7. Start-up incentives	**0.02**	**0.01**	**0.01**	**0.06**	**0.07**	**0.06**	**–**	**–**	**0.07**	**0.10**	**–**	**–**	**. .**	**. .**	**0.01**	**0.01**	**0.08**	**0.08**
8. Out-of-work income maintenance and support	**0.93**	**0.82**	**0.74**	**8.27**	**7.27**	**6.57**	**1.09**	**1.12**	**22.09**	**22.26**	**1.94**	**2.06**	**0.68**	**. .**	**0.76**	**0.77**	**. .**	**. .**
8.1. Full unemployment benefits	0.88[d]	0.80[d]	0.74[d]	8.05	7.17	6.48	0.95	0.94	20.04	20.51	1.71	1.80	. .	. .	0.76	0.77	. .	. .
of which: Unemployment insurance	–	–	–	–	–	–	0.62	0.60	14.98	14.96	1.71	1.80	. .	. .	0.76	0.77	. .	. .
8.2, 8.3. Partial and part-time unemployment benefits	–	–	–	–	–	–	0.02	0.01	1.20	0.78	0.15	0.16	–	–	–	–	–	–
8.4, 8.5. Redundancy and bankrupcy compensation	0.05	0.01	0.01	0.23	0.10	0.09	0.13	0.16	0.85	0.97	0.08	0.11	. .	. .	–	–	–	–
9. Early retirement	**–**	**–**	**–**	**–**	**–**	**–**	**0.15**	**0.25**	**1.42**	**1.90**	**0.45**	**0.45**	**. .**	**. .**	**–**	**–**	**. .**	**. .**
TOTAL (1-9; 2-9 for inflows)	**1.33**	**1.19**	**1.13**	**11.32**	**. .**	**. .**	**1.81**	**2.00**	**38.62**	**41.19**	**3.50**	**3.75**	**. .**	**. .**	**1.15**	**1.14**	**. .**	**. .**
Active measures (1-7)	0.40	0.38	0.39				0.56	0.63			1.11	1.24			0.39[h]	0.37[h]		
of which: Categories 1.1 plus 2-7	0.32	0.30	0.32				0.48	0.52			0.93	1.03			0.24[h]	0.22[h]		
Categories 2-7 only	0.20	0.20	0.20	3.04	. .	. .	0.42	0.46	15.11	17.03	0.90	1.01	. .	. .	0.21[h]	0.19[h]	1.85[h, i]	1.80[h, i]
Passive measures (8-9)	0.93	0.82	0.74	8.27	7.27	6.57	1.25	1.37	23.51	24.16	2.39	2.51	. .	. .	0.76	0.77	. .	. .

. . Data not available.
– Nil or less than 0.005.
* Data for participant inflows are reported only for Categories 2 to 9 since data for Category 1 "Public employment services and administration" are commonly incomplete and non-comparable (see note a). Totals shown must be interpreted with caution.
** Following a change of classification, data to 2002 differ from those published previously.
a) Category 1 refers to public employment services (PES) and the administration of active and passive labour market programmes, including costs of regional and head offices, nationwide IT systems and job-seeker registration, classification and referral. Categories 1.1 and 1.2 include only separately-identified placement and related services and benefit administration and their *de facto* coverage is variable. As data permit, Category 1.1 includes outsourced employment services, job-search assistance measures with specific budget lines and client services as defined by Eurostat.
b) The totals shown for Category 4 include non-zero spending on Eurostat Category 3 "Job rotation and sharing" in Finland, Spain and Sweden.
c) Fiscal years starting on 1 July.
d) Includes Mature Age and Partner Allowances, excludes Youth and Widow Allowances.
e) Benefit administration includes staff costs of unemployment insurance service.
f) Fiscal years starting on 1 April.
g) Employment assistance service.
h) Total for active measures includes Aboriginal Human Resources Development Agreement.
i) Participant inflows for Category 5.3 "Other rehabilitation and training" are not included.

Table H. **Public expenditure and participant inflows* in labour market programmes in OECD countries**** *(cont.)*

Programme categories and sub-categories	Czech Republic						Denmark				Finland				France			
	Public expenditure as a percentage of GDP			Participant inflows as a percentage of the labour force			Public expenditure as a percentage of GDP		Participant inflows as a percentage of the labour force		Public expenditure as a percentage of GDP		Participant inflows as a percentage of the labour force		Public expenditure as a percentage of GDP		Participant inflows as a percentage of the labour force	
	2002	2003	2004	2002	2003	2004	2002	2003	2002	2003	2002	2003	2002	2003	2002	2003	2002	2003
1. PES and administration[a]	**0.07**	**0.07**	**0.12**				**. .**	**0.21**[d]			**0.11**[f]	**0.16**[f]			**. .**	**0.25**		
of which: 1.1. Placement and related services[a]	. .	. .	. .				. .	0.11			0.06	0.08			. .	0.16		
1.2. Benefit administration[a]	. .	. .	. .				. .	. .			0.05[f]	0.05[f]			. .	0.09[g]		
2. Training	**0.02**	**0.02**	**0.02**	**0.77**	**0.93**	**0.86**	**0.62**	**0.52**	**3.93**	**3.68**	**0.34**	**0.36**	**4.71**	**4.96**	**0.30**	**0.31**	**. .**	**3.36**
2.1. Institutional training	0.02	0.02	0.02	0.77	0.93	0.86	0.60	0.50	3.68	3.35	0.28	0.29	3.17	3.17	0.09	0.09	. .	1.76
2.2. Workplace training	–	–	–	–	–	–	–	–	0.12	0.23	0.05	0.06	1.45	1.69	–	–	0.01	0.01
2.3. Integrated training	–	–	–	–	–	–	–	–	–	–	–	–	–	–	0.03	0.04	. .	0.92
2.4. Special support for apprenticeship	–	–	–	–	–	–	0.02	0.02	0.13	0.10	0.01	0.01	0.14	0.14	0.08	0.08	0.70	0.67
4. Employment incentives[b]	**–**	**–**	**–**	**–**	**–**	**–**	**0.54**	**0.49**	**2.88**	**2.61**	**0.16**	**0.19**	**1.74**	**1.80**	**0.11**	**0.08**	**1.79**	**1.93**
4.1. Recruitment incentives	–	–	–	–	–	–	0.54	0.49	2.88	2.61	0.11	0.13	1.22	1.26	0.11	0.08	1.78	1.93
4.2. Employment maintenance incentives	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	0.01	0.01
5. Integration of the disabled	**0.01**	**0.01**	**0.01**	**0.02**	**0.02**	**0.03**	**0.52**	**0.52**	**. .**	**. .**	**0.11**	**0.10**	**1.68**	**1.06**	**0.09**	**0.09**	**. .**	**. .**
5.1. Regular employment	0.01	0.01	0.01	0.02	0.02	0.03	0.01	0.01	–	–	–	–	–	–	0.03	0.02	0.60	0.65
5.2. Sheltered employment	–	–	–	–	–	–	0.17	0.20	. .	0.33	0.02	0.02	0.11	0.11	0.06	0.07	. .	. .
5.3. Other rehabilitation and training	–	–	–	–	–	–	0.34	0.32	. .	. .	0.08	0.08	1.56	0.94	–	–	–	–
6. Direct job creation	**0.07**	**0.06**	**0.08**	**0.68**	**0.73**	**0.92**	**–**	**–**	**0.01**	**0.01**	**0.10**	**0.09**	**0.98**	**0.98**	**0.41**	**0.35**	**1.94**	**1.60**
7. Start-up incentives	**–**	**0.01**	**0.01**	**0.06**	**0.08**	**0.06**	**–**	**–**	**–**	**–**	**0.01**	**0.01**	**0.14**	**0.15**	**–**	**–**	**0.16**	**0.31**
8. Out-of-work income maintenance and support	**0.26**	**0.28**	**0.27**	**9.19**	**9.29**	**8.89**	**1.58**	**1.91**	**. .**	**. .**	**1.62**	**1.58**	**25.59**	**12.45**	**1.47**	**1.67**	**7.83**	**7.73**
8.1. Full unemployment benefits	0.26	0.27	0.27	9.19	9.29	8.89	1.54[e]	1.88[e]	. .	. .	1.48	1.45	20.09	10.12	1.47	1.67	7.83	7.73
of which: Unemployment insurance	0.26	0.27	0.27	9.19	9.29	8.89	1.35[e]	1.65[e]	. .	. .	0.88	0.87	10.68	6.74	1.31	1.51	7.30	7.05
8.2, 8.3. Partial and part-time unemployment benefits	–	–	–	–	–	–	. .	. .	. .	. .	0.12	0.11	4.90	2.66	–	–	–	–
8.4, 8.5. Redundancy and bankrupcy compensation	0.01	0.01	0.01	–	–	–	0.04	0.03	0.76	0.67	0.03	0.02	0.61	0.42	–	–	–	–
9. Early retirement	**. .**	**. .**	**. .**	**0.14**	**0.40**	**0.22**	**0.77**	**0.77**	**. .**	**. .**	**0.53**	**0.51**	**0.40**	**0.42**	**0.13**	**0.10**	**0.11**	**0.12**
TOTAL (1-9; 2-9 for inflows)	**0.43**	**0.45**	**0.51**	**10.87**	**11.46**	**10.98**	**. .**	**4.42**	**. .**	**. .**	**2.99**	**3.01**	**35.25**	**21.80**	**. .**	**2.85**	**. .**	**15.69**
Active measures (1-7)	0.16	0.17	0.23				. .	1.74			0.83	0.91			. .	1.09		
of which: Categories 1.1 plus 2-7	. .	. .	. .				. .	1.64			0.78	0.83			. .	0.99		
Categories 2-7 only	0.09	0.09	0.11	1.54	1.77	1.87	1.68	1.53	. .	. .	0.72	0.75	9.26	8.94	0.91	0.84	. .	7.85[h]
Passive measures (8-9)	0.26[c]	0.28[c]	0.27[c]	9.33	9.69	9.11	2.35	2.68	. .	. .	2.15	2.09	25.99	12.86	1.60	1.77	7.94	7.85

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. . Data not available.
– Nil or less than 0.005.
* Data for participant inflows are reported only for Categories 2 to 9 since data for Category 1 "Public employment services and administration" are commonly incomplete and non-comparable (see note a). Totals shown must be interpreted with caution.
** Following a change of classification, data to 2002 differ from those published previously.
a) Category 1 refers to public employment services (PES) and the administration of active and passive labour market programmes, including costs of regional and head offices, nationwide IT systems and job-seeker registration, classification and referral. Categories 1.1 and 1.2 include only separately-identified placement and related services and benefit administration and their *de facto* coverage is variable. As data permit, Category 1.1 includes outsourced employment services, job-search assistance measures with specific budget lines and client services as defined by Eurostat.
b) The totals shown for Category 4 include non-zero spending on Eurostat Category 3 "Job rotation and sharing" in Finland, Spain and Sweden.
c) Expenditures on early retirement are not included.
d) Administration costs of independant unemployment insurance funds are not included.
e) Includes part-time and partial benefits.
f) Administration costs of independant unemployment insurance funds are included.
g) Unemployment insurance scheme (UNEDIC).
h) Participants inflows for Category 5.2 "Sheltered employment" are not included.

Table H. **Public expenditure and participant inflows[*] in labour market programmes in OECD countries[**]** *(cont.)*

Programme categories and sub-categories	Germany[c]				Greece				Ireland[d]				Italy			
	Public expenditure as a percentage of GDP		Participant inflows as a percentage of the labour force		Public expenditure as a percentage of GDP		Participant inflows as a percentage of the labour force		Public expenditure as a percentage of GDP		Participant inflows as a percentage of the labour force		Public expenditure as a percentage of GDP		Participant inflows as a percentage of the labour force	
	2002	2003	2002	2003	2002	2003	2002	2003	2002	2003	2002	2003	2002	2003	2002	2003
1. PES and administration[a]	**0.27**	**0.28**			**. .**	**. .**			**0.67[e]**	**0.60[e]**			**. .**	**. .**		
of which: 1.1. Placement and related services[a]	0.04	0.05			. .	. .			0.04[e]	0.04[e]			. .	. .		
1.2. Benefit administration[a]	. .	. .			. .	. .			. .	. .			. .	. .		
2. Training	**0.48**	**0.40**	**4.78**	**4.58**	**0.11**	**0.03**	**0.88**	**. .**	**0.21**	**0.20**	**1.63**	**1.53**	**0.22**	**0.23**	**. .**	**. .**
2.1. Institutional training	0.40	0.32	4.20	4.01	0.10	0.02	0.88	0.29	0.19	0.16	1.39	1.33	–	–	. .	. .
2.2. Workplace training	–	–	–	–	–	–	–	–	–	–	–	–	0.06	0.04	. .	. .
2.3. Integrated training	–	–	0.02	0.01	0.02	–	–	0.03	0.02	0.03	0.23	0.20	–	–	–	–
2.4. Special support for apprenticeship	0.07	0.07	0.56	0.56	–	–	–	–	–	–	–	–	0.13	0.15	. .	. .
4. Employment incentives[b]	**0.11**	**0.11**	**1.20**	**1.46**	**0.05**	**0.02**	**0.24**	**. .**	**0.10**	**0.07**	**. .**	**0.19**	**0.36**	**0.33**	**. .**	**. .**
4.1. Recruitment incentives	0.10	0.10	1.20	. .	0.05	0.02	0.24	. .	0.10	0.07	. .	0.19	0.32	0.30	. .	. .
4.2. Employment maintenance incentives	0.01	0.01	. .	. .	–	–	–	–	–	–	–	–	–	–	. .	. .
5. Integration of the disabled	**0.15**	**0.15**	**0.43**	**0.40**	**0.03**	**0.02**	**0.05**	**0.04**	**0.04**	**0.04**	**0.07**	**0.09**	**–**	**0.01**	**. .**	**. .**
5.1. Regular employment	0.01	0.01	0.05	0.04	0.02	0.02	0.04	0.03	0.03	0.03	0.07	0.09	–	0.01	. .	. .
5.2. Sheltered employment	–	–	–	–	–	–	–	–	0.01	0.01	. .	. .	–	–	–	–
5.3. Other rehabilitation and training	0.13	0.14	0.38	0.36	–	–	0.01	–	–	–	–	–	–	–	–	–
6. Direct job creation	**0.17**	**0.12**	**0.63**	**0.70**	**–**	**–**	**–**	**. .**	**0.30**	**0.26**	**2.35**	**1.74**	**0.04**	**0.03**	**0.02**	**0.01**
7. Start-up incentives	**0.05**	**0.08**	**0.31**	**0.40**	**0.03**	**0.04**	**0.11**	**. .**	**–**	**–**	**–**	**0.12**	**0.03**	**0.05**	**. .**	**. .**
8. Out-of-work income maintenance and support	**2.14**	**2.27**	**. .**	**21.10**	**0.37**	**0.41**	**9.98**	**. .**	**0.77**	**0.85**	**16.58**	**17.56**	**0.56**	**0.51**	**. .**	**. .**
8.1. Full unemployment benefits	2.01	2.15	16.12	16.82	0.31	0.35	6.15	. .	0.73	0.77	14.85	15.79	0.49	0.42	. .	. .
of which: Unemployment insurance	2.00	2.15	15.98	16.70	0.31	0.35	5.83	. .	0.33	0.35	9.22	10.01	0.49	0.42	. .	. .
8.2, 8.3. Partial and part-time unemployment benefits	0.03	0.04	. .	3.56	0.05	0.06	3.83	. .	–	–	–	–	0.07	0.09	. .	. .
8.4, 8.5. Redundancy and bankrupcy compensation	0.09	0.08	0.76	0.72	–	–	–	–	0.04	0.07	1.73	1.77	–	–	–	–
9. Early retirement	**0.03**	**0.04**	**0.11**	**0.12**	**–**	**–**	**–**	**. .**	**0.07**	**0.07**	**0.61**	**. .**	**0.10**	**0.11**	**0.01**	**0.02**
TOTAL (1-9; 2-9 for inflows)	**3.39**	**3.46**	**. .**	**28.76**	**. .**	**. .**	**11.26**	**. .**	**2.16**	**2.09**	**21.24**	**21.24**	**. .**	**. .**	**. .**	**. .**
Active measures (1-7)	1.22	1.14			. .	. .			1.32	1.17			. .	. .		
of which: Categories 1.1 plus 2-7	0.99	0.91			. .	. .			0.69	0.61			. .	. .		
Categories 2-7 only	0.95	0.86	7.35	7.54	0.22	0.11	1.29	. .	0.65	0.57	4.05[f]	3.68	0.64	0.65	. .	. .
Passive measures (8-9)	2.17	2.31	. .	21.22	0.37	0.41	9.98	. .	0.84	0.91	17.19	17.56[g]	0.66	0.62	. .	. .

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. . Data not available.
– Nil or less than 0.005.
* Data for participant inflows are reported only for Categories 2 to 9 since data for Category 1 "Public employment services and administration" are commonly incomplete and non-comparable (see note a). Totals shown must be interpreted with caution.
** Following a change of classification, data to 2002 differ from those published previously.
a) Category 1 refers to public employment services (PES) and the administration of active and passive labour market programmes, including costs of regional and head offices, nationwide IT systems and job-seeker registration, classification and referral. Categories 1.1 and 1.2 include only separately-identified placement and related services and benefit administration and their *de facto* coverage is variable. As data permit, Category 1.1 includes outsourced employment services, job-search assistance measures with specific budget lines and client services as defined by Eurostat.
b) The totals shown for Category 4 include non-zero spending on Eurostat Category 3 "Job rotation and sharing" in Finland, Spain and Sweden.
c) Data do not include the activites of the Länder.
d) Totals here include some measures, such as DFSA Family income supplement (Category 4) and measures for the integration of the disabled (Category 5), which are not in Eurostat data.
e) Total for Category 1 refer to total FAS expenditure. Counselling/guidance function, Job Clubs and the Local Employment Services are identifed as the placement services.
f) Participant inflows for Category 4.1 "Employment incentives" are not included.
g) Participant inflows for Category 9 "Early retirement" are not included.

Table H. **Public expenditure and participant inflows* in labour market programmes in OECD countries**** *(cont.)*

Programme categories and sub-categories	Japan[c]		Korea						Luxembourg				Netherlands[d]					
	Public expenditure as a percentage of GDP		Public expenditure as a percentage of GDP			Participant inflows as a percentage of the labour force			Public expenditure as a percentage of GDP		Participant inflows as a percentage of the labour force		Public expenditure as a percentage of GDP			Participant inflows as a percentage of the labour force		
	2002-03	2003-04	2002	2003	2004	2002	2003	2004	2002	2003	2002	2003	2002	2003	2004	2002	2003	2004
1. PES and administration[a]	**0.25**	**0.26**	**0.04**	**0.05**	**0.05**				**. .**	**. .**			**0.28**	**0.31**	**0.31**			
of which: 1.1. Placement and related services[a]	. .	. .	0.01	0.01	0.01				. .	. .			. .	. .	. .			
1.2. Benefit administration[a]	. .	. .	0.01	0.01	0.01				. .	. .			0.18	0.21	0.22			
2. Training	**0.04**	**0.04**	**0.05**	**0.05**	**0.06**	**1.23**	**. .**	**. .**	**. .**	**. .**	**. .**	**. .**	**0.63[e]**	**0.62[e]**	**0.60[e]**	**3.79**	**3.30**	**2.18**
2.1. Institutional training	0.04	**0.04**	0.04	0.04	0.04	1.01	. .	. .	–	–	–	–	0.02	0.02	0.01	0.23	0.19	0.15
2.2. Workplace training	–	**–**	–	–	–	–	–	–	. .	. .	. .	. .	0.09	0.07	0.01	1.90	1.44	0.16
2.3. Integrated training	–	**–**	–	–	–	–	–	–	–	–	–	–	0.25	0.26	0.27	1.16	1.17	1.35
2.4. Special support for apprenticeship	–	**–**	0.01	0.01	0.01	0.22	0.31	0.38	–	–	. .	. .	0.04	0.05	0.05	0.50	0.50	0.52
4. Employment incentives[b]	**0.02**	**0.02**	**0.01**	**0.01**	**0.01**	**1.93**	**1.94**	**1.66**	**0.05**	**0.06**	**0.66**	**0.78**	**0.04**	**0.03**	**0.02**	**0.95**	**0.65**	**0.42**
4.1. Recruitment incentives	0.01	0.01	0.01	0.01	0.01	1.27	1.42	1.21	0.01	0.01	0.21	0.25	0.04	0.03	0.02	0.95	0.65	0.42
4.2. Employment maintenance incentives	0.01	0.01	–	–	–	0.67	0.52	0.45	–	–	–	–	–	–	–	–	–	–
5. Integration of the disabled	**0.01**	**0.01**	**0.02**	**0.03**	**0.03**	**0.16**	**0.20**	**0.17**	**0.03**	**0.03**	**0.39**	**0.41**	**0.63**	**0.62**	**0.59**	**0.78**	**0.70**	**0.47**
5.1. Regular employment	. .	. .	0.01	0.02	0.02	0.09	0.13	0.09	0.03	0.03	0.39	0.41	–	–	–	–	–	–
5.2. Sheltered employment	. .	. .	–	–	–	0.01	0.01	0.01	–	–	–	–	0.47	0.47	0.47	0.09	0.08	0.08
5.3. Other rehabilitation and training	–	. .	–	0.01	0.01	0.06	0.07	0.07	–	–	–	–	0.16	0.15	0.12	0.69	0.62	0.40
6. Direct job creation	**–**	**–**	**0.08**	**0.01**	**0.01**	**2.25**	**0.01**	**0.02**	**0.03**	**0.03**	**. .**	**. .**	**0.29**	**0.25**	**0.21**	**0.34**	**0.19**	**0.27**
7. Start-up incentives	**–**	**–**	**0.01**	**0.01**	**0.01**	**–**	**–**	**–**	**–**	**–**	**–**	**0.01**	**–**	**–**	**–**	**–**	**–**	**–**
8. Out-of-work income maintenance and support	**0.48**	**0.46**	**0.12**	**0.14**	**0.19**	**1.78**	**2.12**	**2.87**	**0.31**	**0.43**	**6.52**	**8.06**	**2.00[e]**	**2.09[e]**	**2.43[e]**	**4.77**	**5.93**	**5.91**
8.1. Full unemployment benefits	. .	. .	0.12	0.14	0.19	1.78	2.12	2.87	0.26	0.38	1.92	2.36	1.93[f]	2.02[f]	2.36[f]	4.77	5.93	5.91
of which: Unemployment insurance	. .	. .	0.12	0.14	0.19	1.78	2.12	2.87	. .	. .	. .	. .	0.97	1.02	1.30	3.58	4.61	4.60
8.2, 8.3. Partial and part-time unemployment benefits	. .	. .	–	–	–	–	–	–	0.02	0.03	4.07	5.28	0.07	0.07	0.07	–	–	–
8.4, 8.5. Redundancy and bankrupcy compensation	–	0.01	–	–	–	–	–	–	0.03	0.02	0.53	0.41	–	–	–	–	–	–
9. Early retirement	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**0.22**	**0.21**	**0.14**	**0.17**	**–**	**–**	**–**	**–**	**–**	**–**
TOTAL (1-9; 2-9 for inflows)	**0.79**	**0.79**	**0.34**	**0.30**	**0.36**	**7.35**	**. .**	**. .**	**. .**	**. .**	**. .**	**. .**	**3.64**	**3.68**	**3.89**	**10.62**	**10.77**	**9.25**
Active measures (1-7)	0.31	0.32	0.22	0.16	0.17				. .	. .			1.87	1.83	1.72			
of which: Categories 1.1 plus 2-7	. .	. .	0.18	0.12	0.13				. .	. .			. .	. .	. .			
Categories 2-7 only	0.07	0.06	0.17	0.11	0.12	5.58	. .	. .	. .	. .	. .	. .	1.59	1.52	1.41	5.85	4.84	3.34
Passive measures (8-9)	0.48	0.46	0.12	0.14	0.19	1.78	2.12	2.87	0.53	0.64	6.66	8.23	1.78[e]	1.86[e]	2.16[e]	4.77	5.93	5.91

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. . Data not available.
– Nil or less than 0.005.
* Data for participant inflows are reported only for Categories 2 to 9 since data for Category 1 "Public employment services and administration" are commonly incomplete and non-comparable (see note a). Totals shown must be interpreted with caution.
** Following a change of classification, data to 2002 differ from those published previously.
a) Category 1 refers to public employment services (PES) and the administration of active and passive labour market programmes, including costs of regional and head offices, nationwide IT systems and job-seeker registration, classification and referral. Categories 1.1 and 1.2 include only separately-identified placement and related services and benefit administration and their *de facto* coverage is variable. As data permit, Category 1.1 includes outsourced employment services, job-search assistance measures with specific budget lines and client services as defined by Eurostat.
b) The totals shown for Category 4 include non-zero spending on Eurostat Category 3 "Job rotation and sharing" in Finland, Spain and Sweden.
c) Fiscal years starting on 1 April.
d) Totals here include a number of decentralised budget allocations, such as ESF funding for training (Category 2) and the reintegration budget of social ministry (Category 5), which are not in Eurostat data.
e) Estimated unemployment benefits paid to participants in labour market training are included in the totals for both Categories 2 and 8, but excluded from the total "Passive measures".
f) Includes unemployment benefits for civil servants (Category 8) which are not in Eurostat data.

Table H. **Public expenditure and participant inflows[*] in labour market programmes in OECD countries[**]** *(cont.)*

Programme categories and sub-categories	New Zealand[c]				Norway						Poland					
	Public expenditure as a percentage of GDP		Participant inflows as a percentage of the labour force		Public expenditure as a percentage of GDP			Participant inflows as a percentage of the labour force			Public expenditure as a percentage of GDP			Participant inflows as a percentage of the labour force		
	2002-03	2003-04	2002-03	2003-04	2002	2003	2004	2002	2003	2004	2002	2003	2004	2002	2003	2004
1. PES and administration[a]	**0.11**	**0.12**			**0.13**	**0.13**	**0.13**				**. .**	**. .**	**. .**			
of which: 1.1. Placement and related services[a]	0.03	0.02			0.04	0.05	0.06				. .	. .	. .			
1.2. Benefit administration[a]	0.05	0.07			0.03[g]	0.02[g]	0.02[g]				. .	. .	. .			
2. Training	**0.28**	**0.29**	**9.34**	**9.15**	**0.08**	**0.09**	**0.09**	**1.34**	**1.67**	**2.23**	**0.05**	**0.04**	**0.03**	**0.82**	**1.54**	**1.63**
2.1. Institutional training	0.08	0.09	1.47	1.32	0.06	0.07	0.07	0.89	1.08	1.50	0.01	0.01	0.01	0.40	0.78	0.75
2.2. Workplace training	0.09	0.09	6.06	6.06	0.01	0.02	0.02	0.45	0.60	0.72	–	–	–	–	–	–
2.3. Integrated training	0.11	0.11	1.81	1.78	–	–	–	–	–	–	–	–	–	–	–	–
2.4. Special support for apprenticeship	–	–	–	–	–	–	–	–	–	–	0.04	0.03	0.02	0.42	0.76	0.88
4. Employment incentives[b]	**0.04**	**0.03**	**1.17**	**1.25**	**0.01**	**0.03**	**0.03**	**0.27**	**0.58**	**. .**	**0.04**	**0.10**	**0.09**	**0.45**	**0.85**	**0.63**
4.1. Recruitment incentives	0.04	0.03	1.08	1.10	0.01	0.03	0.03	0.27	0.57	. .	0.04	0.10	0.09	0.45	0.85	0.63
4.2. Employment maintenance incentives	–	–	0.09	0.16	–	–	–	–	–	–	–	–	–	–	–	–
5. Integration of the disabled	**0.05**	**0.05**	**. .**	**. .**	**0.50**	**0.56**	**0.59**	**2.63**	**2.70**	**3.43**	**–**	**–**	**–**	**–**	**–**	**–**
5.1. Regular employment	0.02	0.02	. .	. .	0.12	0.13	0.18	1.01	0.97	1.35	–	–	–	–	–	–
5.2. Sheltered employment	–	–	. .	–	0.05	0.08	0.08	0.32	0.36	0.37	–	–	–	–	–	–
5.3. Other rehabilitation and training	0.02	0.03	–	0.04	0.33	0.34	0.32	1.31	1.37	1.71	–	–	–	–	–	–
6. Direct job creation	**0.01**	**0.01**	**0.28**	**0.22**	**–**	**–**	**–**	**–**	**0.01**	**0.01**	**0.01**	**0.04**	**0.03**	**0.20**	**0.59**	**0.45**
7. Start-up incentives	**0.03**	**0.02**	**0.24**	**0.19**	**–**	**–**	**–**	**0.02**	**0.01**	**0.04**	**0.01**	**0.01**	**0.01**	**0.02**	**0.03**	**0.03**
8. Out-of-work income maintenance and support	**1.00[d]**	**0.80[d]**	**7.11**	**5.31**	**0.68[f]**	**0.87[f]**	**0.87[f]**	**7.21**	**6.40**	**6.52**	**1.14**	**1.08**	**0.82**	**6.10**	**5.78**	**6.00**
8.1. Full unemployment benefits	1.00	0.80	7.11	5.31	0.49	0.62	0.67	7.21	6.40	6.52	0.32	0.27	0.22	1.46	1.25	1.15
of which: Unemployment insurance	–	–	–	–	0.35	0.48	0.46	5.37	4.71	5.03	0.14	0.12	0.09	–	–	–
8.2, 8.3. Partial and part-time unemployment benefits	–	–	–	–	0.10	0.12	0.12	. .	. .	. .	0.22	0.19	0.16	1.81	1.53	1.40
8.4, 8.5. Redundancy and bankrupcy compensation	–	–	–	–	0.09	0.13	0.08	. .	. .	. .	0.59	0.61	0.44	2.83	3.00	3.45
9. Early retirement	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**
TOTAL (1-9; 2-9 for inflows)	**1.51**	**1.32**	**18.14**	**16.13**	**1.40**	**1.67**	**1.72**	**11.47**	**11.37**	**. .**	**. .**	**. .**	**. .**	**7.57**	**8.79**	**8.74**
Active measures (1-7)	0.51	0.52			0.72	0.81	0.85				. .	. .	. .			
of which: Categories 1.1 plus 2-7	0.43	0.42			0.63	0.73	0.77				. .	. .	. .			
Categories 2-7 only	0.40	0.40	11.03[e]	10.82[e]	0.59	0.68	0.71	4.27	4.97	. .	0.11	0.19	0.16	1.48	3.01	2.74
Passive measures (8-9)	1.00	0.80	7.11	5.31	0.68	0.87	0.87	7.21	6.40	6.52	1.14	1.08	0.82	6.10	5.78	6.00

. . Data not available.
– Nil or less than 0.005.
* Data for participant inflows are reported only for Categories 2 to 9 since data for Category 1 "Public employment services and administration" are commonly incomplete and non-comparable (see note a). Totals shown must be interpreted with caution.
** Following a change of classification, data to 2002 differ from those published previously.
a) Category 1 refers to public employment services (PES) and the administration of active and passive labour market programmes, including costs of regional and head offices, nationwide IT systems and job-seeker registration, classification and referral. Categories 1.1 and 1.2 include only separately-identified placement and related services and benefit administration and their *de facto* coverage is variable. As data permit, Category 1.1 includes outsourced employment services, job-search assistance measures with specific budget lines and client services as defined by Eurostat.
b) The totals shown for Category 4 include non-zero spending on Eurostat Category 3 "Job rotation and sharing" in Finland, Spain and Sweden.
c) Fiscal years starting on 1 July.
d) Unemployment benefits include benefits paid to participants undertaking active programmes.
e) Participant inflows for Category 5 "Integration of the disabled" are not included.
f) Unemployment benefits paid to participants in active programmes are included under the relevant programme.
g) Benefit administration includes administration of rehabilitation benefits.

Table H. **Public expenditure and participant inflows[*] in labour market programmes in OECD countries[**]** *(cont.)*

Programme categories and sub-categories	Portugal				Slovak Republic						Spain[d]			Sweden			
	Public expenditure as a percentage of GDP		Participant inflows as a percentage of the labour force		Public expenditure as a percentage of GDP			Participant inflows as a percentage of the labour force			Public expenditure as a percentage of GDP			Public expenditure as a percentage of GDP		Participant inflows as a percentage of the labour force	
	2002	2003	2002	2003	2002	2003	2004	2002	2003	2004	2002	2003	2004	2002	2003	2002	2003
1. PES and administration[a]	**. .**	**0.13**			**0.17**	**0.17**	**0.34**				**0.10**	**0.09**	**0.08**	**0.25**	**0.24**		
of which: 1.1. Placement and related services[a]	. .	0.04			. .	. .	. .				. .	0.03	0.03	. .	–		
1.2. Benefit administration[a]	. .	–			. .	. .	. .				. .	0.02	0.02	0.05	0.05		
2. Training	**0.18**	**0.29**	**0.93**	**1.24**	**0.04**	**0.02**	**0.01**	**2.00**	**0.94**	**1.03**	**0.17**	**0.15**	**0.17**	**0.61**	**0.37**	**4.24**	**2.99**
2.1. Institutional training	0.09	0.16	0.60	0.80	0.03	0.01	0.01	1.32	0.65	0.87	0.12	0.10	0.09	0.48	0.24	2.40	1.53
2.2. Workplace training	0.03	0.03	0.16	0.18	0.01	–	–	0.51	0.29	0.16	–	–	0.01	–	–	0.01	0.01
2.3. Integrated training	0.01	0.01	0.03	0.02	–	–	–	–	–	–	–	0.01	0.02	–	–	–	–
2.4. Special support for apprenticeship	0.04	0.08	0.09	0.19	–	–	–	0.17	0.10	0.54	0.04	0.03	0.04	–	–	–	–
4. Employment incentives[b]	**0.18**	**0.16**	**. .**	**. .**	**0.04**	**0.01**	**–**	**1.46**	**0.31**	**0.07**	**0.29**	**0.30**	**0.33**	**0.22**	**0.15**	**2.82**	**2.11**
4.1. Recruitment incentives	0.17	0.15	. .	. .	0.04	0.01	–	1.46	0.31	0.07	0.29	0.29	0.32	0.20	0.15	2.82	2.11
4.2. Employment maintenance incentives	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
5. Integration of the disabled	**0.05**	**0.06**	**0.21**	**0.25**	**0.03**	**0.03**	**0.01**	**0.18**	**0.20**	**0.16**	**0.04**	**0.04**	**0.03**	**0.50**	**0.48**	**0.57**	**0.45**
5.1. Regular employment	–	0.01	0.07	0.07	0.03	0.03	0.01	0.18	0.20	0.16	0.01	0.01	0.01	0.25	0.25	0.47	0.38
5.2. Sheltered employment	–	–	–	–	–	–	–	–	–	–	0.03	0.03	0.02	0.21	0.20	0.10	0.07
5.3. Other rehabilitation and training	0.04	0.04	0.14	0.18	–	–	–	–	–	–	–	–	–	0.03	0.03	–	–
6. Direct job creation	**0.04**	**0.04**	**0.69**	**0.65**	**0.08**	**0.04**	**0.03**	**1.54**	**0.53**	**8.28**	**0.09**	**0.09**	**0.10**	**–**	**–**	**–**	**–**
7. Start-up incentives	**–**	**–**	**0.04**	**0.03**	**0.06**	**0.03**	**0.02**	**0.35**	**0.31**	**0.21**	**0.06**	**0.05**	**0.07**	**0.04**	**0.04**	**0.25**	**0.18**
8. Out-of-work income maintenance and support	**0.85**	**1.11**	**. .**	**. .**	**0.36**	**0.32**	**0.31**	**7.36**	**7.15**	**. .**	**1.55**	**1.48**	**1.50**	**1.03**	**1.22**	**12.15**	**13.27**
8.1. Full unemployment benefits	0.84	1.09	2.92	4.33	0.34[c]	0.31[c]	0.30[c]	7.36	7.15	. .	1.47	1.39	1.41	0.93	1.12	9.48	10.41
of which: Unemployment insurance	0.63	0.84	1.85	3.22	0.34	0.31	0.30	7.36	7.15	. .	1.04	1.01	1.03	0.93[e]	1.12[e]	–	–
8.2, 8.3. Partial and part-time unemployment benefits	–	–	. .	. .	–	–	–	–	–	–	0.07	0.09	0.09	0.03	0.03	2.03	2.22
8.4, 8.5. Redundancy and bankrupcy compensation	0.01	0.01	. .	. .	0.02	0.01	0.01	. .	. .	. .	–	–	–	0.07	0.06	0.64	0.63
9. Early retirement	**0.36**	**0.17**	**. .**	**0.53**	**–**	**–**	**0.04**	**–**	**–**	**0.67**	**–**	**–**	**–**	**0.01**	**–**	**. .**	**. .**
TOTAL (1-9; 2-9 for inflows)	**. .**	**1.95**	**. .**	**. .**	**0.78**	**0.61**	**0.76**	**12.88**	**9.42**	**. .**	**2.32**	**2.19**	**2.27**	**2.67**	**2.51**	**20.03**	**19.00**
Active measures (1-7)	. .	0.67			0.42	0.29	0.41				0.78	0.72	0.77	1.63	1.29		
of which: Categories 1.1 plus 2-7	. .	0.58			. .	. .	. .				. .	0.65	0.72	. .	1.04		
Categories 2-7 only	0.45	0.54	. .	. .	0.25	0.12	0.07	5.53	2.28	9.75	0.66	0.62	0.69	1.38	1.04	7.88	5.73
Passive measures (8-9)	1.21	1.28	. .	. .	0.36	0.32	0.35	7.36	7.15	. .	1.55	1.48	1.50	1.04	1.22	12.15	13.27

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. . Data not available.
– Nil or less than 0.005.
* Data for participant inflows are reported only for Categories 2 to 9 since data for Category 1 "Public employment services and administration" are commonly incomplete and non-comparable (see note a). Totals shown must be interpreted with caution.
** Following a change of classification, data to 2002 differ from those published previously.
a) Category 1 refers to public employment services (PES) and the administration of active and passive labour market programmes, including costs of regional and head offices, nationwide IT systems and job-seeker registration, classification and referral. Categories 1.1 and 1.2 include only separately-identified placement and related services and benefit administration and their *de facto* coverage is variable. As data permit, Category 1.1 includes outsourced employment services, job-search assistance measures with specific budget lines and client services as defined by Eurostat.
b) The totals shown for Category 4 include non-zero spending on Eurostat Category 3 "Job rotation and sharing" in Finland, Spain and Sweden.
c) The majority of registered unemployed receive income support from social assistance, which is not included in the data for Category 8 "Out-of-work maintenance and support".
d) Data include expenditure on LMPs financed by the Autonomous Communities and municipalities. The methodology for collecting expenditure data for Spanish autonomous regions and municipalities changed in 2004, thus affecting comparisons with earlier years.
e) Data include "basic insurance" which is not contribution based.

Table H. **Public expenditure and participant inflows[*] in labour market programmes in OECD countries[**]** *(cont.)*

Programme categories and sub-categories	Switzerland						United Kingdom[e]						United States[h]		
	Public expenditure as a percentage of GDP			Participant inflows as a percentage of the labour force			Public expenditure as a percentage of GDP			Participant inflows as a percentage of the labour force			Public expenditure as a percentage of GDP		
	2002	2003	2004	2002	2003	2004	2001-02	2002-03	2003-04	2001-02	2002-03	2003-04	2001-02	2002-03	2003-04
1. PES and administration[a]	**0.11**	**0.13**	**0.14**				**0.37**	**0.34**	**0.34**				**0.04**	**0.04**	**0.04**
of which: 1.1. Placement and related services[a]	. .	. .	. .				0.14[f]	0.15[f]	0.14[f]				0.01	0.01	0.01
1.2. Benefit administration[a]	0.04	0.04	0.04				0.19[g]	0.15[g]	0.15[g]				0.03[i]	0.03[i]	0.03[i]
2. Training	**0.20[c]**	**0.28[c]**	**0.31[c]**	**3.07**	**4.31**	. .	**0.12**	**0.14**	**0.14**	. .	. .	. .	**0.06**	**0.06**	**0.05**
2.1. Institutional training	0.20	0.27	0.30	3.03	4.26	. .	0.01	0.01	0.01	. .	. .	. .	0.03	0.02	0.02
2.2. Workplace training	–	0.01	0.01	0.03	0.05	. .	0.03	0.03	0.03	. .	. .	. .	–	–	–
2.3. Integrated training	–	–	–	–	–	. .	–	–	–	. .	0.26	0.31	0.03	0.03	0.03
2.4. Special support for apprenticeship	–	–	–	–	–	. .	0.09	0.10	0.10	. .	1.00	. .	–	–	–
4. Employment incentives[b]	**0.09**	**0.12**	**0.11**	**2.99**	**3.18**	. .	**0.02**	**0.01**	**–**	. .	. .	. .	**–**	**–**	**–**
4.1. Recruitment incentives	0.04	0.07	0.08	1.52	1.54	. .	0.02	0.01	–	. .	. .	. .	–	–	–
4.2. Employment maintenance incentives	0.05	0.06	0.03	1.47	1.64	. .	–	–	–	. .	. .	. .	–	–	–
5. Integration of the disabled	**0.14**	**0.23**	**0.16**	. .	. .	. .	**0.02**	**0.03**	**0.03**	**–**	**–**	**–**	**0.03**	**0.03**	**0.03**
5.1. Regular employment	0.14	0.15	0.16	. .	. .	. .	–	–	0.01	. .	0.14	0.13	–	–	–
5.2. Sheltered employment	–	0.08	–	–	. .	. .	0.02	0.02	0.02	. .	0.02	0.02	–	–	–
5.3. Other rehabilitation and training	–	–	–	–	–	. .	–	–	–	. .	0.02	0.03	0.03	0.03	0.03
6. Direct job creation	**–**	**–**	**–**	**–**	**–**	. .	**0.02**	**0.02**	**0.01**	**–**	. .	. .	**0.01**	**0.01**	**0.01**
7. Start-up incentives	**–**	**0.01**	**0.01**	**0.05**	**0.06**	. .	**–**	**–**	**–**	. .	**0.01**	**0.01**	**–**	**–**	**–**
8. Out-of-work income maintenance and support	**0.72[c]**	**1.02[c]**	**1.03[c]**	**5.84**	**6.78**	. .	**0.42**	**0.39**	**0.37**	. .	**9.79**	**8.97**	**0.49**	**0.51**	**0.37**
8.1. Full unemployment benefits	0.70	1.01	1.02	5.61	6.64	. .	0.40	0.37	0.35	. .	9.79	8.97	0.49	0.51	0.37
of which: Unemployment insurance	0.64	0.95	0.97	5.61	6.64	. .	. .	. .	. .	. .	. .	. .	0.49	0.50	0.37
8.2, 8.3. Partial and part-time unemployment benefits	–	–	–	–	–	. .	–	–	–	–	–	–	–	–	–
8.4, 8.5. Redundancy and bankrupcy compensation	0.01	0.01	0.01	0.23	0.14	. .	0.02	0.02	0.02	. .	. .	. .	–	–	–
9. Early retirement	**–**	**–**	**–**	**–**	**–**	. .	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**
TOTAL (1-9; 2-9 for inflows)	**1.28**	**1.80**	**1.76**	**11.94**	**14.34**	. .	**0.97**	**0.93**	**0.89**	. .	. .	. .	**0.67**	**0.68**	**0.53**
Active measures (1-7)	0.56	0.77	0.74				0.55	0.54	0.53				0.18[j]	0.17[j]	0.16[j]
of which: Categories 1.1 plus 2-7	. .	. .	. .				0.32	0.34	0.33				0.15[j]	0.14[j]	0.13[j]
Categories 2-7 only	0.44	0.64	0.60	6.10[d]	7.56[d]	. .	0.18	0.20	0.18	. .	. .	. .	0.13[j]	0.13[j]	0.12[j]
Passive measures (8-9)	0.72	1.02	1.03	5.84	6.78	. .	0.42	0.39	0.37	. .	9.79	8.97	0.49	0.51	0.37

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. . Data not available.
– Nil or less than 0.005.
* Data for participant inflows are reported only for Categories 2 to 9 since data for Category 1 "Public employment services and administration" are commonly incomplete and non-comparable (see note a). Totals shown must be interpreted with caution.
** Following a change of classification, data to 2002 differ from those published previously.
a) Category 1 refers to public employment services (PES) and the administration of active and passive labour market programmes, including costs of regional and head offices, nationwide IT systems and job-seeker registration, classification and referral. Categories 1.1 and 1.2 include only separately-identified placement and related services and benefit administration and their *de facto* coverage is variable. As data permit, Category 1.1 includes outsourced employment services, job-search assistance measures with specific budget lines and client services as defined by Eurostat.
b) The totals shown for Category 4 include non-zero spending on Eurostat Category 3 "Job rotation and sharing" in Finland, Spain and Sweden.
c) Unemployment benefits paid to participants in labour market training are included in Category 2 "Training".
d) Participants inflows for Category 5 "Integration of the disabled" are not included.
e) Excluding Northern Ireland. Fiscal years starting on 1 April.
f) Expenditures for Jobcentre Plus, New Deal gateway and follow-through components, New Deal for Lone Parents and New Deal for Partners.
g) Estimate of benefit administration function of Employment Service (2001-02) and Jobcentre Plus (from 2002-03).
h) Fiscal years starting on 1 October.
i) Mainly costs of running unemployment insurance offices. Also includes various national activities such as information, research and evaluation.
j) Total for active measures includes TANF Work Activity expenditures.

Source: Data for Denmark, Finland, France, Greece, Luxembourg, Italy and Portugal are taken from Eurostat, *Labour Market Policy and Participants,* June 2005 and detailed data supplied to OECD by Eurostat. Other countries: OECD database on labour market programmes.

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