ISBN 92-64-01045-9
OECD Employment Outlook

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

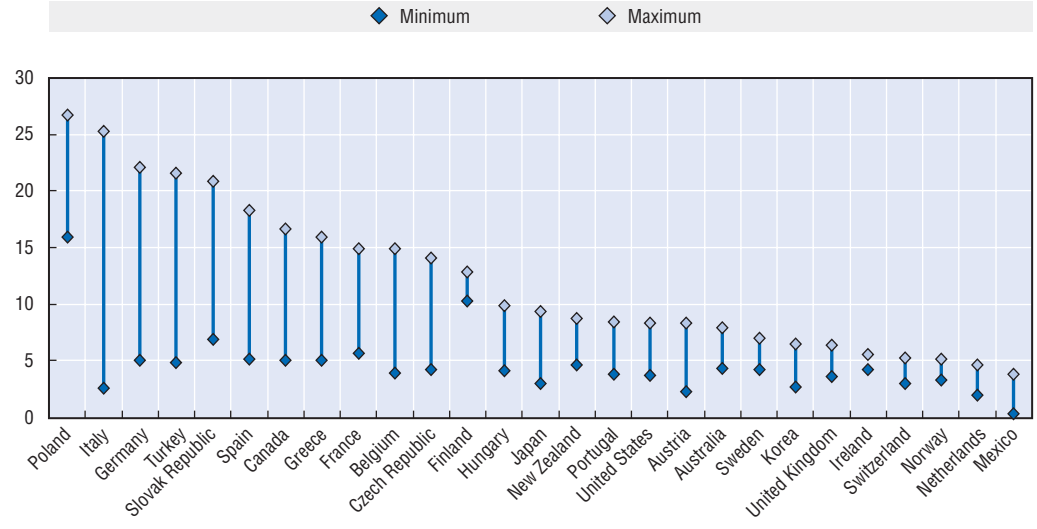
Regional disparities in employment outcomes are an inescapable fact of labour market analysis. In most of the 26 OECD countries for which data are available, differences between the maximum and minimum employment rates at the sub-national level often exceed 10 percentage points (Chart 2.1). The unemployment 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.

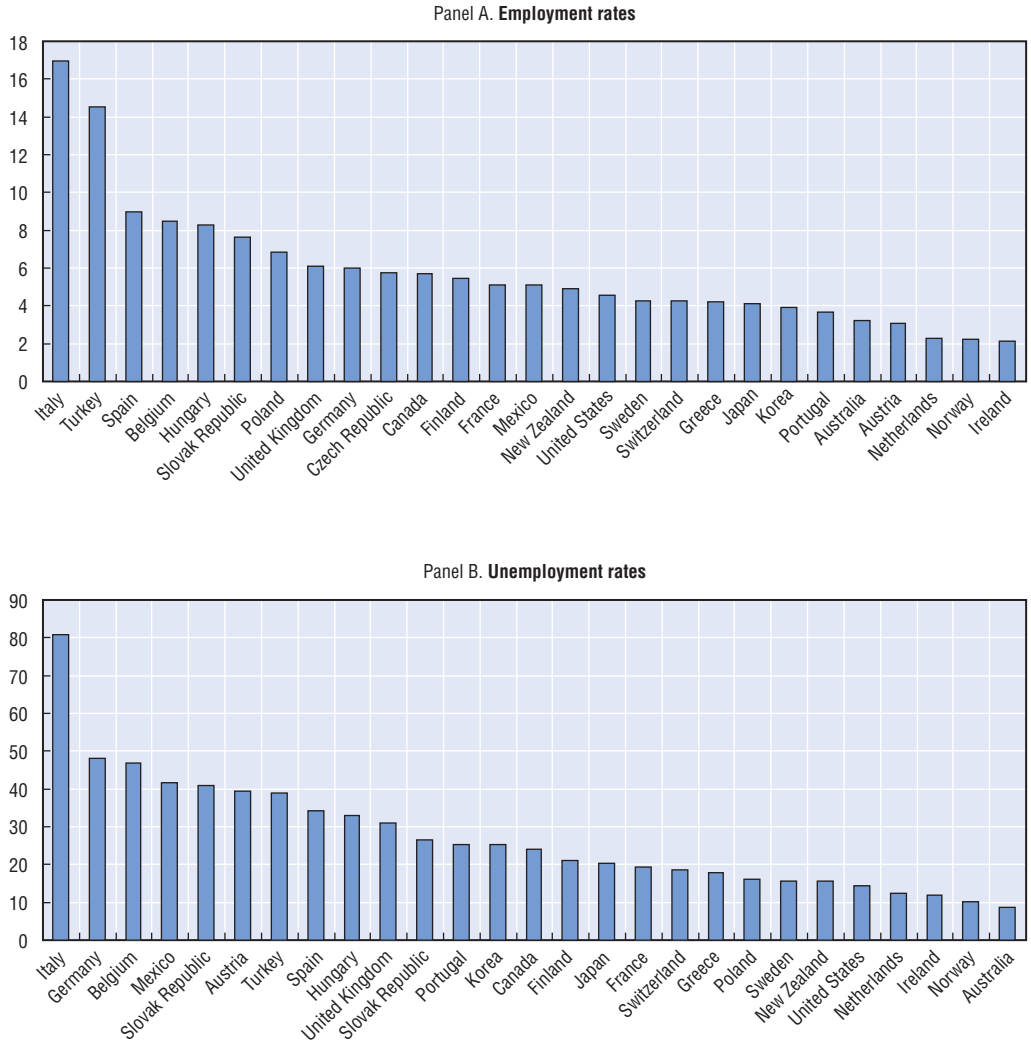
Source: See Annex 2.A1.

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

OECD EMPLOYMENT OUTLOOK – ISBN 92-64-01045-9 – © OECD 2005

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).

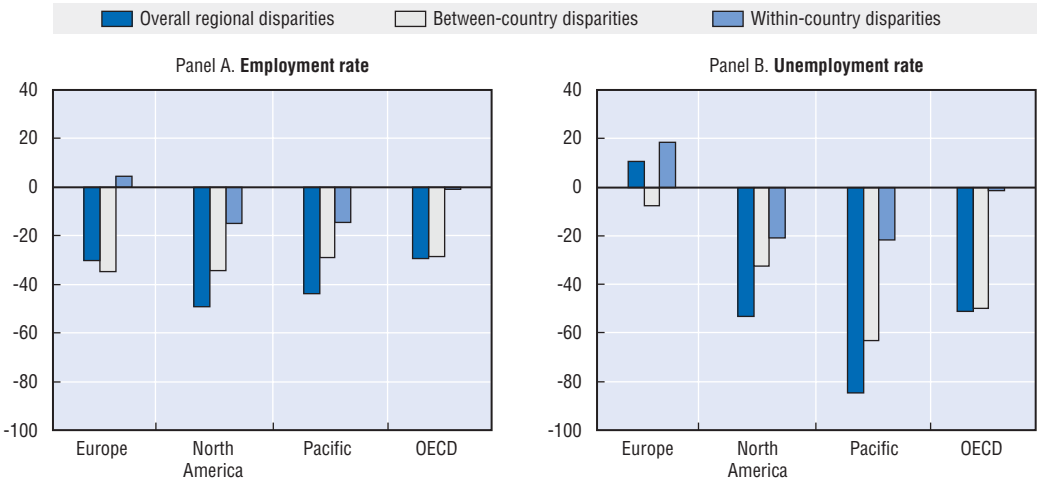
Source: See Annex 2.A1.

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.

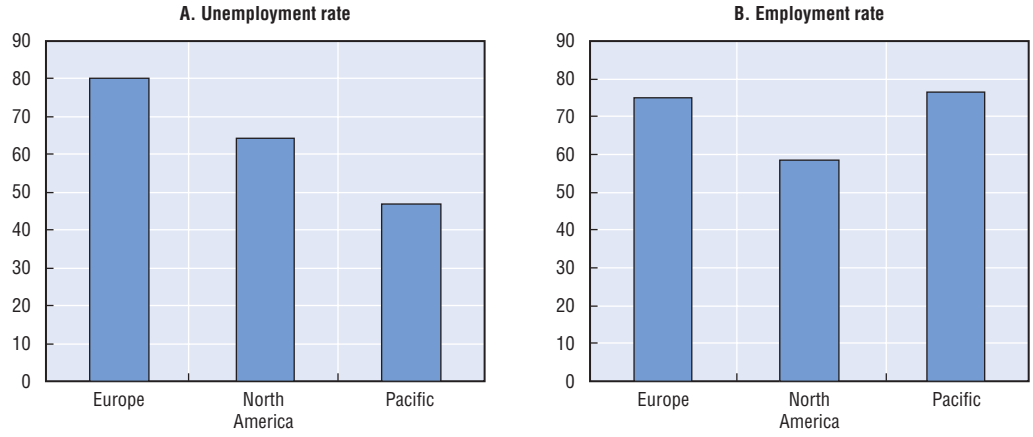
Source: See Annex 2.A1.

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.

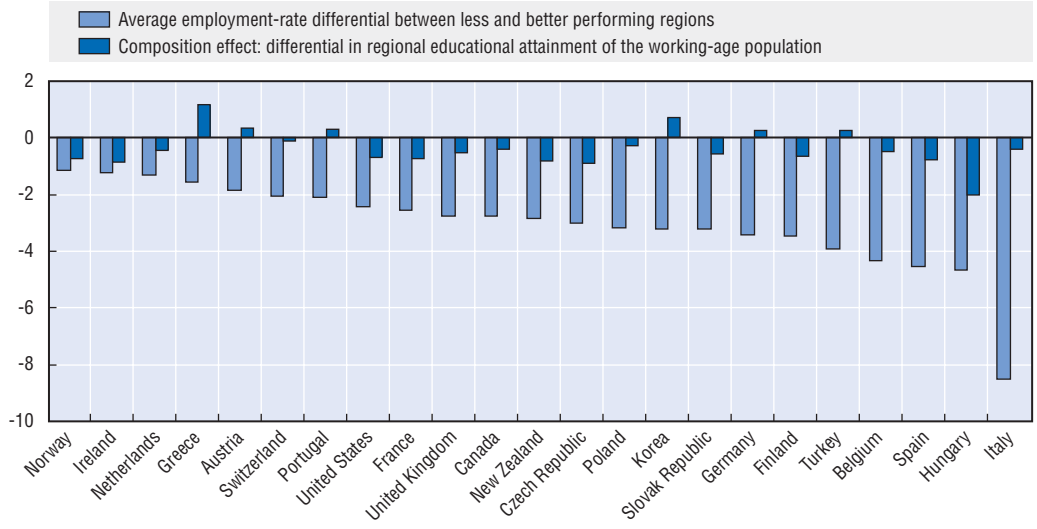
Geographic concentration of economic activities

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.

Statlink: *http://dx.doi.org/10.1787/877536055007*

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]

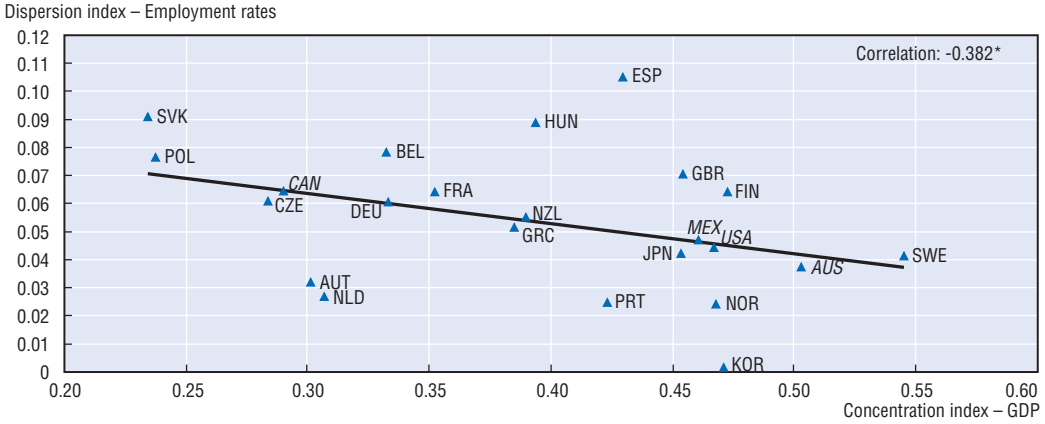
Since both economic activities and the working-age population tend to be concentrated in space, agglomeration does not necessarily lead to regional disparities in labour market performance. As pointed out by Martin (2003), when population follows mobile capital (physical and human) from declining regions 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

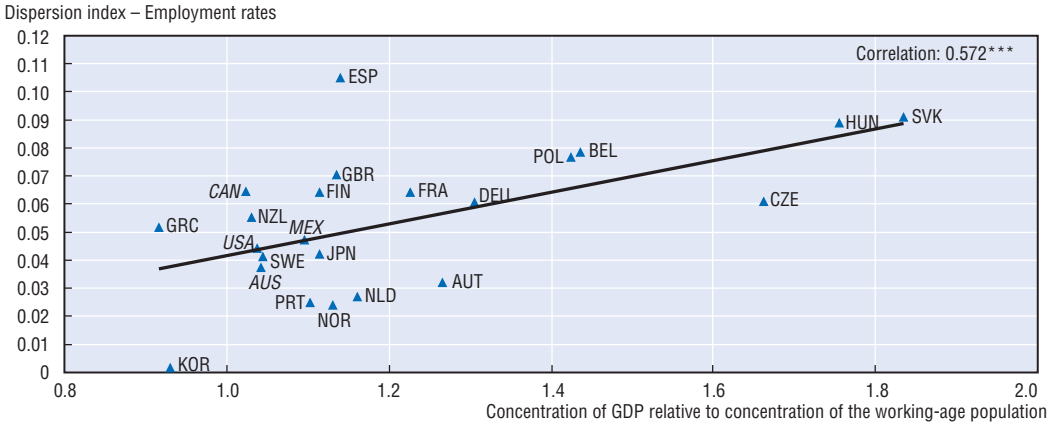
The persistence of regional disparities within each country suggests that "market" mechanisms are often too weak to play a self- equilibrating role. The movement of labour from depressed regions to better performing regions is one such mechanism. Wage adjustment, *i.e.* the reduction of relative wages 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…

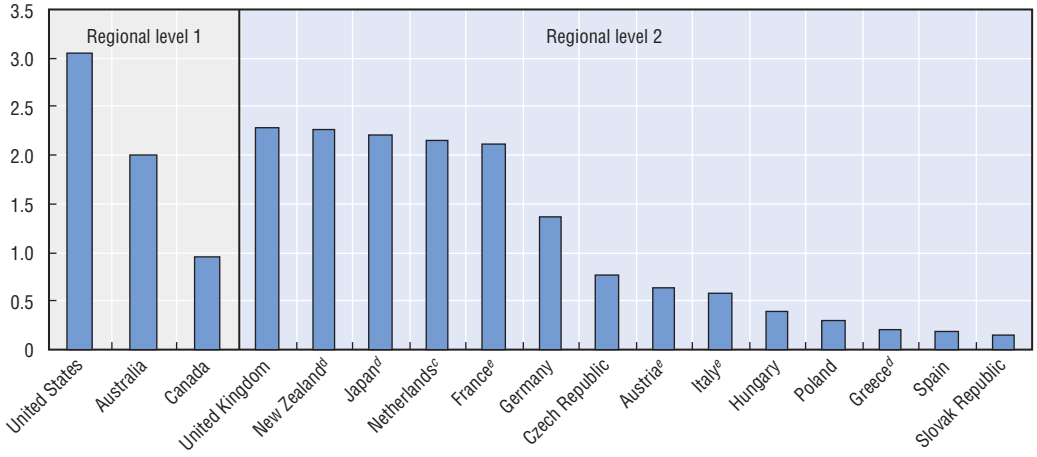
Inter-regional migration and commuting may be examined in terms of *gross* and *net* flows. Gross flows give a general picture of the extent to which individuals are mobile. If motivated by job reasons – which is not always the case as individuals may change residence without changing job – they may 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.

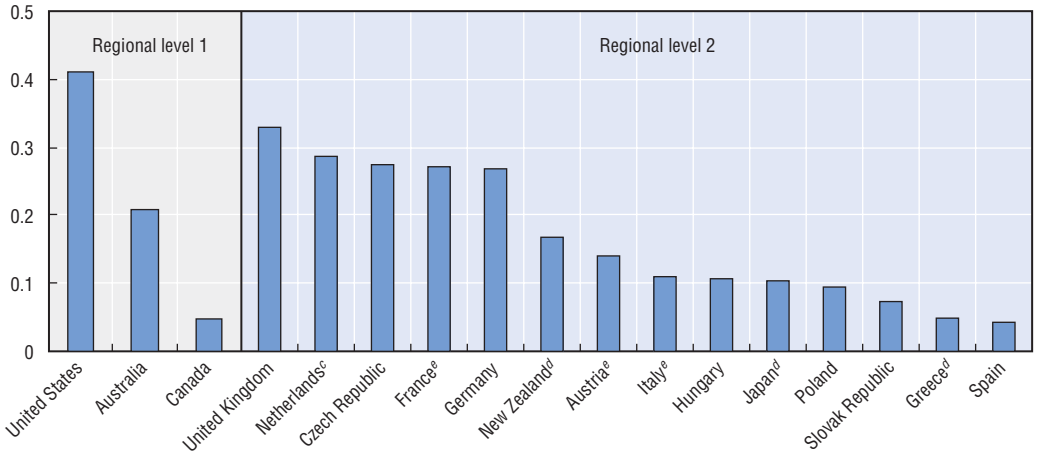
As seen in Box 2.1, cross-country comparisons of gross and net migration rates require caution. However, with these caveats in mind, a general picture emerges from the data. On average, internal gross migration flows, as measured by the proportion of the working-age population within each national economy 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

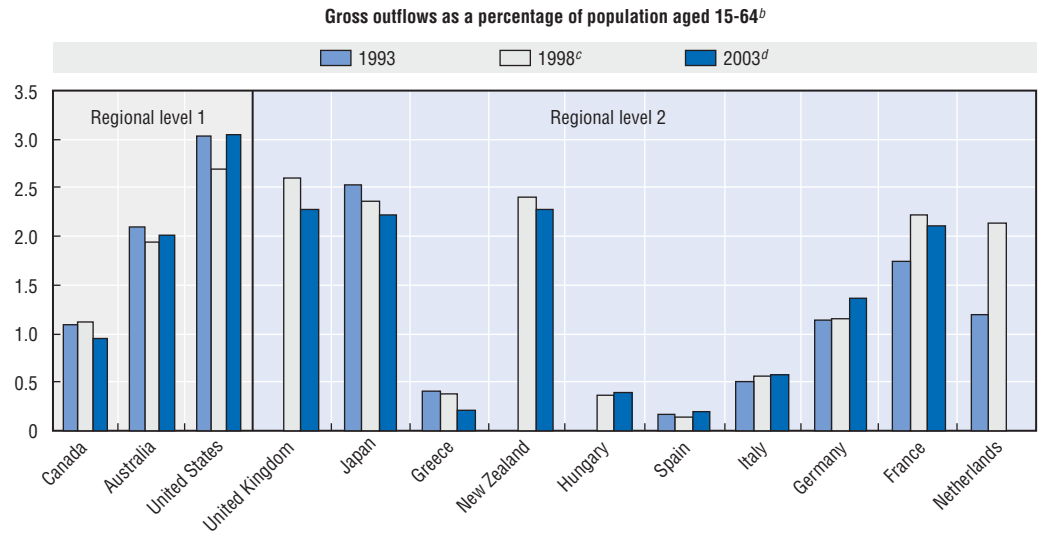
These general patterns, which were highlighted in previous editions of the *Employment Outlook* (1990, 2000), have been relatively stable over the past decade in most countries. In Spain and Italy, migration flows have stabilised though at a low level. Some increasing trend in mobility is noticeable 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.

Statlink: *http://dx.doi.org/10.1787/802525205456*

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.

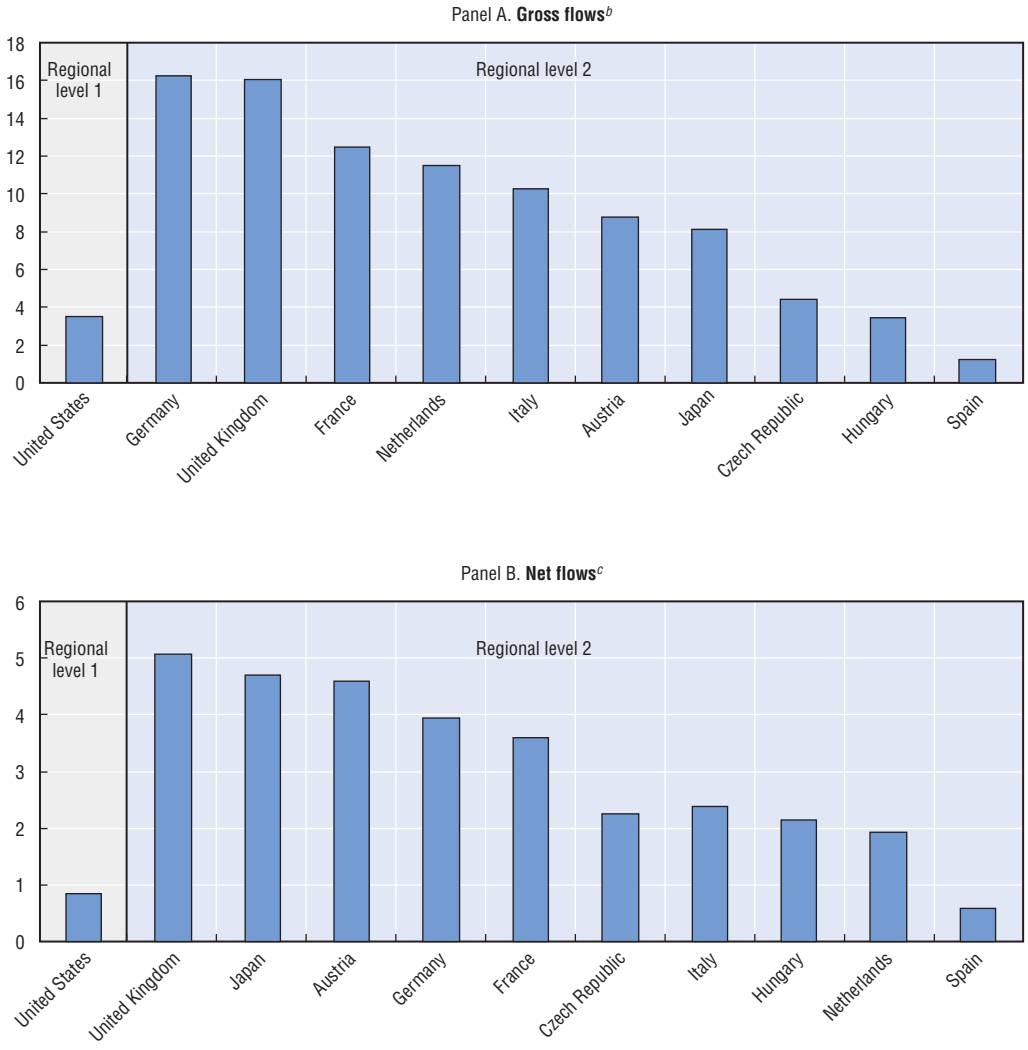
Between 1 and 16 per cent of the employed commute between regions every day

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.

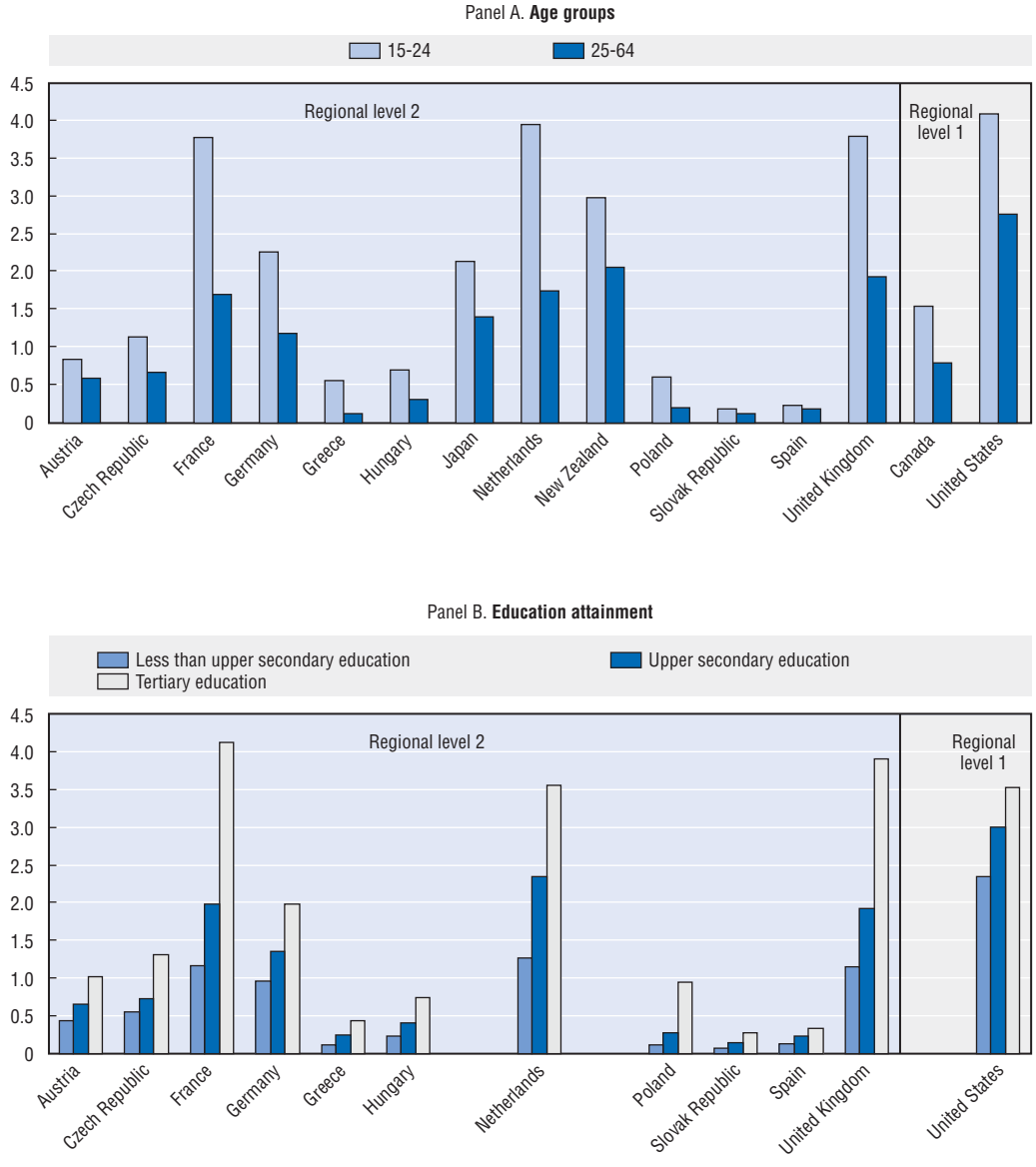
Statlink: *http://dx.doi.org/10.1787/024036434223*

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.

Statlink: *http://dx.doi.org/10.1787/585808080608*

OECD EMPLOYMENT OUTLOOK – ISBN 92-64-01045-9 – © OECD 2005

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

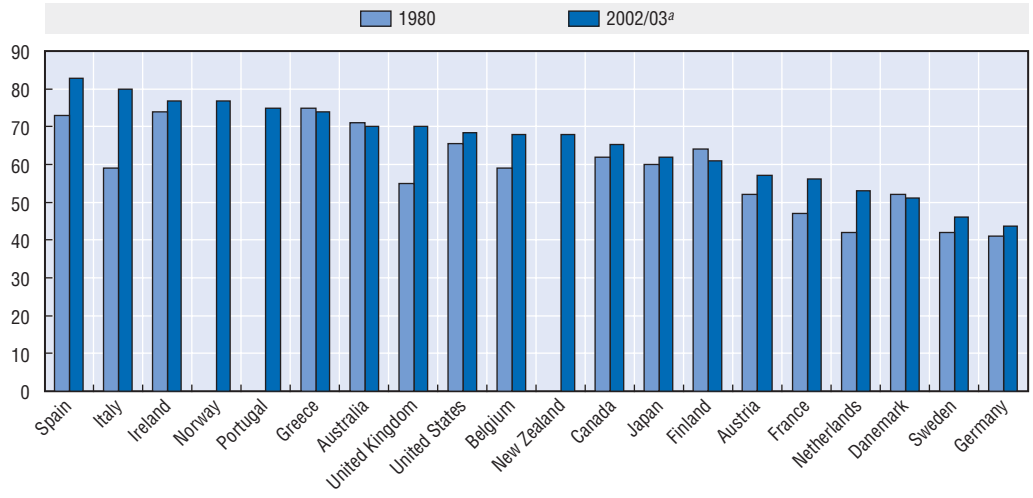
As already mentioned, geographic mobility of labour is not an end in itself, and the focus of this section is rather on removing potential obstacles to mobility in existing housing policies. As housing costs (mortgage payments or rents) are typically the largest component of households' budgets, decisions 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).

OECD EMPLOYMENT OUTLOOK – ISBN 92-64-01045-9 – © OECD 2005

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]

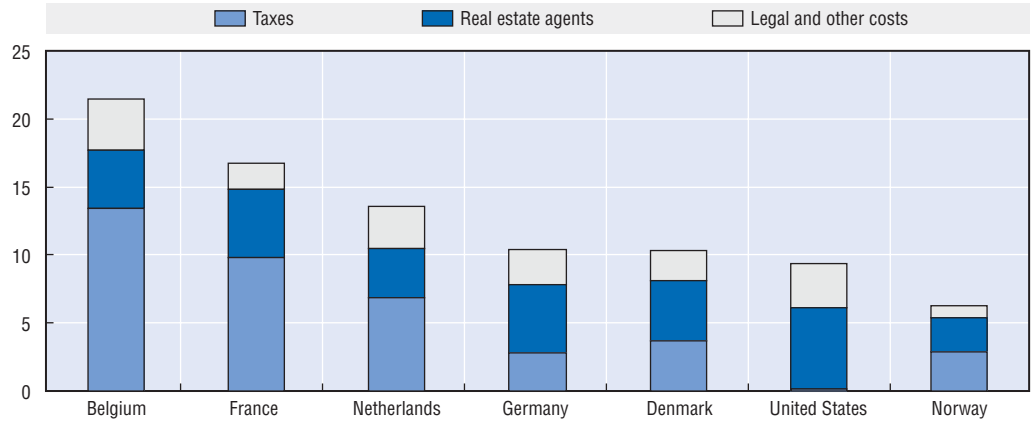
While disincentives previously weighing on the supply of rental accommodation have been removed, housing costs of new entrants on the market such as cash-constrained young households and people who want to move location have thus been raised. Complete liberalisation, however, would entail a significant 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

OECD EMPLOYMENT OUTLOOK – ISBN 92-64-01045-9 – © OECD 2005

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).

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).

Bibliography

Ball, M. (2003), "European Housing Review 2004", Royal Institute of Chartered Surveyors (RICS), Ireland.

Barcelo, C. (2003), "Housing Tenure and Labour Mobility: a comparison across European countries", CEMFI Working Paper No. 0302, Madrid, January (*ftp://ftp.cemfi.es/wp/03/0302.pdf*).

Boehm, T.P. and A.M. Schlottmann (2001), "Housing and Wealth Accumulation: Intergenerational Impacts", Low Income Homeownership Working Paper No. 01-15, Joint Center for Housing Studies, Harvard University, October (*www.jchs.harvard.edu/publications/homeownership/liho01-15.pdf*).

Böheim, R. and M. Taylor (1999), "Residential Mobility, Housing Tenure and the Labour Market in Britain", University of Essex, United Kingdom.

Blanchard, O. and L. Katz (1992), "Regional Evolutions", *Brookings Papers on Economic Activity*, Vol. 1992, No. 1, pp. 1-75.

Brunello, G., C. Lupi and P. Ordine (2001), "Widening Differences in Italian Regional Unemployment", *Labour Economics*, Vol. 8, pp. 103-129.

Cameron, G. and J. Muellbauer (1998), "The Housing Market and Regional Commuting and Migration Choices", *Scottish Journal of Political Economy*, Vol. 45, No. 4, pp. 420-446.

Cannari, L., F. Nucci and P. Sestito (2000), "Geographic Labour Mobility and the Cost of Housing: evidence from Italy", *Applied Economics*, Vol. 32, pp. 1899-1906.

Carone, G., A. Slaomäki, H. Immervoll and D. Paturot (2003), "Indicators of Unemployment and Low-wage Traps (marginal effective tax rates on labour)", European Economy Economic Papers, No. 197, Brussels, December (*http://econwpa.wustl.edu/eps/lab/papers/0409/0409007.pdf*).

Catte, P., N. Girouard, R. Price and C. André (2004), "Housing Markets, Wealth and the Business Cycle", OECD Economics Department Working Paper No. 394, OECD, Paris, June (*www.olis.oecd.org/olis/2004doc.nsf/linkto/eco-wkp(2004)17*).

Chan, S. (2001), "Spatial Lock-in: Do Falling House Prices Constrain Residential Mobility?", *Journal of Urban Economics*, No. 49, pp. 567-586.

Choy, W.K., D. Maré and P. Mawson (2002), "Modelling Regional Labour Market Adjustment in New Zealand", New Zealand Treasury Working Paper No. 02-01, New Zealand (*www.treasury.govt.nz/workingpapers/2002/twp02-01.pdf*).

Chiuri, M.C. and T. Japelli (2001), "Financial Market Imperfections and Home Ownership: A Comparative Study", CEPR Discussion Paper No. 2717, London, March (*www.cepr.org/pubs/new-dps/dplist.asp?dpno=2717*).

Clark, T. E. (1998), "Employment Fluctuations in the US Regions and Industries: The Roles of National, Region-Specific, and Industry-Specific Shocks", *Journal of Labour Economics*, pp. 202-229.

Davies, S. and M. Hallet (2001), "Policy Responses to Regional Unemployment: Lessons from Germany, Spain and Italy", European Commission Economic Papers No. 161, December.

Day, K.M. and S. Winer (2001), "Policy-induced Migration in Canada: an Empirical Study", HRSDC, Canada, November (*www.carleton.ca/economics/cep/cep01-08.pdf*).

Debelle, G. and J. Vickery (1999), "Labour Market Adjustment: Evidence on Interstate Labour Market Mobility", *Australian Economic Review*, Vol. 32, No. 3, pp. 249-263.

Decressin, J. and A. Fatas (1995), "Regional Labor Market Dynamics in Europe", *European Economic Review*, Vol. 39, pp. 1627-1655.

De Koning, J., R. Layard, S. Nickell and N. Westergaard-Nielsen (2004), "Policies for Full Employment", Department for Work and Pensions, London.

Delcoure, N. and N.G. Miller (2002), "International Residential Estate Brokerage Fees and Implications for the US Brokerage Industry", *International Real Estate Review*, Vol. 5, No. 1, pp. 12-39 (*http://ideas.repec.org/a/ire/issued/v05n012002p12-39.html*).

Ditch, J., A. Lewis and S. Wilcox (2001), "Social Housing, Tenure and Housing Allowance: an International Comparison", In-house Report No. 83, Department for Work and Pensions, United Kingdom (*www.dss.gov.uk/asd/asd5/IH83.pdf*).

Duranton, G. and D. Puga (2004), "Micro-Foundations of Urban Agglomeration Economies", in H. Vernon and J. Thisse (eds.), *Handbook of Urban and Regional Economics*, Elsevier-North-Holland, Amsterdam.

Earley, F. (2004) "What Explains the Differences in Homeownership Rates in Europe", *Housing Finance International*, Vol. 19, September.

Elhorst, J.P. (2003), "The Mystery of Regional Unemployment Differentials: Theoretical and Empirical Explanations", *Journal of Economic Surveys*, Vol. 17, No. 5, pp. 709-748.

Ellison, G. and E. Glaeser (1999), "The Geographic Concentration of an Industry: Does Natural Advantage Explain Agglomeration", American Economic Association Papers and Proceedings, Vol. 89, No. 2, pp. 311-316.

ECB (European Central Bank) (2003), "Structural Factors in the EU Housing Markets", Germany, March (*www.ecb.int/pub/pdf/other/euhousingmarketsen.pdf*).

European Commission (2002), *Employment in Europe*, Brussels.

European Mortgage Federation (2002), "The Cost of Housing Study", Germany, September, mimeo.

Eurostat (1999), *Nomenclature of Territorial Units for Statistics – NUTS*, Luxembourg.

Flatau, P., P. Hendershott, R. Watson and G. Wood (2004), "Housing Careers? An Examination of the Role of Labour Market, Social and Economic Determinants", AHURI, Australia, September (*www.ahuri.edu.au/global/docs/doc722.pdf*).

Fredriksson, P. and P. Johansson (2003), "Employment, Mobility, and Active Labour Market Programs", IFAU Working Paper 2003:3, Uppsala, January (*www.ifau.se/swe/pdf2003/wp03-03.pdf*).

Gardner, J., G. Pierre and A. J. Oswald (2001), "Moving for Job Reasons", Department of Economics, University of Warwick, September (*www2.warwick.ac.uk/fac/soc/economics/staff/faculty/oswald/gpoeconomica01.pdf*).

Giguère, S. (2003), "Managing Decentralisation and New Forms of Governance", *Managing Decentralisation – A New Role for Labour Market Policy,* OECD, Paris.

Glaeser, E.L. and J.M. Shapiro (2002), "The Benefits of Home Mortgage Interest Deduction", NBER Working Paper No. 9284, Cambridge, Mass., October (*www.nber.org/papers/w9284.pdf*).

Gobillon, L. (2001), "Emploi, logement et mobilité résidentielle", *Economie et Statistique,* No. 9/10, pp. 77-98 (*http://laurent.gobillon.free.fr/articles/gobillon_2001_ecostat.pdf*).

Green, R.K. and P.H. Hendershott (2001), "Home-ownership and Unemployment in the US", *Urban Studies*, Vol. 38, No. 9, pp. 1509-1520.

Guiso, L. and T. Japelli (1998), "Private Transfers, Borrowing Constraints and the Timing of Homeownership", CEPR Discussion Paper No. 2050, London, December.

Hämäläinen, K. (2002), "Unemployment, Selective Employment Measures and Inter-regional Mobility of Labour", *Papers in Regional Science*, Vol. 81, pp. 423-441.

Hassler, J., J.V. Rodríguez, Mora, K. Storesletten and F. Zilibotti (2001), "A Positive Theory of Geographic Mobility and Social Insurance", CEPR Discussion Paper No. 2964, London, September.

Henley, A. (1998), "Residential Mobility, Housing Equity and the Labour Market", *Economic Journal*, No. 108, pp. 414-427.

HM Treasury (2003), "Housing, Consumption and EMU", EMU Study, United Kingdom (*www.hm-treasury.gov.uk/documents/the_euro/assessment/studies/euro_assess03_studdorset.cfm*).

Hubert, F. (2003), "Rent Control: Academic Analysis and Public Sentiment", *Swedish Economic Policy Review*, Vol. 10, pp. 61-81 (*www.ekradet.konj.se/sepr/SEPRvol10Nr1/Hubert.pdf*).

Laferrère, A. (2005), "La politique du logement : les enseignements de l'expérience française", to be published in *Actes de la journée d'études sur La crise du logement à Bruxelles : problème d'accès ou de pénurie*, Nicolas Bernard éd., éditions Bruylant, Bruxelles (*www.crest.fr/pageperso/dr/laferrere/AideLogement-Journée%2023%20avril%2004.pdf*).

Laferrère, A. and D. le Blanc (2004), "How do Housing Allowances Affect Rents? An Empirical Analysis of the French Case", *Journal of Housing Economics,* No. 20, pp. 36-67.

Lindgren, U. and O. Westerlund (2003), "Labour Market Programmes and Geographical Mobility: migration and commuting among programme participants and openly unemployed", IFAU Working Paper 2003:6, Uppsala, February (*www.ifau.se/swe/pdf2003/wp03-06.pdf*).

MacLennan, D., J. Muellbauer and M. Stephens (1999), "Asymmetries in Housing and Financial Market Institutions and EMU", CEPR Discussion Paper No. 2062, London, January.

Marimon, R. and F. Zilibotti (1999), "Unemployment vs. Mismatch of Talents Reconsidering Unemployment Benefits", *Economic Journal*, Vol. 109, No. 455, April, pp. 266-291.

Martin, P. (2003), "Public Policies and Economic Geography", in B. Funk and L. Pizzati (eds.), *European Integration, Regional Policy and Growth*, World Bank, Washington DC.

Meunier, O. and M. Mignolet (1995), "Regional Employment Disparities in Belgium: Some Empirical Results", in D. Felsenstein and B. Portnov (eds.), *Regional Disparities in Small Countries*, Springer-Verlag Series: "Advances in Spatial Science", Heidelberg.

Mitchell, W. and E. Carlson (2003), "Regional Employment Growth and the Persistence of Regional Employment Disparities", CofFEE Working Papers No. 03-07, University of Newcastle, Australia.

Nahuis, R. and A. Parikh (2002), "Factor Mobility and Regional Disparities: East, West, Home's Best?", CPB Discussion Paper No. 004, University of East Anglia, United Kingdom, January (*www.cpb.nl/eng/pub/discussie/4/disc4.pdf*).

Newell, A. (2003), "Structural Supply and Demand Factors in the Regional Distribution of Unemployment in Poland", Discussion Paper in Economics No. 93, University of Sussex at Brighton, February (*www.sussex.ac.uk/Units/economics/dp/Newell93.pdf*).

OECD (1989), *Employment Outlook*, Paris (*www.oecd.org/dataoecd/63/53/3888243.pdf*).

OECD (1990), "Supply and Demand in Regional Labour Markets: population growth, migration, participation, and earnings differentials", *Employment Outlook*, Paris (*www.oecd.org/dataoecd/47/37/4153090.pdf*).

OECD (2000), "Eligibility Criteria for Unemployment Benefits", *Employment Outlook*, Paris (*www.oecd.org/dataoecd/10/46/2079577.pdf*).

OECD (2001), *Local Partnerships for Better Governance*, Paris.

OECD (2002), "Taking the Measure of Temporary Employment", *Employment Outlook*, Paris (*www.oecd.org/dataoecd/36/8/17652675.pdf*).

OECD (2003), *Managing Decentralisation – A New Role for Labour Market Policy,* Paris.

OECD (2004a), "Wage Setting Institutions and Outcomes", *Employment Outlook*, Paris.

OECD (2004b), *Economic Survey of the Netherlands*, Paris.

OECD (2005a), "OECD Regions at a Glance – Part 1", Document GOV/TDPC(2004)7/PART1, Paris.

OECD (2005b), *Economic Survey of the Czech Republic*, Paris.

OECD (2005c), Background material for Chapter 2 of *OECD Employment Outlook 2005* available on *www.oecd.org/els/employmentoutlook*.

Oswald, A.J. (1999), "The Housing Market and Europe's Unemployment: A Non-technical paper", University of Warwick, United Kingdom, May (*www2.warwick.ac.uk/fac/soc/economics/staff/faculty/oswald/homesnt.pdf*).

Overman, H. and D. Puga (2002), "Unemployment Clusters across Europe's Regions and Countries", *Economic Policy*, pp. 117-147, April.

Puga, D. (2002), "European Regional Policy in Light of Recent Location Theories", *Journal of Economic Geography*, Vol. 2, No. 4, pp. 372-406.

Realtor (2004), *Existing Single-Family Homesales*, Chicago (*www.realtor.org/Research.nsf/Pages/EHSdata*).

Rissman, E. (1999), "Regional Employment Growth and the Business Cycle", *Economic Perspectives*, Vol. 23, Federal Reserve Bank of Chicago, pp. 21-39.

Rosenthal, S.S. and W. C. Strange (2004), "Evidence on the Nature of Agglomeration Economics", in H. Vernon and J. Thisse (eds.), *Handbook of Urban and Regional Economics,* Elsevier-North-Holland, Amsterdam.

Rymes, D. (2003), "Canada: Partnerships across Levels", *Managing Decentralisation – A New Role for Labour Market Policy,* OECD, Paris.

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*).

Sestito, P. (2004), "Economic Convergence across and within Europe: is there a Puzzle", presentation at the 2004 Brussels Economic Forum, 22-23 April (*http://europa.eu.int/comm/economy_finance/events/2004/bxl0404/doc12en.pdf*).

Shields, M. and D. Swenson (2000). "An Industry-level Analysis of Commuting Response to Employment Growth", *Journal of Regional Analysis and Policy,* Vol. 30, No. 2, pp. 81-94.

Spieza, V. (2002), "Geographic Concentration of Production and Unemployment in OECD Countries", OECD, Paris (*www.oecd.org/dataoecd/43/0/15179780.doc*).

Stambøl, L. S. (2005), "Urban and Regional Labour Market Mobility in Norway", Statistics Norway Social and Economic Studies No. 110, January.

Susin, S. (2002), "Rent Vouchers and the Price of Low-Income Housing", *Journal of Public Economics,* No. 83, pp. 109-152.

Tatsiramos, K. (2004), "Geographic Labour Mobility and Unemployment Insurance in Europe", IZA Discussion paper No. 1253, Germany, August.

Toulemonde, E. (2001), "Actual Versus Virtual Employment in Belgium", *Regional Studies*, Vol. 5, No. 6, pp. 513-518.

US Census Bureau (2001), "Housing Characteristics: 2000", Washington DC, October (*www.census.gov/prod/2001pubs/c2kbr01-13.pdf*).

Van Leuvensteijn, M. and P. Koning (2000), "The Effects of Home-ownership on Labour Mobility in the Netherlands: Oswald's theses Revisited", CPB Research Memorandum No. 173, University of East Anglia, United Kingdom, December.

Van Leuvensteijn, M. and P. Koning (2004), "The Effect of Home-ownership on Labour Mobility in the Netherlands", Utrecht School of Economics Discussion Paper No. 04.01, Netherlands, January.

Van Ommeren, J.N. (1996), "Commuting and Relocation of Jobs and Residences", PhD-thesis, Tinbergen Institute Research Series, Netherlands.

Verkade, E., and W. Vermeulen (2004), "The CPB Regional Labour Market Model: a tool for a long-term scenario construction", University of East Anglia, United Kingdom, December (*www.cpb.nl/eng/research/sector5/RLM-model.pdf*).